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Weed Science Research Summaries 2010

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Weed Science Research Summaries 2010

Southeast Research and Extension Center, Monticello



K.L. Smith • J.A. Bullington • R.C. Doherty • J.R. Meier

UofA

**DIVISION OF AGRICULTURE
RESEARCH & EXTENSION**

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Cover photo: Hooded sprayers direct herbicide to areas between rows of grain sorghum. Photo by Jack Dykinga courtesy of USDA Agricultural Research Services.

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**WEED SCIENCE
RESEARCH SUMMARIES 2010
Southeast Research and Extension
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Foreword

The data presented in this publication are intended to help growers, county agents, specialists and industry representatives make unbiased decisions concerning best management practices for effective weed control. It represents results from only one year and although it may serve as a guide, making decisions based on only one-year's data is always risky. Many of these same treatments will be included in subsequent year's research and as additional data are collected, the better treatments will be included in Extension recommendations. Some of the compounds included in this research are not labeled for use in the manner they were evaluated. Always check and read the label directions on all herbicides to insure proper use. Check Cooperate Extension Service publication MP-44 for recommendations.

Much of the rice, soybean, cotton, grain sorghum, and corn research were made possible with grower check-off dollars provided through the Rice Research and Promotion Board, the Soybean Research and Promotion Board, the Corn and Grain Sorghum Research and Promotion Board and the Cotton State Support Group. A special thanks goes to the growers and the board members for their confidence and support. This research would not be possible without their support.

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Herbicides & Adjuvants

<u>TRADE NAME</u>	<u>COMMON NAME</u>	<u>COMPANY NAME</u>
2,4-D Amine	2,4-D	Several
2,4-D LV Ester	2,4-D	Several
AAtrex	Atrazine	Syngenta
Accent	Nicosulfuron	Dupont
Agridex	Crop Oil Concentrate	Helena
Alert	Clomazone	Cheminova
Allecto	N/A	Monsanto
Ally	Metsulfuron	Dupont
Aim EC	Carfentrazone-Ethyl	FMC
AMS	Ammonium Sulfate	Several
Authority MTZ	Sulfentrazone + Metribuzin	FMC
Authority Assist	Sulfentrazone + Imazethapyr	FMC
Authority Broadleaf	N/A	FMC
Authority First	Sulfentrazone + Cloransulam-methyl	FMC
BAS 94461H	N/A	BASF
Basis	Rimsulfuron + Thifensulfuron	Dupont
Balance Flexx	Isoxaflutole	Bayer
Banvel	Dicamba	Micro-Flo
Basagran	Bentazon	BASF
Beyond	Imazamox	BASF
Bicep II Magnum	Atrazine + S-Metolachlor	Syngenta
Blazer	Acifluorfen	UPI
Bolero	Thiobencarb	Valent
Boundary	Metribuzin + Metolachlor	Syngenta
Broadhead	Quinclorac + Carfentrazone-Ethyl	FMC
Cadet	Fluthiacet-methyl	FMC
Callisto	Mesotrione	Syngenta
Canopy	Chlorimuron Ethyl	Dupont
Caparol	Prometryn	Syngenta
Capereno	Thiencarbazone-methyl + Tembotrione	Bayer
CHA-044	N/A	Cheminova
Cinch	Metolachlor	Dupont
Clarity	Dicamba	BASF
Classic	Chlorimuron-Ethyl	DuPont

Clearpath	Imazethapyr + Quinclorac	BASF
Clincher	Cyhalofop-butyl	Dow Agrosciences
Cobra	Lactofen	Valent
COC	Crop Oil Concentrate	Several
Command	Clomazone	FMC
Cornerstone	Glyphosate	Agrilience
Corvus	Thiencarbazone-methyl + Isoxaflutole	Bayer
Cotoran	Fluometuron	Syngenta
Cotton Pro	Prometryn	MANA
Dawn	Fomesafen	Cheminova
Degree Xtra	Acetochlor + Atrazine	Monsanto
Direx	Diuron	Griffin
Distinct	Diflufenzopyr + Dicamba	BASF
Dual II Magnum	Metolachlor	Syngenta
Dual Magnum	Metolachlor	Syngenta
Duet	Propanil + Bensulfuron	RiceCo
Dyne-A-Pak	Non-Ionic Surfactant	Helena
Edition	N/A	Cheminova
Envoke	Trifloxysulfuron-Sodium	Syngenta
Envive	Chlorimuron + Thifensulfuron + Flumioxazin	Dupont
ET	Pyraflufen Ethyl	Nichino America
Express	Tribenuron	Dupont
F 7436-13	N/A	FMC
F 9007	N/A	FMC
F 9071	N/A	FMC
Facet	Quinclorac	BASF
Firstrate	Cloransulam-Methyl	Dow Agrosciences
Flexstar	Fomesafen	Syngenta
Flexstar GT	Fomesafen + Glyphosate	Syngenta
Gangster	Flumioxazin + Cloransulam-methyl	Valent
Goal	Oxyfluorfen	Dow Agrosciences
Glyfos X-tra	Glyphosate	Cheminova
Gensis Extra	N/A	Monsanto
Gramoxone Inteon	Paraquat Dichloride	Syngenta
Grandstand	Triclopyr	Dow Agrosciences
Grasp	Penoxsulam	Dow Agrosciences
Guardsman Max	Dimethenamid + Atrazine	BASF
GWN 3404	N/A	Gowan

Halex GT	S-metolachlor + Mesotrione + Glyphosate	Syngenta
Harmony Extra	Thifensulfuron-methyl + Tribenuron-methyl	Dupont
Harness	Acetochlor	Monsanto
Harness Extra	Acetochlor + Atrazine	Monsanto
Harass	N/A	Cheminova
HM 03351	N/A	Helena
HM 2010A	N/A	Helena
Ignite 280	Glufosinate	Bayer
Impact	Topramezone	AMVAC
Integrity	Saflufenacil + Dimethenamid	BASF
IR 5880	N/A	Isagro
IR 5890	N/A	Isagro
Intrro	Alachlor	Monsanto
Laudis	Tembotrione	Bayer
Layby Pro	Linuron + Diuron	Dupont
Lexar	Atrazine + S-Metolachlor + Mesotrione	Syngenta
Linex	Linuron	Dupont
Lumax	Atrazine + S-Metolachlor + Mesotrione	Syngenta
Londax	Bensulfuron	Dupont
Me-Too-Lachlor	Metolachlor	Drexel
Micro-Tech	Alachlor	Monsanto
Milo-Pro	Propazine	Albaugh
MSMA	Monosodium Acid Methanearsonate	UAP
MON 63410	Acetochlor	Monsanto
MSO	Methylated Seed Oil	Several
Newpath	Imazethapyr	BASF
NIC-IT	Nicosulfuron	Cheminova
Nimble	N/A	Cheminova
NIS	Non-Ionic Surfactant	Several
Outlook	Dimethenamid-P	BASF
Option	Foramsulfuron	Bayer
Paramount	Quinclorac	BASF
Parrlay	Metolachlor	Monsanto
Parallel	Metolachlor	MANA
Peak	Prosulfuron	Syngenta
Prefix	S-metolachlor + Fomesafen	Syngenta
Permit	Halosulfuron-Methyl	Gowan
Poast Plus	Sethoxydim	Micro-Flo

Propanil	Propanil	Several
Prowl H2O	Pendimethalin	BASF
PyriMax	Pyrithiobac Sodium	MANA
Python	Flumetsulam	
Rage D-Tech	Carfentrazone + 2,4-D Ester	FMC
Rebel	Penoxsulam	Dow Agrosiences
Reflex	Fomesafen	Syngenta
Regiment	Bispyribac-Sodium	Valent
Resource	Flumiclorac Pentyl Ester	Valent
Resolve	Rimsulfuron	Dupont
RiceBeaux	Propanil + Thiobencarb	RiceCo
RiceEdge	Propanil + Halosulfuron	RiceCo
RicePro	Propanil + Quinclorac	RiceCo
RiceShot	Propanil	RiceCo
Ricestar HT	Fenoxaprop	Bayer
Roundup Original Max	Glyphosate	Monsanto
Roundup PowerMax	Glyphosate	Monsanto
Roundup WeatherMax	Glyphosate	Monsanto
RH 061908	N/A	RiceCo
Rhythm	Fomesafen	Cheminova
Sencor	Metribuzin	Bayer
Select 2E	Clethodim	Valent
Select Max	Clethodim	Valent
Scepter	Imazaquin	BASF
Sequence	S-Metolachlor + Glyphosate	Syngenta
Sharpen	Saflufenacil	BASF
Spartan	Sulfentrazone	FMC
Stalwart	Metolachlor	Sipcam Agro
Stam M-4	Propanil	UPI
Staple	Pyrithiobac Sodium	Dupont
Steadfast	Nicosulfuron + Rimsulfuron	Dupont
Storm	Bentazon + Acfluorfen	BASF
Strada	Orthosulfamuron	Isagro
Status	Diflufenzopyr + Dicamba	BASF
Superwham	Propanil	RiceCo
Suprend	Trifloxysulfuron-Sodium + Prometryn	Syngenta
Synchrony XP	Chlorimuron ethyl + Thifensulfuron methyl	Dupont
Touchdown Total	Glyphosate	Syngenta

Treflan	Trifluralin	Helena
Valor SX	Flumioxazin	Valent
Ultra Blazer	Acifluofen	UPI
Valor XLT	Flumioxazin +Chlorimuron ethyl	Valent
V-10142	N/A	Valent
V-10233	N/S	Valent
Yukon	Halosulfuron + Dicamba	Gowan Co

Evaluation List

<u>Common Name</u>	<u>Bayer Code</u>
Barnyardgrass	ECHCG
Amazon Sprangletop	LEFPA
Bluegrass, Annual	POAAN
Broadleaf Signalgrass	BRAPP
Chickweed	STEME
Eclipta	ECLAL
Henbit	LAMAM
Hemp Sesbania	SEBEX
Johnsongrass	SORHA
Horseweed	ERICA
Palmer Amaranth	AMAPA
Morningglory, Species	IPOSS
Prickly Sida	SIDSP
Red Rice	ORYRU
Velvetleaf	ABUTH
Phytotoxicity - General	PHYGEN
Phytotoxicity - Necrosis	PHYNEC
Phytotoxicity - Chlorosis	PHYCHL
Phytotoxicity - Stunting	PHYSTU
Plant Counts (Parts)	COUPLA
Control / Efficacy	CONTRO
Plant Height	HEIGHT
Dry Weight	WEIDRY
Percent Moisture	MOICON
Converted Yield	YIELD

2010 Rohwer Weather Data (WatchDog 2900 ET - Weather Station)

Date	Low Temp.	High Temp.	Mean Temp.	RH	Wind Spd.	Wind Dir.	Baro	Soil Temp.	Soil Moist.	Rain	Solar Rad.
	°F	°F	°F	%	mph	Card.	in-Hg	°F	% VWC	in/day	wat/m2
16-Apr	62.8	82	73	51	1.8	SW	30	75.7	3.3	0.04	133.4
17-Apr	58.3	79.8	68.2	56	4.7	NE	30	71.6	3.6	0	339.8
18-Apr	59	74.8	66.1	27	7.3	NE	30	69.9	3.6	0	269.9
19-Apr	55.6	72.9	63.7	44	2.4	N	30	68.7	3.5	0.03	248.1
20-Apr	47	75.9	62.4	50	2.3	NW	30	68.5	3.6	0	387.2
21-Apr	48.8	80.6	66.1	53	1.5	SW	29.8	70.1	3.6	0	380.6
22-Apr	56.6	84.8	72.5	55	4.5	S	29.7	72.3	3.6	0	342.2
23-Apr	65.6	78.9	69.9	84	6.5	SE	29.7	71	3.5	0.32	99
24-Apr	64.1	77.8	72.4	77	9.9	SW	29.5	70.5	24.8	1.64	283
25-Apr	58	76.2	66.7	69	8.7	SW	29.5	67.1	19.5	0	327.9
26-Apr	56.2	72.2	64.2	70	6.6	NW	29.7	65.4	14.9	0	345.8
27-Apr	49.2	66.1	58.5	60	7.3	NW	29.9	63.8	11.9	0	357.7
28-Apr	45.4	73.1	60.7	64	2.3	S	30	65.1	10.8	0	388.8
29-Apr	58.9	84	72.2	53	10.2	S	29.7	68.8	10.5	0	385
30-Apr	67.3	79.5	73.7	83	8.4	N	29.6	70.7	10.1	0	104.3

2010 Rohwer Weather Data (WatchDog 2900 ET - Weather Station)

Date	Low Temp	High Temp.	Mean Temp.	RH	Wind Spd.	Wind Dir.	Baro	Soil Temp.	Soil Moist.	Rain	Solar Rad.
	°F	°F	°F	%	mph	Card.	in-Hg	°F	% VWC	in/day	wat/m2
1-May	72.1	83.9	77.8	89	10.3	NE	29.5	73.3	15.6	0.87	140
2-May	66	81.1	75.4	80	5.1	S	29.6	74.1	17.6	0	226.5
3-May	57.6	86.6	73.4	61	0.8	E	29.8	72.7	15.1	0.01	396.9
4-May	59.8	88.5	74.7	55	2.4	N	29.8	73.6	12.7	0	408.4
5-May	64.2	91.3	77.3	52	4.7	E	29.7	75.6	11.6	0	407.2
6-May	64.7	92.1	78.3	50	5	NE	29.8	77.4	10.8	0	397.2
7-May	68.4	90.3	77.5	63	10	NE	29.7	77.7	9.9	0	302.4
8-May	59.2	73.8	66.5	34	7.7	SW	30.2	75.4	9	0	411.8
9-May	56	64.6	59.1	56	5	NW	30.3	69.7	8	0.02	169.6
10-May	54.6	74.8	63.3	77	7.9	NW	30	67.1	7.5	0.15	259.1
11-May	70	89.1	78.4	67	10	NE	29.8	72.6	7.8	0	322.4
12-May	73.1	89.5	80.7	64	9	N	29.8	76.8	7.7	0	321.5
13-May	73.7	86.6	79.7	73	4.3	N	29.9	77.6	7.3	0	204
14-May	70.6	90.1	80.5	67	2.4	N	30	79.2	7.1	0	334.7
15-May	69.4	85.6	76.4	78	4	N	29.9	79.3	6.9	0.06	227.5
16-May	65.6	87.1	73.3	84	1.8	S	29.9	77.1	6.8	0.31	256.1
17-May	61.6	85.6	72.4	80	2	S	29.9	75.5	6.7	0.01	351.8
18-May	63	79.9	70.5	70	3.5	SW	29.9	75.4	6.7	0	377.6
19-May	58	83.1	71.4	64	3.6	NW	29.8	75.2	6.4	0	341
20-May	63.9	78.5	71	77	4.7	NE	29.8	74.6	6	0.03	160
21-May	64.2	84.6	73.3	89	2.1	E	29.9	73.8	5.9	0.39	237.4
22-May	68.5	90.3	80	77	3.7	N	29.8	76.6	6	0.01	305.3
23-May	74.3	90.7	82	72	3.1	N	29.9	79.2	5.8	0	338.4
24-May	71.1	94.8	82.2	66	2.2	N	29.8	81.3	5.4	0	376.7
25-May	69.2	90.3	80	69	1.7	NW	29.8	81.6	5	0	307.3
26-May	72	89.2	78.6	74	1.4	NW	29.9	80.8	4.9	0.14	281.6
27-May	68	90.8	79.6	70	2.4	SW	29.8	79.7	4.9	0	368.4
28-May	69.3	90.9	80.8	66	3.1	SW	29.7	80.6	4.8	0	341.9
29-May	69.4	90	78.9	62	2.1	W	29.7	80.9	4.7	0	295.2
30-May	68.4	87.9	76.9	72	1.6	N	29.7	80.4	4.6	0	290.2
31-May	69.4	93.1	81.3	66	1.3	NE	29.8	80.7	4.6	0	350.9

2010 Rohwer Weather Data (WatchDog 2900 ET - Weather Station)

Date	Low Temp.	High Temp.	Mean Temp.	RH	Wind Spd.	Wind Dir.	Baro	Soil Temp.	Soil Moist.	Rain	Solar Rad.
	°F	°F	°F	%	mph	Card.	in-Hg	°F	% VWC	in/day	wat/m2
1-Jun	72.9	95.3	83.6	66	2	N	29.7	82.4	4.5	0	310.7
2-Jun	72.5	93.5	82.3	69	3.3	NE	29.7	83	4.5	0	345.5
3-Jun	74.2	90.7	81.4	73	3.3	NE	29.6	83.1	4.4	0	312.7
4-Jun	74.2	90.1	81.1	72	2.9	N	29.7	83.1	4.3	0.02	302.1
5-Jun	73	86.8	79.7	77	3.4	N	29.7	82.1	4.3	0.01	232.8
6-Jun	74.3	96.2	84.8	69	3.4	S	29.8	82.7	4.2	0	304.9
7-Jun	68.1	90.9	81.2	54	1.7	NW	29.9	83.4	4.2	0	398.3
8-Jun	72.9	95.2	84.3	65	3.3	NE	29.8	84.4	4.2	0	338.5
9-Jun	71.3	92.5	80.8	77	2.3	NE	29.9	83.7	4.2	0.86	237
10-Jun	72.5	89.9	80.9	81	3.5	NE	29.8	81.3	8.3	0.01	315.7
11-Jun	78.3	83	80.2	83	4.7	NE	29.8	81.2	8.4	0	127.4
12-Jun	72.7	92.8	79.2	79	2.7	N	29.8	79.7	20.2	0.02	249.8
13-Jun	71.4	94.9	82.5	75	2.1	N	29.8	80	19	0.15	295.6
14-Jun	76.4	92.8	83	75	1.8	N	29.8	81	18.1	0	275.5
15-Jun	76.3	93.3	84.3	71	3.5	N	29.8	82	17.2	0	368.1
16-Jun	77.2	95	84.9	65	4.7	N	29.8	82.8	16.4	0	383.4
17-Jun	76.8	96.8	85.8	63	3.9	N	29.8	84.2	15.8	0	385.1
18-Jun	75.7	96.4	85.7	64	3.2	N	29.8	85.6	15.5	0	384.9
19-Jun	76	97.3	86.2	63	3.2	N	29.8	87	15.3	0	384.2
20-Jun	76.2	96.2	85.8	65	2.3	N	29.8	88	15.1	0	380.6
21-Jun	75.8	97.7	86.6	63	2.3	N	29.7	88.8	15	0	379.8
22-Jun	75.9	99.9	87.8	61	2.2	N	29.7	89.7	14.8	0	385.5
23-Jun	76.5	102.4	84.6	74	1.9	N	29.7	89	14.6	0.46	268.6
24-Jun	76.1	96	85.7	72	1.7	N	29.7	85.4	14.2	0	368.4
25-Jun	73.3	96.8	85.7	63	1	N	29.7	85.4	14	0	376.6
26-Jun	73.6	98.7	86.3	66	0.6	N	29.7	86.9	14.1	0	354.5
27-Jun	74.8	103	88	64	0.9	N	29.7	88.4	14.2	0	374.7
28-Jun	77.9	97.5	86.9	70	1.9	N	29.7	88.9	14.1	0	299.8
29-Jun	72.2	91.6	83	53	2.1	N	29.7	87.8	13.9	0	338.4
30-Jun	68	98.3	81.5	66	2.4	N	29.7	86.8	13.7	0.13	354.9

2010 Rohwer Weather Data (WatchDog 2900 ET - Weather Station)

Date	Low Temp.	High Temp.	Mean Temp.	RH	Wind Spd.	Wind Dir.	Baro	Soil Temp.	Soil Moist.	Rain	Solar Rad.
	°F	°F	°F	%	mph	Card.	in-Hg	°F	% VWC	in/day	wat/m2
1-Jul	69	92.8	81.3	70	1.5	N	29.7	85	13.5	0	374.8
2-Jul	70.8	94.6	83.2	61	0.9	N	29.8	86.1	13.4	0	360.2
3-Jul	70.3	94.8	83.7	64	0.6	N	29.9	87	13.4	0	329.1
4-Jul	75	96.9	85.5	66	2.6	N	29.8	88.2	13.5	0	301.2
5-Jul	70.2	91.7	81.7	70	1.8	NW	29.8	83.9	12.3	0	384.2
6-Jul	73.2	89.2	79.6	84	1.3	NW	29.8	83.5	14.6	0.71	269.3
7-Jul	74.7	87.2	78.9	90	2	N	29.9	82.6	37.3	0.09	253.3
8-Jul	73.2	93.7	83.2	80	0.2	N	29.9	83.5	21.7	0.01	394.3
9-Jul	75.3	90.5	82.7	83	1.5	S	29.9	84.4	18.5	0	330
10-Jul	76.3	89.2	80.4	88	1.1	E	29.9	83.8	17.8	0.22	257
11-Jul	74.3	89.9	81.1	87	1.9	E	29.8	83.9	7.6	0	285
12-Jul	77.4	92.5	84.4	77	3.6	NE	29.7	84.7	5.9	0	369.7
13-Jul	75.6	91	83.6	78	2.1	NE	29.7	84.9	5.5	0	269.7
14-Jul	77.7	95.3	85.4	75	1.5	NE	29.8	85.5	5.3	0	348.8
15-Jul	74.3	98	86.3	74	0.8	E	29.8	86	3.8	0	389.8
16-Jul	73	100.2	85.7	75	1.1	N	29.8	86	9.7	1.64	382.8
17-Jul	74.6	88.3	80.8	86	3.1	NE	29.9	84.5	36.3	0	358.5
18-Jul	75.9	91.6	82.9	81	2.6	NE	29.9	85.7	36.4	0	399.8
19-Jul	75	90.2	81.9	82	4.5	NE	29.9	85.9	36.2	0	357.8
20-Jul	75.3	93.1	83.6	75	3.4	NE	29.9	85.7	35.8	0	410.2
21-Jul	76.1	94.5	85.1	74	1.3	N	29.9	86.3	35.3	0	389.3
22-Jul	76.4	95.5	85.5	70	2.1	NE	29.9	86.5	34.5	0	411.2
23-Jul	73.7	96	85	68	2.3	NE	29.9	85.8	33.5	0	415.5
24-Jul	75.3	95	84.4	74	0.7	NE	29.9	85.1	32.4	0	227.9
25-Jul	77	93	85	75	1	NE	29.9	84.8	31.7	0	236.6
26-Jul	73.9	95.5	81.2	85	1.8	NE	29.9	84.4	32.9	0.97	262.1
27-Jul	74.2	93.5	80.7	86	1.8	NE	29.9	83.5	40	0	315.9
28-Jul	74.6	91.2	80.9	84	2.4	NE	30	83.4	38.1	0	321.5
29-Jul	74.7	95.2	84.4	77	1.5	S	29.9	84	36.5	0	410.8
30-Jul	76.1	97.1	86.2	72	1.1	S	29.8	85.3	34.7	0	408.1
31-Jul	74.9	100.9	87.1	70	0.8	NE	29.7	86.7	32.8	0	410.5

2010 Rohwer Weather Data (WatchDog 2900 ET - Weather Station)

Date	Low Temp.	High Temp.	Mean Temp.	RH	Wind Spd.	Wind Dir.	Baro	Soil Temp.	Soil Moist.	Rain	Solar Rad.
	°F	°F	°F	%	mph	Card.	in-Hg	°F	% VWC	in/day	wat/m2
1-Aug	78	104.9	90.2	67	0.3	S	29.7	90.1	31.6	0	412.2
2-Aug	79.8	105.4	91.6	68	0.5	S	29.7	93.1	30.9	0	405.5
3-Aug	80.9	105.4	91.8	64	0.6	S	29.8	94.5	30.1	0	384.4
4-Aug	81.2	105.5	88.9	70	0.7	S	29.7	94.5	29.3	0	299.8
5-Aug	74.3	98.4	84.9	77	3.3	NE	29.7	91.7	30.3	1.62	273.8
6-Aug	74	92.9	81.4	84	0.7	SW	29.8	87.3	38.9	0	284.6
7-Aug	75.2	86.3	79.5	93	0.8	W	29.8	85.4	39.1	2.17	186.4
8-Aug	76.8	97	84.8	81	0.7	NE	29.7	86.7	38.8	0	336.6
9-Aug	78.5	100.2	87.9	71	1	NE	29.7	87.7	36.8	0	416.5
10-Aug	77.1	97.4	84.3	80	1	NE	29.8	87.3	34.7	0	357.7
11-Aug	77.2	98.6	87.7	75	0.2	N	29.7	87.9	32.5	0	387.9
12-Aug	79.5	101.3	89.5	73	0.2	SE	29.6	89.5	30.6	0	367.4
13-Aug	79.8	103.4	89.4	72	0.9	NE	29.6	91.2	29.1	0	368
14-Aug	78.8	103.1	88.6	74	1.4	E	29.7	92.2	27.9	0	352.2
15-Aug	79.8	104.2	90.8	67	1.6	S	29.7	93.3	27	0	366.5
16-Aug	77.5	94.3	84.9	70	3.9	W	29.8	92.5	25.8	0	346.6
17-Aug	73.6	94.6	83.1	71	2.5	W	29.8	91	24.5	0	332.9
18-Aug	77.9	96.4	85.4	78	1.5	NE	29.7	91.2	23.7	0	295.3
19-Aug	76.7	99.3	86.6	74	1.2	NE	29.7	92.3	23	0	344.3
20-Aug	77.5	98.4	86.7	71	3.2	NE	29.7	92.4	22.2	0	314.4
21-Aug	77.9	101.3	88.9	63	3.1	E	29.7	93.3	21.8	0	355.8
22-Aug	77.3	100.4	86.6	69	1.4	W	29.7	94.1	21.5	0	315.6
23-Aug	76	96.5	85.3	67	1.4	W	29.7	93	21	0	330.9
24-Aug	68.6	93	80.9	61	2.1	SW	29.8	91.2	20.3	0	346.3
25-Aug	70	90.7	79.9	64	2.6	W	29.9	89.3	19.7	0	287.2
26-Aug	67.6	90.2	78.2	53	2.7	W	29.9	88.1	19.1	0	343.7
27-Aug	62.2	92.7	78	54	2.2	W	29.9	87.2	18.6	0	342.6
28-Aug	68.2	93.7	81	65	2.7	N	29.8	87.9	18.4	0	285.7
29-Aug	72.8	80.7	76.2	88	2.7	NW	29.9	84.5	21.1	0.63	134.9
30-Aug	74.9	89.8	80.9	79	2.4	N	30	82.4	26.8	0	207.1
31-Aug	73.6	93	82.3	72	2	N	29.9	83.3	24.2	0	319.2

2010 Rohwer Weather Data (WatchDog 2900 ET - Weather Station)

Date	Low Temp.	High Temp.	Mean Temp.	RH	Wind Spd.	Wind Dir.	Baro	Soil Temp.	Soil Moist.	Rain	Solar Rad.
	°F	°F	°F	%	mph	Card.	in-Hg	°F	% VWC	in/day	wat/m2
1-Sep	72.9	93.1	82.1	66	2.7	N	29.8	84.9	22.1	0	303.9
2-Sep	73.4	94.6	82.8	62	2	NE	29.8	86.2	20.7	0	291.2
3-Sep	60.7	86.9	77.5	65	2.8	SW	29.9	85.4	19.7	0	243.1
4-Sep	54.8	84.9	69.2	60	1.2	SW	30	82.6	18.5	0	343.8
5-Sep	51.6	89.2	70.4	64	1.3	NW	29.9	81.6	17.8	0	336.4
6-Sep	60.9	94.8	79.6	56	4	N	29.8	83.1	17.7	0	321.7
7-Sep	72.4	94	81.5	72	2.6	NE	29.9	85.4	17.7	0	216.1
8-Sep	73	89	78.6	83	2.2	W	29.9	84.2	17.3	0.01	169.2
9-Sep	73.3	97.5	83.8	65	3.9	NE	29.7	84.9	17.2	0	255.7
10-Sep	75.8	98.1	86.1	62	3.4	NE	29.7	87.3	16.9	0	273.2
11-Sep	75.3	95	81.5	76	2.5	S	29.8	86.6	16.5	0	178.7
12-Sep	66.8	90.4	79.1	59	2.7	W	30	85.8	16.2	0	316.6
13-Sep	55.2	89.9	72.5	56	1.4	NW	30	83.8	15.4	0	323
14-Sep	56.4	95.1	76.1	56	0.8	NW	29.9	83.6	15.1	0	299.7
15-Sep	65.1	97.8	81.2	52	2.1	N	29.8	85.1	14.9	0	283.7
16-Sep	68.5	99.4	83.3	54	2.3	E	29.8	86.4	14.6	0	282.7
17-Sep	69.3	98.1	83.1	62	1.2	W	29.8	87.1	14.3	0	269.3
18-Sep	67	98.1	82.2	54	1.4	W	29.9	87.4	14	0	289.8
19-Sep	58	99.1	78	55	0.9	NW	29.9	86	13.4	0	304.9
20-Sep	58	100.4	79	56	0.7	NW	29.9	85.4	13	0	290.3
21-Sep	68.9	96.3	83.2	52	2.5	N	29.8	86.3	12.9	0	263.4
22-Sep	72.4	95.8	83.6	52	3.3	N	29.9	86.8	12.7	0	282.3
23-Sep	71.1	94.7	82.8	55	4.2	N	29.9	86.6	12.4	0	278.2
24-Sep	71.3	98.1	83.4	60	3.3	NE	29.9	86.8	12.2	0	218.6
25-Sep	69	79.3	74.1	82	2.1	W	29.9	83.2	11.8	0.18	146.2
26-Sep	60.3	78.4	68.6	69	4.3	SW	29.8	78.5	11.5	0	207.2
27-Sep	54.2	77.6	63.8	67	3.8	SW	29.9	76.4	11.3	0	278.8
28-Sep	49.8	84.6	66	64	1.3	S	29.8	76.5	11.4	0	272.4
29-Sep	51.4	82.6	67.6	61	1.2	SW	29.7	77.1	11.5	0	273.3
30-Sep	50	86.5	70.4	57	3.4	SW	29.8	77.2	11.4	0	267.6

2010 Marianna Weather Data (WatchDog 2900 ET - Weather Station)									
Date	Low Temp.	High Temp.	Mean Temp.	RH	Wind Spd.	Wind Dir.	Baro	Rain	Solar Rad.
	°F	°F	°F	%	mph	Card.	in-Hg	in/day	wat/m2
15-Jun	79.2	98.9	90.3	51	4	N	29.9	0.05	256.5
16-Jun	73.8	96.9	84.5	68	1.9	N	30	0	313.9
17-Jun	73.8	98	85.2	70	2	N	29.9	0	335.9
18-Jun	73.6	99.3	86.3	70	1.7	NE	29.9	0	343.8
19-Jun	75.8	99.3	87.4	67	1.4	NE	30	0	331.5
20-Jun	73.7	100	87.2	67	0.6	W	29.9	0	356.8
21-Jun	74.9	99.3	87.7	61	1.1	NW	29.9	0	373.6
22-Jun	72.7	97.7	87.2	62	1.3	NW	30	0	369.1
23-Jun	76.3	94	85.2	69	3.5	NW	30	0	337.4
24-Jun	76.4	96.3	86	70	2.1	N	29.9	0	329.8
25-Jun	74.9	96.6	85.5	69	2.1	NW	29.9	0.05	317.6
26-Jun	75.9	95.7	84.4	74	2.3	N	29.9	0	354.6
27-Jun	75.6	94.7	85.2	67	5.4	N	29.8	0	376.6
28-Jun	75.3	96	84.6	68	2.9	N	29.8	0.32	359.5
29-Jun	75	87.3	79.3	83	1.1	S	29.9	0.21	145.9
30-Jun	73.6	88.9	80.2	63	4.4	S	30	0	354.1

2010 Marianna Weather Data (WatchDog 2900 ET - Weather Station)									
Date	Low Temp.	High Temp.	Mean Temp.	RH	Wind Spd.	Wind Dir.	Baro	Rain	Solar Rad.
	°F	°F	°F	%	mph	Card.	in-Hg	in/day	wat/m2
1-Jul	69.7	90.9	79	60	4	S	30	0	356.8
2-Jul	66.9	92.6	79.1	58	1.2	SW	30	0	396.8
3-Jul	67	93.4	81.3	70	2.6	N	29.9	0	331
4-Jul	74.6	91.5	82.4	58	3.2	NW	29.9	0	368.8
5-Jul	72.7	93.2	82.8	60	2.2	N	29.9	0	361.3
6-Jul	73.6	89.4	81	76	1.3	NW	29.9	0	253
7-Jul	73.9	92.7	82.5	74	2.4	NW	29.9	0	325.3
8-Jul	72.2	94.5	83.8	71	0.9	NE	30	0	356.1
9-Jul	73.3	90.3	80.9	81	1.9	E	29.9	0.03	253.5
10-Jul	73.6	91.3	80.9	82	0.9	NE	29.9	0.01	234.2
11-Jul	74.5	91.6	81.7	84	2.2	N	29.8	0.01	253.4
12-Jul	75	95.4	82.4	80	2.6	N	29.7	0.02	242.1
13-Jul	73.4	88.5	79.9	88	1.5	N	29.8	0.76	271.6
14-Jul	76.2	95.7	85.2	80	1.2	NE	29.9	0	316.8
15-Jul	75.5	96.7	85.7	77	1.4	NE	29.9	0.01	313
16-Jul	72.4	95.2	83.3	78	1.7	W	29.9	0.1	324.6
17-Jul	73.2	93	81.3	84	1.6	N	29.9	0	282.2
18-Jul	76.2	92.9	83	81	2.2	N	29.9	0	301.4
19-Jul	75.7	92.9	83.6	77	2.9	N	29.9	0.01	327.8
20-Jul	75.3	93.8	83.7	74	2.8	N	30	0	312.8
21-Jul	77.4	97.5	86.7	68	1.3	N	30	0	340.3
22-Jul	77.3	96	86	67	2.2	N	30	0	350.1
23-Jul	74.3	93.4	84.2	70	1.8	N	30	0	328.7
24-Jul	75.2	98	85.9	69	1	N	30	0	325.6
25-Jul	76.7	95.6	85.8	74	0.4	NE	29.9	0	271.8
26-Jul	73.3	92.2	81	84	1.2	N	29.9	0.14	212.7
27-Jul	72.5	91.7	80.3	84	1.2	N	30	0.01	277.6
28-Jul	74	89.5	80.8	84	1.8	N	30	0	271.8
29-Jul	75.3	95.3	84.3	80	1.2	E	30	0	344
30-Jul	75.9	96.9	85.6	76	1	E	29.9	0	339.9
31-Jul	74.4	99.3	86.6	71	1.2	NE	29.8	0	339.4

2010 Marianna Weather Data (WatchDog 2900 ET - Weather Station)

Date	Low Temp.	High Temp.	Mean Temp.	RH	Wind Spd.	Wind Dir.	Baro	Rain	Solar Rad.
	°F	°F	°F	%	mph	Card.	in-Hg	in/day	wat/m2
1-Aug	77	97.8	87.6	72	1.8	SW	29.8	0	323.1
2-Aug	79.1	102.8	89.4	66	0.9	SW	29.9	0	341.5
3-Aug	79.7	105.2	91.4	66	0.6	N	29.9	0	344.1
4-Aug	80.4	103	91	66	0.6	E	29.9	0	332.4
5-Aug	73.6	101.8	85.6	75	1.4	S	29.8	0.15	274.2
6-Aug	73.9	91.1	81	85	0.5	SW	29.8	0	199.9
7-Aug	74.5	90.5	81.3	84	0.4	NE	29.8	0	219.3
8-Aug	73.5	97.2	84.8	80	0.3	NE	29.8	0	294.4
9-Aug	79.2	99.2	85.6	80	0.3	SW	29.9	0.52	279.6
10-Aug	78.1	96	85.3	83	0.5	NW	29.9	0.02	291.3
11-Aug	77.1	98.6	87.4	79	0.3	E	29.8	0	336.7
12-Aug	77.6	98.9	88.6	72	0.3	NE	29.8	0	337.9
13-Aug	76.9	100.9	88.7	71	0.3	N	29.7	0	336.2
14-Aug	79	99.8	88.4	74	0.8	E	29.8	0	311
15-Aug	80.7	102.1	89.8	70	1.1	S	29.8	0	305.6
16-Aug	76.1	93.1	84	63	4.2	S	29.9	0	317.4
17-Aug	72.3	95	83.1	64	2.5	SW	29.9	0	292.3
18-Aug	76.1	96.4	84.3	78	0.9	S	29.8	0	235
19-Aug	73.7	99.5	86.3	71	0.8	NW	29.8	0	286.3
20-Aug	75.3	96.4	86.2	72	1.3	N	29.8	0	281.3
21-Aug	78.3	98	87.5	69	1.9	E	29.8	0	306.8
22-Aug	74.3	97	85.9	68	1.7	SW	29.8	0	299.6
23-Aug	71.1	96.3	83.7	64	1.6	SW	29.8	0	277.1
24-Aug	65.6	91.6	78.8	63	2.2	S	29.8	0	293.6
25-Aug	67.2	91.1	78.5	68	2.4	S	29.9	0	280
26-Aug	61.8	90.3	76.1	52	2.8	S	30	0	314.7
27-Aug	64.2	91.2	77.2	51	2.7	SW	29.9	0	309.4
28-Aug	66.9	92.8	81	62	2	W	29.9	0	272
29-Aug	74	84.5	77.6	80	3.1	NW	29.9	0	187
30-Aug	73.7	90.3	80.7	76	3	NW	30	0	191
31-Aug	73.2	92.9	81.2	70	1.6	NW	30	0	188.1

2010 Marianna Weather Data (WatchDog 2900 ET - Weather Station)									
Date	Low Temp.	High Temp.	Mean Temp.	RH	Wind Spd.	Wind Dir.	Baro	Rain	Solar Rad.
	°F	°F	°F	%	mph	Card.	in-Hg	in/day	wat/m2
1-Sep	72.9	94.2	82.3	62	1.9	N	29.9	0	264.3
2-Sep	70.7	92.5	80.6	70	0.6	N	29.9	0	201.7
3-Sep	55.7	87.3	75.2	67	2.3	SE	29.9	0	254.1
4-Sep	47.2	85.7	66.7	62	0.9	S	29.9	0	300.3
5-Sep	47.6	88.2	67.4	63	0.9	SW	29.9	0	296
6-Sep	60.1	94.4	79.4	46	2.3	N	29.9	0	280.5
7-Sep	72.8	91.3	78.5	82	0.9	E	30	0.07	162.7
8-Sep	73	80.5	75.4	93	0.8	S	29.9	0.46	89.3
9-Sep	73.7	91.8	82	72	2.4	NW	29.8	0	199.8
10-Sep	75.5	95.5	84	69	1.6	NE	29.8	0	260.1
11-Sep	73	89.6	78.5	82	0.8	SE	29.8	0.1	176
12-Sep	58.8	88.4	75	64	2.4	S	30	0	275
13-Sep	54.6	91.3	72.5	60	0.7	W	30	0	281
14-Sep	58.5	91	76.3	58	0.6	SW	29.9	0	213.7
15-Sep	69.4	97	81.2	53	0.9	N	29.9	0	268.6
16-Sep	71.1	93.3	81.9	61	1.5	N	29.9	0	219.1
17-Sep	69.7	94	81	63	2.4	SW	29.9	0	233
18-Sep	63.3	97.7	78.8	63	0.9	SW	30	0	270.4
19-Sep	56.3	98.7	76.6	67	0.6	SW	30	0	255.3
20-Sep	60.8	98.7	79.3	66	0.5	SW	29.9	0	266.9
21-Sep	64	96.6	80.5	54	1.3	N	29.9	0	244.8
22-Sep	68.3	95.6	81.7	54	1.6	N	29.9	0	260.8
23-Sep	71.8	94.5	81.9	54	2.6	N	30	0	249.4
24-Sep	72.2	92.7	80.8	65	1.7	N	30	0	185.3
25-Sep	62.4	85.8	74	61	1.8	S	29.9	0	170.6
26-Sep	51.9	77.7	64.5	69	3.9	S	29.8	0	169.9
27-Sep	50	79.6	62.5	67	2.6	S	29.8	0	234.6
28-Sep	43.6	83	63	66	0.5	N	29.7	0	262.4
29-Sep	50.5	83.7	66.1	60	1.1	S	29.7	0	238.7
30-Sep	45.3	89	68.5	59	2.6	S	29.7	0	238

2010 Marianna Weather Data (WatchDog 2900 ET - Weather Station)									
Date	Low Temp.	High Temp.	Mean Temp.	RH	Wind Spd.	Wind Dir.	Baro	Rain	Solar Rad.
	°F	°F	°F	%	mph	Card.	in-Hg	in/day	wat/m2
1-Oct	51.6	81.7	66.3	43	4	S	29.9	0	244.2
2-Oct	39.5	84.3	62.3	57	3.5	S	29.9	0	224.2
3-Oct	44.4	68.9	55.7	55	4.3	S	30.1	0	233.9
4-Oct	37.3	71.6	52.7	58	1.8	S	30.2	0	244.4
5-Oct	36.6	77.2	54.3	54	1	S	30.2	0	242.7
6-Oct	34.4	82	56.8	55	0.5	E	30.1	0	239.3
7-Oct	43.6	89.6	65.3	54	0.5	SE	30	0	230.9
8-Oct	52.3	92.3	70	59	0.5	S	29.9	0	227.7
9-Oct	50.2	94.7	71.3	56	0.2	S	29.9	0	224.4
10-Oct	54	94.5	73.2	52	0.3	NE	29.8	0	221.6
11-Oct	57.9	87.8	71.3	53	1.5	N	29.7	0	184.1
12-Oct	55.6	78.4	64.5	81	0.4	NW	29.8	0.08	115.4
13-Oct	49.2	83.2	65.6	73	1.8	S	29.9	0.01	217.1
14-Oct	42	77.6	59.9	51	1.4	S	30	0	235.8
15-Oct	43.7	83	61.6	47	1.1	S	29.9	0	229.2
16-Oct	40	83.4	60.4	50	0.4	NW	30	0	234.4
17-Oct	40	88.1	62.2	54	0.4	E	30	0	218.1
18-Oct	47.4	87.2	66.7	52	0.6	NE	29.8	0	213.1
19-Oct	50.9	68.3	60	72	1	S	29.8	0.01	69.7
20-Oct	43.5	80.1	60.7	63	0.2	E	29.9	0	217.1
21-Oct	43	80.6	64.1	61	0.2	E	29.9	0.04	84.9

Research Trial Summaries

University of Arkansas-Division of Agriculture

Integrity and Sharpen Corn Programs

Trial ID: HCO-20210
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description			
Crop 1: ZEAMX	Zea mays	Corn	
Variety: REV 25H49			Description: RR 2 / LL / Herculex / Cruiser
BBCH Scale: BCOR			Planting Date: 4/19/2010
Planting Method: PLANTD	planted		Rate, Unit: 34750 S/A
Depth, Unit: 1.5	IN		
Row Spacing, Unit: 38	IN	Spacing Within Row, Unit: 5.25	IN
Seed Bed: MEDIUM	medium	Soil Temperature, Unit: 67.7	F
Soil Moisture: GOOD	good	Emergence Date: 4/25/2010	
Harvest Date: 8/23/2010		Harvest Equipment: Almaco	
Harvested Width, Unit: 6.33	FT	Harvested Length, Unit: 28	FT
% Standard Moisture: 15.0		Moisture Meter: Almaco	
Weighing Equipment: Almaco			

Pest Description	
Pest 1 Type: W	Code: ECHCG Echinochloa crus-galli Common Name: Common barnyardgrass Artificial Population: X
Pest 2 Type: W	Code: AMAPA Amaranthus palmeri Common Name: Palmer amaranth Artificial Population: X
Pest 3 Type: W	Code: IPOSS Ipomoea sp. Common Name: Morning glory Artificial Population: X

Site and Design	
Plot Width, Unit: 12.66	FT
Plot Length, Unit: 28	FT
Plot Area, Unit: 354.48	FT ²
Replications: 4	
Site Type: FIELD	field
Experimental Unit: 1	PLOT plot
Tillage Type: CONTIL	conventional-till
Study Design: RACOB	Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED	single control randomized in each block

Maintenance				
No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	4/12/2010	Potassium	90	LB A/A
2.	4/28/2010	Nitrogen	125	LB A/A
3.	5/27/2010	Nitrogen	125	LB A/A

Soil Description			
Description Name: 2010 Corn		Texture: SIL	silt loam
% Sand: 16	% OM: 2.2	Soil Name: Sharkey & Desha Silt Loam	
% Silt: 65	pH: 6.7	Fert. Level: G	good
% Clay: 19	CEC: 13	Soil Drainage: G	good

Application Description		
	A	B
Application Date:	4/20/2010	5/19/2010
Time of Day:	11:00 AM	10:00 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS
Application Placement:	BROSIOI	BROFOL
Applied By:	JM	MS
Air Temperature, Unit:	62.5 F	69.2 F
% Relative Humidity:	50.40	63.97
Wind Velocity, Unit:	4.15 MPH	5.65 MPH
Wind Direction:	S	N
Dew Presence (Y/N):	N no	Y yes
Soil Temperature, Unit:	63.8 F	71.6 F
Soil Moisture:	NORMAL	NORMAL
Next Rain Occurred On:	4/21/2010	5/20/2010

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	V0	V5
Height, Unit:	0 IN	14 IN

Pest Stage At Each Application		
	A	B
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W
Height, Unit:	0 IN	5 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W
Height, Unit:	0 IN	10 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W
Height, Unit:	0 IN	3 IN

University of Arkansas-Division of Agriculture

Integrity and Sharpen Corn Programs

Trial ID: HCO-20210
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment		
	A	B
Appl. Equipment:	Multi Boom	Hand Boom
Equipment Type:	SPTRMO	SPRBAC
Operating Pressure, Unit:	50 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
% Coverage:	100	100
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Integrity and Sharpen Corn Programs

Trial ID: HCO-20210
Location: Rohwer, AR

Investigator: Kenneth Smith

						PLANT C	ECHCG Common barnyar-> PLANT P	AMAPA Palmer amaranth PLANT P	IPOSS Morning glory PLANT P	ECHCG Common barnyar-> PLANT P			
						5/19/2010	5/12/2010	5/12/2010	5/12/2010	5/21/2010			
						COUPLA	CONTRO	CONTRO	CONTRO	CONTRO			
						5 FT/Row	%	%	%	%			
						V2	V3 6"	V3 6"	V3 6"	V6 24"			
						1-3"	1-4"	1-2"	4-20"	4-20"			
						29 DA-A	22 DA-A	22 DA-A	22 DA-A	31 DA-A			
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check								10.0	0.0	0.0	0.0	0.0
2	Integrity	0.566	lb ai/a	13	oz/a	PREPRE A	PRE	10-14" Corn	11.5	100.0	99.8	100.0	97.5
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
3	Lexar	3.13	lb ai/a	72	oz/a	PREPRE A	PRE	10-14" Corn	11.8	100.0	100.0	77.5	100.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
4	Sharpen	0.0557	lb ai/a	2.5	oz/a	PREPRE A	PRE	10-14" Corn	10.0	96.8	99.3	99.8	93.3
	Prowl H20	1.43	lb ai/a	48	oz/a	PREPRE A	PRE	10-14" Corn					
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
5	Harness Xtra	2.1	lb ai/a	48	oz/a	PREPRE A	PRE	10-14" Corn	12.0	97.3	98.5	94.8	100.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
6	Sharpen	0.0557	lb ai/a	2.5	oz/a	PREPRE A	PRE	10-14" Corn	12.0	100.0	99.3	98.5	99.5
	Harness Xtra	2.1	lb ai/a	48	oz/a	PREPRE A	PRE	10-14" Corn					
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
7	Integrity	0.566	lb ai/a	13	oz/a	PREPRE A	PRE	10-14" Corn	11.0	98.0	99.3	98.8	93.8
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	Status	0.0875	lb ai/a	2.5	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
8	Prowl H20	1.43	lb ai/a	48	oz/a	PREPRE A	PRE	10-14" Corn	12.3	92.8	98.8	97.5	80.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
9	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	PRE	10-14" Corn	10.8	99.3	98.0	97.5	96.3
	AAtrex	1	lb ai/a	32	oz/a	PREPRE A	PRE	10-14" Corn					
	Roundup PowerMax	1.13	lb ai/a	32	oz/a	POSPOS B	PRE	10-14" Corn					
	AAtrex	1	lb ai/a	32	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
LSD (P=.05)						3.04	2.97	2.46	21.90	7.39			
Standard Deviation						2.08	2.04	1.69	15.00	5.06			
CV						18.49	2.34	1.92	17.67	6.0			
Bartlett's X2						11.045	4.594	6.865	68.954	16.819			
P(Bartlett's X2)						0.199	0.332	0.334	0.001*	0.005*			
Replicate F						1.958	1.734	0.737	1.129	0.608			
Replicate Prob(F)						0.1472	0.1868	0.5403	0.3570	0.6165			
Treatment F						0.679	1035.369	1530.848	18.882	162.506			
Treatment Prob(F)						0.7053	0.0001	0.0001	0.0001	0.0001			

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Integrity and Sharpen Corn Programs

Trial ID: HCO-20210
Location: Rohwer, AR

Investigator: Kenneth Smith

						AMAPA	IPOSS	ECHCG	AMAPA	IPOSS			
						Palmer amaranth	Morning glory	Common barnyard	Palmer amaranth	Morning glory			
						PLANT P	PLANT P	PLANT P	PLANT P	PLANT P			
						5/21/2010	5/21/2010	6/4/2010	6/4/2010	6/4/2010			
						CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
						%	%	%	%	%			
						V6 24"	V6 24"	V9 46"	V9 46"	V9 46"			
						5-25"	1-2"	8-18"	12-18"	10-18"			
						31 DA-A	31 DA-A	16 DA-B	16 DA-B	16 DA-B			
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	6	7	8	9	10
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Integrity	0.566	lb ai/a	13	oz/a	PREPRE A	PRE	10-14" Corn	100.0	99.5	93.0	95.8	94.5
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
3	Lexar	3.13	lb ai/a	72	oz/a	PREPRE A	PRE	10-14" Corn	100.0	96.5	98.5	97.8	98.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
4	Sharpen	0.0557	lb ai/a	2.5	oz/a	PREPRE A	PRE	10-14" Corn	100.0	96.3	99.8	98.8	98.0
	Prowl H20	1.43	lb ai/a	48	oz/a	PREPRE A	PRE	10-14" Corn					
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
5	Harness Xtra	2.1	lb ai/a	48	oz/a	PREPRE A	PRE	10-14" Corn	100.0	91.3	92.5	97.0	96.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
6	Sharpen	0.0557	lb ai/a	2.5	oz/a	PREPRE A	PRE	10-14" Corn	100.0	98.8	92.8	98.5	98.3
	Harness Xtra	2.1	lb ai/a	48	oz/a	PREPRE A	PRE	10-14" Corn					
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
7	Integrity	0.566	lb ai/a	13	oz/a	PREPRE A	PRE	10-14" Corn	100.0	96.3	94.8	98.0	97.3
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	Status	0.0875	lb ai/a	2.5	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
8	Prowl H20	1.43	lb ai/a	48	oz/a	PREPRE A	PRE	10-14" Corn	95.0	81.3	98.8	98.5	97.8
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
9	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	PRE	10-14" Corn	95.8	82.0	96.8	98.0	99.0
	AAtrex	1	lb ai/a	32	oz/a	PREPRE A	PRE	10-14" Corn					
	Roundup PowerMax	1.13	lb ai/a	32	oz/a	POSPOS B	PRE	10-14" Corn					
	AAtrex	1	lb ai/a	32	oz/a	POSPOS B	PRE	10-14" Corn					
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	PRE	10-14" Corn					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	PRE	10-14" Corn					
LSD (P=.05)						6.14	8.26	3.55	2.71	2.29			
Standard Deviation						4.21	5.66	2.43	1.86	1.57			
CV						4.79	6.87	2.86	2.14	1.81			
Bartlett's X2						0.305	19.292	11.233	3.021	2.664			
P(Bartlett's X2)						0.581	0.007*	0.129	0.883	0.914			
Replicate F						0.600	3.593	2.006	6.511	6.231			
Replicate Prob(F)						0.6213	0.0282	0.1399	0.0022	0.0028			
Treatment F						246.188	125.093	694.694	1232.203	1711.254			
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	0.0001			

University of Arkansas-Division of Agriculture

Integrity and Sharpen Corn Programs													
Trial ID: HCO-20210 Location: Rohwer, AR Investigator: Kenneth Smith													
Pest Code	Pest Name	AMAPA Palmer amaranth PLANT P 6/21/2010 CONTRO %	ECHCG Common barnyar-> PLANT P 8/23/2010 CONTRO %	AMAPA Palmer amaranth PLANT P 8/23/2010 CONTRO %	IPOSS Morning glory PLANT P 8/23/2010 CONTRO %	PLANT P 8/23/2010 MOICON %	PLANT P 8/23/2010 WEIDRY lb/plot Harvest	PLANT P 8/23/2010 YIELD BU Harvest					
Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	16	17	18	19	20	21	22
1	Untreated Check	0.566 lb ai/a	13 oz/a	PREPRE A	PRE	10-14" Corn	0.0	0.0	0.0	0.0	16.10	22.0850013	95.7
2	Integrity	0.77 lb ai/a	22 oz/a	POSPOS B	PRE	10-14" Corn	100.0	87.5	83.0	85.0	15.88	25.2400023	109.5
	Roundup PowerMax	0.224 lb ai/a	0.25 % v/v	POSPOS B		10-14" Corn							
	NIS	2.53 lb ai/a	5 gal/100 gal	POSPOS B		10-14" Corn							
	AMS												
3	Lexar	3.13 lb ai/a	72 oz/a	PREPRE A	PRE	10-14" Corn	100.0	83.8	88.8	85.0	15.60	25.1350027	109.5
	Roundup PowerMax	0.77 lb ai/a	22 oz/a	POSPOS B		10-14" Corn							
	NIS	0.224 lb ai/a	0.25 % v/v	POSPOS B		10-14" Corn							
	AMS	2.53 lb ai/a	5 gal/100 gal	POSPOS B		10-14" Corn							
4	Sharpen	0.0557 lb ai/a	2.5 oz/a	PREPRE A	PRE	10-14" Corn	100.0	86.3	83.8	85.0	15.83	22.6550030	98.4
	Prowl H20	1.43 lb ai/a	48 oz/a	PREPRE A	PRE	10-14" Corn							
	Roundup PowerMax	0.77 lb ai/a	22 oz/a	POSPOS B		10-14" Corn							
	NIS	0.224 lb ai/a	0.25 % v/v	POSPOS B		10-14" Corn							
	AMS	2.53 lb ai/a	5 gal/100 gal	POSPOS B		10-14" Corn							
5	Harness Xtra	2.1 lb ai/a	48 oz/a	PREPRE A	PRE	10-14" Corn	100.0	87.5	81.8	87.5	16.15	23.6075024	102.3
	Roundup PowerMax	0.77 lb ai/a	22 oz/a	POSPOS B		10-14" Corn							
	NIS	0.224 lb ai/a	0.25 % v/v	POSPOS B		10-14" Corn							
	AMS	2.53 lb ai/a	5 gal/100 gal	POSPOS B		10-14" Corn							
6	Sharpen	0.0557 lb ai/a	2.5 oz/a	PREPRE A	PRE	10-14" Corn	99.3	83.8	87.5	88.8	16.45	26.3275020	113.6
	Harness Xtra	2.1 lb ai/a	48 oz/a	PREPRE A	PRE	10-14" Corn							
	Roundup PowerMax	0.77 lb ai/a	22 oz/a	POSPOS B		10-14" Corn							
	NIS	0.224 lb ai/a	0.25 % v/v	POSPOS B		10-14" Corn							
	AMS	2.53 lb ai/a	5 gal/100 gal	POSPOS B		10-14" Corn							
7	Integrity	0.566 lb ai/a	13 oz/a	PREPRE A	PRE	10-14" Corn	100.0	86.8	87.5	85.0	16.68	26.0950038	112.2
	Roundup PowerMax	0.77 lb ai/a	22 oz/a	POSPOS B		10-14" Corn							
	Status	0.0875 lb ai/a	2.5 oz/a	POSPOS B		10-14" Corn							
	NIS	0.224 lb ai/a	0.25 % v/v	POSPOS B		10-14" Corn							
	AMS	2.53 lb ai/a	5 gal/100 gal	POSPOS B		10-14" Corn							
8	Prowl H20	1.43 lb ai/a	48 oz/a	PREPRE A	PRE	10-14" Corn	100.0	90.0	85.0	75.0	16.68	25.4425017	109.7
	Roundup PowerMax	0.77 lb ai/a	22 oz/a	POSPOS B		10-14" Corn							
	NIS	0.224 lb ai/a	0.25 % v/v	POSPOS B		10-14" Corn							
	AMS	2.53 lb ai/a	5 gal/100 gal	POSPOS B		10-14" Corn							
9	Dual Magnum	0.95 lb ai/a	16 oz/a	PREPRE A	PRE	10-14" Corn	100.0	83.8	82.5	86.3	15.93	25.4300028	110.5
	AAtrex	1 lb ai/a	32 oz/a	PREPRE A	PRE	10-14" Corn							
	Roundup PowerMax	1.13 lb ai/a	32 oz/a	POSPOS B		10-14" Corn							
	AAtrex	1 lb ai/a	32 oz/a	POSPOS B		10-14" Corn							
	NIS	0.224 lb ai/a	0.25 % v/v	POSPOS B		10-14" Corn							
	AMS	2.53 lb ai/a	5 gal/100 gal	POSPOS B		10-14" Corn							
LSD (P=.05)							0.73	9.24	6.90	8.82	1.109	4.96536161	21.56
Standard Deviation							0.50	6.33	4.73	6.04	0.760	3.40217171	14.77
CV							0.56	8.27	6.26	8.03	4.71	13.79	13.83
Bartlett's X2							0.0	3.361	2.448	2.674	10.085	9.482	10.308
P(Bartlett's X2)							.	0.762	0.931	0.913	0.259	0.303	0.244
Replicate F							1.000	1.909	0.154	2.155	1.593	17.778	18.132
Replicate Prob(F)							0.4098	0.1550	0.9264	0.1196	0.2171	0.0001	0.0001
Treatment F							17745.447	82.746	144.516	88.949	1.019	0.793	0.745
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.4483	0.6138	0.6520

University of Arkansas-Division of Agriculture

Integrity and Sharpen Corn Programs

Trial ID: HCO-20210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

COUPLA = count - plant / emergence - objective

CONTRO = control / burndown or knockdown

LODGIN = lodging

MOICON = moisture content

WEIDRY = weight - dry / dry matter content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.388722*21*(100-20)/85

University of Arkansas-Division of Agriculture

Corvus, Balance Flexx, Capreno, Laudis, & Ignite Weed Control Programs

Trial ID: HCO-20310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop 1:		ZeamX Zea mays Corn		Crop Description
Variety: REV 25H49		Description: RR 2 / LL / Herculex / Cruiser		
BBCH Scale: BCOR		Planting Date: 4/19/2010		
Planting Method: PLANTD planted		Rate, Unit: 34750 S/A		
Depth, Unit: 1.0 IN		Spacing Within Row, Unit: 5.25 IN		
Row Spacing, Unit: 38 IN		Soil Temperature, Unit: 67.7 F		
Seed Bed: MEDIUM medium		Emergence Date: 4/25/2010		
Soil Moisture: GOOD good		Harvest Equipment: Almaco		
Harvest Date: 8/23/2010		Harvested Length, Unit: 28 FT		
Harvested Width, Unit: 6.33 FT		Moisture Meter: Almaco		
% Standard Moisture: 15.0				
Weighing Equipment: Almaco				

Pest 1 Type: W		Pest Description
Code: ECHCG Echinochloa crus-galli		
Common Name: Common barnyardgrass		
Artificial Population: X		
Pest 2 Type: W		
Code: AMAPA Amaranthus palmeri		
Common Name: Palmer amaranth		
Artificial Population: X		
Pest 3 Type: W		
Code: IPOSS Ipomoea sp.		
Common Name: Morning glory		

Plot Width, Unit: 12.66 FT		Site and Design
Plot Length, Unit: 28 FT		Site Type: FIELD field
Plot Area, Unit: 354.48 FT ²		Experimental Unit: 1 PLOT plot
Replications: 4		Tillage Type: CONTIL conventional-till
		Study Design: RACOB L Randomized Complete Block (RCB)
		Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance				
No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	4/12/2010	Potassium	90	LB A/A
2.	4/28/2010	Nitrogen	125	LB A/A
3.	5/27/2010	Nitrogen	125	LB A/A

Description Name: 2010 Corn		Soil Description
% Sand: 16	% OM: 2.2	Texture: SIL silt loam
% Silt: 65	pH: 6.7	Soil Name: Sharkey & Desha Silt Loam
% Clay: 19	CEC: 13	Fert. Level: G good
		Soil Drainage: G good

Application Description			
	A	B	C
Application Date:	4/20/2010	5/3/2010	5/19/2010
Time of Day:	7:00 AM	2:00 PM	9:00 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PREPRE	EAPOCR	POSPOS
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	JM	JB	MS
Air Temperature, Unit:	62.5 F	74.1 F	69.2 F
% Relative Humidity:	50.40	63.69	63.97
Wind Velocity, Unit:	4.15 MPH	0.10 MPH	5.65 MPH
Wind Direction:	S	SE	NNW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	63.8 F	68.6 F	71.6 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	30	10	40
Next Rain Occurred On:	4/21/2010	5/10/2010	5/20/2010

Crop Stage At Each Application			
	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	V0	V2	V4
Height, Unit:	0 IN	4 IN	14 IN

Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Height, Unit:	0 IN	1 IN	5 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W
Height, Unit:	0 IN	1 IN	5 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W
Height, Unit:	0 IN	1 IN	3 IN

University of Arkansas-Division of Agriculture

Corvus, Balance Flexx, Capreno, Laudis, & Ignite Weed Control Programs

Trial ID: HCO-20310
 Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment			
	A	B	C
Appl. Equipment:	Multi Boom	Hand Boom	Hand Boom
Equipment Type:	SPTRMO	SPRBAC	SPRBAC
Operating Pressure, Unit:	50 PSI	PSI	PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2
% Coverage:	100.0	100.0	100.0
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes

University of Arkansas-Division of Agriculture

Corvus, Balance Flexx, Capreno, Laudis, & Ignite Weed Control Programs

Trial ID: HCO-20310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code	Pest Name	PLANT C	ECHCG	AMAPA	IPOSS	ECHCG							
		5/19/2010	Common barnyar>	Palmer amaranth	Morning glory	Common barnyar>							
Part Rated		PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date		5/13/2010	5/13/2010	5/13/2010	5/13/2010	5/20/2010							
Rating Type		COUPLA	CONTRO	CONTRO	CONTRO	CONTRO							
Rating Unit		5 FT/Row	%	%	%	%							
Crop Stage Majority		V2	V3 7"	V3 7"	V3 7"	V6 24"							
Pest Stage Majority			1-4"	1-3"	1-2"	4-20"							
Trt-Eval Interval		29 DA-A	10 DA-B	10 DA-B	10 DA-B	17 DA-B							
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check								12.8	0.0	0.0	0.0	0.0
2	Corvus AAtrex	0.115 1	lb ai/a lb ai/a	5.6 32	oz/a oz/a	PREPRE PREPRE	A A	Pre to V2 Pre to V2	12.5	98.8	98.8	97.5	100.0
3	Balance Flexx AAtrex	0.094 1	lb ai/a lb ai/a	6 32	oz/a oz/a	PREPRE PREPRE	A A	Pre to V2 Pre to V2	12.3	100.0	100.0	100.0	92.5
4	Capreno Roundup PowerMax COC	0.081 0.387 0.83	lb ai/a lb ae/a lb ai/a	3 11 1	oz/a oz/a % v/v	POSPOS POSPOS POSPOS	B B B	V1-V2 V1-V2 V1-V2	11.5	98.8	98.0	97.3	96.7
5	Capreno Roundup PowerMax COC	0.081 0.77 0.83	lb ai/a lb ae/a lb ai/a	3 22 1	oz/a oz/a % v/v	POSPOS POSPOS POSPOS	C C C	V3-V4 V3-V4 V3-V4	10.5	80.0	78.8	78.8	46.7
6	Corvus Laudis Roundup PowerMax MSO	0.0616 0.082 0.387 1	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 11 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre to V2 V3-V4 V3-V4 V3-V4	10.5	100.0	98.0	100.0	96.7
7	Balance Flexx Laudis Roundup PowerMax MSO	0.094 0.082 0.77 1	lb ai/a lb ai/a lb ae/a lb ai/a	6 3 22 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre V3-V4 V3-V4 V3-V4	11.3	98.8	98.8	97.5	80.0
8	Corvus Laudis Ignite 280	0.0616 0.082 0.402	lb ai/a lb ai/a lb ai/a	3 3 22	oz/a oz/a oz/a	PREPRE POSPOS POSPOS	A C C	Pre V3-V4 V3-V4	10.5	95.3	98.0	93.8	93.8
9	Balance Flexx Laudis Ignite 280	0.047 0.082 0.402	lb ai/a lb ai/a lb ai/a	3 3 22	oz/a oz/a oz/a	PREPRE POSPOS POSPOS	A C C	Pre V3-V4 V3-V4	11.8	95.3	94.3	93.0	71.3
10	Balance Flexx Capreno Roundup PowerMax COC	0.047 0.081 0.387 0.83	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 11 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre V3-V4 V3-V4 V3-V4	12.0	92.5	93.5	92.0	67.5
11	Lexar	2.78	lb ai/a	96	oz/a	PREPRE	A	Pre	10.3	98.5	98.5	97.8	96.3
12	Dual Magnum AAtrex Roundup PowerMax AAtrex COC	0.95 1 1.13 1 0.83	lb ai/a lb ai/a lb ae/a lb ai/a lb ai/a	16 32 32 32 1	oz/a oz/a oz/a oz/a % v/v	PREPRE PREPRE POSPOS POSPOS POSPOS	A A C C C	Pre Pre V3-V4 V3-V4 V3-V4	11.8	100.0	100.0	96.8	98.3
13	Capreno Roundup PowerMax COC	0.081 0.77 0.83	lb ai/a lb ae/a lb ai/a	3 22 1	oz/a oz/a % v/v	POSPOS POSPOS POSPOS	B B B	V1-V2 V1-V2 V1-V2	9.8	100.0	100.0	98.8	96.3
14	Corvus Laudis Roundup PowerMax MSO	0.0616 0.082 0.77 1	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 22 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre to V2 V3-V4 V3-V4 V3-V4	12.0	96.8	99.3	100.0	95.0
15	Balance Flexx Capreno Roundup PowerMax COC	0.047 0.081 0.77 0.83	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 22 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre V3-V4 V3-V4 V3-V4	11.0	96.8	98.0	95.5	63.8
LSD (P=.05)									2.56	5.09	4.54	4.31	21.93
Standard Deviation									1.79	3.56	3.18	3.02	15.35
CV									15.78	3.95	3.52	3.38	19.27
Bartlett's X2									18.081	8.045	8.197	5.885	32.985
P(Bartlett's X2)									0.203	0.53	0.61	0.825	0.001*
Replicate F									0.158	1.112	0.771	2.475	0.861
Replicate Prob(F)									0.9242	0.3551	0.5165	0.0746	0.4695
Treatment F									1.011	203.875	257.972	280.306	12.609
Treatment Prob(F)									0.4611	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Corvus, Balance Flexx, Capreno, Laudis, & Ignite Weed Control Programs

Trial ID: HCO-20310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		AMAPA	IPOSS	ECHCG	AMAPA	IPOSS							
Pest Name		Palmer amaranth	Morning glory	Common barnyar>	Palmer amaranth	Morning glory							
Part Rated		PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date		5/20/2010	5/20/2010	6/4/2010	6/4/2010	6/4/2010							
Rating Type		CONTRO	CONTRO	CONTRO	CONTRO	CONTRO							
Rating Unit		%	%	%	%	%							
Crop Stage Majority		V6 24"	V6 24"	V9 64"	V9 64"	V9 64"							
Pest Stage Majority		5-25"	8-18"	10-20"	10-18"	12-18"							
Trt-Eval Interval		17 DA-B	17 DA-B	16 DA-C	16 DA-C	16 DA-C							
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	6	7	8	9	10
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Corvus AAtrex	0.115	lb ai/a	5.6	oz/a	PREPRE A	Pre to V2	Pre to V2	100.0	100.0	92.5	96.0	96.8
3	Balance Flexx AAtrex	0.094	lb ai/a	6	oz/a	PREPRE A	Pre to V2	Pre to V2	93.8	92.5	84.8	91.0	91.0
4	Capreno Roundup PowerMax COC	0.081 0.387 0.83	lb ai/a lb ae/a lb ai/a	3 11 1	oz/a oz/a % v/v	POSPOS B POSPOS B POSPOS B	V1-V2 V1-V2 V1-V2		96.3	98.3	92.5	93.3	93.3
5	Capreno Roundup PowerMax COC	0.081 0.77 0.83	lb ai/a lb ae/a lb ai/a	3 22 1	oz/a oz/a % v/v	POSPOS C POSPOS C POSPOS C	V3-V4 V3-V4 V3-V4		67.5	42.5	96.8	97.5	98.5
6	Corvus Laudis Roundup PowerMax MSO	0.0616 0.082 0.387 1	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 11 1	oz/a oz/a oz/a % v/v	PREPRE A POSPOS C POSPOS C POSPOS C	Pre to V2 V3-V4 V3-V4 V3-V4		91.3	97.5	96.0	98.3	98.8
7	Balance Flexx Laudis Roundup PowerMax MSO	0.094 0.082 0.77 1	lb ai/a lb ai/a lb ae/a lb ai/a	6 3 22 1	oz/a oz/a oz/a % v/v	PREPRE A POSPOS C POSPOS C POSPOS C	Pre V3-V4 V3-V4 V3-V4		91.3	63.8	96.8	98.8	98.8
8	Corvus Laudis Ignite 280	0.0616 0.082 0.402	lb ai/a lb ai/a lb ai/a	3 3 22	oz/a oz/a oz/a	PREPRE A POSPOS C POSPOS C	Pre V3-V4 V3-V4		97.5	97.5	95.3	99.3	98.8
9	Balance Flexx Laudis Ignite 280	0.047 0.082 0.402	lb ai/a lb ai/a lb ai/a	3 3 22	oz/a oz/a oz/a	PREPRE A POSPOS C POSPOS C	Pre V3-V4 V3-V4		82.5	50.0	97.0	99.5	99.3
10	Balance Flexx Capreno Roundup PowerMax COC	0.047 0.081 0.387 0.83	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 11 1	oz/a oz/a oz/a % v/v	PREPRE A POSPOS C POSPOS C POSPOS C	Pre V3-V4 V3-V4 V3-V4		86.3	62.5	94.0	98.3	97.5
11	Lexar	2.78	lb ai/a	96	oz/a	PREPRE A	Pre		97.5	90.0	91.8	97.3	97.8
12	Dual Magnum AAtrex Roundup PowerMax AAtrex COC	0.95 1 1.13 1 0.83	lb ai/a lb ai/a lb ae/a lb ai/a lb ai/a	16 32 32 32 1	oz/a oz/a oz/a oz/a % v/v	PREPRE A PREPRE A POSPOS C POSPOS C POSPOS C	Pre Pre V3-V4 V3-V4 V3-V4		97.5	88.8	96.5	97.3	97.8
13	Capreno Roundup PowerMax COC	0.081 0.77 0.83	lb ai/a lb ae/a lb ai/a	3 22 1	oz/a oz/a % v/v	POSPOS B POSPOS B POSPOS B	V1-V2 V1-V2 V1-V2		95.0	96.3	92.8	96.0	96.8
14	Corvus Laudis Roundup PowerMax MSO	0.0616 0.082 0.77 1	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 22 1	oz/a oz/a oz/a % v/v	PREPRE A POSPOS C POSPOS C POSPOS C	Pre to V2 V3-V4 V3-V4 V3-V4		95.0	97.5	95.0	96.8	96.8
15	Balance Flexx Capreno Roundup PowerMax COC	0.047 0.081 0.77 0.83	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 22 1	oz/a oz/a oz/a % v/v	PREPRE A POSPOS C POSPOS C POSPOS C	Pre V3-V4 V3-V4 V3-V4		82.5	57.5	98.5	99.3	99.3
LSD (P=.05)									11.78	15.31	4.53	4.61	4.34
Standard Deviation									8.24	10.71	3.17	3.23	3.04
CV									9.7	14.17	3.61	3.57	3.35
Bartlett's X2									7.033	24.06	6.753	22.618	12.99
P(Bartlett's X2)									0.855	0.02*	0.914	0.046*	0.449
Replicate F									0.939	1.613	3.236	3.933	1.661
Replicate Prob(F)									0.4305	0.2014	0.0316	0.0146	0.1900
Treatment F									36.684	29.240	239.845	242.870	274.806
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Corvus, Balance Flexx, Capreno, Laudis, & Ignite Weed Control Programs

Trial ID: HCO-20310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		CYPES		ECHCG		AMAPA		IPOSS		BRAPP			
Pest Name		Yellow nutsedge		Common barnyar		Palmer amaranth		Morning glory		Broadleaf sign			
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P			
Rating Date		6/4/2010		6/11/2010		6/11/2010		6/11/2010		6/11/2010			
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO			
Rating Unit		%		%		%		%		%			
Crop Stage Majority		V9 64"		VT 73"		VT 73"		VT 73"		VT 73"			
Pest Stage Majority		10-14"		12-28"		10-33"		12-24"		12-26"			
Trit-Eval Interval		16 DA-C		23 DA-C		23 DA-C		23 DA-C		23 DA-C			
Trit No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	11	12	13	14	15
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Corvus AAtrex	0.115 1	lb ai/a lb ai/a	5.6 32	oz/a oz/a	PREPRE PREPRE	A A	Pre to V2 Pre to V2	90.3	94.3	95.3	98.0	97.0
3	Balance Flexx AAtrex	0.094 1	lb ai/a lb ai/a	6 32	oz/a oz/a	PREPRE PREPRE	A A	Pre to V2 Pre to V2	86.8	88.5	93.0	92.0	87.5
4	Capreno Roundup PowerMax COC	0.081 0.387 0.83	lb ai/a lb ae/a lb ai/a	3 11 1	oz/a oz/a % v/v	POSPOS POSPOS POSPOS	B B B	V1-V2 V1-V2 V1-V2	83.0	98.0	96.3	95.8	99.3
5	Capreno Roundup PowerMax COC	0.081 0.77 0.83	lb ai/a lb ae/a lb ai/a	3 22 1	oz/a oz/a % v/v	POSPOS POSPOS POSPOS	C C C	V3-V4 V3-V4 V3-V4	93.0	98.0	99.8	99.5	97.8
6	Corvus Laudis Roundup PowerMax MSO	0.0616 0.082 0.387 1	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 11 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre to V2 V3-V4 V3-V4 V3-V4	97.3	98.5	98.8	97.5	98.5
7	Balance Flexx Laudis Roundup PowerMax MSO	0.094 0.082 0.77 1	lb ai/a lb ai/a lb ae/a lb ai/a	6 3 22 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre V3-V4 V3-V4 V3-V4	96.0	99.5	99.3	98.5	100.0
8	Corvus Laudis Ignite 280	0.0616 0.082 0.402	lb ai/a lb ai/a lb ai/a	3 3 22	oz/a oz/a oz/a	PREPRE POSPOS POSPOS	A C C	Pre V3-V4 V3-V4	96.0	98.0	99.8	100.0	99.5
9	Balance Flexx Laudis Ignite 280	0.047 0.082 0.402	lb ai/a lb ai/a lb ai/a	3 3 22	oz/a oz/a oz/a	PREPRE POSPOS POSPOS	A C C	Pre V3-V4 V3-V4	96.8	98.0	99.8	75.5	99.0
10	Balance Flexx Capreno Roundup PowerMax COC	0.047 0.081 0.387 0.83	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 11 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre V3-V4 V3-V4 V3-V4	93.8	98.5	99.3	95.3	100.0
11	Lexar	2.78	lb ai/a	96	oz/a	PREPRE	A	Pre	94.3	94.3	98.8	97.3	93.5
12	Dual Magnum AAtrex Roundup PowerMax AAtrex COC	0.95 1 1.13 1 0.83	lb ai/a lb ai/a lb ae/a lb ai/a lb ai/a	16 32 32 32 1	oz/a oz/a oz/a oz/a % v/v	PREPRE PREPRE POSPOS POSPOS POSPOS	A A C C C	Pre Pre V3-V4 V3-V4 V3-V4	94.3	97.5	99.8	97.8	100.0
13	Capreno Roundup PowerMax COC	0.081 0.77 0.83	lb ai/a lb ae/a lb ai/a	3 22 1	oz/a oz/a % v/v	POSPOS POSPOS POSPOS	B B B	V1-V2 V1-V2 V1-V2	93.5	94.3	98.3	98.5	98.0
14	Corvus Laudis Roundup PowerMax MSO	0.0616 0.082 0.77 1	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 22 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre to V2 V3-V4 V3-V4 V3-V4	91.0	96.8	99.5	99.3	98.5
15	Balance Flexx Capreno Roundup PowerMax COC	0.047 0.081 0.77 0.83	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 22 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre V3-V4 V3-V4 V3-V4	92.3	99.3	99.8	99.0	99.0
LSD (P=.05)									7.82	3.16	3.05	16.51	3.12
Standard Deviation									5.47	2.21	2.14	11.55	2.18
CV									6.32	2.45	2.33	12.89	2.39
Bartlett's X2									21.952	27.084	50.803	105.726	16.708
P(Bartlett's X2)									0.056	0.008*	0.001*	0.001*	0.081
Replicate F									3.955	1.554	1.063	1.079	1.982
Replicate Prob(F)									0.0143	0.2148	0.3751	0.3686	0.1313
Treatment F									78.498	514.844	569.388	19.503	542.755
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Corvus, Balance Flexx, Capreno, Laudis, & Ignite Weed Control Programs

Trial ID: HCO-20310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		CYPES		PLANT C		ECHCG		AMAPA		ECHCG			
Pest Name		Yellow nutsedge		PLANT C		Common barnyar>		Palmer amaranth		Common barnyar>			
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P			
Rating Date		6/11/2010		6/11/2010		6/21/2010		6/21/2010		8/23/2010			
Rating Type		CONTRO		LODGIN		CONTRO		CONTRO		CONTRO			
Rating Unit		%		%		%		%		%			
Crop Stage Majority		VT 73*		VT 73*		R2 81.5*		R2 81.5*		R6 80*			
Pest Stage Majority		8-18"		8-18"		10-40"		20-60"		12-30			
Trt-Eval Interval		23 DA-C		23 DA-C		33 DA-C		33 DA-C		96 DA-C			
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	16	17	18	19	20
1	Untreated Check								0.0	2.3	0.0	0.0	0.0
2	Corvus AAtrex	0.115 1	lb ai/a lb ai/a	5.6 32	oz/a oz/a	PREPRE PREPRE	A A	Pre to V2 Pre to V2	98.0	10.0	91.8	95.0	91.3
3	Balance Flexx AAtrex	0.094 1	lb ai/a lb ai/a	6 32	oz/a oz/a	PREPRE PREPRE	A A	Pre to V2 Pre to V2	94.0	7.5	86.0	97.5	90.0
4	Capreno Roundup PowerMax COC	0.081 0.387 0.83	lb ai/a lb ae/a lb ai/a	3 11 1	oz/a oz/a % v/v	POSPOS POSPOS POSPOS	B B B	V1-V2 V1-V2 V1-V2	78.3	10.0	93.5	98.8	90.0
5	Capreno Roundup PowerMax COC	0.081 0.77 0.83	lb ai/a lb ae/a lb ai/a	3 22 1	oz/a oz/a % v/v	POSPOS POSPOS POSPOS	C C C	V3-V4 V3-V4 V3-V4	95.3	6.3	93.5	100.0	88.8
6	Corvus Laudis Roundup PowerMax MSO	0.0616 0.082 0.387 1	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 11 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre to V2 V3-V4 V3-V4 V3-V4	99.5	5.5	95.5	100.0	90.0
7	Balance Flexx Laudis Roundup PowerMax MSO	0.094 0.082 0.77 1	lb ai/a lb ai/a lb ae/a lb ai/a	6 3 22 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre V3-V4 V3-V4 V3-V4	95.0	8.3	94.8	100.0	90.0
8	Corvus Laudis Ignite 280	0.0616 0.082 0.402	lb ai/a lb ai/a lb ai/a	3 3 22	oz/a oz/a oz/a	PREPRE POSPOS POSPOS	A C C	Pre V3-V4 V3-V4	100.0	2.0	95.3	100.0	90.0
9	Balance Flexx Laudis Ignite 280	0.047 0.082 0.402	lb ai/a lb ai/a lb ai/a	3 3 22	oz/a oz/a oz/a	PREPRE POSPOS POSPOS	A C C	Pre V3-V4 V3-V4	97.5	5.5	96.8	100.0	89.3
10	Balance Flexx Capreno Roundup PowerMax COC	0.047 0.081 0.387 0.83	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 11 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre V3-V4 V3-V4 V3-V4	91.5	5.0	96.0	100.0	90.0
11	Lexar	2.78	lb ai/a	96	oz/a	PREPRE	A	Pre	98.3	11.8	92.5	100.0	87.5
12	Dual Magnum AAtrex Roundup PowerMax AAtrex COC	0.95 1 1.13 1 0.83	lb ai/a lb ai/a lb ae/a lb ai/a lb ai/a	16 32 32 32 1	oz/a oz/a oz/a oz/a % v/v	PREPRE PREPRE POSPOS POSPOS POSPOS	A A C C C	Pre Pre V3-V4 V3-V4 V3-V4	100.0	5.0	95.3	100.0	90.0
13	Capreno Roundup PowerMax COC	0.081 0.77 0.83	lb ai/a lb ae/a lb ai/a	3 22 1	oz/a oz/a % v/v	POSPOS POSPOS POSPOS	B B B	V1-V2 V1-V2 V1-V2	97.5	13.8	92.0	100.0	90.0
14	Corvus Laudis Roundup PowerMax MSO	0.0616 0.082 0.77 1	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 22 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre to V2 V3-V4 V3-V4 V3-V4	91.3	6.3	94.3	100.0	88.8
15	Balance Flexx Capreno Roundup PowerMax COC	0.047 0.081 0.77 0.83	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 22 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre V3-V4 V3-V4 V3-V4	99.8	3.8	95.5	98.8	92.5
LSD (P=.05)									11.48	11.29	4.09	3.53	2.75
Standard Deviation									8.03	7.90	2.86	2.47	1.92
CV									9.02	115.35	3.27	2.66	2.29
Bartlett's X2									56.342	15.266	10.207	4.511	4.522
P(Bartlett's X2)									0.001*	0.36	0.677	0.211	0.477
Replicate F									1.255	0.824	1.660	0.365	0.710
Replicate Prob(F)									0.3025	0.4883	0.1901	0.7787	0.5515
Treatment F									39.537	0.729	288.929	432.831	584.283
Treatment Prob(F)									0.0001	0.7334	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Corvus, Balance Flexx, Capreno, Laudis, & Ignite Weed Control Programs

Trial ID: HCO-20310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		PLANT P	PLANT P	PLANT P					
Pest Name		Palmer amaranth		Morning glory		8/23/2010	8/23/2010	8/23/2010					
Part Rated		PLANT P		PLANT P		MOICON	WEIDRY	YIELD					
Rating Date		8/23/2010		8/23/2010		%	lb/plot	BU					
Rating Type		CONTRO		CONTRO		Harvest	Harvest	Harvest					
Rating Unit		%		%									
Crop Stage Majority		R6 80"		R6 80"									
Pest Stage Majority		20-60"		20-80"									
Trt-Eval Interval		96 DA-C		96 DA-C									
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	21	22	23	24	25
1	Untreated Check								0.0	0.0	16.00	25.1025	109.0
2	Corvus AAtrex	0.115 1	lb ai/a lb ai/a	5.6 32	oz/a oz/a	PREPRE PREPRE	A A	Pre to V2 Pre to V2	90.5	93.8	15.95	28.2825	122.7
3	Balance Flexx AAtrex	0.094 1	lb ai/a lb ai/a	6 32	oz/a oz/a	PREPRE PREPRE	A A	Pre to V2 Pre to V2	86.3	75.8	16.38	29.0875	125.6
4	Capreno Roundup PowerMax COC	0.081 0.387 0.83	lb ai/a lb ae/a lb ai/a	3 11 1	oz/a oz/a % v/v	POSPOS POSPOS POSPOS	B B B	V1-V2 V1-V2 V1-V2	91.3	85.0	16.25	27.5625	119.3
5	Capreno Roundup PowerMax COC	0.081 0.77 0.83	lb ai/a lb ae/a lb ai/a	3 22 1	oz/a oz/a % v/v	POSPOS POSPOS POSPOS	C C C	V3-V4 V3-V4 V3-V4	90.0	85.0	15.13	30.7950	135.0
6	Corvus Laudis Roundup PowerMax MSO	0.0616 0.082 0.387 1	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 11 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre to V2 V3-V4 V3-V4 V3-V4	87.5	86.3	17.53	29.2250	124.4
7	Balance Flexx Laudis Roundup PowerMax MSO	0.094 0.082 0.77 1	lb ai/a lb ai/a lb ae/a lb ai/a	6 3 22 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre V3-V4 V3-V4 V3-V4	90.0	81.8	15.68	29.2720	127.5
8	Corvus Laudis Ignite 280	0.0616 0.082 0.402	lb ai/a lb ai/a lb ai/a	3 3 22	oz/a oz/a oz/a	PREPRE POSPOS POSPOS	A C C	Pre V3-V4 V3-V4	91.3	83.8	15.40	32.7450	143.1
9	Balance Flexx Laudis Ignite 280	0.047 0.082 0.402	lb ai/a lb ai/a lb ai/a	3 3 22	oz/a oz/a oz/a	PREPRE POSPOS POSPOS	A C C	Pre V3-V4 V3-V4	91.3	81.3	15.60	29.6100	129.1
10	Balance Flexx Capreno Roundup PowerMax COC	0.047 0.081 0.387 0.83	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 11 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre V3-V4 V3-V4 V3-V4	91.3	81.8	15.63	30.0275	130.8
11	Lexar	2.78	lb ai/a	96	oz/a	PREPRE	A	Pre	88.8	83.8	15.68	29.1650	126.9
12	Dual Magnum AAtrex Roundup PowerMax AAtrex COC	0.95 1 1.13 1 0.83	lb ai/a lb ai/a lb ae/a lb ai/a lb ai/a	16 32 32 32 1	oz/a oz/a oz/a oz/a % v/v	PREPRE PREPRE POSPOS POSPOS POSPOS	A A C C C	Pre Pre V3-V4 V3-V4 V3-V4	86.3	86.3	15.50	27.4000	119.5
13	Capreno Roundup PowerMax COC	0.081 0.77 0.83	lb ai/a lb ae/a lb ai/a	3 22 1	oz/a oz/a % v/v	POSPOS POSPOS POSPOS	B B B	V1-V2 V1-V2 V1-V2	88.8	88.8	15.23	28.2825	123.8
14	Corvus Laudis Roundup PowerMax MSO	0.0616 0.082 0.77 1	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 22 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre to V2 V3-V4 V3-V4 V3-V4	90.0	87.5	16.35	30.2500	130.7
15	Balance Flexx Capreno Roundup PowerMax COC	0.047 0.081 0.77 0.83	lb ai/a lb ai/a lb ae/a lb ai/a	3 3 22 1	oz/a oz/a oz/a % v/v	PREPRE POSPOS POSPOS POSPOS	A C C C	Pre V3-V4 V3-V4 V3-V4	91.3	88.8	15.40	30.1600	131.7
LSD (P=.05)									6.64	12.70	1.246	4.53567	20.06
Standard Deviation									4.65	8.89	0.872	3.17388	14.04
CV									5.56	11.21	5.5	10.9	11.09
Bartlett's X2									19.201	16.353	33.622	13.495	14.005
P(Bartlett's X2)									0.038*	0.231	0.002*	0.488	0.449
Replicate F									1.683	3.370	3.022	6.552	6.547
Replicate Prob(F)									0.1852	0.0272	0.0401	0.0010	0.0010
Treatment F									99.613	25.227	1.932	1.201	1.234
Treatment Prob(F)									0.0001	0.0001	0.0503	0.3107	0.2886

University of Arkansas-Division of Agriculture

Corvus, Balance Flexx, Capreno, Laudis, & Ignite Weed Control Programs

Trial ID: HCO-20310
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US
AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US
CYPES, Cyperus esculentus, = US
BRAPP, Brachiaria platyphylla, = US

Part Rated

PLANT = plant
C = Crop is Part Rated
P = Pest is Part Rated

Rating Type

COUPLA = count - plant / emergence - objective
CONTRO = control / burndown or knockdown
LODGIN = lodging
MOICON = moisture content
WEIDRY = weight - dry / dry matter content
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
BU = bushel

ARM Action Codes

TY1 = $4.388722 * [C24] * (100 - [C23]) / 85$

University of Arkansas-Division of Agriculture

Realm Q, Prequel Q, Steadfast Q, & Resolve Q in Corn Programs

Trial ID: HCO-20510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop 1:		ZeamX Zea mays Corn		Crop Description	
Variety:	REV 25H49	Description:	RR 2 / LL / Herculex / Cruiser	Planting Date:	4/19/2010
BBCH Scale:	BCOR	Rate, Unit:	34750 S/A	Planting Method:	PLANTD planted
Depth, Unit:	1.5 IN	Spacing Within Row, Unit:	5.25 IN	Soil Temperature, Unit:	67.7 F
Row Spacing, Unit:	38 IN	Soil Moisture:	GOOD good	Emergence Date:	4/25/2010
Seed Bed:	MEDIUM medium	Harvest Date:	9/7/2010	Harvest Equipment:	Massey Ferguson 8
Soil Moisture:	GOOD good	Harvested Width, Unit:	6.33 FT	Harvested Length, Unit:	28 FT
Harvest Date:	9/7/2010	% Standard Moisture:	15.0	Moisture Meter:	Massey Ferguson 8
Weighing Equipment:	Massey Ferguson 8				

Pest 1 Type: W		Code: ECHCG Echinochloa crus-galli		Pest Description	
Common Name:	Common barnyardgrass	Artificial Population:	X		
Pest 2 Type: W	Code: AMAPA Amaranthus palmeri	Common Name:	Palmer amaranth	Artificial Population:	X
Pest 3 Type: W	Code: IPOSS Ipomoea sp.	Common Name:	Morning glory	Artificial Population:	X

Plot Width, Unit:		12.66 FT		Site Type: FIELD field	
Plot Length, Unit:	28 FT	Experimental Unit:	1 PLOT plot	Tillage Type:	CONVIL conventional-till
Plot Area, Unit:	354.48 FT2	Study Design:	RACOB L Randomized Complete Block (RCB)	Untreated Arrangement:	INCLUDED single control randomized in each block
Replications:	4				

Maintenance					
No.	Date	Maintenance Treatment Name	Rate	Rate Unit	
1.	4/12/2010	Potassium	90	LB A/A	
2.	4/28/2010	Nitrogen	125	LB A/A	
3.	5/27/2010	Nitrogen	125	LB A/A	

Soil Description					
Description Name:	2010 Corn	Texture:	SIL silt loam	Soil Name:	Sharkey & Desha Silt Loam
% Sand:	16	% OM:	2.2	Fert. Level:	G good
% Silt:	65	pH:	6.7	Soil Drainage:	G good
% Clay:	19	CEC:	13		

Application Description		
	A	B
Application Date:	4/20/2010	5/13/2010
Time of Day:	10:30 AM	10:00 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS
Application Placement:	BROSOI	BROFOL
Applied By:	RD	RD
Air Temperature, Unit:	62.5 F	78.3 F
% Relative Humidity:	50.40	78.55
Wind Velocity, Unit:	4.15 MPH	3.85 MPH
Wind Direction:	S	ENE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	63.8 F	75.5 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	30	70
Next Rain Occurred On:	4/21/2010	5/14/2010

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	BBCH	BBCH
Stage Majority, Percent:	V0	V4
Height, Unit:	0 IN	6 IN

Pest Stage At Each Application		
	A	B
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W
Height, Unit:	0 IN	2 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W
Height, Unit:	0 IN	2 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W
Height, Unit:	0 IN	1 IN

University of Arkansas-Division of Agriculture

Realm Q, Prequel Q, Steadfast Q, & Resolve Q in Corn Programs

Trial ID: HCO-20510
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment

	A	B
Appl. Equipment:	Multi Boom	Multi Boom
Equipment Type:	SPTRMO	SPTRMO
Operating Pressure, Unit:	50 PSI	50 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
% Coverage:	100	100
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

Trt No Treatment Application Comment

5 Callisto was substituted ai for dry mesotrione ai
6 Callisto was substituted ai for dry mesotrione ai
7 Callisto was substituted ai for dry mesotrione ai
9 Callisto was substituted ai for dry mesotrione ai

No. Date By Deviations

1.5/13/2010 ZH Plot 212 - Recieved Trt 4 not Trt 9
Reasons: Mis-Application

University of Arkansas-Division of Agriculture

Realm Q, Prequel Q, Steadfast Q, & Resolve Q in Corn Programs

Trial ID: HCO-20510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG				
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>				
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P				
Rating Date		5/20/2010		5/20/2010		5/20/2010		6/4/2010				
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO				
Rating Unit		%		%		%		%				
Crop Stage Majority		V6 24"		V6 24"		V6 24"		V9 44"				
Pest Stage Majority		5-20"		5-25"		6-16"		10-20"				
Tri-Eval Interval		7 DA-B		7 DA-B		7 DA-B		22 DA-B				
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4
1	Untreated Check								0.0	0.0	0.0	0.0
2	Realm Q					POSPOS B		4 oz.	97.5	100.0	87.5	92.3
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	>Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
3	Cinch ATZ					PREPRE A		PRE	100.0	100.0	95.0	92.3
	Realm Q					POSPOS B		4 oz.				
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	>Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
4	Realm Q					POSPOS B		4 oz.	100.0	100.0	96.3	93.8
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	>Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	Abutant S	1	lb ai/a	32	oz/a	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
5	Realm Q					POSPOS B		4 oz.	100.0	100.0	98.8	94.0
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	Ignite 280	0.402	lb ai/a	22	oz/a	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
6	Realm Q					POSPOS B		4 oz.	99.5	100.0	100.0	94.3
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	Atrazine	2	lb ai/a	35.6	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
7	Prequel					PREPRE A		1.66 oz.	100.0	100.0	98.8	96.0
	>Rimsulfuron (Resolve DF)	0.0156	lb ai/a	1	oz/a	PREPRE A		PRE				
	>Isoxaflutole-ethyl	0.0313	lb ai/a	0.67	oz/a	PREPRE A		PRE				
	Realm Q					POSPOS B		4 oz.				
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
8	Steadfast Q					POSPOS B		1.5 oz.	91.3	100.0	92.5	91.8
	Steadfast	0.035	lb ai/a	0.75	oz/a	POSPOS B		V2 - V4 Corn				
	Isoxadifen-ethyl	0.0078	lb ai/a	0.25	oz/a	POSPOS B		V2 - V4 Corn				
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
9	Realm Q					POSPOS B		4 oz.	100.0	100.0	100.0	96.8
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	Abutant S	1	lb ai/a	32	oz/a	POSPOS B		V2 - V4 Corn				
	Atrazine	2	lb ai/a	35.6	oz/a	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
10	Resolve Q					PREPRE A		1.25 oz.	100.0	100.0	97.5	91.5
	>Rimsulfuron (Resolve DF)	0.0144	lb ai/a	0.92	oz/a	PREPRE A		PRE				
	>Thifensulfuron	0.00313	lb ai/a	0.1	oz/a	PREPRE A		PRE				
	>Isoxadifen-ethyl	0.0072	lb ai/a	0.23	oz/a	PREPRE A		PRE				
	Abutant S	1	lb ai/a	32	oz/a	POSPOS B		V2 - V4 Corn				
	Atrazine	2	lb ai/a	35.6	oz/a	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
11	Mesotrione					POSPOS B		V2 - V4 Corn	98.8	100.0	97.5	87.0
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
12	Cinch ATZ					PREPRE A		PRE	100.0	100.0	97.5	94.8
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
13	Roundup PowerMax					POSPOS B		V2 - V4 Corn	100.0	100.0	99.5	83.8
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
14	Ignite 280					POSPOS B		V2 - V4 Corn	99.5	100.0	100.0	83.8
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				

University of Arkansas-Division of Agriculture

Realm Q, Prequel Q, Steadfast Q, & Resolve Q in Corn Programs

Trial ID: HCO-20510
Location: Rohwer, AR

Investigator: Kenneth Smith

							ECHCG	AMAPA	IPOSS	ECHCG		
							Common barnyar>	Palmer amaranth	Morning glory	Common barnyar>		
							PLANT P	PLANT P	PLANT P	PLANT P		
							5/20/2010	5/20/2010	5/20/2010	6/4/2010		
							CONTRO	CONTRO	CONTRO	CONTRO		
							%	%	%	%		
							V6 24"	V6 24"	V6 24"	V9 44"		
							5-20"	5-25"	6-16"	10-20"		
							7 DA-B	7 DA-B	7 DA-B	22 DA-B		
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4
15	AAtrex	2	lb ai/a	64	oz/a	POSPOS B	V2 - V4 Corn		100.0	100.0	100.0	87.5
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn					
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn					
LSD (P=.05)							3.04	0.00	5.68	6.09		
Standard Deviation							2.13	0.00	3.98	4.26		
CV							2.3	0.0	4.38	5.0		
Bartlett's X2							13.511	0.0	13.802	8.751		
P(Bartlett's X2)							0.009*	.	0.13	0.792		
Replicate F							2.052	0.000	2.540	8.016		
Replicate Prob(F)							0.1211	1.0000	0.0692	0.0002		
Treatment F							580.966	0.000	162.356	126.365		
Treatment Prob(F)							0.0001	1.0000	0.0001	0.0001		

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Realm Q, Prequel Q, Steadfast Q, & Resolve Q in Corn Programs

Trial ID: HCO-20510
Location: Rohwer, AR

Investigator: Kenneth Smith

						AMAPA Palmer amaranth PLANT P 6/4/2010 CONTRO %	IPOSS Morning glory PLANT P 6/4/2010 CONTRO %	ECHCG Common barnyar PLANT P 6/11/2010 CONTRO %	AMAPA Palmer amaranth PLANT P 6/11/2010 CONTRO %				
Pest Code	Pest Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	5	6	7	8	9
	1 Untreated Check								0.0	0.0	0.0	0.0	0.0
	2 Realm Q					POSPOS B		4 oz.	99.0	98.5	13.8	91.8	100.0
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn					
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn					
	>Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn					
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					
	3 Cinch ATZ					PREPRE A		PRE	97.5	97.5	8.8	91.5	99.5
	Realm Q					POSPOS B		4 oz.					
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn					
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn					
	>Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn					
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					
	4 Realm Q					POSPOS B		4 oz.	99.3	99.3	8.8	92.0	99.5
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn					
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn					
	>Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn					
	Abutant S	1	lb ai/a	32	oz/a	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					
	5 Realm Q					POSPOS B		4 oz.	99.5	98.5	5.0	95.0	98.5
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn					
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn					
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn					
	Ignite 280	0.402	lb ai/a	22	oz/a	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					
	6 Realm Q					POSPOS B		4 oz.	100.0	100.0	5.0	93.5	99.5
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn					
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn					
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn					
	Atrazine	2	lb ai/a	35.6	oz/a	POSPOS B		V2 - V4 Corn					
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					
	7 Prequel					PREPRE A		1.66 oz.	100.0	100.0	8.8	92.8	99.0
	>Rimsulfuron (Resolve DF)	0.0156	lb ai/a	1	oz/a	PREPRE A		PRE					
	>Isoxadifen-ethyl	0.0313	lb ai/a	0.67	oz/a	PREPRE A		PRE					
	Realm Q					POSPOS B		4 oz.					
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn					
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn					
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn					
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					
	8 Steadfast Q					POSPOS B		1.5 oz.	100.0	100.0	2.5	89.8	98.3
	Steadfast	0.035	lb ai/a	0.75	oz/a	POSPOS B		V2 - V4 Corn					
	Isoxadifen-ethyl	0.0078	lb ai/a	0.25	oz/a	POSPOS B		V2 - V4 Corn					
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn					
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					
	9 Realm Q					POSPOS B		4 oz.	100.0	100.0	11.3	94.0	100.0
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn					
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn					
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn					
	Abutant S	1	lb ai/a	32	oz/a	POSPOS B		V2 - V4 Corn					
	Atrazine	2	lb ai/a	35.6	oz/a	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					
	10 Resolve Q					PREPRE A		1.25 oz.	99.8	99.8	15.0	89.8	99.0
	>Rimsulfuron (Resolve DF)	0.0144	lb ai/a	0.92	oz/a	PREPRE A		PRE					
	>Thifensulfuron	0.00313	lb ai/a	0.1	oz/a	PREPRE A		PRE					
	>Isoxadifen-ethyl	0.0072	lb ai/a	0.23	oz/a	PREPRE A		PRE					
	Abutant S	1	lb ai/a	32	oz/a	POSPOS B		V2 - V4 Corn					
	Atrazine	2	lb ai/a	35.6	oz/a	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					
	11 Mesotrione					POSPOS B		V2 - V4 Corn	98.8	98.8	7.5	87.8	99.5
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					
	12 Cinch ATZ					PREPRE A		PRE	97.8	98.5	5.0	91.8	98.5
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn					
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					
	13 Roundup PowerMax					POSPOS B		V2 - V4 Corn	97.5	97.5	11.3	89.0	99.5
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn					
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					
	14 Ignite 280					POSPOS B		V2 - V4 Corn	97.3	97.3	10.0	87.8	99.8
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn					
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn					

University of Arkansas-Division of Agriculture

Realm Q, Prequel Q, Steadfast Q, & Resolve Q in Corn Programs

Trial ID: HCO-20510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		AMAPA					
Pest Name		Palmer amaranth		Morning glory		Common barnyar>		Palmer amaranth					
Part Rated		PLANT P		PLANT P		PLANT C		PLANT P					
Rating Date		6/4/2010		6/4/2010		6/4/2010		6/11/2010					
Rating Type		CONTRO		CONTRO		PHYSTU		CONTRO					
Rating Unit		%		%		%		%					
Crop Stage Majority		V9 44"		V9 44"		V9 44"		VT 71.5"					
Pest Stage Majority		12-18"		10-14"		12-34"		10-38"					
Trt-Eval Interval		22 DA-B		22 DA-B		22 DA-B		29 DA-B					
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	5	6	7	8	9
15	AAtrex	2	lb ai/a	64	oz/a	POSPOS B	V2 - V4 Corn		100.0	100.0	10.0	88.8	98.3
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
LSD (P=.05)									3.59	3.65	14.48	3.78	2.06
Standard Deviation									2.51	2.55	10.14	2.65	1.44
CV									2.72	2.76	124.1	3.12	1.56
Bartlett's X2									24.315	17.809	9.646	8.921	17.231
P(Bartlett's X2)									0.002*	0.023*	0.723	0.779	0.101
Replicate F									0.193	0.426	4.051	5.203	5.175
Replicate Prob(F)									0.9007	0.7352	0.0129	0.0038	0.0039
Treatment F									414.906	401.437	0.651	318.239	1266.455
Treatment Prob(F)									0.0001	0.0001	0.8065	0.0001	0.0001

University of Arkansas-Division of Agriculture

Realm Q, Prequel Q, Steadfast Q, & Resolve Q in Corn Programs

Trial ID: HCO-20510
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	Pest Name				IPOSS Morning glory PLANT P 6/11/2010 CONTRO	PLANT C 6/11/2010 PHYSTU	PLANT C 6/11/2010 LODGIN	ECHCG Common barnyar-> PLANT P 8/23/2010 CONTRO	AMAPA Palmer amaranth PLANT P 8/23/2010 CONTRO				
Rating Date	Rating Type	Rating Unit	Crop Stage Majority	Pest Stage Majority	Tri-Eval Interval	VT 71.5* 12-24* 29 DA-B	VT 71.5* VT 71.5* 29 DA-B	VT 71.5* R6 80* 10-30 102 DA-B	R6 80* 20-60* 102 DA-B				
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	10	11	12	13	14
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Realm Q					POSPOS B	4 oz.		98.8	7.5	0.0	87.5	90.0
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B	V2 - V4 Corn						
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B	V2 - V4 Corn						
	>Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
3	Cinch ATZ					PREPRE A	PRE		99.5	3.8	0.0	85.0	87.5
	Realm Q					POSPOS B	4 oz.						
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B	V2 - V4 Corn						
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B	V2 - V4 Corn						
	>Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
4	Realm Q					POSPOS B	4 oz.		99.0	6.3	2.5	88.8	90.0
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B	V2 - V4 Corn						
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B	V2 - V4 Corn						
	>Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	Abutant S	1	lb ai/a	32	oz/a	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
5	Realm Q					POSPOS B	4 oz.		99.0	0.0	2.5	90.0	87.5
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B	V2 - V4 Corn						
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B	V2 - V4 Corn						
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	Ignite 280	0.402	lb ai/a	22	oz/a	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
6	Realm Q					POSPOS B	4 oz.		99.8	2.5	5.0	90.0	90.0
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B	V2 - V4 Corn						
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B	V2 - V4 Corn						
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	Atrazine	2	lb ai/a	35.6	oz/a	POSPOS B	V2 - V4 Corn						
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
7	Prequel					PREPRE A	1.66 oz.		99.5	6.3	2.5	90.0	88.8
	>Rimsulfuron (Resolve DF)	0.0156	lb ai/a	1	oz/a	PREPRE A	PRE						
	>Isoxadifen-ethyl	0.0313	lb ai/a	0.67	oz/a	PREPRE A	PRE						
	Realm Q					POSPOS B	4 oz.						
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B	V2 - V4 Corn						
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B	V2 - V4 Corn						
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
8	Steadfast Q					POSPOS B	1.5 oz.		98.5	2.0	5.0	90.0	90.0
	Steadfast	0.035	lb ai/a	0.75	oz/a	POSPOS B	V2 - V4 Corn						
	Isoxadifen-ethyl	0.0078	lb ai/a	0.25	oz/a	POSPOS B	V2 - V4 Corn						
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
9	Realm Q					POSPOS B	4 oz.		100.0	8.8	1.3	87.5	90.0
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B	V2 - V4 Corn						
	>Isoxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B	V2 - V4 Corn						
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	Abutant S	1	lb ai/a	32	oz/a	POSPOS B	V2 - V4 Corn						
	Atrazine	2	lb ai/a	35.6	oz/a	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
10	Resolve Q					PREPRE A	1.25 oz.		99.0	4.5	0.0	87.5	90.0
	>Rimsulfuron (Resolve DF)	0.0144	lb ai/a	0.92	oz/a	PREPRE A	PRE						
	>Thifensulfuron	0.00313	lb ai/a	0.1	oz/a	PREPRE A	PRE						
	>Isoxadifen-ethyl	0.0072	lb ai/a	0.23	oz/a	PREPRE A	PRE						
	Abutant S	1	lb ai/a	32	oz/a	POSPOS B	V2 - V4 Corn						
	Atrazine	2	lb ai/a	35.6	oz/a	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
11	Mesotrione					POSPOS B	V2 - V4 Corn		99.0	6.3	1.8	90.0	90.0
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
12	Cinch ATZ					PREPRE A	PRE		98.5	5.0	0.0	87.5	88.8
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
13	Roundup PowerMax					POSPOS B	V2 - V4 Corn		100.0	6.3	1.3	92.5	92.5
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
14	Ignite 280					POSPOS B	V2 - V4 Corn		99.8	10.0	0.0	88.8	90.0
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						

University of Arkansas-Division of Agriculture

Realm Q, Prequel Q, Steadfast Q, & Resolve Q in Corn Programs

Trial ID: HCO-20510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

							IPOSS			ECHCG	AMAPA		
							Morning glory	PLANT C	PLANT C	Common barnyar->	Palmer amaranth		
							PLANT P	6/11/2010	6/11/2010	PLANT P	PLANT P		
							6/11/2010	6/11/2010	8/23/2010	8/23/2010			
							CONTRO	PHYSTU	LODGIN	CONTRO	CONTRO		
							%	%	%	%	%		
							VT 71.5*	VT 71.5*	VT 71.5*	R6 80*	R6 80*		
							12-24*			10-30	20-60*		
							29 DA-B	29 DA-B	29 DA-B	102 DA-B	102 DA-B		
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	10	11	12	13	14
15	AAtrex	2	lb ai/a	64	oz/a	POSPOS B	V2 - V4 Corn		98.5	11.3	3.8	91.3	91.3
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn						
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn						
LSD (P=.05)							2.06	13.34	5.64	4.39	3.65		
Standard Deviation							1.44	9.34	3.95	3.07	2.55		
CV							1.56	174.5	232.32	3.7	3.05		
Bartlett's X2							17.362	16.047	7.597	5.694	3.694		
P(Bartlett's X2)							0.098	0.189	0.474	0.77	0.718		
Replicate F							5.146	1.880	0.275	2.985	0.405		
Replicate Prob(F)							0.0040	0.1477	0.8431	0.0418	0.7498		
Treatment F							1264.381	0.511	0.836	225.176	330.915		
Treatment Prob(F)							0.0001	0.9133	0.6280	0.0001	0.0001		

University of Arkansas-Division of Agriculture

Realm Q, Prequel Q, Steadfast Q, & Resolve Q in Corn Programs

Trial ID: HCO-20510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code								IPOSS	PLANT P	PLANT P	PLANT P	
Pest Name								Morning glory	9/7/2010	9/7/2010	9/7/2010	
Part Rated								PLANT P	MOICON	WEIDRY	YIELD	
Rating Date								8/23/2010	9/7/2010	9/7/2010	9/7/2010	
Rating Type								CONTRO	%	lb/plot	BU	
Rating Unit								R6 80*	Harvest	Harvest	Harvest	
Crop Stage Majority								20-80*				
Pest Stage Majority								102 DA-B				
Trt-Eval Interval												
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	15	16	17	18
1	Untreated Check								0.0	12.53	19.85	89.8
2	Realm Q					POSPOS B		4 oz.	87.5	12.50	17.58	79.4
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	>Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
3	Cinch ATZ					PREPRE A		PRE	90.0	12.73	19.05	86.1
	Realm Q					POSPOS B		4 oz.				
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	>Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
4	Realm Q					POSPOS B		4 oz.	90.0	12.93	18.85	84.8
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	>Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	Abutant S	1	lb ai/a	32	oz/a	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
5	Realm Q					POSPOS B		4 oz.	90.0	12.15	22.60	102.6
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	Ignite 280	0.402	lb ai/a	22	oz/a	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
6	Realm Q					POSPOS B		4 oz.	90.0	12.67	22.67	102.3
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	Atrazine	2	lb ai/a	35.6	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
7	Prequel					PREPRE A		1.66 oz.	90.0	11.73	17.88	81.7
	>Rimsulfuron (Resolve DF)	0.0156	lb ai/a	1	oz/a	PREPRE A		PRE				
	>Isxadifen-ethyl	0.0313	lb ai/a	0.67	oz/a	PREPRE A		PRE				
	Realm Q					POSPOS B		4 oz.				
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
8	Steadfast Q					POSPOS B		1.5 oz.	91.3	12.20	22.25	100.9
	Steadfast	0.035	lb ai/a	0.75	oz/a	POSPOS B		V2 - V4 Corn				
	Isxadifen-ethyl	0.0078	lb ai/a	0.25	oz/a	POSPOS B		V2 - V4 Corn				
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
9	Realm Q					POSPOS B		4 oz.	91.3	12.73	15.90	71.6
	>Rimsulfuron (Resolve DF)	0.0188	lb ai/a	1.2	oz/a	POSPOS B		V2 - V4 Corn				
	>Isxadifen-ethyl	0.0094	lb ai/a	0.3	oz/a	POSPOS B		V2 - V4 Corn				
	Callisto	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	Abutant S	1	lb ai/a	32	oz/a	POSPOS B		V2 - V4 Corn				
	Atrazine	2	lb ai/a	35.6	oz/a	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
10	Resolve Q					PREPRE A		1.25 oz.	91.3	12.68	17.78	80.2
	>Rimsulfuron (Resolve DF)	0.0144	lb ai/a	0.92	oz/a	PREPRE A		PRE				
	>Thifensulfuron	0.00313	lb ai/a	0.1	oz/a	PREPRE A		PRE				
	>Isxadifen-ethyl	0.0072	lb ai/a	0.23	oz/a	PREPRE A		PRE				
	Abutant S	1	lb ai/a	32	oz/a	POSPOS B		V2 - V4 Corn				
	Atrazine	2	lb ai/a	35.6	oz/a	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
11	Mesotrione					POSPOS B		V2 - V4 Corn	90.0	12.00	21.50	97.8
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
12	Cinch ATZ					PREPRE A		PRE	89.3	9.38	16.28	73.6
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
13	Roundup PowerMax					POSPOS B		V2 - V4 Corn	92.5	12.90	20.30	91.3
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				
14	Ignite 280					POSPOS B		V2 - V4 Corn	90.0	12.63	19.95	90.1
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B		V2 - V4 Corn				
	COC	0.83	lb ai/a	1	% v/v	POSPOS B		V2 - V4 Corn				
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B		V2 - V4 Corn				

University of Arkansas-Division of Agriculture

Realm Q, Prequel Q, Steadfast Q, & Resolve Q in Corn Programs

Trial ID: HCO-20510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code							IPOSS					
Pest Name							Morning glory					
Part Rated							PLANT P	PLANT P	PLANT P	PLANT P		
Rating Date							8/23/2010	9/7/2010	9/7/2010	9/7/2010		
Rating Type							CONTRO	MOICON	WEIDRY	YIELD		
Rating Unit							%	%	lb/plot	BU		
Crop Stage Majority							R6 80"	Harvest	Harvest	Harvest		
Pest Stage Majority							20-80"					
Trt-Eval Interval							102 DA-B					
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	15	16	17	18
15	AAtrex	2	lb ai/a	64	oz/a	POSPOS B	V2 - V4 Corn		91.3	12.15	17.73	80.4
	Mesotrione	0.078	lb ai/a	2.5	oz/a	POSPOS B	V2 - V4 Corn					
	COC	0.83	lb ai/a	1	% v/v	POSPOS B	V2 - V4 Corn					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V4 Corn					
LSD (P=.05)							3.43	2.619	9.628	43.86		
Standard Deviation							2.40	1.833	6.737	30.69		
CV							2.85	14.95	34.83	35.08		
Bartlett's X2							4.643	61.353	11.191	10.933		
P(Bartlett's X2)							0.59	0.001*	0.671	0.691		
Replicate F							1.103	1.171	2.607	2.559		
Replicate Prob(F)							0.3586	0.3323	0.0645	0.0681		
Treatment F							377.315	0.901	0.430	0.430		
Treatment Prob(F)							0.0001	0.5644	0.9553	0.9553		

University of Arkansas-Division of Agriculture

Realm Q, Prequel Q, Steadfast Q, & Resolve Q in Corn Programs

Trial ID: HCO-20510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

PHYSTU = phytotoxicity - stunting

LODGIN = lodging

MOICON = moisture content

WEIDRY = weight - dry / dry matter content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.388722*17*(100-@MVAVGREP(16))/85

University of Arkansas-Division of Agriculture

Weed Efficacy without Atrazine

Trial ID: HCO-20810
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DKC 64-83
BBCH Scale: BCOR
Planting Method: PLANTD planted
Depth, Unit: 1.5 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Harvest Date: 9/7/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 15.0
Weighing Equipment: Massey Ferguson 8

Description: RR2 / VT3P
Planting Date: 4/19/2010
Rate, Unit: 34750 S/A
Spacing Within Row, Unit: 5.25 IN
Soil Temperature, Unit: 67.7 F
Emergence Date: 4/24/2010
Harvest Equipment: Massey Ferguson 8
Harvested Length, Unit: 28 FT
Moisture Meter: Massey Ferguson 8

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass
Artificial Population: X

Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth
Artificial Population: X

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory
Artificial Population: X

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT2
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB1 Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	4/12/2010	Potassium	90	LB A/A
2.	4/28/2010	Nitrogen	125	LB A/A
3.	5/27/2010	Nitrogen	125	LB A/A

Soil Description

Description Name: 2010 Corn
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B
Application Date:	5/4/2010	5/26/2010
Time of Day:	10:00 AM	10:30 AM
Application Method:	SPRAY	SPRAY
Application Timing:	POSPOS	POSPOS
Application Placement:	BROFOL	BROFOL
Applied By:	RD	BM
Air Temperature, Unit:	73.9 F	81.5 F
% Relative Humidity:	58.72	63.92
Wind Velocity, Unit:	0.85 MPH	1.40 MPH
Wind Direction:	S	W
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	68.9 F	79.4 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	25	35
Next Rain Occurred On:	5/10/2010	5/27/2010

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	V2	V6
Height, Unit:	4 IN	20 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W
Height, Unit:	1 IN	8 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W
Height, Unit:	1 IN	6 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W
Height, Unit:	1 IN	4 IN

University of Arkansas-Division of Agriculture

Weed Efficacy without Atrazine

Trial ID: HCO-20810
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment

	A	B
Appl. Equipment:	Multi Boom	Multi Boom
Equipment Type:	SPTRMO	SPTRMO
Operating Pressure, Unit:	50 PSI	50 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
% Coverage:	100	100
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Weed Efficacy without Atrazine

Trial ID: HCO-20810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	ECHCG	AMAPA	IPOSS	ECHCG								
Pest Name	Common barnyar>	Palmer amaranth	Morning glory	Common barnyar>								
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P								
Rating Date	5/12/2010	5/12/2010	5/12/2010	5/20/2010								
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO								
Rating Unit	%	%	%	%								
Crop Stage Majority	V3 6"	V3 6"	V3 6"	V6 24"								
Pest Stage Majority	1-4"	1-2"	1-2"	1-3"								
Trt-Eval Interval	8 DA-A	8 DA-A	8 DA-A	16 DA-A								
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4
1	Untreated Check								0.0	0.0	0.0	0.0
2	Callisto	0.094	lb ai/a	3 oz/a		EAPOCR A	V1 to V2		100.0	100.0	100.0	78.8
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		EAPOCR A	V1 to V2					
3	Impact	0.0164	lb ai/a	0.75 oz/a		EAPOCR A	V1 to V2		100.0	100.0	97.8	72.5
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		EAPOCR A	V1 to V2					
4	Laudis	0.082	lb ai/a	3 oz/a		EAPOCR A	V1 to V2		100.0	98.8	98.5	86.3
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		EAPOCR A	V1 to V2					
5	Balance Flexx	0.078	lb ai/a	5 oz/a		EAPOCR A	V1 to V2		100.0	100.0	100.0	92.0
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		EAPOCR A	V1 to V2					
6	Capreno	0.081	lb ai/a	3 oz/a		EAPOCR A	V1 to V2		100.0	100.0	98.8	92.5
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		EAPOCR A	V1 to V2					
7	Corvus	0.103	lb ai/a	5 oz/a		EAPOCR A	V1 to V2		100.0	98.8	98.8	92.5
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		EAPOCR A	V1 to V2					
8	Sharpen	0.0557	lb ai/a	2.5 oz/a		EAPOCR A	V1 to V2		98.0	98.0	98.0	70.0
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		EAPOCR A	V1 to V2					
9	Resolve Q					EAPOCR A	V1 to V2		99.3	98.8	96.8	83.8
	Rimsulfuron (Resolve DF)	0.0144	lb ai/a	0.92 oz/a		EAPOCR A	V1 to V2					
	Thifensulfuron (Harmony SG)	0.00313	lb ai/a	0.1 oz/a		EAPOCR A	V1 to V2					
	Isoxadifen-Ethyl	0.0072	lb ai/a	0.23 oz/a		EAPOCR A	V1 to V2					
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		EAPOCR A	V1 to V2					
10	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2		98.0	98.8	98.0	
	Callisto	0.094	lb ai/a	3 oz/a		LAPOCR B	20" Corn					
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		LAPOCR B	20" Corn					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		LAPOCR B	20" Corn					
11	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2		96.8	98.8	98.5	
	Impact	0.0164	lb ai/a	0.75 oz/a		LAPOCR B	20" Corn					
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		LAPOCR B	20" Corn					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		LAPOCR B	20" Corn					
12	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2		98.0	99.3	97.3	
	Laudis	0.082	lb ai/a	3 oz/a		LAPOCR B	20" Corn					
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		LAPOCR B	20" Corn					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		LAPOCR B	20" Corn					
13	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2		98.5	98.8	97.5	
	Balance Flexx	0.078	lb ai/a	5 oz/a		LAPOCR B	20" Corn					
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		LAPOCR B	20" Corn					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		LAPOCR B	20" Corn					
14	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2		99.3	98.8	99.3	
	Capreno	0.081	lb ai/a	3 oz/a		LAPOCR B	20" Corn					
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		LAPOCR B	20" Corn					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		LAPOCR B	20" Corn					
15	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2		98.8	98.0	96.8	
	Corvus	0.103	lb ai/a	5 oz/a		LAPOCR B	20" Corn					
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		LAPOCR B	20" Corn					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		LAPOCR B	20" Corn					
16	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2		100.0	97.3	98.0	
	Sharpen	0.0557	lb ai/a	2.5 oz/a		LAPOCR B	20" Corn					
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		LAPOCR B	20" Corn					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		LAPOCR B	20" Corn					
17	Roundup PowerMax	0.77	lb ae/a	22 oz/a		EAPOCR A	V1 to V2		99.3	99.3	98.0	
	Resolve Q					LAPOCR B	20" Corn					
	Rimsulfuron (Resolve DF)	0.0144	lb ai/a	0.92 oz/a		LAPOCR B	20" Corn					
	Thifensulfuron (Harmony SG)	0.00313	lb ai/a	0.1 oz/a		LAPOCR B	20" Corn					
	Isoxadifen-Ethyl	0.0072	lb ai/a	0.23 oz/a		LAPOCR B	20" Corn					
	Roundup PowerMax	0.77	lb ae/a	22 oz/a		LAPOCR B	20" Corn					
	Ammonium Sulfate	2.5	lb ai/a	5 gal/100 gal		LAPOCR B	20" Corn					
	LSD (P=.05)								2.19	2.78	2.66	11.96
	Standard Deviation								1.53	1.94	1.86	8.19
	CV								1.65	2.09	2.02	11.03
	Bartlett's X2								2.471	1.95	3.737	10.993
	P(Bartlett's X2)								0.963	0.999	0.994	0.139
	Replicate F								0.805	1.091	3.799	0.340
	Replicate Prob(F)								0.4971	0.3619	0.0160	0.7963
	Treatment F								982.876	610.933	654.921	50.436
	Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Weed Efficacy without Atrazine

Trial ID: HCO-20810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	Pest Name	AMAPA Palmer amaranth	IPOSS Morning glory	ECHCG Common barnyar>	AMAPA Palmer amaranth	IPOSS Morning glory							
Part Rated	Rating Date	PLANT P 5/20/2010	PLANT P 5/20/2010	PLANT P 6/4/2010	PLANT P 6/4/2010	PLANT P 6/4/2010							
Rating Type	Rating Unit	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO							
Crop Stage Majority	Pest Stage Majority	% V6 24* 2-6"	% V6 24* 1-3"	% V9 44* 18-28"	% V9 44* 20-30"	% V9 44* 12-24"							
Trt-Interval	Trt-Eval Interval	16 DA-A	16 DA-A	9 DA-B	9 DA-B	9 DA-B							
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	5	6	7	8	9
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Callisto	0.094	lb ai/a	3	oz/a	EAPOCR A	V1 to V2		82.5	85.0	89.0	89.8	93.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1 to V2						
3	Impact	0.0164	lb ai/a	0.75	oz/a	EAPOCR A	V1 to V2		71.3	75.0	82.8	87.3	90.3
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1 to V2						
4	Laudis	0.082	lb ai/a	3	oz/a	EAPOCR A	V1 to V2		86.3	83.8	81.8	85.0	87.5
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1 to V2						
5	Balance Flexx	0.078	lb ai/a	5	oz/a	EAPOCR A	V1 to V2		93.8	91.3	91.3	93.5	94.3
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1 to V2						
6	Capreno	0.081	lb ai/a	3	oz/a	EAPOCR A	V1 to V2		78.8	92.5	93.5	90.8	94.3
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1 to V2						
7	Corvus	0.103	lb ai/a	5	oz/a	EAPOCR A	V1 to V2		91.3	88.8	98.8	99.8	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1 to V2						
8	Sharpen	0.0557	lb ai/a	2.5	oz/a	EAPOCR A	V1 to V2		80.0	78.8	86.3	88.0	88.5
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1 to V2						
9	Resolve Q					EAPOCR A	V1 to V2		81.3	77.5	89.8	91.8	94.3
	Rimsulfuron (Resolve DF)	0.0144	lb ai/a	0.92	oz/a	EAPOCR A	V1 to V2						
	Thifensulfuron (Harmony SG)	0.00313	lb ai/a	0.1	oz/a	EAPOCR A	V1 to V2						
	Isoxadifen-Ethyl	0.0072	lb ai/a	0.23	oz/a	EAPOCR A	V1 to V2						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1 to V2						
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2				94.0	96.8	97.3
	Callisto	0.094	lb ai/a	3	oz/a	LAPOCR B	20" Corn						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20" Corn						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20" Corn						
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2				94.3	98.5	98.5
	Impact	0.0164	lb ai/a	0.75	oz/a	LAPOCR B	20" Corn						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20" Corn						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20" Corn						
12	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2				93.8	95.8	97.8
	Laudis	0.082	lb ai/a	3	oz/a	LAPOCR B	20" Corn						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20" Corn						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20" Corn						
13	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2				91.8	96.0	95.5
	Balance Flexx	0.078	lb ai/a	5	oz/a	LAPOCR B	20" Corn						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20" Corn						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20" Corn						
14	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2				98.0	98.5	99.3
	Capreno	0.081	lb ai/a	3	oz/a	LAPOCR B	20" Corn						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20" Corn						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20" Corn						
15	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2				94.8	100.0	100.0
	Corvus	0.103	lb ai/a	5	oz/a	LAPOCR B	20" Corn						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20" Corn						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20" Corn						
16	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2				96.8	97.8	99.3
	Sharpen	0.0557	lb ai/a	2.5	oz/a	LAPOCR B	20" Corn						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20" Corn						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20" Corn						
17	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1 to V2				96.5	100.0	98.8
	Resolve Q					LAPOCR B	20" Corn						
	Rimsulfuron (Resolve DF)	0.0144	lb ai/a	0.92	oz/a	LAPOCR B	20" Corn						
	Thifensulfuron (Harmony SG)	0.00313	lb ai/a	0.1	oz/a	LAPOCR B	20" Corn						
	Isoxadifen-Ethyl	0.0072	lb ai/a	0.23	oz/a	LAPOCR B	20" Corn						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20" Corn						
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20" Corn						
LSD (P=.05)									16.09	14.88	5.48	7.23	5.36
Standard Deviation									11.02	10.19	3.84	5.06	3.75
CV									14.92	13.64	4.43	5.7	4.17
Bartlett's X2									3.669	9.522	18.451	38.392	22.706
P(Bartlett's X2)									0.817	0.217	0.24	0.001*	0.045*
Replicate F									0.198	0.579	5.337	1.388	2.101
Replicate Prob(F)									0.8966	0.6344	0.0030	0.2579	0.1125
Treatment F									26.774	31.657	141.965	85.256	156.823
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Weed Efficacy without Atrazine

Trial ID: HCO-20810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code Pest Name Part Rated Rating Date Rating Type Rating Unit Crop Stage Majority Pest Stage Majority Tri-Eval Interval	PLANT C 6/4/2010 PHYSTU % V9 44* 9 DA-B	ECHCG Common barnyar> PLANT P 6/11/2010 CONTRO % VT 75* 10-40* 16 DA-B	AMAPA Palmer amaranth PLANT P 6/11/2010 CONTRO % VT 75* 12-42* 16 DA-B	IPOSS Morning glory PLANT P 6/11/2010 CONTRO % VT 75* 12-30* 16 DA-B	Trt	Rate	Rate	Other	Other	Growth	Appl	Appl					
					No.	Name	Unit	Rate	Rate	Stage	Code	Description	10	11	12	13	
1	Untreated Check													0.0	0.0	0.0	0.0
2	Callisto Roundup PowerMax Ammonium Sulfate	0.094 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	3 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A EAPOCR A EAPOCR A	V1 to V2 V1 to V2 V1 to V2									0.0	77.5	90.5	91.3
3	Impact Roundup PowerMax Ammonium Sulfate	0.0164 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	0.75 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A EAPOCR A EAPOCR A	V1 to V2 V1 to V2 V1 to V2									0.0	71.8	82.3	84.8
4	Laudis Roundup PowerMax Ammonium Sulfate	0.082 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	3 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A EAPOCR A EAPOCR A	V1 to V2 V1 to V2 V1 to V2									0.0	74.3	80.5	81.5
5	Balance Flexx Roundup PowerMax Ammonium Sulfate	0.078 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	5 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A EAPOCR A EAPOCR A	V1 to V2 V1 to V2 V1 to V2									0.0	87.3	90.3	90.0
6	Capreno Roundup PowerMax Ammonium Sulfate	0.081 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	3 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A EAPOCR A EAPOCR A	V1 to V2 V1 to V2 V1 to V2									0.0	89.3	92.3	93.5
7	Corvus Roundup PowerMax Ammonium Sulfate	0.103 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	5 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A EAPOCR A EAPOCR A	V1 to V2 V1 to V2 V1 to V2									3.8	95.3	95.3	96.5
8	Sharpen Roundup PowerMax Ammonium Sulfate	0.0557 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	2.5 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A EAPOCR A EAPOCR A	V1 to V2 V1 to V2 V1 to V2									0.0	72.5	83.0	84.3
9	Resolve Q Rimsulfuron (Resolve DF) Thifensulfuron (Harmony SG) Isoxadifen-Ethyl Roundup PowerMax Ammonium Sulfate	0.0144 lb ai/a 0.00313 lb ai/a 0.0072 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	0.92 oz/a 0.1 oz/a 0.23 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A EAPOCR A EAPOCR A EAPOCR A EAPOCR A	V1 to V2 V1 to V2 V1 to V2 V1 to V2 V1 to V2									0.0	77.5	84.0	86.8
10	Roundup PowerMax Callisto Roundup PowerMax Ammonium Sulfate	0.77 lb ae/a 0.094 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	22 oz/a 3 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A LAPOCR B LAPOCR B LAPOCR B	V1 to V2 20" Corn 20" Corn 20" Corn									0.0	91.8	95.0	95.0
11	Roundup PowerMax Impact Roundup PowerMax Ammonium Sulfate	0.77 lb ae/a 0.0164 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	22 oz/a 0.75 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A LAPOCR B LAPOCR B LAPOCR B	V1 to V2 20" Corn 20" Corn 20" Corn									0.0	88.3	90.5	91.0
12	Roundup PowerMax Laudis Roundup PowerMax Ammonium Sulfate	0.77 lb ae/a 0.082 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	22 oz/a 3 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A LAPOCR B LAPOCR B LAPOCR B	V1 to V2 20" Corn 20" Corn 20" Corn									0.0	94.0	94.0	93.5
13	Roundup PowerMax Balance Flexx Roundup PowerMax Ammonium Sulfate	0.77 lb ae/a 0.078 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	22 oz/a 5 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A LAPOCR B LAPOCR B LAPOCR B	V1 to V2 20" Corn 20" Corn 20" Corn									0.0	88.3	88.8	90.0
14	Roundup PowerMax Capreno Roundup PowerMax Ammonium Sulfate	0.77 lb ae/a 0.081 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	22 oz/a 3 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A LAPOCR B LAPOCR B LAPOCR B	V1 to V2 20" Corn 20" Corn 20" Corn									3.8	98.8	97.8	97.5
15	Roundup PowerMax Corvus Roundup PowerMax Ammonium Sulfate	0.77 lb ae/a 0.103 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	22 oz/a 5 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A LAPOCR B LAPOCR B LAPOCR B	V1 to V2 20" Corn 20" Corn 20" Corn									11.3	98.0	97.8	97.5
16	Roundup PowerMax Sharpen Roundup PowerMax Ammonium Sulfate	0.77 lb ae/a 0.0557 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	22 oz/a 2.5 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A LAPOCR B LAPOCR B LAPOCR B	V1 to V2 20" Corn 20" Corn 20" Corn									0.0	94.0	96.3	96.3
17	Roundup PowerMax Resolve Q Rimsulfuron (Resolve DF) Thifensulfuron (Harmony SG) Isoxadifen-Ethyl Roundup PowerMax Ammonium Sulfate	0.77 lb ae/a 0.0144 lb ai/a 0.00313 lb ai/a 0.0072 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	22 oz/a 0.92 oz/a 0.1 oz/a 0.23 oz/a 22 oz/a 5 gal/100 gal	EAPOCR A LAPOCR B LAPOCR B LAPOCR B LAPOCR B LAPOCR B	V1 to V2 20" Corn 20" Corn 20" Corn 20" Corn 20" Corn 20" Corn									3.8	92.5	93.5	93.0
LSD (P=.05)					4.42	7.25	7.24	6.98									
Standard Deviation					3.09	5.08	5.06	4.88									
CV					233.6	6.2	5.93	5.68									
Bartlett's X2					1.143	8.066	25.028	25.979									
P(Bartlett's X2)					0.767	0.921	0.05*	0.038*									
Replicate F					0.564	0.445	1.126	1.055									
Replicate Prob(F)					0.6413	0.7218	0.3480	0.3770									
Treatment F					3.635	81.365	80.107	86.289									
Treatment Prob(F)					0.0003	0.0001	0.0001	0.0001									

University of Arkansas-Division of Agriculture

Weed Efficacy without Atrazine

Trial ID: HCO-20810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		BRAPP		ECHCG		AMAPA		IPOSS				
Pest Name		Broadleaf sign>		Common barnyar>		Palmer amaranth		Morning glory				
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P				
Rating Date		6/11/2010		6/22/2010		6/22/2010		6/22/2010				
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO				
Rating Unit		%		%		%		%				
Crop Stage Majority		VT 75"		R2 78.5"		R2 78.5"		R2 78.5"				
Pest Stage Majority		10-30"		10-50"		10-65"		5-20"				
Trt-Eval Interval		16 DA-B		27 DA-B		27 DA-B		27 DA-B				
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	14	15	16	17
1	Untreated Check								0.0	0.0	0.0	0.0
2	Callisto	0.094	lb ai/a	3	oz/a	EAPOCR A	V1	V2	77.3	76.3	86.3	88.8
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1	V2				
3	Impact	0.0164	lb ai/a	0.75	oz/a	EAPOCR A	V1	V2	72.8	72.5	88.8	90.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1	V2				
4	Laudis	0.082	lb ai/a	3	oz/a	EAPOCR A	V1	V2	73.8	70.0	75.0	77.5
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1	V2				
5	Balance Flexx	0.078	lb ai/a	5	oz/a	EAPOCR A	V1	V2	87.0	88.0	92.5	87.5
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1	V2				
6	Capreno	0.081	lb ai/a	3	oz/a	EAPOCR A	V1	V2	89.0	90.0	88.8	91.8
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1	V2				
7	Corvus	0.103	lb ai/a	5	oz/a	EAPOCR A	V1	V2	94.5	95.0	94.0	94.5
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1	V2				
8	Sharpen	0.0557	lb ai/a	2.5	oz/a	EAPOCR A	V1	V2	73.8	70.0	80.0	80.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1	V2				
9	Resolve Q					EAPOCR A	V1	V2	78.0	87.0	90.0	91.3
	Rimsulfuron (Resolve DF)	0.0144	lb ai/a	0.92	oz/a	EAPOCR A	V1	V2				
	Thifensulfuron (Harmony SG)	0.00313	lb ai/a	0.1	oz/a	EAPOCR A	V1	V2				
	Isoxadifen-Ethyl	0.0072	lb ai/a	0.23	oz/a	EAPOCR A	V1	V2				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	EAPOCR A	V1	V2				
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2	91.3	93.0	93.8	93.8
	Callisto	0.094	lb ai/a	3	oz/a	LAPOCR B	20"	Corn				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20"	Corn				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20"	Corn				
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2	88.5	90.0	92.0	93.8
	Impact	0.0164	lb ai/a	0.75	oz/a	LAPOCR B	20"	Corn				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20"	Corn				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20"	Corn				
12	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2	95.5	93.8	95.0	91.3
	Laudis	0.082	lb ai/a	3	oz/a	LAPOCR B	20"	Corn				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20"	Corn				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20"	Corn				
13	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2	89.0	91.8	93.8	95.0
	Balance Flexx	0.078	lb ai/a	5	oz/a	LAPOCR B	20"	Corn				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20"	Corn				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20"	Corn				
14	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2	99.0	93.8	95.0	92.5
	Capreno	0.081	lb ai/a	3	oz/a	LAPOCR B	20"	Corn				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20"	Corn				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20"	Corn				
15	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2	97.0	95.0	92.5	95.0
	Corvus	0.103	lb ai/a	5	oz/a	LAPOCR B	20"	Corn				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20"	Corn				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20"	Corn				
16	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2	94.0	93.0	92.3	94.0
	Sharpen	0.0557	lb ai/a	2.5	oz/a	LAPOCR B	20"	Corn				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20"	Corn				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20"	Corn				
17	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR A	V1	V2	92.8	92.5	93.8	93.8
	Resolve Q					LAPOCR B	20"	Corn				
	Rimsulfuron (Resolve DF)	0.0144	lb ai/a	0.92	oz/a	LAPOCR B	20"	Corn				
	Thifensulfuron (Harmony SG)	0.00313	lb ai/a	0.1	oz/a	LAPOCR B	20"	Corn				
	Isoxadifen-Ethyl	0.0072	lb ai/a	0.23	oz/a	LAPOCR B	20"	Corn				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	LAPOCR B	20"	Corn				
	Ammonium Sulfate	2.5	lb ai/a	5	gal/100 gal	LAPOCR B	20"	Corn				
	LSD (P=.05)								7.31	9.48	11.50	11.94
	Standard Deviation								5.12	6.63	8.05	8.35
	CV								6.24	8.1	9.48	9.79
	Bartlett's X2								8.562	34.226	44.498	43.094
	P(Bartlett's X2)								0.899	0.001*	0.001*	0.001*
	Replicate F								0.556	2.131	0.893	0.860
	Replicate Prob(F)								0.6466	0.1086	0.4516	0.4682
	Treatment F								79.758	47.650	31.389	29.132
	Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Weed Efficacy without Atrazine

Trial ID: HCO-20810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		PLANT P		PLANT P		PLANT P		
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		9/7/2010		9/7/2010		9/7/2010		
Part Rated		PLANT P		PLANT P		PLANT P		MOICON		WEIDRY		YIELD		
Rating Date		9/3/2010		9/3/2010		9/3/2010		9/3/2010		9/3/2010		9/3/2010		
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		
Rating Unit		%		%		%		%		%		%		
Crop Stage Majority		R6 80"		R6 80"		R6 80"		R6 80"		R6 80"		R6 80"		
Pest Stage Majority		12-30"		24-72"		24-96"		24-96"		24-96"		24-96"		
Trt-Eval Interval		100 DA-B		100 DA-B		100 DA-B		100 DA-B		100 DA-B		100 DA-B		
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	18	19	20	21	22	23
1	Untreated Check								0.0	0.0	0.0	13.825	28.3275	126.0
2	Callisto Roundup PowerMax Ammonium Sulfate	0.094 0.77 2.5	lb ai/a lb ae/a lb ai/a	3 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A EAPOCR A EAPOCR A		V1 to V2 V1 to V2 V1 to V2	0.0	88.3	83.3	13.950	35.1375	156.1
3	Impact Roundup PowerMax Ammonium Sulfate	0.0164 0.77 2.5	lb ai/a lb ae/a lb ai/a	0.75 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A EAPOCR A EAPOCR A		V1 to V2 V1 to V2 V1 to V2	0.0	77.5	77.5	13.793	33.3700	148.5
4	Laudis Roundup PowerMax Ammonium Sulfate	0.082 0.77 2.5	lb ai/a lb ae/a lb ai/a	3 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A EAPOCR A EAPOCR A		V1 to V2 V1 to V2 V1 to V2	0.0	80.0	83.3	13.975	35.5100	157.8
5	Balance Flexx Roundup PowerMax Ammonium Sulfate	0.078 0.77 2.5	lb ai/a lb ae/a lb ai/a	5 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A EAPOCR A EAPOCR A		V1 to V2 V1 to V2 V1 to V2	0.0	88.8	75.0	13.850	34.0075	151.3
6	Capreno Roundup PowerMax Ammonium Sulfate	0.081 0.77 2.5	lb ai/a lb ae/a lb ai/a	3 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A EAPOCR A EAPOCR A		V1 to V2 V1 to V2 V1 to V2	0.0	70.0	95.0	14.000	36.4500	161.9
7	Corvus Roundup PowerMax Ammonium Sulfate	0.103 0.77 2.5	lb ai/a lb ae/a lb ai/a	5 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A EAPOCR A EAPOCR A		V1 to V2 V1 to V2 V1 to V2	0.0	77.5	95.0	13.950	36.2925	161.2
8	Sharpen Roundup PowerMax Ammonium Sulfate	0.0557 0.77 2.5	lb ai/a lb ae/a lb ai/a	2.5 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A EAPOCR A EAPOCR A		V1 to V2 V1 to V2 V1 to V2	0.0	88.3	92.0	13.800	34.2175	152.3
9	Resolve Q Rimsulfuron (Resolve DF) Thifensulfuron (Harmony SG) Isoxadifen-Ethyl Roundup PowerMax Ammonium Sulfate	0.0144 0.00313 0.0072 0.77 2.5	lb ai/a lb ai/a lb ai/a lb ae/a lb ai/a	0.92 oz/a 0.1 oz/a 0.23 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A EAPOCR A EAPOCR A EAPOCR A EAPOCR A		V1 to V2 V1 to V2 V1 to V2 V1 to V2 V1 to V2	0.0	87.5	90.0	14.050	35.6875	158.4
10	Roundup PowerMax Callisto Roundup PowerMax Ammonium Sulfate	0.77 0.094 0.77 2.5	lb ae/a lb ai/a lb ae/a lb ai/a	22 oz/a 3 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A LAPOCR B LAPOCR B LAPOCR B		V1 to V2 20" Corn 20" Corn 20" Corn	0.0	88.8	93.8	13.775	33.6150	149.6
11	Roundup PowerMax Impact Roundup PowerMax Ammonium Sulfate	0.77 0.0164 0.77 2.5	lb ae/a lb ai/a lb ae/a lb ai/a	22 oz/a 0.75 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A LAPOCR B LAPOCR B LAPOCR B		V1 to V2 20" Corn 20" Corn 20" Corn	0.0	88.3	83.3	14.150	35.9625	159.4
12	Roundup PowerMax Laudis Roundup PowerMax Ammonium Sulfate	0.77 0.082 0.77 2.5	lb ae/a lb ai/a lb ae/a lb ai/a	22 oz/a 3 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A LAPOCR B LAPOCR B LAPOCR B		V1 to V2 20" Corn 20" Corn 20" Corn	0.0	85.0	80.0	14.000	33.0338	146.7
13	Roundup PowerMax Balance Flexx Roundup PowerMax Ammonium Sulfate	0.77 0.078 0.77 2.5	lb ae/a lb ai/a lb ae/a lb ai/a	22 oz/a 5 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A LAPOCR B LAPOCR B LAPOCR B		V1 to V2 20" Corn 20" Corn 20" Corn	0.0	78.8	88.8	13.675	34.4575	153.6
14	Roundup PowerMax Capreno Roundup PowerMax Ammonium Sulfate	0.77 0.081 0.77 2.5	lb ae/a lb ai/a lb ae/a lb ai/a	22 oz/a 3 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A LAPOCR B LAPOCR B LAPOCR B		V1 to V2 20" Corn 20" Corn 20" Corn	0.0	82.5	86.3	13.675	25.2700	112.6
15	Roundup PowerMax Corvus Roundup PowerMax Ammonium Sulfate	0.77 0.103 0.77 2.5	lb ae/a lb ai/a lb ae/a lb ai/a	22 oz/a 5 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A LAPOCR B LAPOCR B LAPOCR B		V1 to V2 20" Corn 20" Corn 20" Corn	0.0	84.5	90.3	13.750	30.9150	137.7
16	Roundup PowerMax Sharpen Roundup PowerMax Ammonium Sulfate	0.77 0.0557 0.77 2.5	lb ae/a lb ai/a lb ae/a lb ai/a	22 oz/a 2.5 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A LAPOCR B LAPOCR B LAPOCR B		V1 to V2 20" Corn 20" Corn 20" Corn	0.0	68.8	93.8	13.725	34.4725	153.6
17	Roundup PowerMax Resolve Q Rimsulfuron (Resolve DF) Thifensulfuron (Harmony SG) Isoxadifen-Ethyl Roundup PowerMax Ammonium Sulfate	0.77 0.0144 0.00313 0.0072 0.77 2.5	lb ae/a lb ai/a lb ai/a lb ai/a lb ae/a lb ai/a	22 oz/a 0.92 oz/a 0.1 oz/a 0.23 oz/a 22 oz/a 5 gal/100 gal		EAPOCR A LAPOCR B LAPOCR B LAPOCR B LAPOCR B LAPOCR B		V1 to V2 20" Corn 20" Corn 20" Corn 20" Corn 20" Corn 20" Corn	0.0	93.8	89.5	13.875	28.4150	126.3
LSD (P=.05)									0.00	16.20	14.35	0.4271	5.07314	22.53
Standard Deviation									0.00	11.34	10.04	0.2989	3.54998	15.76
CV									0.0	14.51	12.22	2.15	10.68	10.66
Bartlett's X2									0.0	23.565	18.605	37.125	17.097	16.66
P(Bartlett's X2)									.	0.073	0.099	0.002*	0.379	0.408
Replicate F									0.000	5.701	0.809	1.222	6.978	7.031
Replicate Prob(F)									1.0000	0.0020	0.4950	0.3120	0.0005	0.0005
Treatment F									0.000	14.073	19.262	0.848	3.231	3.194
Treatment Prob(F)									1.0000	0.0001	0.0001	0.6280	0.0008	0.0009

University of Arkansas-Division of Agriculture

Weed Efficacy without Atrazine

Trial ID: HCO-20810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US
AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US
BRAPP, Brachiaria platyphylla, = US

Part Rated

PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown
PHYSTU = phytotoxicity - stunting
MOICON = moisture content
WEIDRY = weight - dry / dry matter content
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
BU = bushel

ARM Action Codes

TY1 = 4.388722*22*(100-21)/85

University of Arkansas-Division of Agriculture

Crop Safety of Resolve DF & Resolve Q

Trial ID: HCO-20910
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DKC 64-83
BBCH Scale: BCOR
Planting Method: PLANTD planted
Depth, Unit: 1.5 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Harvest Date: 8/27/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 15.0
Weighing Equipment: Massey Ferguson 8

Description: RR2 / VT3P
Planting Date: 4/19/2010
Rate, Unit: 34750 S/A
Spacing Within Row, Unit: 5.25 IN
Soil Temperature, Unit: 67.7 F
Emergence Date: 4/25/2010
Harvest Equipment: Massey Ferguson 8
Harvested Length, Unit: 28 FT
Moisture Meter: Massey Ferguson 8

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	4/20/2010	Lexar	3.7	LBA/Gal	SE	96	OZ/A
2.	4/12/2010	Potassium				90	LB A/A
3.	4/28/2010	Nitrogen				125	LB A/A
4.	5/27/2010	Nitrogen				125	LB A/A

Soil Description

Description Name: 2010 Corn
% Sand: 16
% Silt: 65
% Clay: 19
% OM: 2.2
pH: 6.7
CEC: 13

Texture: SIL silt loam
Soil Name: Sharkey & Desha Silt Loam
Fert. Level: G good
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	5/13/2010	5/20/2010	5/26/2010
Time of Day:	10:00 AM	11:40 AM	11:00 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	EAPOCR	MIPOCR	LAPOCR
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	ZH	ZH	BM
Air Temperature, Unit:	78.3 F	70.3 F	81.5 F
% Relative Humidity:	78.55	79.71	63.92
Wind Velocity, Unit:	3.85 MPH	5.90 MPH	1.40 MPH
Wind Direction:	ENE	S	W
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	75.5 F	74.1 F	79.4 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	70	80	30
Next Rain Occurred On:	5/6/2010	5/20/2010	5/27/2010

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	V3	V5	V6
Height, Unit:	6 IN	13 IN	21 IN

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Crop Safety of Resolve DF & Resolve Q

Trial ID: HCO-20910
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment			
	A	B	C
Appl. Equipment:	Hand Boom	Multi Boom	Hand Boom
Equipment Type:	SPRBAC	SPTRMO	SPRBAC
Operating Pressure, Unit:	45 PSI	50 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2
% Coverage:	100	100	100
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes

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Crop Safety of Resolve DF & Resolve Q

Trial ID: HCO-20910
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code Pest Name Part Rated Rating Date Rating Type Rating Unit Crop Stage Majority Pest Stage Majority Trit-Eval Interval	PLANT C 6/4/2010 PHYCHL % V9 44*	PLANT C 6/4/2010 PHYSTU % V9 44*	PLANT C 6/11/2010 PHYSTU % VT 75*	PLANT P 8/27/2010 WEIDRY lb/plot Harvest	PLANT P 8/27/2010 MOICON % Harvest	PLANT P 8/27/2010 YIELD BU Harvest	PLANT P 10/29/2010 COPLPA # Row Harvest	PLANT P 10/29/2010 COPLPA # Kernel Harvest	PLANT P 10/29/2010 WEDRCL gm Harvest	Trit Treatment								
										1	2	3	4	5	6	7	8	9
1 Weed-Free Check Roundup PowerMax Roundup PowerMax Roundup PowerMax										0.0	0.0	2.5	22.93	6.70	107.8	18.2	574.1	173.31
2 Resolve >Rimsulfuron Roundup PowerMax Roundup PowerMax Roundup PowerMax	0.0156 lb ai/a 0.0156 lb ai/a 0.77 lb ae/a 0.77 lb ae/a 0.77 lb ae/a									0.0	3.8	0.0	32.85	10.15	152.5	15.6	501.1	146.41
3 Resolve >Rimsulfuron Roundup PowerMax Roundup PowerMax Roundup PowerMax	0.0313 lb ai/a 0.0313 lb ai/a 0.77 lb ae/a 0.77 lb ae/a 0.77 lb ae/a									0.0	0.0	0.0	34.50	10.08	160.1	15.5	509.9	155.99
4 Resolve >Rimsulfuron Roundup PowerMax Roundup PowerMax Roundup PowerMax	0.047 lb ai/a 0.047 lb ai/a 0.77 lb ae/a 0.77 lb ae/a 0.77 lb ae/a									0.0	2.5	1.3	29.55	9.58	138.0	15.5	486.4	145.05
5 Resolve Q >Rimsulfuron >Thifensulfuron >Isoxadifen-Ethyl Roundup PowerMax Roundup PowerMax Roundup PowerMax	0.019 lb ai/a 0.0156 lb ai/a 0.00346 lb ai/a 0.00783 lb ai/a 0.77 lb ae/a 0.77 lb ae/a 0.77 lb ae/a									0.0	0.0	0.0	32.78	10.13	152.1	16.0	534.8	161.09
6 Resolve Q >Rimsulfuron >Thifensulfuron >Isoxadifen-Ethyl Roundup PowerMax Roundup PowerMax Roundup PowerMax	0.038 lb ai/a 0.0313 lb ai/a 0.00695 lb ai/a 0.01572 lb ai/a 0.77 lb ae/a 0.77 lb ae/a 0.77 lb ae/a									0.0	3.8	1.3	31.55	9.63	147.1	15.7	512.6	184.40
7 Resolve Q >Rimsulfuron >Thifensulfuron >Isoxadifen-Ethyl Roundup PowerMax Roundup PowerMax Roundup PowerMax	0.057 lb ai/a 0.047 lb ai/a 0.01044 lb ai/a 0.02361 lb ai/a 0.77 lb ae/a 0.77 lb ae/a 0.77 lb ae/a									0.0	3.8	3.8	29.80	10.35	138.0	15.7	498.5	146.96
8 Roundup PowerMax Resolve >Rimsulfuron Roundup PowerMax Roundup PowerMax	0.77 lb ae/a 0.0156 lb ai/a 0.0156 lb ai/a 0.77 lb ae/a 0.77 lb ae/a									0.0	0.0	2.5	29.05	9.30	136.1	12.6	430.4	137.90
9 Roundup PowerMax Resolve >Rimsulfuron Roundup PowerMax Roundup PowerMax	0.77 lb ae/a 0.0313 lb ai/a 0.0313 lb ai/a 0.77 lb ae/a 0.77 lb ae/a									0.0	0.0	0.0	24.95	9.95	116.0	13.3	415.2	131.03
10 Roundup PowerMax Resolve >Rimsulfuron Roundup PowerMax Roundup PowerMax	0.77 lb ae/a 0.047 lb ai/a 0.047 lb ai/a 0.77 lb ae/a 0.77 lb ae/a									0.0	1.3	0.0	22.98	10.23	106.5	11.5	375.0	120.96
11 Roundup PowerMax Resolve Q >Rimsulfuron >Thifensulfuron >Isoxadifen-Ethyl Roundup PowerMax Roundup PowerMax	0.77 lb ae/a 0.019 lb ai/a 0.0156 lb ai/a 0.00346 lb ai/a 0.00783 lb ai/a 0.77 lb ae/a 0.77 lb ae/a									0.0	0.0	0.0	34.95	9.58	163.2	15.4	536.9	164.34
12 Roundup PowerMax Resolve Q >Rimsulfuron >Thifensulfuron >Isoxadifen-Ethyl Roundup PowerMax Roundup PowerMax	0.77 lb ae/a 0.038 lb ai/a 0.0313 lb ai/a 0.00695 lb ai/a 0.01572 lb ai/a 0.77 lb ae/a 0.77 lb ae/a									0.0	0.0	2.5	33.03	9.15	155.0	15.6	507.5	154.61
13 Roundup PowerMax Resolve Q >Rimsulfuron >Thifensulfuron >Isoxadifen-Ethyl Roundup PowerMax Roundup PowerMax	0.77 lb ae/a 0.057 lb ai/a 0.047 lb ai/a 0.01044 lb ai/a 0.02361 lb ai/a 0.77 lb ae/a 0.77 lb ae/a									0.0	3.8	3.8	28.78	9.85	133.9	15.1	508.2	156.00
14 Roundup PowerMax Roundup PowerMax Resolve >Rimsulfuron Roundup PowerMax	0.77 lb ae/a 0.77 lb ae/a 0.0156 lb ai/a 0.0156 lb ai/a 0.77 lb ae/a									0.0	2.5	0.0	25.00	9.25	117.1	15.0	361.6	114.37

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Crop Safety of Resolve DF & Resolve Q

Trial ID: HCO-20910
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code	Pest Name	PLANT C	PLANT C	PLANT C	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P						
Part Rated	Rating Date	6/4/2010	6/4/2010	6/11/2010	8/27/2010	8/27/2010	8/27/2010	10/29/2010	10/29/2010	10/29/2010						
Rating Type	Rating Unit	PHYCHL	PHYSTU	PHYSTU	WEIDRY	MOICON	YIELD	COPLPA	COPLPA	WEDRCL						
Crop Stage Majority	Pest Stage Majority	%	%	%	lb/plot	%	BU	# Row	# Kernel	gm						
Tri-Eval Interval		V9 44*	V9 44*	VT 75*	Harvest	Harvest	Harvest	Harvest	Harvest	Harvest						
Tri	Treatment	Rate	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4	5	6	7	8	9
15	Roundup PowerMax	0.77 lb ae/a	22 oz/a	6" Corn	A	0.0	6.3	1.3	20.48	10.15	94.9	15.7	372.0	113.30		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a	12" Corn	B											
	Resolve	0.0313 lb ai/a	2 oz/a	20" Corn	C											
	>Rimsulfuron	0.0313 lb ai/a	2 oz/a	20" Corn	C											
	Roundup PowerMax	0.77 lb ae/a	22 oz/a	20" Corn	C											
16	Roundup PowerMax	0.77 lb ae/a	22 oz/a	6" Corn	A	0.0	12.5	10.0	15.50	9.98	71.9	15.4	325.2	98.85		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a	12" Corn	B											
	Resolve	0.047 lb ai/a	3 oz/a	20" Corn	C											
	>Rimsulfuron	0.047 lb ai/a	3 oz/a	20" Corn	C											
	Roundup PowerMax	0.77 lb ae/a	22 oz/a	20" Corn	C											
17	Roundup PowerMax	0.77 lb ae/a	22 oz/a	6" Corn	A	0.0	8.0	6.3	21.38	10.55	98.7	15.6	474.8	118.66		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a	12" Corn	B											
	Resolve Q	0.019 lb ai/a	1.36 oz/a	20" Corn	C											
	>Rimsulfuron	0.0156 lb ai/a	1 oz/a	20" Corn	C											
	>Thifensulfuron	0.00346 lb ai/a	0.111 oz/a	20" Corn	C											
	>Isoxadifen-Ethyl	0.00783 lb ai/a	0.25 oz/a	20" Corn	C											
	Roundup PowerMax	0.77 lb ae/a	22 oz/a	20" Corn	C											
18	Roundup PowerMax	0.77 lb ae/a	22 oz/a	6" Corn	A	0.0	6.3	5.0	20.90	10.20	96.8	14.9	361.5	114.07		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a	12" Corn	B											
	Resolve Q	0.038 lb ai/a	2.72 oz/a	20" Corn	C											
	>Rimsulfuron	0.0313 lb ai/a	2 oz/a	20" Corn	C											
	>Thifensulfuron	0.00695 lb ai/a	0.222 oz/a	20" Corn	C											
	>Isoxadifen-Ethyl	0.01572 lb ai/a	0.503 oz/a	20" Corn	C											
	Roundup PowerMax	0.77 lb ae/a	22 oz/a	20" Corn	C											
19	Roundup PowerMax	0.77 lb ae/a	22 oz/a	6" Corn	A	0.0	6.3	1.3	19.73	9.98	91.8	15.6	353.9	108.16		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a	12" Corn	B											
	Resolve Q	0.057 lb ai/a	4.08 oz/a	20" Corn	C											
	>Rimsulfuron	0.047 lb ai/a	3 oz/a	20" Corn	C											
	>Thifensulfuron	0.01044 lb ai/a	0.334 oz/a	20" Corn	C											
	>Isoxadifen-Ethyl	0.02361 lb ai/a	0.756 oz/a	20" Corn	C											
	Roundup PowerMax	0.77 lb ae/a	22 oz/a	20" Corn	C											
LSD (P=.05)		0.00	5.60	5.84	6.649	1.766	31.21	1.66	83.95	25.447						
Standard Deviation		0.00	3.96	4.13	4.702	1.249	22.07	1.17	59.36	17.994						
CV		0.0	124.42	190.23	17.49	12.85	17.64	7.73	13.05	12.92						
Bartlett's X2		0.0	5.961	11.75	42.098	49.923	42.102	61.346	68.971	71.993						
P(Bartlett's X2)		.	0.876	0.383	0.001*	0.001*	0.001*	0.001*	0.001*	0.001*						
Replicate F		0.000	0.752	0.688	1.918	3.699	1.913	3.171	2.004	3.954						
Replicate Prob(F)		1.0000	0.5259	0.5634	0.1375	0.0171	0.1385	0.0315	0.1243	0.0127						
Treatment F		0.000	3.045	1.663	6.062	1.756	6.027	5.775	6.596	7.275						
Treatment Prob(F)		1.0000	0.0008	0.0768	0.0001	0.0573	0.0001	0.0001	0.0001	0.0001						

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Part Rated
 PLANT = plant
 C = Crop is Part Rated
 P = Pest is Part Rated

Rating Type
 PHYCHL = phytotoxicity - chlorosis
 PHYSTU = phytotoxicity - stunting
 WEIDRY = weight - dry / dry matter content
 MOICON = moisture content
 YIELD = yield
 COPLPA = count - plant part
 WEDRCL = weight dried and cleaned

Rating Unit
 % = percent
 lb/plot = pounds per plot
 BU = bushel

ARM Action Codes
 TY1 = 4.388722*4*(100-5)/85

University of Arkansas-Division of Agriculture

Sulfonylurea Tolerance in Corn

Trial ID: HCO-21010
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DKC 64-83
BBCH Scale: BCOR
Planting Method: PLANTD planted
Depth, Unit: 1.5 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Harvest Date: 8/27/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 15.0
Weighing Equipment: Massey Ferguson 8

Description: RR2 / VT3P
Planting Date: 4/19/2010
Rate, Unit: 34750 S/A
Spacing Within Row, Unit: 5.25 IN
Soil Temperature, Unit: 67.7 F
Emergence Date: 4/25/2010
Harvest Equipment: Massey Ferguson 8
Harvested Length, Unit: 28 FT
Moisture Meter: Massey Ferguson 8

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix Code	Tank Mix
1.	4/20/2010	AAAtrex	4	LBA/GAL	L	32	OZ/A	Y	yes
2.	4/20/2010	Dual Magnum	7.62	LBA/GAL	L	16	OZ/A	Y	yes
3.	5/15/2010	AAAtrex	4	LBA/GAL	L	32	OZ/A	Y	yes
4.	5/15/2010	Roundup PowerMax	4.5	LBAE/GA	SL	32	OZ/A	Y	yes
5.	4/12/2010	Potassium				90	LB A/A		
6.	4/28/2010	Nitrogen				125	LB A/A		
7.	5/27/2010	Nitrogen				125	LB A/A		

Soil Description

Description Name: 2010 Corn
% Sand: 16
% Silt: 65
% Clay: 19

% OM: 2.2
pH: 6.7
CEC: 13

Texture: SIL silt loam
Soil Name: Sharkey & Desha Silt Loam
Fert. Level: G good
Soil Drainage: G good

Application Description

	A
Application Date:	5/26/2010
Time of Day:	11:30 AM
Application Method:	SPRAY
Application Timing:	LAPOCR
Application Placement:	BROFOL
Applied By:	KO
Air Temperature, Unit:	81.5 F
% Relative Humidity:	63.92
Wind Velocity, Unit:	1.40 MPH
Wind Direction:	W
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	79.4 F
Soil Moisture:	NORMAL
% Cloud Cover:	30
Next Rain Occurred On:	5/27/2010

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMX BCOR
Stage Scale Used:	DESC
Stage Majority, Percent:	V6
Height, Unit:	20 IN

University of Arkansas-Division of Agriculture

Sulfonylurea Tolerance in Corn

Trial ID: HCO-21010
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment	
	A
Appl. Equipment:	Hand Boom
Equipment Type:	SPRBAC
Operating Pressure, Unit:	45 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
% Coverage:	100
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	18 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 Liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Sulfonylurea Tolerance in Corn

Trial ID: HCO-21010
 Location: Rohwer, AR
 Investigator: Kenneth Smith

								PLANT C 6/4/2010 PHYCHL %	PLANT C 6/4/2010 PHYSTU %	PLANT C 6/11/2010 PHYSTU %	PLANT C 6/14/2010 HEIGHT cm VT	PLANT P 8/27/2010 WEIDRY lb/plot Harvest	PLANT P 8/27/2010 MOICON % Harvest	PLANT P 8/27/2010 YIELD bu/ac Harvest	
								9 DA-A	9 DA-A	16 DA-A	19 DA-A				
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4	5	6	7
1	SU Untreated Weed-Free Check								0.0	0.0	0.0	207.3	25.08	9.100	116.9
2	Thifensulfuron (Harmony GT XP)	0.0039	lb ai/a	0.083	oz/a	LAPOCR A	V6 - 1x		0.0	12.5	15.0	189.6	17.55	7.825	81.1
3	Thifensulfuron (Harmony GT XP)	0.0078	lb ai/a	0.166	oz/a	LAPOCR A	V6 - 2x		0.0	3.8	0.0	209.0	28.88	8.250	137.0
4	Halosulfuron (Permit)	0.062	lb ai/a	1.32	oz/a	LAPOCR A	V6 - 1x		0.0	1.3	3.8	202.8	28.28	10.648	130.4
5	Halosulfuron (Permit)	0.124	lb ai/a	2.65	oz/a	LAPOCR A	V6 - 2x		0.0	10.0	8.8	195.9	21.40	10.150	99.0
6	Rimsulfuron (Resolve DF)	0.0156	lb ai/a	1	oz/a	LAPOCR A	V6 - 1x		0.0	17.5	5.0	180.7	14.08	9.600	65.4
7	Rimsulfuron (Resolve DF)	0.0313	lb ai/a	2	oz/a	LAPOCR A	V6 - 2x		0.0	10.0	6.3	205.0	16.45	7.300	76.4
8	Nicosulfuron (Accent)	0.031	lb ai/a	0.66	oz/a	LAPOCR A	V6 - 1x		0.0	5.0	1.3	196.7	20.93	8.825	97.9
9	Nicosulfuron (Accent)	0.062	lb ai/a	1.32	oz/a	LAPOCR A	V6 - 2x		0.0	7.5	7.5	208.0	27.60	10.250	127.5
10	Prosulfuron (Peak)	0.0356	lb ai/a	1.00	oz/a	LAPOCR A	V6 - 1x		0.0	12.5	8.8	193.6	20.03	7.575	93.2
11	Prosulfuron (Peak)	0.071	lb ai/a	2.00	oz/a	LAPOCR A	V6 - 2x		0.0	10.0	5.0	196.6	13.75	4.875	65.6
12	Foramsulfuron (Option)	0.03	lb ai/a	1.5	oz/a	LAPOCR A	V6 - 1x		0.0	5.0	7.5	198.9	24.25	10.300	112.4
13	Foramsulfuron (Option)	0.06	lb ai/a	3.0	oz/a	LAPOCR A	V6 - 2x		0.0	5.0	8.8	202.2	19.10	7.150	90.4
14	Callisto	0.094	lb ai/a	3	oz/a	LAPOCR A	V6 - 1x		0.0	10.0	6.3	196.0	20.98	6.600	100.0
15	Callisto	0.188	lb ai/a	6	oz/a	LAPOCR A	V6 - 2x		0.0	12.5	12.5	187.4	15.60	4.925	74.5
LSD (P=.05)								0.00	13.44	14.94	25.25	14.528	5.3575	66.60	
Standard Deviation								0.00	9.40	10.45	17.67	10.166	3.7489	46.61	
CV								0.0	115.15	162.89	8.93	48.58	45.58	47.63	
Bartlett's X2								0.0	21.741	18.254	7.081	8.146	31.016	7.291	
P(Bartlett's X2)								.	0.06	0.108	0.932	0.882	0.006*	0.923	
Replicate F								0.000	1.313	0.360	1.225	1.329	2.000	1.181	
Replicate Prob(F)								1.0000	0.2828	0.7823	0.3127	0.2778	0.1286	0.3285	
Treatment F								0.000	1.039	0.653	0.832	0.975	0.983	0.988	
Treatment Prob(F)								1.0000	0.4367	0.8048	0.6321	0.4939	0.4865	0.4817	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Sulfonylurea Tolerance in Corn

Trial ID: HCO-21010
 Location: Rohwer, AR
 Investigator: Kenneth Smith

								PLANT P	PLANT P	PLANT P	
								COPLPA	COPLPA	WEDRCL	
								# Row	# Kernel	gm Kerne	
								Harvest	Harvest	Harvest	
Trt	Treatment	Rate	Other	Other	Growth	Appl	Appl				
No.	Name	Rate	Unit	Rate	Unit	Stage	Code	Description	8	9	10
1	SU Untreated Weed-Free Check								15.5	469.7	143.763
2	Thifensulfuron (Harmony GT XP)	0.0039	lb ai/a	0.083	oz/a	LAPOCR	A	V6 - 1x	15.1	330.0	87.633
3	Thifensulfuron (Harmony GT XP)	0.0078	lb ai/a	0.166	oz/a	LAPOCR	A	V6 - 2x	15.8	471.3	147.493
4	Halosulfuron (Permit)	0.062	lb ai/a	1.32	oz/a	LAPOCR	A	V6 - 1x	15.8	480.1	143.550
5	Halosulfuron (Permit)	0.124	lb ai/a	2.65	oz/a	LAPOCR	A	V6 - 2x	15.1	415.7	118.948
6	Rimsulfuron (Resolve DF)	0.0156	lb ai/a	1	oz/a	LAPOCR	A	V6 - 1x	15.0	290.8	76.673
7	Rimsulfuron (Resolve DF)	0.0313	lb ai/a	2	oz/a	LAPOCR	A	V6 - 2x	15.5	363.1	110.542
8	Nicosulfuron (Accent)	0.031	lb ai/a	0.66	oz/a	LAPOCR	A	V6 - 1x	15.8	427.0	120.148
9	Nicosulfuron (Accent)	0.062	lb ai/a	1.32	oz/a	LAPOCR	A	V6 - 2x	15.6	423.5	122.305
10	Prosulfuron (Peak)	0.0356	lb ai/a	1.00	oz/a	LAPOCR	A	V6 - 1x	15.5	410.9	113.983
11	Prosulfuron (Peak)	0.071	lb ai/a	2.00	oz/a	LAPOCR	A	V6 - 2x	15.3	391.5	108.358
12	Foramsulfuron (Option)	0.03	lb ai/a	1.5	oz/a	LAPOCR	A	V6 - 1x	15.1	403.4	110.293
13	Foramsulfuron (Option)	0.06	lb ai/a	3.0	oz/a	LAPOCR	A	V6 - 2x	15.9	426.8	121.305
14	Callisto	0.094	lb ai/a	3	oz/a	LAPOCR	A	V6 - 1x	15.2	375.6	96.985
15	Callisto	0.188	lb ai/a	6	oz/a	LAPOCR	A	V6 - 2x	15.4	374.2	103.145
	LSD (P=.05)								0.70	128.04	47.5237
	Standard Deviation								0.49	89.60	33.2552
	CV								3.16	22.2	28.92
	Bartlett's X2								17.089	13.061	9.367
	P(Bartlett's X2)								0.251	0.522	0.807
	Replicate F								1.857	1.818	2.746
	Replicate Prob(F)								0.1516	0.1585	0.0548
	Treatment F								1.546	1.355	1.448
	Treatment Prob(F)								0.1369	0.2181	0.1744

University of Arkansas-Division of Agriculture

Sulfonylurea Tolerance in Corn

Trial ID: HCO-21010
Location: Rohwer, AR

Investigator: Kenneth Smith

Part Rated

PLANT = plant
C = Crop is Part Rated
P = Pest is Part Rated

Rating Type

PHYCHL = phytotoxicity - chlorosis
PHYSTU = phytotoxicity - stunting
HEIGHT = height
WEIDRY = weight - dry / dry matter content
MOICON = moisture content
YIELD = yield
COPLPA = count - plant part
WEDRCL = weight dried and cleaned

Rating Unit

% = percent
cm = centimeter
lb/plot = pounds per plot
bu/ac = bushels per acre

ARM Action Codes

TY1 = 4.388722*5^(100-6)/85

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Corn Burndown Response to Different Paraquat Rates with Atrazine, Metribuzin, & Diuron

Trial ID: HCO-21110
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DKC 64-83
BBCH Scale: BCOR
Planting Method: PLANTD planted
Depth, Unit: 1.5 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Description: RR2 / VT3P
Planting Date: 4/19/2010
Rate, Unit: 34750 S/A
Spacing Within Row, Unit: 5.25 IN
Soil Temperature, Unit: 67.7 F
Emergence Date: 4/24/2010

Pest Description

Pest 1 Type: W Code: ZEAMX Zea mays
Common Name: Corn

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 177.24 FT2
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	4/20/2010	Dual Magnum	7.62	LBA/GAL	L	16	OZ/A
2.	4/12/2010	Potassium				90	LB A/A
3.	4/28/2010	Nitrogen				125	LB A/A
4.	5/27/2010	Nitrogen				125	LB A/A

Soil Description

Description Name: 2010 Corn
% Sand: 16
% Silt: 65
% Clay: 19
% OM: 2.2
pH: 6.7
CEC: 13
Texture: SIL silt loam
Soil Name: Sharkey & Desha Silt Loam
Fert. Level: G good
Soil Drainage: G good

Application Description

	A
Application Date:	5/4/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	POSPOS
Application Placement:	BROFOL
Applied By:	RD
Air Temperature, Unit:	73.9 F
% Relative Humidity:	58.72
Wind Velocity, Unit:	0.85 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	68.9 F
Soil Moisture:	GOOD
% Cloud Cover:	25
Next Rain Occurred On:	5/10/2010

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMX BCOR
Stage Scale Used:	DESC
Stage Majority, Percent:	V2
Height, Unit:	4 IN

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ZEAMX W
Stage Majority, Percent:	V2
Height, Unit:	4 IN

University of Arkansas-Division of Agriculture

Corn Burndown Response to Different Paraquat Rates with Atrazine, Metribuzin, & Diuron

Trial ID: HCO-21110
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment	
	A
Appl. Equipment:	Multi Boom
Equipment Type:	SPTRMO
Operating Pressure, Unit:	50 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
% Coverage:	100
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	18 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 Liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Corn Burndown Response to Different Paraquat Rates with Atrazine, Metribuzin, & Diuron

Trial ID: HCO-21110
Location: Rohwer, AR

Investigator: Kenneth Smith

							PLANT C 5/12/2010 PHYCHL % V3 6*	PLANT C 5/12/2010 PHYNEC % V3 6*	PLANT C 5/20/2010 PHYCHL % V6 24*	PLANT C 5/20/2010 PHYNEC % V6 24*	PLANT C 5/20/2010 PHYSTU % V6 24*	PLANT C 5/20/2010 CONTRO % V6 24*	PLANT C 6/4/2010 PHYSTU % V9 44*	PLANT C 6/4/2010 CONTRO % V9 44*
							8 DA-A	8 DA-A	16 DA-A	16 DA-A	16 DA-A	16 DA-A	31 DA-A	31 DA-A
Trt	Treatment	Rate	Other Rate	Other Rate	Growth Unit	Appl Code	1	2	3	4	5	6	7	8
No.	Name	Unit	Unit	Unit	Stage	Description								
1	Untreated Weed-Free Check						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	AAtrex COC	1 lb ai/a 1 lb ai/a	32 oz/a 1 % v/v		POSPOS A POSPOS A	V2 V2	0.0	0.0	7.5	5.0	10.0	5.0	5.0	0.0
3	Sencor COC	0.14 lb ai/a 1 lb ai/a	3 oz/a 1 % v/v		POSPOS A POSPOS A	V2 V2	5.0	5.0	2.5	2.5	5.0	0.0	2.5	0.0
4	Direx COC	0.5 lb ai/a 1 lb ai/a	16 oz/a 1 % v/v		POSPOS A POSPOS A	V2 V2	17.5	15.0	5.0	5.0	10.0	2.5	11.3	7.5
5	Gramoxone Inteon COC	0.156 lb ai/a 1 lb ai/a	10 oz/a 1 % v/v		POSPOS A POSPOS A	V2 V2	20.0	20.0	12.5	10.0	17.5	10.0	10.0	2.5
6	Gramoxone Inteon COC	0.313 lb ai/a 1 lb ai/a	20 oz/a 1 % v/v		POSPOS A POSPOS A	V2 V2	47.5	45.0	27.5	17.5	45.0	20.0	25.0	10.0
7	Gramoxone Inteon COC	0.47 lb ai/a 1 lb ai/a	30 oz/a 1 % v/v		POSPOS A POSPOS A	V2 V2	65.5	68.0	25.0	20.0	50.0	37.5	35.0	16.3
8	Gramoxone Inteon COC	0.625 lb ai/a 1 lb ai/a	40 oz/a 1 % v/v		POSPOS A POSPOS A	V2 V2	71.3	71.3	40.0	32.5	50.0	48.8	30.0	17.5
9	Gramoxone Inteon COC AAtrex	0.156 lb ai/a 1 lb ai/a 1 lb ai/a	10 oz/a 1 % v/v 32 oz/a		POSPOS A POSPOS A POSPOS A	V2 V2 V2	42.5	37.5	10.0	12.5	22.5	20.0	32.5	17.5
10	Gramoxone Inteon COC AAtrex	0.313 lb ai/a 1 lb ai/a 1 lb ai/a	20 oz/a 1 % v/v 32 oz/a		POSPOS A POSPOS A POSPOS A	V2 V2 V2	82.5	83.5	27.5	17.5	50.0	55.0	50.0	27.5
11	Gramoxone Inteon COC AAtrex	0.47 lb ai/a 1 lb ai/a 1 lb ai/a	30 oz/a 1 % v/v 32 oz/a		POSPOS A POSPOS A POSPOS A	V2 V2 V2	85.5	86.8	47.5	39.3	65.0	63.8	47.5	32.5
12	Gramoxone Inteon COC AAtrex	0.625 lb ai/a 1 lb ai/a 1 lb ai/a	40 oz/a 1 % v/v 32 oz/a		POSPOS A POSPOS A POSPOS A	V2 V2 V2	94.3	95.5	70.0	65.0	82.5	87.3	73.0	75.5
13	Gramoxone Inteon COC Sencor	0.156 lb ai/a 1 lb ai/a 0.14 lb ai/a	10 oz/a 1 % v/v 3 oz/a		POSPOS A POSPOS A POSPOS A	V2 V2 V2	73.0	71.8	30.0	27.5	52.5	32.5	40.0	17.5
14	Gramoxone Inteon COC Sencor	0.313 lb ai/a 1 lb ai/a 0.14 lb ai/a	20 oz/a 1 % v/v 3 oz/a		POSPOS A POSPOS A POSPOS A	V2 V2 V2	93.0	94.3	82.5	77.5	85.0	85.5	77.5	74.3
15	Gramoxone Inteon COC Sencor	0.47 lb ai/a 1 lb ai/a 0.14 lb ai/a	30 oz/a 1 % v/v 3 oz/a		POSPOS A POSPOS A POSPOS A	V2 V2 V2	99.3	99.8	95.0	97.5	97.5	97.5	92.5	96.3
16	Gramoxone Inteon COC Sencor	0.625 lb ai/a 1 lb ai/a 0.14 lb ai/a	40 oz/a 1 % v/v 3 oz/a		POSPOS A POSPOS A POSPOS A	V2 V2 V2	98.3	98.3	100.0	100.0	100.0	98.8	100.0	100.0
17	Gramoxone Inteon COC Direx	0.156 lb ai/a 1 lb ai/a 0.5 lb ai/a	10 oz/a 1 % v/v 16 oz/a		POSPOS A POSPOS A POSPOS A	V2 V2 V2	65.0	65.0	27.5	25.0	60.0	54.3	50.0	27.5
18	Gramoxone Inteon COC Direx	0.313 lb ai/a 1 lb ai/a 0.5 lb ai/a	20 oz/a 1 % v/v 16 oz/a		POSPOS A POSPOS A POSPOS A	V2 V2 V2	93.5	96.5	57.5	60.0	71.8	83.0	77.5	73.0
19	Gramoxone Inteon COC Direx	0.47 lb ai/a 1 lb ai/a 0.5 lb ai/a	30 oz/a 1 % v/v 16 oz/a		POSPOS A POSPOS A POSPOS A	V2 V2 V2	99.8	99.8	97.5	97.5	97.5	97.3	92.5	93.0
20	Gramoxone Inteon COC Direx	0.625 lb ai/a 1 lb ai/a 0.5 lb ai/a	40 oz/a 1 % v/v 16 oz/a		POSPOS A POSPOS A POSPOS A	V2 V2 V2	99.0	99.5	100.0	100.0	100.0	99.3	97.5	97.5
LSD (P=.05)							11.02	10.73	21.48	22.90	18.32	13.10	16.96	15.60
Standard Deviation							7.79	7.59	15.19	16.19	12.96	9.26	11.99	11.03
CV							12.45	12.12	35.11	39.9	24.18	18.57	25.26	28.07
Bartlett's X2							64.345	71.743	30.932	41.761	17.514	36.181	18.652	23.285
P(Bartlett's X2)							0.001*	0.001*	0.009*	0.001*	0.289	0.004*	0.349	0.078
Replicate F							1.546	1.860	0.730	1.315	2.103	0.594	0.866	2.456
Replicate Prob(F)							0.2126	0.1467	0.5384	0.2783	0.1100	0.6212	0.4642	0.0722
Treatment F							86.469	95.145	22.025	20.232	27.471	64.781	31.967	46.749
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Part Rated
PLANT = plant
C = Crop is Part Rated
Rating Type
PHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis / burn
PHYSTU = phytotoxicity - stunting
CONTRO = control / burndown or knockdown
Rating Unit
% = percent

University of Arkansas-Division of Agriculture

Corn Burndown Response to Different Amounts of Immediate Photoactive Radiation

Trial ID: HCO-21210
Location: Rohwer, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DKC 64-83
BBCH Scale: BCOR
Planting Method: PLANTD planted
Depth, Unit: 1.5 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Description: RR2 / VT3P
Planting Date: 4/19/2010
Rate, Unit: 34750 S/A
Spacing Within Row, Unit: 5.25 IN
Soil Temperature, Unit: 67.7 F
Emergence Date: 4/25/2010

Pest Description

Pest 1 Type: W Code: ZEAMX Zea mays
Common Name: Corn

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 177.24 FT2
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	4/21/2010	Dual Magnum	7.62	LBA/GAL	L	16	OZ/A
2.	4/12/2010	Potassium				90	LB A/A
3.	4/28/2010	Nitrogen				125	LB A/A
4.	5/27/2010	Nitrogen				125	LB A/A

Soil Description

Description Name: 2010 Corn
% Sand: 16
% Silt: 65
% Clay: 19
% OM: 2.2
pH: 6.7
CEC: 13
Texture: SIL silt loam
Soil Name: Sharkey & Desha Silt Loam
Fert. Level: G good
Soil Drainage: G good

Application Description

	A	B
Application Date:	5/20/2010	5/19/2010
Time of Day:	6:45 AM	8:15 PM
Application Method:	SPRAY	SPRAY
Application Timing:	POSPOS	POSPOS
Application Placement:	BROFOL	BROFOL
Applied By:	ZH	JM
Air Temperature, Unit:	70.3 F	69.2 F
% Relative Humidity:	79.71	63.97
Wind Velocity, Unit:	5.90 MPH	5.65 MPH
Wind Direction:	S	NNW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	74.1 F	71.6 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	80	60
Next Rain Occurred On:	5/20/2010	5/20/2010

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	V4	V4
Height, Unit:	10 IN	10 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ZEAMX W	ZEAMX W
Height, Unit:	10 IN	10 IN

University of Arkansas-Division of Agriculture

Corn Burndown Response to Different Amounts of Immediate Photoactive Radiation

Trial ID: HCO-21210
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment		
	A	B
Appl. Equipment:	Hand Boom	Hand Boom
Equipment Type:	SPRBAC	SPRBAC
Operating Pressure, Unit:	45 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
% Coverage:	100	100
Boom Length, Unit:	6.33 FT	6.33 FT
Boom Height, Unit:	18 IN	18 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Corn Burndown Response to Different Amounts of Immediate Photoactive Radiation

Trial ID: HCO-21210
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code							PLANT C	PLANT C	PLANT C	
Pest Name							5/27/2010	6/3/2010	6/10/2010	
Part Rated							PHYNEC	PHYNEC	PHYNEC	
Rating Date							%	%	%	
Rating Type							V4	V6	V8	
Rating Unit										
Crop Stage Majority										
Pest Stage Majority										
Trt-Eval Interval							7 DA-A	14 DA-A	21 DA-A	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	1	2	3
1	Untreated Check							0.0	0.0	0.0
2	AAtrex COC	1 lb ai/a 1 lb ai/a	32 oz/a 1 % v/v		POSPOS A POSPOS A	V2 - AM V2 - AM		22.5	17.5	18.8
3	Gramoxone Inteon COC	0.313 lb ai/a 1 lb ai/a	20 oz/a 1 % v/v		POSPOS A POSPOS A	V2 - AM V2 - AM		81.3	75.0	60.0
4	Gramoxone Inteon COC	0.47 lb ai/a 1 lb ai/a	30 oz/a 1 % v/v		POSPOS A POSPOS A	V2 - AM V2 - AM		87.5	83.0	71.3
5	Gramoxone Inteon COC	0.625 lb ai/a 1 lb ai/a	40 oz/a 1 % v/v		POSPOS A POSPOS A	V2 - AM V2 - AM		93.8	89.3	81.8
6	Gramoxone Inteon COC AAtrex	0.313 lb ai/a 1 lb ai/a 1 lb ai/a	20 oz/a 1 % v/v 32 oz/a		POSPOS A POSPOS A POSPOS A	V2 - AM V2 - AM V2 - AM		88.8	85.0	85.0
7	Gramoxone Inteon COC AAtrex	0.47 lb ai/a 1 lb ai/a 1 lb ai/a	30 oz/a 1 % v/v 32 oz/a		POSPOS A POSPOS A POSPOS A	V2 - AM V2 - AM V2 - AM		90.5	86.5	89.3
8	Gramoxone Inteon COC AAtrex	0.625 lb ai/a 1 lb ai/a 1 lb ai/a	40 oz/a 1 % v/v 32 oz/a		POSPOS A POSPOS A POSPOS A	V2 - AM V2 - AM V2 - AM		90.0	82.5	95.5
9	AAtrex COC	1 lb ai/a 1 lb ai/a	32 oz/a 1 % v/v		POSPOS B POSPOS B	V2 - PM V2 - PM		17.5	12.5	18.8
10	Gramoxone Inteon COC	0.313 lb ai/a 1 lb ai/a	20 oz/a 1 % v/v		POSPOS B POSPOS B	V2 - PM V2 - PM		98.8	98.0	98.0
11	Gramoxone Inteon COC	0.47 lb ai/a 1 lb ai/a	30 oz/a 1 % v/v		POSPOS B POSPOS B	V2 - PM V2 - PM		100.0	99.8	96.0
12	Gramoxone Inteon COC	0.625 lb ai/a 1 lb ai/a	40 oz/a 1 % v/v		POSPOS B POSPOS B	V2 - PM V2 - PM		99.5	99.5	99.5
13	Gramoxone Inteon COC AAtrex	0.313 lb ai/a 1 lb ai/a 1 lb ai/a	20 oz/a 1 % v/v 32 oz/a		POSPOS B POSPOS B POSPOS B	V2 - PM V2 - PM V2 - PM		98.3	97.5	97.3
14	Gramoxone Inteon COC AAtrex	0.47 lb ai/a 1 lb ai/a 1 lb ai/a	30 oz/a 1 % v/v 32 oz/a		POSPOS B POSPOS B POSPOS B	V2 - PM V2 - PM V2 - PM		98.3	99.3	98.8
15	Gramoxone Inteon COC AAtrex	0.625 lb ai/a 1 lb ai/a 1 lb ai/a	40 oz/a 1 % v/v 32 oz/a		POSPOS B POSPOS B POSPOS B	V2 - PM V2 - PM V2 - PM		99.8	99.8	100.0
LSD (P=.05)							5.17	9.44	10.21	
Standard Deviation							3.62	6.61	7.14	
CV							4.65	8.81	9.65	
Bartlett's X2							38.84	62.906	62.32	
P(Bartlett's X2)							0.001*	0.001*	0.001*	
Replicate F							1.256	0.974	2.800	
Replicate Prob(F)							0.3018	0.4139	0.0515	
Treatment F							355.372	110.233	90.728	
Treatment Prob(F)							0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Part Rated
 PLANT = plant
 C = Crop is Part Rated
 Rating Type
 PHYNEC = phytotoxicity - necrosis /burn
 Rating Unit
 % = percent

University of Arkansas-Division of Agriculture

Corn Burndown Response using Different Paraquat Application Timing

Trial ID: HCO-21310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DKC 64-83
BBCH Scale: BCOR
Planting Method: PLANTD planted
Depth, Unit: 1.5 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Description: RR2 / VT3P
Planting Date: 4/19/2010
Rate, Unit: 34750 S/A
Spacing Within Row, Unit: 5.25 IN
Soil Temperature, Unit: 67.7 F
Emergence Date: 4/24/2010

Pest Description

Pest 1 Type: W Code: ZEAMX Zea mays
Common Name: Corn

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT2
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	4/21/2010	Dual Magnum	7.62	LBA/GAL	L	16	OZ/A
2.	4/12/2010	Potassium				90	LB A/A
3.	4/28/2010	Nitrogen				125	LB A/A
4.	5/27/2010	Nitrogen				125	LB A/A

Soil Description

Description Name: 2010 Corn
% Sand: 16
% Silt: 65
% Clay: 19
% OM: 2.2
pH: 6.7
CEC: 13
Texture: SIL silt loam
Soil Name: Sharkey & Desha Silt Loam
Fert. Level: G good
Soil Drainage: G good

Application Description

	A	B	C	D
Application Date:	4/28/2010	5/4/2010	5/13/2010	5/19/2010
Time of Day:	10:00 AM	10:15 AM	11:00 AM	10:00 AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	EAPOCR	EAPOCR	MIPOCR	LAPOCR
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	JB	KH	JM	MS
Air Temperature, Unit:	60.2 F	73.9 F	78.3 F	69.2 F
% Relative Humidity:	66.08	58.72	78.55	63.97
Wind Velocity, Unit:	1.90 MPH	0.85 MPH	3.85 MPH	5.65 MPH
Wind Direction:	SSW	S	ENE	NNW
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	59.8 F	68.9 F	75.5 F	71.6 F
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL
% Cloud Cover:	30	30	70	40
Next Rain Occurred On:	5/1/2010	5/10/2010	5/16/2010	5/20/2010

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR
Height, Unit:	1 IN	3 IN	6 IN	13 IN

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	ZEAMX W	ZEAMX W	ZEAMX W	ZEAMX W
Stage Majority, Percent:	V1 90	V2 100	V3 100	V4 100
Height, Unit:	1 IN	3 IN	6 IN	13 IN

University of Arkansas-Division of Agriculture

Corn Burndown Response using Different Paraquat Application Timing

Trial ID: HCO-21310
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment								
	A		B		C		D	
Appl. Equipment:	Hand Boom		Hand Boom		Hand Boom		Hand Boom	
Equipment Type:	SPRBAC		SPRBAC		SPRBAC		SPRBAC	
Operating Pressure, Unit:	45	PSI	45	PSI	45	PSI	45	PSI
Nozzle Type:	Air-Mix		Air-Mix		Air-Mix		Air-Mix	
Nozzle Size:	110015		110015		110015		110015	
Nozzle Spacing, Unit:	19	IN	19	IN	19	IN	19	IN
Nozzles/Row:	2		2		2		2	
% Coverage:	100		100		100		100	
Boom Length, Unit:	12.6 FT		12.6 FT		12.6 FT		12.6 FT	
Boom Height, Unit:	18 IN		18 IN		18 IN		18 IN	
Carrier:	WATER		WATER		WATER		WATER	
Spray Volume, Unit:	12	gal/ac	12	gal/ac	12	gal/ac	12	gal/ac
Mix Size, Unit:	3	Liters	3	Liters	3	Liters	3	Liters
Propellant:	COMCO2		COMCO2		COMCO2		COMCO2	
Tank Mix (Y/N):	Y	yes	Y	yes	Y	yes	Y	yes

University of Arkansas-Division of Agriculture

Corn Burndown Response using Different Paraquat Application Timing

Trial ID: HCO-21310
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		PLANT C		PLANT C		PLANT C		PLANT C		PLANT C		
Pest Name		5/4/2010		5/11/2010		5/20/2010		5/27/2010		6/2/2010		
Part Rated		PHYNEC		PHYNEC		PHYNEC		CONTRO		CONTRO		
Rating Date		%		%		%		%		%		
Rating Type		V		V3		V6		V7		V8		
Rating Unit		6 DA-A		7 DA-B		7 DA-C		8 DA-D		14 DA-D		
Crop Stage Majority												
Pest Stage Majority												
Trt-Eval Interval												
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	Gramoxone Inteon COC	0.624 lb ai/a 1 lb ai/a	40 oz/a 1 % v/v		PREPLA A PREPLA A	V1 V1		62.5	17.5	20.0	13.8	17.5
3	Gramoxone Inteon AAtrex COC	0.624 lb ai/a 1 lb ai/a 1 lb ai/a	40 oz/a 32 oz/a 1 % v/v		PREPLA A PREPLA A PREPLA A	V1 V1 V1		75.0	27.5	25.0	35.0	30.0
4	Gramoxone Inteon COC	0.624 lb ai/a 1 lb ai/a	40 oz/a 1 % v/v		PREPLA B PREPLA B	V2 V2			92.3	78.8	60.0	60.0
5	Gramoxone Inteon AAtrex COC	0.624 lb ai/a 1 lb ai/a 1 lb ai/a	40 oz/a 32 oz/a 1 % v/v		PREPLA B PREPLA B PREPLA B	V2 V2 V2			100.0	96.5	96.3	91.3
6	Gramoxone Inteon COC	0.624 lb ai/a 1 lb ai/a	40 oz/a 1 % v/v		PREPLA C PREPLA C	V3 V3				93.0	84.3	72.5
7	Gramoxone Inteon AAtrex COC	0.624 lb ai/a 1 lb ai/a 1 lb ai/a	40 oz/a 32 oz/a 1 % v/v		PREPLA C PREPLA C PREPLA C	V3 V3 V3				96.5	91.8	79.3
8	Gramoxone Inteon COC	0.624 lb ai/a 1 lb ai/a	40 oz/a 1 % v/v		PREPLA D PREPLA D	V4 V4					86.3	65.0
9	Gramoxone Inteon AAtrex COC	0.624 lb ai/a 1 lb ai/a 1 lb ai/a	40 oz/a 32 oz/a 1 % v/v		PREPLA D PREPLA D PREPLA D	V4 V4 V4					78.8	60.0
LSD (P=.05)								6.45	10.14	7.59	9.69	13.59
Standard Deviation								3.73	6.58	5.11	6.64	9.31
CV								8.13	13.88	8.72	10.95	17.62
Bartlett's X2								0.061	8.848	10.845	12.368	10.761
P(Bartlett's X2)								0.805	0.012*	0.055	0.089	0.096
Replicate F								2.200	1.711	0.045	0.743	0.518
Replicate Prob(F)								0.1889	0.2176	0.9868	0.5372	0.6738
Treatment F								465.000	191.812	268.919	116.917	42.518
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Part Rated
PLANT = plant
C = Crop is Part Rated
Rating Type
PHYNEC = phytotoxicity - necrosis /burn
CONTRO = control / burndown or knockdown
Rating Unit
% = percent

University of Arkansas-Division of Agriculture

Halex GT Programs

Trial ID: HCO-21410
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DKC 64-83
BBCH Scale: BCOR
Planting Method: PLANTD planted
Depth, Unit: 1.5 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Harvest Date: 9/3/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 15.0
Weighing Equipment: Almaco
Description: RR
Planting Date: 4/19/2010
Rate, Unit: 34750 S/A
Spacing Within Row, Unit: 5.25 IN
Soil Temperature, Unit: 67.7 F
Emergence Date: 4/24/2010
Harvest Equipment: Almaco
Harvested Length, Unit: 28 FT
Moisture Meter: Almaco

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass
Artificial Population: X
Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth
Artificial Population: X
Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory
Artificial Population: X

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT2
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB1 Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: 2010 Corn
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	4/20/2010	5/5/2010	5/19/2010
Time of Day:	AM	10:00 AM	10:30 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS	POSPOS
Application Placement:	BROS01	BROF0L	BROF0L
Applied By:	RD	JB	MS
Air Temperature, Unit:	62.5 F	77.4 F	69.2 F
% Relative Humidity:	50.40	51.45	63.97
Wind Velocity, Unit:	4.15 MPH	5.80 MPH	5.65 MPH
Wind Direction:	S	ENE	NNW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	63.8 F	70.9 F	71.6 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	35	30	45
Next Rain Occurred On:	4/21/2010	5/10/2010	5/20/2010

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	V0	V3	V5
Height, Unit:	0 IN	4.5 IN	15 IN

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Height, Unit:	0 IN	1.5 IN	5 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W
Height, Unit:	0 IN	1.5 IN	6 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W
Height, Unit:	0 IN	1 IN	5 IN

University of Arkansas-Division of Agriculture

Halex GT Programs

Trial ID: HCO-21410
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment			
	A	B	C
Appl. Equipment:	Multi Boom	Multi Boom	Hand Boom
Equipment Type:	SPTRMO	SPTRMO	SPRBAC
Operating Pressure, Unit:	50 PSI	50 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2
% Coverage:	100	100	100
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes

University of Arkansas-Division of Agriculture

Halex GT Programs

Trial ID: HCO-21410
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code	ECHCG	AMAPA	IPOSS	PLANT C	PLANT C							
Pest Name	Common barnyar>	Palmer amaranth	Morning glory	5/12/2010	5/19/2010							
Part Rated	PLANT P	PLANT P	PLANT P	PHYSTU	COUPLA							
Rating Date	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010							
Rating Type	CONTRO	CONTRO	CONTRO	PHYSTU	COUPLA							
Rating Unit	%	%	%	%	%							
Crop Stage Majority	V3 6"	V3 6"	V3 6"	V3 6"	V3 6"							
Pest Stage Majority	1-4"	1-2"	1-2"									
Trt-Eval Interval	22 DA-A	22 DA-A	22 DA-A	22 DA-A	14 DA-B							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check							0.0	0.0	0.0	0.0	12.3
2	Dual II Magnum	1.24 lb ai/a	20.8 oz/a		PREPRE A	Pre	V2-V4 / <12"	99.3	100.0	100.0	1.3	11.0
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	AAtrex	2 lb ai/a	64 oz/a		POSPOS B	Pre	V2-V4 / <12"					
3	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V2-V4 / <12"	98.5	98.8	99.3	0.0	10.5
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	AAtrex	1 lb ai/a	32 oz/a		POSPOS B	Pre	V2-V4 / <12"					
4	Bicep II Magnum	1.79 lb ai/a	41.6 oz/a		PREPRE A	Pre	V2-V4 / <12"	98.0	98.8	99.3	1.3	11.5
	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V2-V4 / <12"					
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B	Pre	V2-V4 / <12"					
5	Bicep II Magnum	1.79 lb ai/a	41.6 oz/a		PREPRE A	Pre	V4-V6 / 18-20"	100.0	99.3	100.0	1.3	9.8
	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V4-V6 / 18-20"					
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS C	Pre	V4-V6 / 18-20"					
6	Lexar	2.78 lb ai/a	96 oz/a		PREPRE A	Pre		100.0	98.8	100.0	0.0	12.3
7	Dual II Magnum	0.955 lb ai/a	16 oz/a		PREPRE A	Pre		100.0	98.8	98.8	0.0	12.5
	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre						
	Roundup PowerMax	1.13 lb ai/a	32 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	AAtrex	1 lb ai/a	32 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	LSD (P=.05)							1.63	2.76	1.79	2.39	3.34
	Standard Deviation							1.10	1.86	1.21	1.61	2.25
	CV							1.29	2.19	1.41	299.79	19.72
	Bartlett's X2							0.76	0.939	1.078	0.0	6.38
	P(Bartlett's X2)							0.684	0.919	0.583	.	0.382
	Replicate F							3.356	1.884	1.402	1.269	0.554
	Replicate Prob(F)							0.0419	0.1685	0.2747	0.3148	0.6519
	Treatment F							4687.496	1621.988	3899.099	0.692	0.840
	Treatment Prob(F)							0.0001	0.0001	0.0001	0.6589	0.5556

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Halex GT Programs

Trial ID: HCO-21410
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG		AMAPA		
Common barnyar>		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>		Palmer amaranth		
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		
Rating Date		5/20/2010		5/20/2010		5/20/2010		6/4/2010		6/4/2010		
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		
Rating Unit		%		%		%		%		%		
Crop Stage Majority		V6 24"		V6 24"		V6 24"		V9 44"		V9 44"		
Pest Stage Majority		5-20"		5-30"		6-12"		18-22"		12-20"		
Trt-Eval Interval		15 DA-B		15 DA-B		15 DA-B		16 DA-C		16 DA-C		
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	6	7	8	9	10
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	Dual II Magnum	1.24 lb ai/a	20.8 oz/a		PREPRE A	Pre	V2-V4 / <12"	100.0	100.0	97.5	100.0	100.0
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	AAtrex	2 lb ai/a	64 oz/a		POSPOS B	Pre	V2-V4 / <12"					
3	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V2-V4 / <12"	100.0	100.0	95.0	98.8	98.0
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	AAtrex	1 lb ai/a	32 oz/a		POSPOS B	Pre	V2-V4 / <12"					
4	Bicep II Magnum	1.79 lb ai/a	41.6 oz/a		PREPRE A	Pre	V2-V4 / <12"	100.0	100.0	95.0	99.3	100.0
	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V2-V4 / <12"					
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B	Pre	V2-V4 / <12"					
5	Bicep II Magnum	1.79 lb ai/a	41.6 oz/a		PREPRE A	Pre	V4-V6 / 18-20"	100.0	100.0	90.0	100.0	100.0
	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V4-V6 / 18-20"					
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS C	Pre	V4-V6 / 18-20"					
6	Lexar	2.78 lb ai/a	96 oz/a		PREPRE A	Pre		100.0	95.0	77.5	95.5	96.5
7	Dual II Magnum	0.955 lb ai/a	16 oz/a		PREPRE A	Pre		100.0	97.5	72.5	95.5	93.5
	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre						
	Roundup PowerMax	1.13 lb ai/a	32 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	AAtrex	1 lb ai/a	32 oz/a		POSPOS B	Pre	V2-V4 / <12"					
LSD (P=.05)								0.00	6.42	10.17	4.47	4.19
Standard Deviation								0.00	4.32	6.84	3.01	2.82
CV								0.0	5.1	9.08	3.58	3.36
Bartlett's X2								0.0	1.308	6.192	6.896	0.033
P(Bartlett's X2)								.	0.253	0.288	0.075	0.984
Replicate F								0.000	0.702	2.720	2.069	0.623
Replicate Prob(F)								1.0000	0.5630	0.0749	0.1402	0.6094
Treatment F								0.000	299.553	102.051	608.953	693.000
Treatment Prob(F)								1.0000	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Halex GT Programs

Trial ID: HCO-21410
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code	IPOSS		ECHCG		AMAPA		IPOSS		BRAPP		
Pest Name	Morning glory		Common barnyar>		Palmer amaranth		Morning glory		Broadleaf sign>		
Part Rated	PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		
Rating Date	6/4/2010		6/11/2010		6/11/2010		6/11/2010		6/11/2010		
Rating Type	CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		
Rating Unit	%		%		%		%		%		
Crop Stage Majority	V9 44*		VT 75*		VT 75*		VT 75*		VT 75*		
Pest Stage Majority	10-18*		10-30*		15-35*		10-20*		10-25*		
Tri-Eval Interval	16 DA-C		23 DA-C		23 DA-C		23 DA-C		23 DA-C		
Tri Treatment No. Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	11	12	13	14	15
1 Untreated Check							0.0	0.0	0.0	0.0	0.0
2 Dual II Magnum	1.24 lb ai/a	20.8 oz/a		PREPRE A	Pre	V2-V4 / <12"	94.8	100.0	99.5	93.3	97.5
Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B		V2-V4 / <12"					
AAtrex	2 lb ai/a	64 oz/a		POSPOS B		V2-V4 / <12"					
3 AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V2-V4 / <12"	91.8	100.0	98.0	91.8	97.5
Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B		V2-V4 / <12"					
AAtrex	1 lb ai/a	32 oz/a		POSPOS B		V2-V4 / <12"					
4 Bicep II Magnum	1.79 lb ai/a	41.6 oz/a		PREPRE A	Pre	V2-V4 / <12"	95.0	100.0	97.8	94.0	99.0
AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V2-V4 / <12"					
Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B		V2-V4 / <12"					
5 Bicep II Magnum	1.79 lb ai/a	41.6 oz/a		PREPRE A	Pre	V4-V6 / 18-20"	96.3	100.0	100.0	98.3	99.5
AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V4-V6 / 18-20"					
Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS C		V4-V6 / 18-20"					
6 Lexar	2.78 lb ai/a	96 oz/a		PREPRE A	Pre		90.0	96.0	94.3	91.5	93.8
7 Dual II Magnum	0.955 lb ai/a	16 oz/a		PREPRE A	Pre		89.5	96.8	89.5	89.0	94.3
AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre						
Roundup PowerMax	1.13 lb ai/a	32 oz/a		POSPOS B		V2-V4 / <12"					
AAtrex	1 lb ai/a	32 oz/a		POSPOS B		V2-V4 / <12"					
LSD (P=.05)							4.44	5.94	4.80	3.48	6.14
Standard Deviation							2.99	4.00	3.23	2.34	4.13
CV							3.75	4.72	3.91	2.94	4.98
Bartlett's X2							2.671	0.125	16.946	5.697	10.728
P(Bartlett's X2)							0.751	0.723	0.002*	0.337	0.057
Replicate F							3.463	0.639	1.513	6.859	3.180
Replicate Prob(F)							0.0382	0.5997	0.2451	0.0028	0.0491
Treatment F							555.555	349.219	514.340	907.591	315.311
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Halex GT Programs

Trial ID: HCO-21410
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG				
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>				
Part Rated	PLANT C	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P			
Rating Date	6/19/2010	6/22/2010	6/22/2010	6/22/2010	6/22/2010	6/22/2010	8/23/2010	8/23/2010	8/23/2010			
Rating Type	LODGIN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%	%	%	%			
Crop Stage Majority	VT 75"	R2 78.5"	R2 78.5"	R2 78.5"	R2 78.5"	R2 78.5"	5-20"	5-20"	R6 80"			
Pest Stage Majority		10-50"	10-65"	10-65"	10-65"	10-65"	10-30"	10-30"	10-30"			
Trt-Eval Interval	31 DA-C	34 DA-C	34 DA-C	34 DA-C	34 DA-C	34 DA-C	96 DA-C	96 DA-C	96 DA-C			
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	16	17	18	19	20
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	Dual II Magnum	1.24 lb ai/a	20.8 oz/a		PREPRE A	Pre	V2-V4 / <12"	0.0	80.0	83.8	83.8	94.3
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	AAtrex	2 lb ai/a	64 oz/a		POSPOS B	Pre	V2-V4 / <12"					
3	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V2-V4 / <12"	2.5	65.8	71.3	73.8	92.5
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	AAtrex	1 lb ai/a	32 oz/a		POSPOS B	Pre	V2-V4 / <12"					
4	Bicep II Magnum	1.79 lb ai/a	41.6 oz/a		PREPRE A	Pre	V2-V4 / <12"	0.0	93.3	93.3	93.3	93.8
	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V2-V4 / <12"					
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B	Pre	V2-V4 / <12"					
5	Bicep II Magnum	1.79 lb ai/a	41.6 oz/a		PREPRE A	Pre	V4-V6 / 18-20"	0.0	65.0	65.0	65.0	91.3
	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V4-V6 / 18-20"					
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS C	Pre	V4-V6 / 18-20"					
6	Lexar	2.78 lb ai/a	96 oz/a		PREPRE A	Pre		0.0	65.0	62.5	65.0	92.5
7	Dual II Magnum	0.955 lb ai/a	16 oz/a		PREPRE A	Pre	V2-V4 / <12"	0.0	76.7	70.0	80.0	95.0
	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V2-V4 / <12"					
	Roundup PowerMax	1.13 lb ai/a	32 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	AAtrex	1 lb ai/a	32 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	LSD (P=.05)							2.81	16.17	17.21	17.05	5.04
	Standard Deviation							1.89	10.79	11.48	11.37	3.40
	CV							529.15	16.94	18.03	17.28	4.25
	Bartlett's X2							0.0	7.616	7.804	7.748	5.724
	P(Bartlett's X2)							.	0.179	0.167	0.101	0.221
	Replicate F							1.000	0.624	1.189	0.991	1.638
	Replicate Prob(F)							0.4155	0.6096	0.3453	0.4221	0.2158
	Treatment F							1.000	30.802	27.503	29.253	431.048
	Treatment Prob(F)							0.4552	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Halex GT Programs

Trial ID: HCO-21410
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		PLANT P		PLANT P		PLANT P		
Pest Name		Palmer amaranth		Morning glory		9/3/2010		9/3/2010		9/3/2010		
Part Rated		PLANT P		PLANT P		MOICON		WEIDRY		YIELD		
Rating Date		8/23/2010		8/23/2010		9/3/2010		9/3/2010		9/3/2010		
Rating Type		CONTRO		CONTRO		%		%		BU		
Rating Unit		%		%		Harvest		lb/plot		Harvest		
Crop Stage Majority		R6 80"		R6 80"		20-80"		Harvest		Harvest		
Pest Stage Majority		20-60"		20-80"		96 DA-C						
Tri-Eval Interval		96 DA-C		96 DA-C								
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	21	22	23	24	25
1	Untreated Check							0.0	0.0	14.15	31.650	140.3
2	Dual II Magnum	1.24 lb ai/a	20.8 oz/a		PREPRE A	Pre	V2-V4 / <12"	90.0	81.3	14.00	38.078	169.1
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	AAtrex	2 lb ai/a	64 oz/a		POSPOS B	Pre	V2-V4 / <12"					
3	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V2-V4 / <12"	90.5	85.5	14.18	36.035	159.7
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	AAtrex	1 lb ai/a	32 oz/a		POSPOS B	Pre	V2-V4 / <12"					
4	Bicep II Magnum	1.79 lb ai/a	41.6 oz/a		PREPRE A	Pre	V2-V4 / <12"	93.8	88.8	13.90	37.058	164.8
	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V2-V4 / <12"					
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS B	Pre	V2-V4 / <12"					
5	Bicep II Magnum	1.79 lb ai/a	41.6 oz/a		PREPRE A	Pre	V4-V6 / 18-20"	87.5	85.0	14.38	36.290	160.7
	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V4-V6 / 18-20"					
	Halex GT	1.98 lb ai/a	57.6 oz/a		POSPOS C	Pre	V4-V6 / 18-20"					
6	Lexar	2.78 lb ai/a	96 oz/a		PREPRE A	Pre		91.3	72.5	14.45	37.425	165.3
7	Dual II Magnum	0.955 lb ai/a	16 oz/a		PREPRE A	Pre	V2-V4 / <12"	95.0	71.3	14.10	37.613	166.8
	AAtrex	1 lb ai/a	32 oz/a		PREPRE A	Pre	V2-V4 / <12"					
	Roundup PowerMax	1.13 lb ai/a	32 oz/a		POSPOS B	Pre	V2-V4 / <12"					
	AAtrex	1 lb ai/a	32 oz/a		POSPOS B	Pre	V2-V4 / <12"					
LSD (P=.05)								8.30	14.72	0.547	5.9535	26.83
Standard Deviation								5.59	9.91	0.368	4.0074	18.06
CV								7.13	14.32	2.6	11.04	11.22
Bartlett's X2								8.238	4.038	17.775	7.078	7.335
P(Bartlett's X2)								0.083	0.544	0.007*	0.314	0.291
Replicate F								1.432	0.911	1.028	3.625	3.620
Replicate Prob(F)								0.2664	0.4554	0.4037	0.0331	0.0333
Treatment F								153.586	39.724	1.118	1.180	1.146
Treatment Prob(F)								0.0001	0.0001	0.3908	0.3603	0.3766

University of Arkansas-Division of Agriculture

Halex GT Programs

Trial ID: HCO-21410
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US
AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US
BRAPP, Brachiaria platyphylla, = US

Part Rated

PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown
PHYSTU = phytotoxicity - stunting
COUPLA = count - plant / emergence - objective
LODGIN = lodging
MOICON = moisture content
WEIDRY = weight - dry / dry matter content
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
BU = bushel

ARM Action Codes

TY1 = 4.388722*24*(100-23)/85

University of Arkansas-Division of Agriculture

Lengths of Control using Residual Herbicides in Corn

Trial ID: HCO-21510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DKC 64-83
BBCH Scale: BCOR
Planting Method: PLANTD planted
Depth, Unit: 1.5 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Description: RR2 / VT3P
Planting Date: 4/19/2010
Rate, Unit: 34750 S/A
Spacing Within Row, Unit: 5.25 IN
Soil Temperature, Unit: 67.7 F
Emergence Date: 4/25/2010

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass
Artificial Population: X

Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth
Artificial Population: X

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory
Artificial Population: X

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT2
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB1 Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	4/12/2010	Potassium	90	LB A/A
2.	4/28/2010	Nitrogen	125	LB A/A
3.	5/27/2010	Nitrogen	125	LB A/A

Soil Description

Description Name: 2010 Corn
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B
Application Date:	4/20/2010	5/19/2010
Time of Day:	11:30 AM	9:30 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS
Application Placement:	BROSIO	BROFOL
Applied By:	JM	MS
Air Temperature, Unit:	62.5 F	69.2 F
% Relative Humidity:	50.40	63.97
Wind Velocity, Unit:	4.15 MPH	5.65 MPH
Wind Direction:	S	NNW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	63.8 F	71.6 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	40	45
Next Rain Occurred On:	4/21/2010	5/20/2010

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	V0	V5
Height, Unit:	0 IN	17 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W
Height, Unit:	0 IN	4 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W
Height, Unit:	0 IN	6 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W
Height, Unit:	0 IN	3 IN

University of Arkansas-Division of Agriculture

Lengths of Control using Residual Herbicides in Corn

Trial ID: HCO-21510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Application Equipment		
	A	B
Appl. Equipment:	Multi Boom	Hand Boom
Equipment Type:	SPTRMO	SPRBAC
Operating Pressure, Unit:	50 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
% Coverage:	100	100
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

Trt No	Treatment	Application	Comment
9			Herbicide did not go into solution well - remixed twice

University of Arkansas-Division of Agriculture

Lengths of Control using Residual Herbicides in Corn

Trial ID: HCO-21510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		PLANT C				
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		5/12/2010				
Part Rated		PLANT P		PLANT P		PLANT P		PLANT C				
Rating Date		5/12/2010		5/12/2010		5/12/2010		5/12/2010				
Rating Type		CONTRO		CONTRO		CONTRO		PHYSTU				
Rating Unit		%		%		%		%				
Crop Stage Majority		V4 7"		V4 7"		V4 7"		V4 7"				
Pest Stage Majority		1-3"		1-3"		1-2"		1-2"				
Trt-Eval Interval		29 DA-A		22 DA-A		22 DA-A		22 DA-A				
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check							13.0	0.0	0.0	0.0	0.0
2	Callisto	0.219 lb ai/a	7 oz/a		PREPRE A	Pre		11.3	93.0	96.5	97.3	0.0
3	Lexar	2.76 lb ai/a	95 oz/a		PREPRE A	Pre		9.5	97.8	97.5	99.3	0.0
4	Lumax	2.46 lb ai/a	81 oz/a		PREPRE A	Pre		11.0	100.0	100.0	100.0	0.0
5	Balance Flexx	0.047 lb ai/a	3 oz/a		PREPRE A	Pre		12.0	94.3	96.8	93.5	0.0
6	Corvus	0.103 lb ai/a	5 oz/a		PREPRE A	Pre		10.8	98.8	100.0	99.8	1.3
7	Instigate				PREPRE A	Pre - 10.3 oz		10.3	100.0	100.0	100.0	57.5
	Rimsulfuron (Resolve DF)	0.0303 lb ai/a	1.94 oz/a		PREPRE A	Pre						
	Classic	0.0303 lb ai/a	1.94 oz/a		PREPRE A	Pre						
	Mesotrione	0.2 lb ai/a	6.4 oz/a		PREPRE A	Pre						
8	First Shot				PREPRE A	Pre - 0.5 oz		11.8	88.0	84.3	83.5	0.0
	Express	0.0078 lb ai/a	0.25 oz/a		PREPRE A	Pre						
	Harass	0.0078 lb ai/a	0.166 oz/a		PREPRE A	Pre						
9	Traverse				PREPRE A	Pre - 3.9 oz		11.0	100.0	100.0	100.0	52.5
	Rimsulfuron (Resolve DF)	0.0305 lb ai/a	1.94 oz/a		PREPRE A	Pre						
	Classic	0.0305 lb ai/a	1.95 oz/a		PREPRE A	Pre						
10	Dual Magnum	1.58 lb ai/a	26.5 oz/a		PREPRE A	Pre		11.5	95.5	100.0	96.8	0.0
	AAtrex	2 lb ai/a	64 oz/a		PREPRE A	Pre						
11	Impact	0.016 lb ai/a	0.73 oz/a		POSPOS B	2-4" WD		12.0				0.0
12	Steadfast				POSPOS B	2-4" WD		11.3				0.0
	Nicosulfuron (Accent)	0.0351 lb ai/a	0.75 oz/a		POSPOS B	2-4" WD						
	Rimsulfuron (Resolve DF)	0.0186 lb ai/a	1.19 oz/a		POSPOS B	2-4" WD						
13	Realm Q				POSPOS B	2-4" WD		11.3				0.0
	Rimsulfuron (Resolve DF)	0.0188 lb ai/a	1.2 oz/a		POSPOS B	2-4" WD						
	Isoxadifen-ethyl	0.0094 lb ai/a	0.3 oz/a		POSPOS B	2-4" WD						
	Callisto	0.078 lb ai/a	2.5 oz/a		POSPOS B	2-4" WD						
14	Resolve Q				POSPOS B	2-4" WD		12.5				0.0
	Rimsulfuron (Resolve DF)	0.0156 lb ai/a	1 oz/a		POSPOS B	2-4" WD						
	Harmony GT	0.00313 lb ai/a	0.1 oz/a		POSPOS B	2-4" WD						
	Isoxadifen-ethyl	0.076 lb ai/a	2.43 oz/a		POSPOS B	2-4" WD						
15	Laudis	0.082 lb ai/a	3 oz/a		POSPOS B	2-4" WD		11.3				0.0
16	Capreno	0.081 lb ai/a	3 oz/a		POSPOS B	2-4" WD		11.5				0.0
17	Trigate				POSPOS B	2-4" WD - 3.76 oz		11.8				0.0
	Rimsulfuron (Resolve DF)	0.0158 lb ai/a	1.01 oz/a		POSPOS B	2-4" WD						
	Express	0.0117 lb ai/a	0.374 oz/a		POSPOS B	2-4" WD						
	Callisto	0.078 lb ai/a	2.5 oz/a		POSPOS B	2-4" WD						
18	Instigate				POSPOS B	2-4" WD - 8.9 oz		10.0				0.0
	Rimsulfuron (Resolve DF)	0.0203 lb ai/a	1.3 oz/a		POSPOS B	2-4" WD						
	Classic	0.0203 lb ai/a	1.3 oz/a		POSPOS B	2-4" WD						
	Callisto	0.134 lb ai/a	4.3 oz/a		POSPOS B	2-4" WD						
19	Roundup PowerMax	0.77 lb ai/a	22 oz/a		POSPOS B	2-4" WD		11.8				0.0
20	Realm Q				POSPOS B	2-4" WD		13.0				0.0
	Rimsulfuron (Resolve DF)	0.0188 lb ai/a	1.2 oz/a		POSPOS B	2-4" WD						
	Isoxadifen-ethyl	0.0094 lb ai/a	0.3 oz/a		POSPOS B	2-4" WD						
	Callisto	0.078 lb ai/a	2.5 oz/a		POSPOS B	2-4" WD						
	Atrazine	2 lb ai/a	35.6 oz/a		POSPOS B	2-4" WD						
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		POSPOS B	2-4" WD						
LSD (P=.05)								2.13	3.88	3.67	3.24	3.22
Standard Deviation								1.51	2.67	2.53	2.23	2.28
CV								13.2	3.08	2.89	2.57	40.92
Bartlett's X2								31.267	5.757	1.73	11.777	3.939
P(Bartlett's X2)								0.038*	0.331	0.63	0.038*	0.139
Replicate F								0.784	3.172	0.437	1.349	1.508
Replicate Prob(F)								0.5080	0.0403	0.7285	0.2795	0.2222
Treatment F								1.406	527.440	604.133	769.429	221.267
Treatment Prob(F)								0.1613	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Lengths of Control using Residual Herbicides in Corn

Trial ID: HCO-21510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		PLANT C			
Pest Name		Common barnyar-		Palmer amaranth		Morning glory		5/20/2010			
Part Rated		PLANT P		PLANT P		PLANT P		PHYSTU			
Rating Date		5/20/2010		5/20/2010		5/20/2010		5/20/2010			
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO			
Rating Unit		%		%		%		%			
Crop Stage Majority		V6 28"		V6 28"		V6 28"		V6 28"			
Pest Stage Majority		3-6"		4-8"		2-4"		2-4"			
Trt-Eval Interval		30 DA-A		30 DA-A		30 DA-A		30 DA-A			
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Appl Code	Appl Description	6	7	8	9
1	Untreated Check							0.0	0.0	0.0	0.0
2	Callisto	0.219 lb ai/a	7 oz/a		PREPRE A	Pre		70.0	80.5	85.0	0.0
3	Lexar	2.76 lb ai/a	95 oz/a		PREPRE A	Pre		94.3	92.5	93.8	0.0
4	Lumax	2.46 lb ai/a	81 oz/a		PREPRE A	Pre		96.8	94.3	95.0	0.0
5	Balance Flexx	0.047 lb ai/a	3 oz/a		PREPRE A	Pre		73.8	82.3	91.3	0.0
6	Corvus	0.103 lb ai/a	5 oz/a		PREPRE A	Pre		90.0	81.8	91.8	0.0
7	Instigate				PREPRE A	Pre - 10.3 oz		93.0	87.5	95.0	55.0
	Rimsulfuron (Resolve DF)	0.0303 lb ai/a	1.94 oz/a		PREPRE A	Pre					
	Classic	0.0303 lb ai/a	1.94 oz/a		PREPRE A	Pre					
	Mesotrione	0.2 lb ai/a	6.4 oz/a		PREPRE A	Pre					
8	First Shot				PREPRE A	Pre - 0.5 oz		65.0	63.8	83.0	5.0
	Express	0.0078 lb ai/a	0.25 oz/a		PREPRE A	Pre					
	Harass	0.0078 lb ai/a	0.166 oz/a		PREPRE A	Pre					
9	Traverse				PREPRE A	Pre - 3.9 oz		90.0	80.5	91.3	55.0
	Rimsulfuron (Resolve DF)	0.0305 lb ai/a	1.94 oz/a		PREPRE A	Pre					
	Classic	0.0305 lb ai/a	1.95 oz/a		PREPRE A	Pre					
10	Dual Magnum	1.58 lb ai/a	26.5 oz/a		PREPRE A	Pre		91.8	83.8	88.0	0.0
	AAtrex	2 lb ai/a	64 oz/a		PREPRE A	Pre					
11	Impact	0.016 lb ai/a	0.73 oz/a		POSPOS B	2-4" WD					0.0
12	Steadfast				POSPOS B	2-4" WD					0.0
	Nicosulfuron (Accent)	0.0351 lb ai/a	0.75 oz/a		POSPOS B	2-4" WD					
	Rimsulfuron (Resolve DF)	0.0186 lb ai/a	1.19 oz/a		POSPOS B	2-4" WD					
13	Realm Q				POSPOS B	2-4" WD					0.0
	Rimsulfuron (Resolve DF)	0.0188 lb ai/a	1.2 oz/a		POSPOS B	2-4" WD					
	Isoxadifen-ethyl	0.0094 lb ai/a	0.3 oz/a		POSPOS B	2-4" WD					
	Callisto	0.078 lb ai/a	2.5 oz/a		POSPOS B	2-4" WD					
14	Resolve Q				POSPOS B	2-4" WD					0.0
	Rimsulfuron (Resolve DF)	0.0156 lb ai/a	1 oz/a		POSPOS B	2-4" WD					
	Harmony GT	0.00313 lb ai/a	0.1 oz/a		POSPOS B	2-4" WD					
	Isoxadifen-ethyl	0.076 lb ai/a	2.43 oz/a		POSPOS B	2-4" WD					
15	Laudis	0.082 lb ai/a	3 oz/a		POSPOS B	2-4" WD					0.0
16	Capreno	0.081 lb ai/a	3 oz/a		POSPOS B	2-4" WD					0.0
17	Trigate				POSPOS B	2-4" WD - 3.76 oz					0.0
	Rimsulfuron (Resolve DF)	0.0158 lb ai/a	1.01 oz/a		POSPOS B	2-4" WD					
	Express	0.0117 lb ai/a	0.374 oz/a		POSPOS B	2-4" WD					
	Callisto	0.078 lb ai/a	2.5 oz/a		POSPOS B	2-4" WD					
18	Instigate				POSPOS B	2-4" WD - 8.9 oz					0.0
	Rimsulfuron (Resolve DF)	0.0203 lb ai/a	1.3 oz/a		POSPOS B	2-4" WD					
	Classic	0.0203 lb ai/a	1.3 oz/a		POSPOS B	2-4" WD					
	Callisto	0.134 lb ai/a	4.3 oz/a		POSPOS B	2-4" WD					
19	Roundup PowerMax	0.77 lb ai/a	22 oz/a		POSPOS B	2-4" WD					0.0
20	Realm Q				POSPOS B	2-4" WD					0.0
	Rimsulfuron (Resolve DF)	0.0188 lb ai/a	1.2 oz/a		POSPOS B	2-4" WD					
	Isoxadifen-ethyl	0.0094 lb ai/a	0.3 oz/a		POSPOS B	2-4" WD					
	Callisto	0.078 lb ai/a	2.5 oz/a		POSPOS B	2-4" WD					
	Atrazine	2 lb ai/a	35.6 oz/a		POSPOS B	2-4" WD					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		POSPOS B	2-4" WD					
LSD (P=.05)								10.13	10.20	9.31	4.13
Standard Deviation								6.98	7.03	6.42	2.92
CV								9.13	9.41	7.88	50.73
Bartlett's X2								9.427	30.989	14.735	1.283
P(Bartlett's X2)								0.308	0.001*	0.065	0.527
Replicate F								1.719	1.452	0.387	0.588
Replicate Prob(F)								0.1867	0.2498	0.7631	0.6256
Treatment F								69.579	61.316	81.087	133.948
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Lengths of Control using Residual Herbicides in Corn

Trial ID: HCO-21510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		PLANT C			
Pest Name		Common barnyard		Palmer amaranth		Morning glory		6/4/2010			
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P			
Rating Date		6/4/2010		6/4/2010		6/4/2010		6/4/2010			
Rating Type		CONTRO		CONTRO		CONTRO		PHYSTU			
Rating Unit		%		%		%		%			
Crop Stage Majority		V9 44*		V9 44*		V9 44*		V9 44*			
Pest Stage Majority		15-20"		20-28"		12-24"					
Tri-Eval Interval		16 DA-B		16 DA-B		16 DA-B		16 DA-B			
Tri No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Appl Code	Appl Description	10	11	12	13
1	Untreated Check							0.0	0.0	0.0	0.0
2	Callisto	0.219 lb ai/a	7 oz/a		PREPRE A	Pre		75.5	83.8	88.8	0.0
3	Lexar	2.76 lb ai/a	95 oz/a		PREPRE A	Pre		92.0	92.8	92.8	0.0
4	Lumax	2.46 lb ai/a	81 oz/a		PREPRE A	Pre		92.5	91.0	87.0	0.0
5	Balance Flexx	0.047 lb ai/a	3 oz/a		PREPRE A	Pre		76.0	76.5	84.3	0.0
6	Corvus	0.103 lb ai/a	5 oz/a		PREPRE A	Pre		89.8	81.0	86.0	0.0
7	Instigate				PREPRE A	Pre - 10.3 oz		84.3	81.3	90.5	50.0
	Rimsulfuron (Resolve DF)	0.0303 lb ai/a	1.94 oz/a		PREPRE A	Pre					
	Classic	0.0303 lb ai/a	1.94 oz/a		PREPRE A	Pre					
	Mesotrione	0.2 lb ai/a	6.4 oz/a		PREPRE A	Pre					
8	First Shot				PREPRE A	Pre - 0.5 oz		45.0	32.5	37.5	0.0
	Express	0.0078 lb ai/a	0.25 oz/a		PREPRE A	Pre					
	Harass	0.0078 lb ai/a	0.166 oz/a		PREPRE A	Pre					
9	Traverse				PREPRE A	Pre - 3.9 oz		86.5	76.8	83.0	40.0
	Rimsulfuron (Resolve DF)	0.0305 lb ai/a	1.94 oz/a		PREPRE A	Pre					
	Classic	0.0305 lb ai/a	1.95 oz/a		PREPRE A	Pre					
10	Dual Magnum	1.58 lb ai/a	26.5 oz/a		PREPRE A	Pre		89.8	82.8	84.3	0.0
	AAtrex	2 lb ai/a	64 oz/a		PREPRE A	Pre					
11	Impact	0.016 lb ai/a	0.73 oz/a		POSPOS B	2-4" WD		74.3	80.5	86.8	0.0
12	Steadfast				POSPOS B	2-4" WD		86.0	77.8	79.8	1.3
	Nicosulfuron (Accent)	0.0351 lb ai/a	0.75 oz/a		POSPOS B	2-4" WD					
	Rimsulfuron (Resolve DF)	0.0186 lb ai/a	1.19 oz/a		POSPOS B	2-4" WD					
13	Realm Q				POSPOS B	2-4" WD		80.5	81.8	84.0	0.0
	Rimsulfuron (Resolve DF)	0.0188 lb ai/a	1.2 oz/a		POSPOS B	2-4" WD					
	Isoxadifen-ethyl	0.0094 lb ai/a	0.3 oz/a		POSPOS B	2-4" WD					
	Callisto	0.078 lb ai/a	2.5 oz/a		POSPOS B	2-4" WD					
14	Resolve Q				POSPOS B	2-4" WD		73.3	77.5	81.3	0.0
	Rimsulfuron (Resolve DF)	0.0156 lb ai/a	1 oz/a		POSPOS B	2-4" WD					
	Harmony GT	0.00313 lb ai/a	0.1 oz/a		POSPOS B	2-4" WD					
	Isoxadifen-ethyl	0.076 lb ai/a	2.43 oz/a		POSPOS B	2-4" WD					
15	Laudis	0.082 lb ai/a	3 oz/a		POSPOS B	2-4" WD		62.3	66.0	70.0	0.0
16	Capreno	0.081 lb ai/a	3 oz/a		POSPOS B	2-4" WD		84.0	84.8	85.3	0.0
17	Trigate				POSPOS B	2-4" WD - 3.76 oz		81.0	78.5	82.8	35.0
	Rimsulfuron (Resolve DF)	0.0158 lb ai/a	1.01 oz/a		POSPOS B	2-4" WD					
	Express	0.0117 lb ai/a	0.374 oz/a		POSPOS B	2-4" WD					
	Callisto	0.078 lb ai/a	2.5 oz/a		POSPOS B	2-4" WD					
18	Instigate				POSPOS B	2-4" WD - 8.9 oz		77.0	77.0	82.3	35.0
	Rimsulfuron (Resolve DF)	0.0203 lb ai/a	1.3 oz/a		POSPOS B	2-4" WD					
	Classic	0.0203 lb ai/a	1.3 oz/a		POSPOS B	2-4" WD					
	Callisto	0.134 lb ai/a	4.3 oz/a		POSPOS B	2-4" WD					
19	Roundup PowerMax	0.77 lb ai/a	22 oz/a		POSPOS B	2-4" WD		85.5	87.5	85.3	0.0
20	Realm Q				POSPOS B	2-4" WD		90.5	93.8	95.0	0.0
	Rimsulfuron (Resolve DF)	0.0188 lb ai/a	1.2 oz/a		POSPOS B	2-4" WD					
	Isoxadifen-ethyl	0.0094 lb ai/a	0.3 oz/a		POSPOS B	2-4" WD					
	Callisto	0.078 lb ai/a	2.5 oz/a		POSPOS B	2-4" WD					
	Atrazine	2 lb ai/a	35.6 oz/a		POSPOS B	2-4" WD					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		POSPOS B	2-4" WD					
LSD (P=.05)								14.57	15.63	16.01	16.32
Standard Deviation								10.31	11.05	11.32	11.54
CV								13.51	14.7	14.45	14.31
Bartlett's X2								92.239	59.223	70.416	10.725
P(Bartlett's X2)								0.001*	0.001*	0.001*	0.03*
Replicate F								0.660	0.946	0.508	0.578
Replicate Prob(F)								0.5802	0.4244	0.6781	0.6317
Treatment F								16.909	15.536	14.932	8.305
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Lengths of Control using Residual Herbicides in Corn

Trial ID: HCO-21510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

BRAPP, Brachiaria platyphylla, = US

Part Rated

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

COUPLA = count - plant / emergence - objective

CONTRO = control / burndown or knockdown

PHYSTU = phytotoxicity - stunting

Rating Unit

% = percent

University of Arkansas-Division of Agriculture

Cadet & Authority MTZ in Corn

Trial ID: HCO-21610
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DKC 64-83
BBCH Scale: BCOR
Planting Method: PLANTD planted
Depth, Unit: 1.5 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Harvest Date: 9/3/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 15.0
Weighing Equipment: Almaco
Description: RR2 / VT3P
Planting Date: 4/19/2010
Rate, Unit: 34750 S/A
Spacing Within Row, Unit: 5.25 IN
Soil Temperature, Unit: 67.7 F
Emergence Date: 4/25/2010
Harvest Equipment: Almaco
Harvested Length, Unit: 28 FT
Moisture Meter: Almaco

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass
Artificial Population: X
Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth
Artificial Population: X
Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory
Artificial Population: X

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT2
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: 2010 Corn
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B
Application Date:	4/20/2010	5/19/2010
Time of Day:	11:00 AM	9:45 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS
Application Placement:	BROSOI	BROFOL
Applied By:	JM	MS
Air Temperature, Unit:	62.5 F	69.2 F
% Relative Humidity:	50.40	63.97
Wind Velocity, Unit:	4.15 MPH	5.65 MPH
Wind Direction:	S	NNW
Soil Temperature, Unit:	63.8 F	71.6 F
Next Rain Occurred On:	4/21/2010	5/20/2010

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	V0	V5
Height, Unit:	0 IN	15 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W
Height, Unit:	0 IN	3 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W
Height, Unit:	0 IN	6 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W
Height, Unit:	0 IN	4 IN

University of Arkansas-Division of Agriculture

Cadet & Authority MTZ in Corn

Trial ID: HCO-21610
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Application Equipment		
	A	B
Appl. Equipment:	Multi Boom	Hand Boom
Equipment Type:	SPTRMO	SPRBAC
Operating Pressure, Unit:	50 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
% Coverage:	100	100
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

Trt No	Treatment	Application	Comment
2-6	Made with 3 gal can with 119 ml Dual		

University of Arkansas-Division of Agriculture

Cadet & Authority MTZ in Corn

Trial ID: HCO-21610
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code	ECHCG Common barnyar>	AMAPA Palmer amaranth	IPOSS Morning glory	ECHCG Common barnyar>	AMAPA Palmer amaranth								
Pest Name	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P								
Part Rated	6/4/2010	6/4/2010	6/4/2010	6/11/2010	6/11/2010								
Rating Date	6/4/2010	6/4/2010	6/4/2010	6/11/2010	6/11/2010								
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO								
Rating Unit	%	%	%	%	%								
Crop Stage Majority	V9 44*	V9 44*	V9 44*	VT 75*	VT 75*								
Pest Stage Majority	10-16"	12-30"	14-24"	10-30"	15-35"								
Trt-Eval Interval	16 DA-B	16 DA-B	16 DA-B	23 DA-B	23 DA-B								
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Dual Magnum Cadet Glyphos X-Tra NIS	0.95 0.00356 0.75 0.224	lb ai/a lb ai/a lb ai/a lb ai/a	16 0.5 24 0.25	oz/a oz/a oz/a % v/v	PREPRE A POSPOS B POSPOS B POSPOS B	Pre V4 + V4 + V4 +		99.3	98.8	93.8	100.0	99.0
3	Dual Magnum Cadet Glyphos X-Tra NIS	0.95 0.005 0.75 0.224	lb ai/a lb ai/a lb ai/a lb ai/a	16 0.7 24 0.25	oz/a oz/a oz/a % v/v	PREPRE A POSPOS B POSPOS B POSPOS B	Pre V4 + V4 + V4 +		100.0	98.8	94.0	100.0	96.5
4	Dual Magnum Cadet Glyphos X-Tra NIS	0.95 0.0064 0.75 0.224	lb ai/a lb ai/a lb ai/a lb ai/a	16 0.9 24 0.25	oz/a oz/a oz/a % v/v	PREPRE A POSPOS B POSPOS B POSPOS B	Pre V4 + V4 + V4 +		100.0	99.8	97.8	100.0	97.3
5	Dual Magnum Resource Glyphos X-Tra NIS	0.95 0.0138 0.75 0.224	lb ai/a lb ai/a lb ai/a lb ai/a	16 2.05 24 0.25	oz/a oz/a oz/a % v/v	PREPRE A POSPOS B POSPOS B POSPOS B	Pre V4 + V4 + V4 +		99.5	100.0	96.5	100.0	98.3
6	Dual Magnum Glyphos X-Tra NIS	0.95 0.75 0.224	lb ai/a lb ai/a lb ai/a	16 24 0.25	oz/a oz/a % v/v	PREPRE A POSPOS B POSPOS B	Pre V4 + V4 +		100.0	99.5	96.0	100.0	99.0
7	Authority MTZ Glyphos X-Tra COC Cadet AAtrex Glyphos X-Tra Class Act (AMS)	0.155 1 0.83 0.00356 1.25 0.75 2.53	lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a	5.5 32 1 0.5 40 24 5	oz/a oz/a % v/v oz/a oz/a oz/a gal/100 gal	PREPRE A PREPRE A PREPRE A POSPOS B POSPOS B POSPOS B POSPOS B	Pre Pre Pre V4 + V4 + V4 + V4 +		99.3	100.0	98.0	99.5	97.3
8	Bicep II Magnum Glyphos X-Tra COC Cadet AAtrex Glyphos X-Tra Class Act (AMS)	2.9 1 0.83 0.00356 1.25 0.75 2.53	lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a	67.2 32 1 0.5 40 24 5	oz/a oz/a % v/v oz/a oz/a oz/a gal/100 gal	PREPRE A PREPRE A PREPRE A POSPOS B POSPOS B POSPOS B POSPOS B	Pre Pre Pre V4 + V4 + V4 + V4 +		99.5	99.8	99.0	100.0	98.5
9	Dual II Magnum Glyphos X-Tra COC Cadet AAtrex Glyphos X-Tra Class Act (AMS)	1.6 1 0.83 0.00356 1.25 0.75 2.53	lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a	26.72 32 1 0.5 40 24 5	oz/a oz/a % v/v oz/a oz/a oz/a gal/100 gal	PREPRE A PREPRE A PREPRE A POSPOS B POSPOS B POSPOS B POSPOS B	Pre Pre Pre V4 + V4 + V4 + V4 +		100.0	99.8	99.0	100.0	99.3
10	Dual Magnum AAtrex Dual Magnum AAtrex	0.95 1 0.95 1	lb ai/a lb ai/a lb ai/a lb ai/a	16 32 16 32	oz/a oz/a oz/a oz/a	PREPRE A PREPRE A POSPOS B POSPOS B	Pre Pre V4 + V4 +		99.3	100.0	99.5	98.8	98.3
11	Lexar	2.78	lb ai/a	96	oz/a	PREPRE A	Pre		100.0	99.3	97.8	100.0	98.8
LSD (P=.05)									1.27	1.56	3.94	1.13	2.73
Standard Deviation									0.88	1.08	2.73	0.78	1.89
CV									0.97	1.2	3.09	0.86	2.12
Bartlett's X2									1.045	13.364	13.131	2.196	15.786
P(Bartlett's X2)									0.903	0.038*	0.157	0.138	0.071
Replicate F									1.368	0.645	1.896	1.815	1.219
Replicate Prob(F)									0.2714	0.5921	0.1516	0.1657	0.3199
Treatment F									4694.339	3069.682	461.771	5906.186	980.259
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Cadet & Authority MTZ in Corn

Trial ID: HCO-21610
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		IPOSS		BRAPP		ECHCG		AMAPA		IPOSS			
Pest Name		Morning glory		Broadleaf sign>		Common barnyar>		Palmer amaranth		Morning glory			
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P			
Rating Date		6/11/2010		6/11/2010		6/22/2010		6/22/2010		6/22/2010			
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO			
Rating Unit		%		%		%		%		%			
Crop Stage Majority		VT 75*		VT 75*		R2 78.5*		R2 78.5*		R2 78.5*			
Pest Stage Majority		10-20*		10-25*		10-30*		15-35*		10-20*			
Tri-Eval Interval		23 DA-B		23 DA-B		34 DA-B		34 DA-B		34 DA-B			
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	6	7	8	9	10
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		92.3	100.0	95.0	100.0	100.0
	Cadet	0.00356	lb ai/a	0.5	oz/a	POSPOS B	V4 +						
	Glyfos X-Tra	0.75	lb ai/a	24	oz/a	POSPOS B	V4 +						
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	V4 +						
3	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		93.8	100.0	95.5	97.5	96.3
	Cadet	0.005	lb ai/a	0.7	oz/a	POSPOS B	V4 +						
	Glyfos X-Tra	0.75	lb ai/a	24	oz/a	POSPOS B	V4 +						
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	V4 +						
4	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		92.0	100.0	97.0	98.8	95.0
	Cadet	0.0064	lb ai/a	0.9	oz/a	POSPOS B	V4 +						
	Glyfos X-Tra	0.75	lb ai/a	24	oz/a	POSPOS B	V4 +						
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	V4 +						
5	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		93.0	100.0	97.5	100.0	93.8
	Resource	0.0138	lb ai/a	2.05	oz/a	POSPOS B	V4 +						
	Glyfos X-Tra	0.75	lb ai/a	24	oz/a	POSPOS B	V4 +						
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	V4 +						
6	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		94.0	100.0	96.5	100.0	97.5
	Glyfos X-Tra	0.75	lb ai/a	24	oz/a	POSPOS B	V4 +						
	NIS	0.224	lb ai/a	0.25	% v/v	POSPOS B	V4 +						
7	Authority MTZ	0.155	lb ai/a	5.5	oz/a	PREPRE A	Pre		93.0	99.5	91.3	98.8	93.8
	Glyfos X-Tra	1	lb ai/a	32	oz/a	PREPRE A	Pre						
	COC	0.83	lb ai/a	1	% v/v	PREPRE A	Pre						
	Cadet	0.00356	lb ai/a	0.5	oz/a	POSPOS B	V4 +						
	AAtrex	1.25	lb ai/a	40	oz/a	POSPOS B	V4 +						
	Glyfos X-Tra	0.75	lb ai/a	24	oz/a	POSPOS B	V4 +						
	Class Act (AMS)	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V4 +						
8	Bicep II Magnum	2.9	lb ai/a	67.2	oz/a	PREPRE A	Pre		95.8	100.0	94.3	100.0	96.3
	Glyfos X-Tra	1	lb ai/a	32	oz/a	PREPRE A	Pre						
	COC	0.83	lb ai/a	1	% v/v	PREPRE A	Pre						
	Cadet	0.00356	lb ai/a	0.5	oz/a	POSPOS B	V4 +						
	AAtrex	1.25	lb ai/a	40	oz/a	POSPOS B	V4 +						
	Glyfos X-Tra	0.75	lb ai/a	24	oz/a	POSPOS B	V4 +						
	Class Act (AMS)	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V4 +						
9	Dual II Magnum	1.6	lb ai/a	26.72	oz/a	PREPRE A	Pre		94.8	100.0	93.8	98.8	97.5
	Glyfos X-Tra	1	lb ai/a	32	oz/a	PREPRE A	Pre						
	COC	0.83	lb ai/a	1	% v/v	PREPRE A	Pre						
	Cadet	0.00356	lb ai/a	0.5	oz/a	POSPOS B	V4 +						
	AAtrex	1.25	lb ai/a	40	oz/a	POSPOS B	V4 +						
	Glyfos X-Tra	0.75	lb ai/a	24	oz/a	POSPOS B	V4 +						
	Class Act (AMS)	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V4 +						
10	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		96.0	98.8	96.3	97.5	95.0
	AAtrex	1	lb ai/a	32	oz/a	PREPRE A	Pre						
	Dual Magnum	0.95	lb ai/a	16	oz/a	POSPOS B	V4 +						
	AAtrex	1	lb ai/a	32	oz/a	POSPOS B	V4 +						
11	Lexar	2.78	lb ai/a	96	oz/a	PREPRE A	Pre		97.3	100.0	92.5	95.0	98.8
LSD (P=.05)									4.86	1.13	5.12	3.13	4.64
Standard Deviation									3.37	0.78	3.55	2.17	3.22
CV									3.93	0.86	4.11	2.42	3.67
Bartlett's X2									9.176	2.196	4.75	1.175	3.216
P(Bartlett's X2)									0.421	0.138	0.856	0.947	0.92
Replicate F									0.333	1.815	1.106	1.089	4.304
Replicate Prob(F)									0.8014	0.1657	0.3620	0.3690	0.0122
Treatment F									285.175	5906.186	261.857	755.032	328.121
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Cadet & Authority MTZ in Corn

Trial ID: HCO-21610
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG Common barnyar>		AMAPA Palmer amaranth		IPOSS Morning glory		PLANT P 9/3/2010	PLANT P 9/3/2010	PLANT P 9/3/2010					
Pest Name		PLANT P 9/3/2010		PLANT P 9/3/2010		PLANT P 9/3/2010		MOICON	WEIDRY	YIELD					
Part Rated		CONTRO		CONTRO		CONTRO		%	lb/plot	BU					
Rating Date		%		%		%		Harvest	Harvest	Harvest					
Rating Type		R6 80"		R6 80"		R6 80"									
Rating Unit		12-30"		24-72"		24-96"									
Crop Stage Majority		107 DA-B		107 DA-B		107 DA-B									
Pest Stage Majority															
Trt-Eval Interval															
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	11	12	13	14	15	16	
1	Untreated Check								0.0	0.0	0.0	14.28	33.973	150.3	
2	Dual Magnum Cadet Glyphos X-Tra NIS	0.95 0.00356 0.75 0.224	lb ai/a lb ai/a lb ai/a lb ai/a	16 0.5 24 0.25	oz/a oz/a oz/a % v/v	PREPRE A POSPOS B POSPOS B POSPOS B	A B B B	Pre V4 + V4 + V4 +	73.8	87.5	77.5	14.08	35.528	157.6	
3	Dual Magnum Cadet Glyphos X-Tra NIS	0.95 0.005 0.75 0.224	lb ai/a lb ai/a lb ai/a lb ai/a	16 0.7 24 0.25	oz/a oz/a oz/a % v/v	PREPRE A POSPOS B POSPOS B POSPOS B	A B B B	Pre V4 + V4 + V4 +	81.3	91.3	71.3	14.20	35.818	158.6	
4	Dual Magnum Cadet Glyphos X-Tra NIS	0.95 0.0064 0.75 0.224	lb ai/a lb ai/a lb ai/a lb ai/a	16 0.9 24 0.25	oz/a oz/a oz/a % v/v	PREPRE A POSPOS B POSPOS B POSPOS B	A B B B	Pre V4 + V4 + V4 +	82.5	95.0	75.0	14.00	37.405	166.1	
5	Dual Magnum Resource Glyphos X-Tra NIS	0.95 0.0138 0.75 0.224	lb ai/a lb ai/a lb ai/a lb ai/a	16 2.05 24 0.25	oz/a oz/a oz/a % v/v	PREPRE A POSPOS B POSPOS B POSPOS B	A B B B	Pre V4 + V4 + V4 +	81.3	88.8	66.7	14.15	37.443	166.0	
6	Dual Magnum Glyphos X-Tra NIS	0.95 0.75 0.224	lb ai/a lb ai/a lb ai/a	16 24 0.25	oz/a oz/a % v/v	PREPRE A POSPOS B POSPOS B	A B B	Pre V4 + V4 +	71.3	83.8	68.8	11.88	36.385	164.8	
7	Authority MTZ Glyphos X-Tra COC Cadet AAtrex Glyphos X-Tra Class Act (AMS)	0.155 1 0.83 0.00356 1.25 0.75 2.53	lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a	5.5 32 1 0.5 40 24 5	oz/a oz/a % v/v oz/a oz/a oz/a gal/100 gal	PREPRE A PREPRE A PREPRE A POSPOS B POSPOS B POSPOS B POSPOS B	A A A B B B B	Pre Pre Pre V4 + V4 + V4 + V4 +	68.8	93.3	88.3	14.00	33.998	150.9	
8	Bicep II Magnum Glyphos X-Tra COC Cadet AAtrex Glyphos X-Tra Class Act (AMS)	2.9 1 0.83 0.00356 1.25 0.75 2.53	lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a	67.2 32 1 0.5 40 24 5	oz/a oz/a % v/v oz/a oz/a oz/a gal/100 gal	PREPRE A PREPRE A PREPRE A POSPOS B POSPOS B POSPOS B POSPOS B	A A A B B B B	Pre Pre Pre V4 + V4 + V4 + V4 +	71.3	87.0	87.0	14.78	34.040	149.9	
9	Dual II Magnum Glyphos X-Tra COC Cadet AAtrex Glyphos X-Tra Class Act (AMS)	1.6 1 0.83 0.00356 1.25 0.75 2.53	lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a lb ai/a	26.72 32 1 0.5 40 24 5	oz/a oz/a % v/v oz/a oz/a oz/a gal/100 gal	PREPRE A PREPRE A PREPRE A POSPOS B POSPOS B POSPOS B POSPOS B	A A A B B B B	Pre Pre Pre V4 + V4 + V4 + V4 +	73.8	92.5	89.5	14.03	34.335	152.4	
10	Dual Magnum AAtrex Dual Magnum AAtrex	0.95 1 0.95 1	lb ai/a lb ai/a lb ai/a lb ai/a	16 32 16 32	oz/a oz/a oz/a oz/a	PREPRE A PREPRE A POSPOS B POSPOS B	A A B B	Pre Pre V4 + V4 +	77.5	95.3	92.8	14.40	34.188	151.1	
11	Lexar	2.78	lb ai/a	96	oz/a	PREPRE A	A	Pre	76.3	94.5	89.5	14.05	35.650	158.2	
LSD (P=.05)										19.57	9.91	17.92	3.238	6.3728	27.99
Standard Deviation										13.55	6.86	12.39	2.243	4.4135	19.38
CV										19.68	8.3	16.91	16.04	12.49	12.35
Bartlett's X2										4.619	18.319	3.627	124.784	7.937	9.792
P(Bartlett's X2)										0.866	0.019*	0.934	0.001*	0.635	0.459
Replicate F										1.522	1.024	1.257	0.624	1.399	1.110
Replicate Prob(F)										0.2291	0.3959	0.3075	0.6053	0.2624	0.3604
Treatment F										11.808	64.982	17.651	0.431	0.366	0.444
Treatment Prob(F)										0.0001	0.0001	0.0001	0.9196	0.9518	0.9123

University of Arkansas-Division of Agriculture

Cadet & Authority MTZ in Corn

Trial ID: HCO-21610
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

BRAPP, Brachiaria platyphylla, = US

Part Rated

PLANT = plant

P = Pest is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

MOICON = moisture content

WEIDRY = weight - dry / dry matter content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.388722*15*(100-14)/85

University of Arkansas-Division of Agriculture

Efficacy and Selectivity of Dawn, Reflex, and Goal 2 XL Applied EPP and PRE in Cotton

Trial ID: HCT-40110
 Location: Rohwer
 Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Seed Bed: CRUSTE crusted
Planting Date: 5/5/2010
Rate, Unit: 3.5 S/ROWFT
Spacing Within Row, Unit: 3.42 IN
Soil Temperature, Unit: 68 F
Emergence Date: 5/13/2010
Harvested Width, Unit: 6.33 FT
Harvested Length, Unit: 28 FT

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Study Design: RACOB� Randomized Complete Block (RCB)

Application Description

	A	B
Application Date:	4/21/2010	5/6/2010
Time of Day:	AM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	14 DPP	PRE
Application Placement:	BROSÔI	BROSÔI
Applied By:	RD	RD
Air Temperature, Unit:	62.5 F	65.8 F
% Relative Humidity:	50.4	68.9
Wind Velocity, Unit:	4.14 MPH	4.2 MPH
Wind Direction:	SE	ESE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	63.8 F	68.4 F
Soil Moisture:	dry	dry
% Cloud Cover:	0	0
Next Rain Occurred On:	5/1/2010	5/10/2010

Crop Stage At Each Application

	A	B
BCOT	BCOT	

Application Equipment

	A	B
Appl. Equipment:	Hand Boom	Multi-Boom
Operating Pressure, Unit:	45 PSI	55 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
Boom Length, Unit:	6.33 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	MPH	3.8 MPH
Carrier:	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	CO2	CO2

University of Arkansas-Division of Agriculture

Efficacy and Selectivity of Dawn, Reflex, and Goal 2 XL Applied EPP and PRE in Cotton

Trial ID: HCT-40110
Location: Rohwer

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		PLANT C		PLANT C		PLANT C	
Pest Name		Palmer amaranth		Morning glory		Common barnyar>		5/20/2010		5/20/2010		5/20/2010	
Part Rated		PLANT P		PLANT P		PLANT P		PHYCHL		PHYNEC		PHYSTU	
Rating Date		5/20/2010		5/20/2010		5/20/2010		5/20/2010		5/20/2010		5/20/2010	
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL	
Rating Unit		%		%		%		%		%		%	
Crop Stage Majority		1 If		1 If		1 If		1 If		1 If		1 If	
Pest Stage Majority		cotyl		cotyl		cotyl		cotyl		cotyl		cotyl	
Tri-Eval Interval		14 DA-B		14 DA-B		14 DA-B		14 DA-B		14 DA-B		14 DA-B	
Tri	Treatment	Rate	Other	Other	Appl	Appl							
No.	Name	Rate	Unit	Rate	Unit	Description	1	2	3	4	5	6	
1		0.0					0.0	0.0	0.0	0.0	0.0	0.0	
2	Dawn	0.375	lb ai/a	24	oz/a	A 14 DPP	100.0	100.0	99.5	0.0	0.0	0.0	
	Glyphos X-tra	0.75	lb ai/a	32	oz/a	A 14 DPP							
3	Reflex	0.375	lb ai/a	24	oz/a	A 14 DPP	100.0	100.0	97.0	0.0	0.0	0.0	
	Glyphos X-tra	0.75	lb ai/a	32	oz/a	A 14 DPP							
4	Dawn	0.375	lb ai/a	24	oz/a	B PRE	100.0	100.0	97.0	0.0	0.0	0.0	
5	Reflex	0.375	lb ai/a	24	oz/a	B PRE	100.0	100.0	100.0	0.0	0.0	0.0	
6	Dawn	0.25	lb ai/a	16	oz/a	B PRE	100.0	100.0	100.0	0.0	0.0	0.0	
7	Reflex	0.25	lb ai/a	16	oz/a	B PRE	97.5	100.0	100.0	0.0	0.0	0.0	
8	Dawn	0.188	lb ai/a	12	oz/a	B PRE	99.5	100.0	99.5	0.0	0.0	0.0	
9	Reflex	0.188	lb ai/a	12	oz/a	B PRE	99.0	99.5	100.0	0.0	0.0	0.0	
10	Dawn	0.188	lb ai/a	12	oz/a	B PRE	100.0	100.0	99.5	0.0	0.0	0.0	
	Prowl H2O	1	lb ai/a	33.7	oz/a	B PRE							
11	Reflex	0.188	lb ai/a	12	oz/a	B PRE	100.0	100.0	100.0	0.0	0.0	0.0	
	Prowl H2O	1	lb ai/a	33.7	oz/a	B PRE							
12	Goal 2XL	0.25	lb ai/a	16	oz/a	B PRE	100.0	100.0	100.0	0.0	2.5	2.5	
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	B PRE							
13	Goal 2XL	0.25	lb ai/a	16	oz/a	A 14 DPP	100.0	100.0	94.5	0.0	0.0	0.0	
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	A 14 DPP							
14	Goal 2XL	0.25	lb ai/a	16	oz/a	A 14 DPP remove bed	100.0	100.0	95.0	0.0	0.0	0.0	
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	A 14 DPP remove bed							
LSD (P=.05)							1.99	0.38	5.13	0.00	1.91	1.91	
Standard Deviation							1.39	0.27	3.59	0.00	1.34	1.34	
CV							1.51	0.29	3.92	0.0	748.33	748.33	
Bartlett's X2							9.172	0.0	23.913	0.0	0.0	0.0	
P(Bartlett's X2)							0.01*	.	0.001*	.	.	.	
Replicate F							1.079	1.000	0.650	0.000	1.000	1.000	
Replicate Prob(F)							0.3691	0.4031	0.5877	1.0000	0.4031	0.4031	
Treatment F							1463.649	39970.234	216.668	0.000	1.000	1.000	
Treatment Prob(F)							0.0001	0.0001	0.0001	1.0000	0.4697	0.4697	

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Efficacy and Selectivity of Dawn, Reflex, and Goal 2 XL Applied EPP and PRE in Cotton

Trial ID: HCT-40110
 Location: Rohwer

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		PLANT C		PLANT C		PLANT C	
Pest Name		Palmer amaranth		Morning glory		Common barnyar>		5/27/2010		5/27/2010		5/27/2010	
Part Rated		PLANT P		PLANT P		PLANT P		PHYCHL		PHYNEC		PHYSTU	
Rating Date		5/27/2010		5/27/2010		5/27/2010		%		%		%	
Rating Type		CONTROL		CONTROL		CONTROL		%		%		%	
Rating Unit		%		%		%		3 If		3 If		3 If	
Crop Stage Majority		3 If		3 If		3 If		3 If		3 If		3 If	
Pest Stage Majority		2-12"		2-12"		2-12"		21 DA-B		21 DA-B		21 DA-B	
Tri-Eval Interval		21 DA-B		21 DA-B		21 DA-B		21 DA-B		21 DA-B		21 DA-B	
Tri	Treatment	Rate	Other	Other	Appl	Appl							
No.	Name	Rate	Unit	Rate	Unit	Code	Description	7	8	9	10	11	12
1		0.0						0.0	0.0	0.0	0.0	0.0	0.0
2	Dawn	0.375	lb ai/a	24	oz/a	A	14 DPP	98.8	93.8	91.3	0.0	0.0	0.0
	Glyphos X-tra	0.75	lb ai/a	32	oz/a	A	14 DPP						
3	Reflex	0.375	lb ai/a	24	oz/a	A	14 DPP	99.5	97.0	93.8	0.0	0.0	0.0
	Glyphos X-tra	0.75	lb ai/a	32	oz/a	A	14 DPP						
4	Dawn	0.375	lb ai/a	24	oz/a	B	PRE	98.8	95.8	93.3	0.0	0.0	0.0
5	Reflex	0.375	lb ai/a	24	oz/a	B	PRE	97.0	97.5	95.8	0.0	0.0	0.0
6	Dawn	0.25	lb ai/a	16	oz/a	B	PRE	97.0	95.0	97.0	0.0	0.0	0.0
7	Reflex	0.25	lb ai/a	16	oz/a	B	PRE	95.0	97.8	99.0	0.0	0.0	0.0
8	Dawn	0.188	lb ai/a	12	oz/a	B	PRE	96.5	91.5	94.5	0.0	0.0	0.0
9	Reflex	0.188	lb ai/a	12	oz/a	B	PRE	97.8	94.0	94.5	0.0	0.0	0.0
10	Dawn	0.188	lb ai/a	12	oz/a	B	PRE	98.3	100.0	99.0	0.0	0.0	0.0
	Prowl H2O	1	lb ai/a	33.7	oz/a	B	PRE						
11	Reflex	0.188	lb ai/a	12	oz/a	B	PRE	98.3	97.5	98.8	0.0	0.0	0.0
	Prowl H2O	1	lb ai/a	33.7	oz/a	B	PRE						
12	Goal 2XL	0.25	lb ai/a	16	oz/a	B	PRE	100.0	100.0	99.0	0.0	0.0	0.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	B	PRE						
13	Goal 2XL	0.25	lb ai/a	16	oz/a	A	14 DPP	80.8	92.5	82.5	0.0	0.0	0.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	A	14 DPP						
14	Goal 2XL	0.25	lb ai/a	16	oz/a	A	14 DPP remove bed	70.0	91.3	81.3	0.0	0.0	0.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	A	14 DPP remove bed						
LSD (P=.05)		7.14		6.79		9.56		0.00		0.00		0.00	
Standard Deviation		5.00		4.75		6.69		0.00		0.00		0.00	
CV		5.7		5.35		7.68		0.0		0.0		0.0	
Bartlett's X2		37.161		13.739		42.426		0.0		0.0		0.0	
P(Bartlett's X2)		0.001*		0.185		0.001*		.		.		.	
Replicate F		0.729		2.239		0.776		0.000		0.000		0.000	
Replicate Prob(F)		0.5407		0.0989		0.5144		1.0000		1.0000		1.0000	
Treatment F		113.548		117.115		59.020		0.000		0.000		0.000	
Treatment Prob(F)		0.0001		0.0001		0.0001		1.0000		1.0000		1.0000	

University of Arkansas-Division of Agriculture

Efficacy and Selectivity of Dawn, Reflex, and Goal 2 XL Applied EPP and PRE in Cotton

Trial ID: HCT-40110
Location: Rohwer

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		PLANT C	PLANT C	PLANT C			
Pest Name		Palmer amaranth		Morning glory		Common barnyar>		6/3/2010	6/3/2010	6/3/2010			
Part Rated		PLANT P		PLANT P		PLANT P		PHYCHL	PHYNEC	PHYSTU			
Rating Date		6/3/2010		6/3/2010		6/3/2010		%	%	%			
Rating Type		CONTROL		CONTROL		CONTROL		cotyl	cotyl	cotyl			
Rating Unit		%		%		%		%	%	%			
Crop Stage Majority		4-5 If		4-5 If		4-5 If		4-5 If	4-5 If	4-5 If			
Pest Stage Majority		2-12"		2-12"		2-12"		28 DA-B	28 DA-B	28 DA-B			
Tri-Eval Interval		28 DA-B		28 DA-B		28 DA-B		28 DA-B	28 DA-B	28 DA-B			
Tri No.	Treatment Name	Rate	Other Rate	Other Rate	Unit	Appl Code	Appl Description	13	14	15	16	17	18
1		0.0						0.0	0.0	0.0	0.0	0.0	0.0
2	Dawn	0.375 lb ai/a	24 oz/a			A	14 DPP	97.5	95.0	83.8	0.0	0.0	0.0
	Glyfos X-tra	0.75 lb ai/a	32 oz/a			A	14 DPP						
3	Reflex	0.375 lb ai/a	24 oz/a			A	14 DPP	99.5	93.8	90.0	0.0	0.0	0.0
	Glyfos X-tra	0.75 lb ai/a	32 oz/a			A	14 DPP						
4	Dawn	0.375 lb ai/a	24 oz/a			B	PRE	97.5	92.5	90.0	0.0	0.0	0.0
5	Reflex	0.375 lb ai/a	24 oz/a			B	PRE	95.0	96.3	91.3	0.0	0.0	0.0
6	Dawn	0.25 lb ai/a	16 oz/a			B	PRE	95.0	92.5	95.8	0.0	0.0	0.0
7	Reflex	0.25 lb ai/a	16 oz/a			B	PRE	92.5	95.0	97.0	0.0	0.0	0.0
8	Dawn	0.188 lb ai/a	12 oz/a			B	PRE	95.0	88.3	91.3	0.0	0.0	0.0
9	Reflex	0.188 lb ai/a	12 oz/a			B	PRE	95.8	90.8	90.8	0.0	0.0	0.0
10	Dawn	0.188 lb ai/a	12 oz/a			B	PRE	97.0	100.0	97.5	0.0	0.0	0.0
	Prowl H2O	1 lb ai/a	33.7 oz/a			B	PRE						
11	Reflex	0.188 lb ai/a	12 oz/a			B	PRE	96.0	95.8	100.0	0.0	0.0	0.0
	Prowl H2O	1 lb ai/a	33.7 oz/a			B	PRE						
12	Goal 2XL	0.25 lb ai/a	16 oz/a			B	PRE	100.0	100.0	97.5	0.0	0.0	0.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a			B	PRE						
13	Goal 2XL	0.25 lb ai/a	16 oz/a			A	14 DPP	75.0	90.0	77.5	0.0	0.0	0.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a			A	14 DPP						
14	Goal 2XL	0.25 lb ai/a	16 oz/a			A	14 DPP remove bed	57.5	90.0	72.5	0.0	0.0	0.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a			A	14 DPP remove bed						
LSD (P=.05)		9.60		7.13		12.21		0.00		0.00		0.00	
Standard Deviation		6.71		4.99		8.54		0.00		0.00		0.00	
CV		7.88		5.72		10.18		0.0		0.0		0.0	
Bartlett's X2		24.081		9.558		26.615		0.0		0.0		0.0	
P(Bartlett's X2)		0.007*		0.387		0.005*		.		.		.	
Replicate F		1.237		4.522		0.788		0.000		0.000		0.000	
Replicate Prob(F)		0.3093		0.0082		0.5079		1.0000		1.0000		1.0000	
Treatment F		65.275		103.105		35.346		0.000		0.000		0.000	
Treatment Prob(F)		0.0001		0.0001		0.0001		1.0000		1.0000		1.0000	

University of Arkansas-Division of Agriculture

Efficacy and Selectivity of Dawn, Reflex, and Goal 2 XL Applied EPP and PRE in Cotton

Trial ID: HCT-40110
Location: Rohwer

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		PLANT C	PLANT C	PLANT C	PLANT C	PLANT C		
Pest Name		Palmer amaranth		Morning glory		Common barnyar>		6/14/2010	6/14/2010	6/14/2010	10/4/2010	10/4/2010		
Part Rated		PLANT P		PLANT P		PLANT P		PHYCHL	PHYNEC	PHYSTU	YIELD	YIELD		
Rating Date		6/14/2010		6/14/2010		6/14/2010		%	%	%	lb/plot	lb/ac		
Rating Type		CONTROL		CONTROL		CONTROL		%	%	%	Harvest	Harvest		
Rating Unit		%		%		%		8-10 If	8-10 If	8-10 If	151 DA-B	151 DA-B		
Crop Stage Majority		8-10 If		8-10 If		8-10 If		cotyl	cotyl	cotyl	Mature	Mature		
Pest Stage Majority		2-24*		2-24*		2-24*		39 DA-B	39 DA-B	39 DA-B	151 DA-B	151 DA-B		
Tri-Eval Interval		39 DA-B		39 DA-B		39 DA-B		39 DA-B	39 DA-B	39 DA-B	151 DA-B	151 DA-B		
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	19	20	21	22	23	24	25	26
1		0.0					0.0	0.0	0.0	0.0	0.0	0.0	11.383	2797.46
2	Dawn Glyphos X-tra	0.375 lb ai/a 0.75 lb ai/a	24 oz/a	32 oz/a	A	14 DPP	95.8	78.8	86.3	0.0	0.0	0.0	14.298	3513.87
3	Reflex Glyphos X-tra	0.375 lb ai/a 0.75 lb ai/a	24 oz/a	32 oz/a	A	14 DPP	99.0	86.3	86.3	0.0	0.0	0.0	13.438	3302.51
4	Dawn	0.375 lb ai/a	24 oz/a		B	PRE	98.3	91.3	88.8	0.0	0.0	0.0	13.473	3311.12
5	Reflex	0.375 lb ai/a	24 oz/a		B	PRE	88.8	87.5	90.0	0.0	0.0	0.0	11.800	2900.07
6	Dawn	0.25 lb ai/a	16 oz/a		B	PRE	95.0	85.0	88.8	0.0	0.0	0.0	13.328	3275.48
7	Reflex	0.25 lb ai/a	16 oz/a		B	PRE	87.5	93.8	96.3	0.0	0.0	0.0	13.943	3426.63
8	Dawn	0.188 lb ai/a	12 oz/a		B	PRE	93.3	89.5	92.0	0.0	0.0	0.0	13.500	3317.87
9	Reflex	0.188 lb ai/a	12 oz/a		B	PRE	93.8	92.5	91.3	0.0	0.0	0.0	13.413	3296.37
10	Dawn Prowl H2O	0.188 lb ai/a 1 lb ai/a	12 oz/a	33.7 oz/a	B	PRE	95.8	98.8	97.5	0.0	0.0	0.0	12.878	3164.88
11	Reflex Prowl H2O	0.188 lb ai/a 1 lb ai/a	12 oz/a	33.7 oz/a	B	PRE	94.5	95.0	98.8	0.0	0.0	0.0	13.618	3346.75
12	Goal 2XL Roundup PowerMax	0.25 lb ai/a 0.77 lb ai/a	16 oz/a	22 oz/a	B	PRE	99.5	95.0	96.3	0.0	0.0	0.0	12.768	3137.85
13	Goal 2XL Roundup PowerMax	0.25 lb ai/a 0.77 lb ai/a	16 oz/a	22 oz/a	A	14 DPP	58.8	90.0	68.8	0.0	0.0	0.0	12.875	3164.27
14	Goal 2XL Roundup PowerMax	0.25 lb ai/a 0.77 lb ai/a	16 oz/a	22 oz/a	A	14 DPP remove bed	25.0	76.3	50.0	0.0	0.0	0.0	12.128	2980.56
LSD (P=.05)		16.27					16.27	14.90	19.28	0.00	0.00	0.00	1.6612	408.268
Standard Deviation		11.38					11.38	10.42	13.49	0.00	0.00	0.00	1.1624	285.689
CV		14.17					14.17	12.59	16.7	0.0	0.0	0.0	8.9	8.9
Bartlett's X2		55.45					55.45	25.921	34.582	0.0	0.0	0.0	16.29	16.29
P(Bartlett's X2)		0.001*					0.001*	0.007*	0.001*	.	.	.	0.234	0.234
Replicate F		0.756					0.756	3.491	2.370	0.000	0.000	0.000	8.293	8.293
Replicate Prob(F)		0.5254					0.5254	0.0245	0.0853	1.0000	1.0000	1.0000	0.0002	0.0002
Treatment F		29.389					29.389	22.339	15.565	0.000	0.000	0.000	1.992	1.992
Treatment Prob(F)		0.0001					0.0001	0.0001	0.0001	1.0000	1.0000	1.0000	0.0486	0.0486

University of Arkansas-Division of Agriculture

Efficacy and Selectivity of Dawn, Reflex, and Goal 2 XL Applied EPP and PRE in Cotton

Trial ID: HCT-40110
Location: Rohwer

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US
ECHCG, Echinochloa crus-galli, = US

Part Rated

PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

PHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
lb/ac = pounds per acre

ARM Action Codes

TY1 = 245.7684*25

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in GT Cotton

Trial ID: HCT-40210
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Seed Bed: CRUSTE crusted
Planting Date: 5/5/2010
Rate, Unit: 3.5 S/ROWFT
Spacing Within Row, Unit: 3.42 IN
Soil Temperature, Unit: 68 F
Emergence Date: 5/13/2010
Harvested Width, Unit: 6.33 FT
Harvested Length, Unit: 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA **Amaranthus palmeri**
Common Name: Palmer amaranth
Description: F
Pest 2 Type: W **Code:** IPOSS **Ipomoea sp.**
Common Name: Morning glory

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Study Design: RACOBL Randomized Complete Block (RCB)

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G

Application Description

	A	B	C	D	E
Application Date:	4/21/2010	5/6/2010	6/3/2010	6/16/2010	6/25/2010
Time of Day:	AM	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	14 DPP	PRE	2-3 If	8-10 If	12-14 If
Application Placement:	BROSOL	BROSOL	BANFOL	BRODIR	BRODIR
Applied By:	RD	RD			
Air Temperature, Unit:	62.5 F	65.8 F	79.6 F	85.1 F	83.3 F
% Relative Humidity:	50.4	68.9	79.47	69.06	46.4
Wind Velocity, Unit:	4.14 MPH	4.2 MPH	2.50 MPH	4.95 MPH	2.45 MPH
Wind Direction:	SSW	ESE	E	SSE	S
Dew Presence (Y/N):	N no	N no	N no	N no	N no
Soil Temperature, Unit:	63.8	68.4 F	81.0 F	84.6 F	85.5 F
Soil Moisture:	DRY	DRY	FAIR	FAIR	FAIR
% Cloud Cover:	0	0	40	40	40
Next Rain Occurred On:	5/1/2010	5/10/2010	6/10/2010	6/17/2010	6/29/2010

Crop Stage At Each Application

	A	B	C	D	E
BCOT	BCOT	BCOT	BCOT	BCOT	

Application Equipment

	A	B	C	D	E
Appl. Equipment:	Hand Boom	Multi-Boom	Multi-Boom	HoodSpray	HoodSpray
Operating Pressure, Unit:	45 PSI	55 PSI	55 PSI	35 PSI	35 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	TeeJet	TeeJet
Nozzle Size:	110015	110015	110015		
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	38 IN	38 IN
Nozzles/Row:	2	2	2	3	3
Boom Length, Unit:	6.33 FT	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	4 IN	4 IN
Ground Speed, Unit:	MPH	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA	15 GPA	15 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	2 Gallons	2 Gallons
Propellant:	CO2	CO2	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in GT Cotton

Trial ID: HCT-40210
Location: Rohwer, AR

Investigator: Kenneth Smith

		AMAPA Palmer amaranth		IPOSS Morning glory		PLANT C 5/20/2010		PLANT C 5/20/2010		AMAPA Palmer amaranth		IPOSS Morning glory				
		PLANT P		PLANT P		PLANT C		PLANT C		PLANT P		PLANT P				
		5/20/2010		5/20/2010		5/20/2010		5/20/2010		5/27/2010		5/27/2010				
		CONTROL		CONTROL		PHYCHL		PHYNEC		CONTROL		CONTROL				
		%		%		%		%		%		%				
		cot-1 lf		cot-1 lf		cot-1 lf		cot-1 lf		3 lf		3 lf				
		cotyl		cotyl		cotyl		cotyl		2-12"		2-12"				
		14 DA-B		14 DA-B		14 DA-B		14 DA-B		21 DA-B		21 DA-B				
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Unit	Appl Code	Description		1	2	3	4	5	6	7
1	UTC	0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Reflex	0.25	lb ai/a	16	oz/a	A	14 DPP	100.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
	Sequence	1.64	lb ai/a	40	oz/a	C	2-3 lf cotton									
	Suprend	1.2	lb ai/a	24	oz/a	D	8-10 lf cotton									
	MSMA	2.02	lb ai/a	43	oz/a	E	12-13 node cotton									
	Valor	0.064	lb ai/a	2	oz/a	E	12-13 node cotton									
3	Cotoran	1	lb ai/a	32	oz/a	B	PRE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	98.3	100.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	C	2-3 lf cotton									
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	2-3 lf cotton									
	Prefix	1.32	lb ai/a	32	oz/a	E	12-13 node cotton									
	Touchdown Total	0.75	lb ai/a	23	oz/a	E	12-13 node cotton									
4	Cotoran	1	lb ai/a	32	oz/a	B	PRE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	98.0	100.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	C	2-3 lf cotton									
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	2-3 lf cotton									
	Prefix	1.32	lb ai/a	32	oz/a	E	12-13 node cotton									
	Caparol	1	lb ai/a	32	oz/a	E	12-13 node cotton									
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	E	12-13 node cotton									
5	Cotoran	1	lb ai/a	32	oz/a	B	PRE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	C	2-3 lf cotton									
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	2-3 lf cotton									
	Prefix	1.32	lb ai/a	32	oz/a	E	12-13 node cotton									
	Caparol	1.5	lb ai/a	48	oz/a	E	12-13 node cotton									
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	E	12-13 node cotton									
6	Roundup PowerMax	0.77	lb ai/a	22	oz/a	A	14 DPP	100.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
	2,4-D Ester	0.5	lb ai/a	16	oz/a	A	14 DPP									
	Basis	0.0234	lb ai/a	0.5	oz/a	A	14 DPP									
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	B	PRE									
	Staple LX	0.0425	lb ai/a	1.7	oz/a	B	PRE									
	Direx	0.625	lb ai/a	20	oz/a	B	PRE									
	COC	1	% v/v	1	% v/v	B	PRE									
	Sequence	1.64	lb ai/a	40	oz/a	C	2-3 lf cotton									
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	D	8-10 lf cotton									
	Staple LX	0.0425	lb ai/a	1.7	oz/a	D	8-10 lf cotton									
	MSMA	2.02	lb ai/a	43	oz/a	E	12-13 node cotton									
	Valor	0.064	lb ai/a	2	oz/a	E	12-13 node cotton									
	NIS	0.25	% v/v	0.25	% v/v	E	12-13 node cotton									
7	Cotoran	1	lb ai/a	32	oz/a	B	PRE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	99.5	100.0
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	C	2-3 lf cotton									
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	D	8-10 lf cotton									
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	E	12-13 node cotton									
LSD (P=.05)		0.00		0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.36	0.00
Standard Deviation		0.00		0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00
CV		0.0		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.08	0.0
Bartlett's X2		0.0		0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.943	0.0
P(Bartlett's X2)		.		.		.		.	.	.	.	.	.	.	0.163	.
Replicate F		0.000		0.000		0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.863	0.000
Replicate Prob(F)		1.0000		1.0000		1.0000		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1721	1.0000
Treatment F		0.000		0.000		0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	6731.731	0.000
Treatment Prob(F)		1.0000		1.0000		1.0000		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in GT Cotton

Trial ID: HCT-40210
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		PLANT C		PLANT C		PLANT C		AMAPA		PLANT C		PLANT C		PLANT C	
Pest Name		5/27/2010		5/27/2010		5/27/2010		Palmer amaranth		6/3/2010		6/3/2010		6/3/2010	
Part Rated		PHYCHL		PHYNEC		PHYSTU		PLANT P		PHYCHL		PHYNEC		PHYSTU	
Rating Date		%		%		%		CONTROL		%		%		%	
Rating Type		3 lf		3 lf		3 lf		4-5 lf		4-5 lf		4-5 lf		4-5 lf	
Rating Unit		cotyl		cotyl		cotyl		2-24"		28 DA-B		28 DA-B		28 DA-B	
Crop Stage Majority		21 DA-B		21 DA-B		21 DA-B		28 DA-B		28 DA-B		28 DA-B		28 DA-B	
Pest Stage Majority		21 DA-B		21 DA-B		21 DA-B		28 DA-B		28 DA-B		28 DA-B		28 DA-B	
Tri-Eval Interval		21 DA-B		21 DA-B		21 DA-B		28 DA-B		28 DA-B		28 DA-B		28 DA-B	
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Unit	Appl Code	Description	8	9	10	11	12	13	14
1	UTC								0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Reflex	0.25	lb ai/a	16	oz/a	A		14 DPP	0.0	0.0	0.0	100.0	0.0	0.0	0.0
	Sequence	1.64	lb ai/a	40	oz/a	C		2-3 lf cotton							
	Suprend	1.2	lb ai/a	24	oz/a	D		8-10 lf cotton							
	MSMA	2.02	lb ai/a	43	oz/a	E		12-13 node cotton							
	Valor	0.064	lb ai/a	2	oz/a	E		12-13 node cotton							
3	Cotoran	1	lb ai/a	32	oz/a	B		PRE	0.0	0.0	0.0	97.0	0.0	0.0	0.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	C		2-3 lf cotton							
	Dual Magnum	0.95	lb ai/a	16	oz/a	C		2-3 lf cotton							
	Prefix	1.32	lb ai/a	32	oz/a	E		12-13 node cotton							
	Touchdown Total	0.75	lb ai/a	23	oz/a	E		12-13 node cotton							
4	Cotoran	1	lb ai/a	32	oz/a	B		PRE	0.0	0.0	0.0	95.0	0.0	0.0	0.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	C		2-3 lf cotton							
	Dual Magnum	0.95	lb ai/a	16	oz/a	C		2-3 lf cotton							
	Prefix	1.32	lb ai/a	32	oz/a	E		12-13 node cotton							
	Caparol	1	lb ai/a	32	oz/a	E		12-13 node cotton							
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	E		12-13 node cotton							
5	Cotoran	1	lb ai/a	32	oz/a	B		PRE	0.0	0.0	0.0	100.0	0.0	0.0	0.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	C		2-3 lf cotton							
	Dual Magnum	0.95	lb ai/a	16	oz/a	C		2-3 lf cotton							
	Prefix	1.32	lb ai/a	32	oz/a	E		12-13 node cotton							
	Caparol	1.5	lb ai/a	48	oz/a	E		12-13 node cotton							
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	E		12-13 node cotton							
6	Roundup PowerMax	0.77	lb ai/a	22	oz/a	A		14 DPP	0.0	0.0	0.0	100.0	0.0	0.0	0.0
	2,4-D Ester	0.5	lb ai/a	16	oz/a	A		14 DPP							
	Basis	0.0234	lb ai/a	0.5	oz/a	A		14 DPP							
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	B		PRE							
	Staple LX	0.0425	lb ai/a	1.7	oz/a	B		PRE							
	Direx	0.625	lb ai/a	20	oz/a	B		PRE							
	COC	1	% v/v	1	% v/v	B		PRE							
	Sequence	1.64	lb ai/a	40	oz/a	C		2-3 lf cotton							
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	D		8-10 lf cotton							
	Staple LX	0.0425	lb ai/a	1.7	oz/a	D		8-10 lf cotton							
	MSMA	2.02	lb ai/a	43	oz/a	E		12-13 node cotton							
	Valor	0.064	lb ai/a	2	oz/a	E		12-13 node cotton							
	NIS	0.25	% v/v	0.25	% v/v	E		12-13 node cotton							
7	Cotoran	1	lb ai/a	32	oz/a	B		PRE	0.0	0.0	0.0	98.0	0.0	0.0	0.0
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	C		2-3 lf cotton							
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	D		8-10 lf cotton							
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	E		12-13 node cotton							
LSD (P=.05)									0.00	0.00	0.00	1.38	0.00	0.00	0.00
Standard Deviation									0.00	0.00	0.00	0.93	0.00	0.00	0.00
CV									0.0	0.0	0.0	1.1	0.0	0.0	0.0
Bartlett's X2									0.0	0.0	0.0	0.0	0.0	0.0	0.0
P(Bartlett's X2)									.	.	.	.	.	.	.
Replicate F									0.000	0.000	0.000	1.000	0.000	0.000	0.000
Replicate Prob(F)									1.0000	1.0000	1.0000	0.4155	1.0000	1.0000	1.0000
Treatment F									0.000	0.000	0.000	6462.889	0.000	0.000	0.000
Treatment Prob(F)									1.0000	1.0000	1.0000	0.0001	1.0000	1.0000	1.0000

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in GT Cotton

Trial ID: HCT-40210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA Palmer amaranth		PLANT C	PLANT C	PLANT C	AMAPA Palmer amaranth	AMAPA Palmer amaranth	PLANT C	PLANT C					
Pest Name		PLANT P		PHYCHL	PHYNEC	PHYSTU	PLANT P	PLANT P	10/4/2010	10/4/2010					
Part Rated		6/14/2010		6/14/2010	6/14/2010	6/14/2010	6/24/2010	7/12/2010	10/4/2010	10/4/2010					
Rating Date		CONTROL		CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	YIELD	YIELD					
Rating Type		%		%	%	%	%	%	lb/plot	LB					
Rating Unit		8-10 lf		8-10 lf	8-10 lf	8-10 lf	10-12 lf	9 NAWF	Harvest	Harvest					
Crop Stage Majority		2-24*		2-24*	2-24*	2-24*	2-24*	2-24*							
Pest Stage Majority		11 DA-C		11 DA-C	11 DA-C	11 DA-C	8 DA-D	17 DA-E	101 DA-E	101 DA-E					
Tri-Eval Interval															
Tri No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	Appl Description								
1	UTC	0.0						15	16	17	18	19	20	21	22
2	Reflex	0.25	lb ai/a	16	oz/a	A	14 DPP	100.0	0.0	0.0	0.0	100.0	100.0	16.095	3955.64
	Sequence	1.64	lb ai/a	40	oz/a	C	2-3 lf cotton								
	Suprend	1.2	lb ai/a	24	oz/a	D	8-10 lf cotton								
	MSMA	2.02	lb ai/a	43	oz/a	E	12-13 node cotton								
	Valor	0.064	lb ai/a	2	oz/a	E	12-13 node cotton								
3	Cotoran	1	lb ai/a	32	oz/a	B	PRE	97.5	0.0	0.0	0.0	100.0	100.0	15.138	3720.32
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	C	2-3 lf cotton								
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	2-3 lf cotton								
	Prefix	1.32	lb ai/a	32	oz/a	E	12-13 node cotton								
	Touchdown Total	0.75	lb ai/a	23	oz/a	E	12-13 node cotton								
4	Cotoran	1	lb ai/a	32	oz/a	B	PRE	100.0	0.0	0.0	31.3	99.5	100.0	13.253	3257.05
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	C	2-3 lf cotton								
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	2-3 lf cotton								
	Prefix	1.32	lb ai/a	32	oz/a	E	12-13 node cotton								
	Caparol	1	lb ai/a	32	oz/a	E	12-13 node cotton								
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	E	12-13 node cotton								
5	Cotoran	1	lb ai/a	32	oz/a	B	PRE	100.0	0.0	0.0	0.0	100.0	100.0	14.985	3682.84
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	C	2-3 lf cotton								
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	2-3 lf cotton								
	Prefix	1.32	lb ai/a	32	oz/a	E	12-13 node cotton								
	Caparol	1.5	lb ai/a	48	oz/a	E	12-13 node cotton								
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	E	12-13 node cotton								
6	Roundup PowerMax	0.77	lb ai/a	22	oz/a	A	14 DPP	100.0	0.0	0.0	12.5	100.0	100.0	16.573	4073.00
	2,4-D Ester	0.5	lb ai/a	16	oz/a	A	14 DPP								
	Basis	0.0234	lb ai/a	0.5	oz/a	A	14 DPP								
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	B	PRE								
	Staple LX	0.0425	lb ai/a	1.7	oz/a	B	PRE								
	Direx	0.625	lb ai/a	20	oz/a	B	PRE								
	COC	1	% v/v	1	% v/v	B	PRE								
	Sequence	1.64	lb ai/a	40	oz/a	C	2-3 lf cotton								
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	D	8-10 lf cotton								
	Staple LX	0.0425	lb ai/a	1.7	oz/a	D	8-10 lf cotton								
	MSMA	2.02	lb ai/a	43	oz/a	E	12-13 node cotton								
	Valor	0.064	lb ai/a	2	oz/a	E	12-13 node cotton								
	NIS	0.25	% v/v	0.25	% v/v	E	12-13 node cotton								
7	Cotoran	1	lb ai/a	32	oz/a	B	PRE	99.5	0.0	0.0	0.0	100.0	100.0	15.718	3862.87
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	C	2-3 lf cotton								
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	D	8-10 lf cotton								
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	E	12-13 node cotton								
LSD (P=.05)								2.89	0.00	0.00	16.04	0.56	0.00	2.5250	620.580
Standard Deviation								1.95	0.00	0.00	10.80	0.38	0.00	1.6996	417.721
CV								2.28	0.0	0.0	172.75	0.44	0.0	11.54	11.54
Bartlett's X2								5.6	0.0	0.0	0.72	0.0	0.0	6.907	6.907
P(Bartlett's X2)								0.018*	.	.	0.396	.	.	0.33	0.33
Replicate F								0.854	0.000	0.000	0.702	1.000	0.000	0.800	0.800
Replicate Prob(F)								0.4829	1.0000	1.0000	0.5630	0.4155	1.0000	0.5100	0.5101
Treatment F								1492.130	0.000	0.000	4.915	39934.336	0.000	4.707	4.707
Treatment Prob(F)								0.0001	1.0000	1.0000	0.0039	0.0001	1.0000	0.0048	0.0048

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in GT Cotton

Trial ID: HCT-40210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

PHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
LB = pound

ARM Action Codes

TY1 = 245.7684*21

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in Liberty Link Cotton

Trial ID: HCT-40310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop 1:		Crop Description	
GOSHI	Gossypium hirsutum American upland cotton		
Variety: Fiber Max 1773 LL B2			
BBCH Scale:	BCOT	Planting Date:	5/5/2010
Planting Method:	BEDDED bedded	Rate, Unit:	3.5 S/FT
Depth, Unit:	1 IN	Spacing Within Row, Unit:	3.42 IN
Row Spacing, Unit:	38 IN	Soil Temperature, Unit:	68 F
Seed Bed:	CRUSTE crusted	Emergence Date:	5/13/2010
Harvested Width, Unit:	6.33 FT	Harvested Length, Unit:	28 FT

Pest 1 Type:		Pest Description	
W	Code: AMAPA Amaranthus palmeri Common Name: Palmer amaranth		
Pest 2 Type:	W Code: IPOSS Ipomoea sp. Common Name: Morning glory		
Pest 3 Type:	W Code: ECHCG Echinochloa crus-galli Common Name: Common barnyardgrass		

Site and Design	
Plot Width, Unit:	12.66 FT
Plot Length, Unit:	29 FT
Plot Area, Unit:	354.48 FT2
Replications:	4
Study Design: RACOB L Randomized Complete Block (RCB)	

Soil Description	
Description Name:	Silt Loam
% Sand:	16
% Silt:	67
% Clay:	17
% OM:	2.2
pH:	7.1
CEC:	14
Texture:	SIL silt loam
Soil Name:	Herbert Silt Loam
Fert. Level:	G

Application Description				
	A	B	C	D
Application Date:	4/21/2010	5/6/2010	6/3/2010	6/25/2010
Time of Day:	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	14 DPP	PRE	4 lf	12-node
Application Placement:	BROSOI	BROSOI	BROFOL	BRODIR
Applied By:	RD	RD	RD	RD
Air Temperature, Unit:	62.5 F	65.8 F	79.6 F	83.3 F
% Relative Humidity:	50.4	68.9	79.47	80
Wind Velocity, Unit:	4.14 MPH	4.2 MPH	2.50 MPH	2.45 MPH
Wind Direction:	SSW	ESE	E	S
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	63.8	68.4 F	81.0 F	85.5 F
Soil Moisture:	DRY	DRY	FAIR	FAIR
% Cloud Cover:	0	0	40	40
Next Rain Occurred On:	5/1/2010	5/10/2010	6/11/2010	6/29/2010

Crop Stage At Each Application				
	A	B	C	D
BCOT	BCOT	BCOT	BCOT	

Application Equipment				
	A	B	C	D
Appl. Equipment:	Hand Boom	Multi-Boom	Multi-Boom	HoodSpray
Operating Pressure, Unit:	45 PSI	55 PSI	55 PSI	35 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	TeeJet
Nozzle Size:	110015	110015	110015	
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	38 IN
Nozzles/Row:	2	2	2	3
Boom Length, Unit:	6.33 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	4 IN
Ground Speed, Unit:	MPH	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA	15 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	2 Gallons
Propellant:	CO2	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in Liberty Link Cotton

Trial ID: HCT-40310
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		AMAPA		IPOSS	
Pest Name		Palmer amaranth		Morning glory		Common barnyard		Palmer amaranth		Morning glory	
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P	
Rating Date		5/20/2010		5/20/2010		5/20/2010		5/27/2010		5/27/2010	
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL	
Rating Unit		%		%		%		%		%	
Crop Stage Majority		Cot-1 lf		Cot-1 lf		Cot-1 lf		3 lf		3 lf	
Pest Stage Majority		cotyl		cotyl		cotyl		2-12"		2-12"	
Tri-Eval Interval											
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	1	2	3	4	5
1	UTC						0.0	0.0	0.0	0.0	0.0
2	Reflex	0.25 lb ai/a	16 oz/a		A	14 DPP	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton					
	Valor	0.064 lb ai/a	2 oz/a		D	12-13 node cotton					
3	Cotoran	1 lb ai/a	32 oz/a		B	PRE	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	Prefix	1.32 lb ai/a	32 oz/a		D	12-13 node cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton					
4	Cotoran	1 lb ai/a	32 oz/a		B	PRE	100.0	100.0	100.0	98.8	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	Prefix	1.32 lb ai/a	32 oz/a		D	12-13 node cotton					
	Caparol	1 lb ai/a	32 oz/a		D	12-13 node cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton					
5	Cotoran	1 lb ai/a	32 oz/a		B	PRE	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	Prefix	1.32 lb ai/a	32 oz/a		D	12-13 node cotton					
	Caparol	1.5 lb ai/a	48 oz/a		D	12-13 node cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton					
6	Caparol	1 lb ai/a	32 oz/a		B	PRE	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	MSMA	2.02 lb ai/a	43 oz/a		D	12-13 node cotton					
	Direx	0.75 lb ai/a	24 oz/a		D	12-13 node cotton					
7	Cotoran	1 lb ai/a	32 oz/a		B	PRE	100.0	100.0	97.5	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Ignite 280	0.73 lb ai/a	40 oz/a		D	12-13 node cotton					
LSD (P=.05)							0.00	0.00	2.81	1.40	0.00
Standard Deviation							0.00	0.00	1.89	0.94	0.00
CV							0.0	0.0	2.21	1.1	0.0
Bartlett's X2							0.0	0.0	0.0	0.0	0.0
P(Bartlett's X2)							.	.	.	.	.
Replicate F							0.000	0.000	1.000	1.000	0.000
Replicate Prob(F)							1.0000	1.0000	0.4155	0.4155	1.0000
Treatment F							0.000	0.000	1587.667	6374.334	0.000
Treatment Prob(F)							1.0000	1.0000	0.0001	0.0001	1.0000

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in Liberty Link Cotton

Trial ID: HCT-40310
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		AMAPA		PLANT C		PLANT C		PLANT C	
Pest Name		Common barnyar>		Palmer amaranth		Palmer amaranth		PHYCHL		PHYNEC		PHYSTU	
Part Rated		PLANT P		PLANT P		PLANT P		6/14/2010		6/14/2010		6/14/2010	
Rating Date		5/27/2010		6/3/2010		6/14/2010		6/14/2010		6/14/2010		6/14/2010	
Rating Type		CONTROL		CONTROL		CONTROL		%		%		%	
Rating Unit		%		%		%		8-10 If		8-10 If		8-10 If	
Crop Stage Majority		3 If		4-5 If		8-10 If		8-10 If		8-10 If		8-10 If	
Pest Stage Majority		2-12"		2-12"		2-24"							
Tri-Eval Interval													
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	Appl Description	6	7	8	9	10	11
1	UTC							0.0	0.0	0.0	0.0	0.0	0.0
2	Reflex	0.25	lb ai/a	16	oz/a	A	14 DPP	100.0	100.0	100.0	0.0	0.0	10.0
	Ignite 280	0.53	lb ai/a	29	oz/a	C	4 lf cotton						
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	4 lf cotton						
	Ignite 280	0.53	lb ai/a	29	oz/a	D	12-13 node cotton						
	Valor	0.064	lb ai/a	2	oz/a	D	12-13 node cotton						
3	Cotoran	1	lb ai/a	32	oz/a	B	PRE	100.0	99.0	99.5	0.0	0.0	0.0
	Ignite 280	0.53	lb ai/a	29	oz/a	C	4 lf cotton						
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	4 lf cotton						
	Prefix	1.32	lb ai/a	32	oz/a	D	12-13 node cotton						
	Ignite 280	0.53	lb ai/a	29	oz/a	D	12-13 node cotton						
4	Cotoran	1	lb ai/a	32	oz/a	B	PRE	100.0	96.3	99.5	0.0	0.0	17.5
	Ignite 280	0.53	lb ai/a	29	oz/a	C	4 lf cotton						
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	4 lf cotton						
	Prefix	1.32	lb ai/a	32	oz/a	D	12-13 node cotton						
	Caparol	1	lb ai/a	32	oz/a	D	12-13 node cotton						
	Ignite 280	0.53	lb ai/a	29	oz/a	D	12-13 node cotton						
5	Cotoran	1	lb ai/a	32	oz/a	B	PRE	100.0	100.0	100.0	0.0	0.0	22.5
	Ignite 280	0.53	lb ai/a	29	oz/a	C	4 lf cotton						
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	4 lf cotton						
	Prefix	1.32	lb ai/a	32	oz/a	D	12-13 node cotton						
	Caparol	1.5	lb ai/a	48	oz/a	D	12-13 node cotton						
	Ignite 280	0.53	lb ai/a	29	oz/a	D	12-13 node cotton						
6	Caparol	1	lb ai/a	32	oz/a	B	PRE	100.0	100.0	97.0	0.0	0.0	0.0
	Ignite 280	0.53	lb ai/a	29	oz/a	C	4 lf cotton						
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	4 lf cotton						
	MSMA	2.02	lb ai/a	43	oz/a	D	12-13 node cotton						
	Direx	0.75	lb ai/a	24	oz/a	D	12-13 node cotton						
7	Cotoran	1	lb ai/a	32	oz/a	B	PRE	100.0	100.0	99.5	0.0	0.0	15.0
	Ignite 280	0.53	lb ai/a	29	oz/a	C	4 lf cotton						
	Ignite 280	0.73	lb ai/a	40	oz/a	D	12-13 node cotton						
LSD (P=.05)								0.00	2.73	2.95	0.00	0.00	25.75
Standard Deviation								0.00	1.84	1.98	0.00	0.00	17.33
CV								0.0	2.16	2.33	0.0	0.0	186.65
Bartlett's X2								0.0	4.603	12.217	0.0	0.0	0.894
P(Bartlett's X2)								.	0.032*	0.007*	.	.	0.827
Replicate F								0.000	1.164	0.520	0.000	0.000	4.708
Replicate Prob(F)								1.0000	0.3508	0.6738	1.0000	1.0000	0.0135
Treatment F								0.000	1663.762	1431.000	0.000	0.000	1.185
Treatment Prob(F)								1.0000	0.0001	0.0001	1.0000	1.0000	0.3577

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in Liberty Link Cotton

Trial ID: HCT-40310
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		AMAPA		PLANT C	PLANT C
Pest Name		Palmer amaranth		Palmer amaranth		10/4/2010	10/4/2010
Part Rated		PLANT P		PLANT P		WEIGHT	YIELD
Rating Date		6/24/2010		7/12/2010		lb/plot	lb/ac
Rating Type		CONTROL		CONTROL		Harvest	Harvest
Rating Unit		%		%		coty/	coty/
Crop Stage Majority		10-12 lf		9 NAWF		101 DA-D	101 DA-D
Pest Stage Majority		6-36"		3-60"			
Trt-Eval Interval							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	
		Unit	Unit	Unit			
1	UTC						
		0.0					
2	Reflex	0.25 lb ai/a	16 oz/a		A	14 DPP	
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton	
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton	
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton	
	Valor	0.064 lb ai/a	2 oz/a		D	12-13 node cotton	
3	Cotoran	1 lb ai/a	32 oz/a		B	PRE	
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton	
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton	
	Prefix	1.32 lb ai/a	32 oz/a		D	12-13 node cotton	
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton	
4	Cotoran	1 lb ai/a	32 oz/a		B	PRE	
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton	
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton	
	Prefix	1.32 lb ai/a	32 oz/a		D	12-13 node cotton	
	Caparol	1 lb ai/a	32 oz/a		D	12-13 node cotton	
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton	
5	Cotoran	1 lb ai/a	32 oz/a		B	PRE	
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton	
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton	
	Prefix	1.32 lb ai/a	32 oz/a		D	12-13 node cotton	
	Caparol	1.5 lb ai/a	48 oz/a		D	12-13 node cotton	
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton	
6	Caparol	1 lb ai/a	32 oz/a		B	PRE	
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton	
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton	
	MSMA	2.02 lb ai/a	43 oz/a		D	12-13 node cotton	
	Direx	0.75 lb ai/a	24 oz/a		D	12-13 node cotton	
7	Cotoran	1 lb ai/a	32 oz/a		B	PRE	
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton	
	Ignite 280	0.73 lb ai/a	40 oz/a		D	12-13 node cotton	
	LSD (P=.05)	0.79				2.9447	723.711
	Standard Deviation	0.53				1.9821	487.141
	CV	0.63				0.0	15.57
	Bartlett's X2	0.0				5.589	5.589
	P(Bartlett's X2)	.				0.471	0.471
	Replicate F	4.500				7.726	7.726
	Replicate Prob(F)	0.0159				1.0000	0.0016
	Treatment F	19901.002				0.000	5.928
	Treatment Prob(F)	0.0001				1.0000	0.0015

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in Liberty Link Cotton

Trial ID: HCT-40310
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US
ECHCG, Echinochloa crus-galli, = US

Part Rated

PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

PHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting
WEIGHT = weight
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
lb/ac = pounds per acre

ARM Action Codes

TY1 = 245.7684*14

University of Arkansas-Division of Agriculture

Evaluate Length of Residual Control and Crop Response to Common PRE Herbicides.

Trial ID: HCT-40410
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Seed Bed: CRUSTE crusted
Planting Date: 5/5/2010
Rate, Unit: 3.5 S/ROWFT
Spacing Within Row, Unit: 3.42 IN
Soil Temperature, Unit: 68 F
Emergence Date: 5/13/2010
Harvested Width, Unit: 6.33 FT
Harvested Length, Unit: 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
Pest 2 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory
Pest 3 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 29 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Study Design: RACOB L Randomized Complete Block (RCB)

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Rate	Rate Unit
1.	7/5/2010	GLYPHOSATE	3	lb ae/A	48	OZ/A

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G

Application Description

	A
Application Date:	5/6/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	PRE
Application Placement:	BROSOL
Applied By:	RD
Air Temperature, Unit:	65.8 F
% Relative Humidity:	68.9
Wind Velocity, Unit:	4.2 MPH
Wind Direction:	ESE
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	68.4 F
Soil Moisture:	dry
% Cloud Cover:	0
Next Rain Occurred On:	5/10/2010

Crop Stage At Each Application

	A
BCOT	
Stage Scale Used:	DESC
Stage Majority, Percent:	PRE

Pest Stage At Each Application

	A
Stage Majority, Percent:	PRE

University of Arkansas-Division of Agriculture

Evaluate Length of Residual Control and Crop Response to Common PRE Herbicides.

Trial ID: HCT-40410
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment	
	A
Appl. Equipment:	Multi-Boom
Operating Pressure, Unit:	55 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.8 MPH
Carrier:	H2O
Spray Volume, Unit:	12 GPA
Mix Size, Unit:	3 Liters
Propellant:	CO2

University of Arkansas-Division of Agriculture

Evaluate Length of Residual Control and Crop Response to Common PRE Herbicides.

Trial ID: HCT-40410
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		PLANT C	AMAPA	ECHCG	PLANT C	PLANT C	PLANT C	PLANT C						
Pest Name		5/14/2010	Palmer amaranth	Common barnyar>	5/20/2010	5/20/2010	5/20/2010	5/21/2010						
Part Rated		STASUB	PLANT P	PLANT P	PHYCHL	PHYNEC	PHYSTU	STASUB						
Rating Date		5 ft	5/20/2010	5/20/2010	%	%	%	5 ft						
Rating Type		cotyI	CONTROL	CONTROL	1 lf	1 lf	1 lf	1-2 lf						
Rating Unit		8 DA-A	%	%	cotyI	cotyI	cotyI	cotyI						
Crop Stage Majority			14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	15 DA-A						
Pest Stage Majority														
Tri-Eval Interval														
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	1	2	3	4	5	6	7
1	UTC							14.5	0.0	0.0	0.0	0.0	0.0	15.0
2	Caparol	0.5 lb ai/a	16 oz/a		A	PRE		13.8	100.0	100.0	0.0	0.0	0.0	13.8
3	Caparol	0.75 lb ai/a	24 oz/a		A	PRE		14.8	100.0	100.0	0.0	0.0	0.0	13.8
4	Caparol	1 lb ai/a	32 oz/a		A	PRE		13.5	100.0	100.0	0.0	0.0	0.0	14.0
5	Cotoran	0.5 lb ai/a	16 oz/a		A	PRE		15.0	100.0	100.0	0.0	0.0	0.0	14.5
6	Cotoran	0.75 lb ai/a	24 oz/a		A	PRE		15.0	100.0	100.0	0.0	0.0	0.0	14.5
7	Cotoran	1 lb ai/a	32 oz/a		A	PRE		12.8	100.0	100.0	0.0	0.0	0.0	13.0
8	Direx	0.5 lb ai/a	16 oz/a		A	PRE		13.3	100.0	100.0	0.0	0.0	0.0	12.8
9	Direx	0.75 lb ai/a	24 oz/a		A	PRE		11.8	100.0	100.0	0.0	0.0	0.0	11.5
10	Direx	1 lb ai/a	32 oz/a		A	PRE		14.0	100.0	100.0	0.0	0.0	0.0	12.5
11	Dual Magnum	0.95 lb ai/a	16 oz/a		A	PRE		14.8	100.0	100.0	0.0	0.0	0.0	14.3
12	Dual Magnum	1.43 lb ai/a	24 oz/a		A	PRE		14.0	100.0	100.0	0.0	0.0	0.0	13.0
13	Dual Magnum	1.9 lb ai/a	32 oz/a		A	PRE		13.3	100.0	100.0	0.0	0.0	0.0	13.3
14	Prowl H2O	0.95 lb ai/a	32 oz/a		A	PRE		15.5	100.0	100.0	0.0	0.0	0.0	15.0
15	Prowl H2O	1.43 lb ai/a	48 oz/a		A	PRE		12.8	100.0	100.0	0.0	0.0	0.0	13.0
16	Prowl H2O	1.9 lb ai/a	64 oz/a		A	PRE		13.0	100.0	100.0	0.0	0.0	0.0	13.5
17	Reflex	0.188 lb ai/a	12 oz/a		A	PRE		15.3	100.0	100.0	0.0	0.0	0.0	14.0
18	Reflex	0.25 lb ai/a	16 oz/a		A	PRE		13.3	100.0	100.0	0.0	0.0	0.0	13.0
19	Reflex	0.375 lb ai/a	24 oz/a		A	PRE		14.3	100.0	100.0	0.0	0.0	0.0	14.3
20	Valor	0.032 lb ai/a	1 oz/a		A	PRE		13.5	100.0	100.0	0.0	0.0	0.0	12.5
21	Valor	0.048 lb ai/a	1.5 oz/a		A	PRE		13.0	100.0	100.0	0.0	25.0	41.3	10.3
22	Valor	0.064 lb ai/a	2 oz/a		A	PRE		12.3	100.0	100.0	0.0	40.0	52.5	9.0
LSD (P=.05)								3.69	0.00	0.00	0.00	1.23	1.14	3.86
Standard Deviation								2.61	0.00	0.00	0.00	0.87	0.80	2.73
CV								18.93	0.0	0.0	0.0	29.46	18.84	20.68
Bartlett's X2								16.244	0.0	0.0	0.0	0.0	0.061	12.733
P(Bartlett's X2)								0.756	.	.	.	.	0.804	0.918
Replicate F								0.432	0.000	0.000	0.000	1.000	1.615	0.287
Replicate Prob(F)								0.7305	1.0000	1.0000	1.0000	0.3988	0.1947	0.8349
Treatment F								0.606	0.000	0.000	0.000	511.143	1198.762	1.142
Treatment Prob(F)								0.8992	1.0000	1.0000	1.0000	0.0001	0.0001	0.3323

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluate Length of Residual Control and Crop Response to Common PRE Herbicides.

Trial ID: HCT-40410
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		ECHCG		PLANT C		PLANT C		PLANT C		AMAPA		IPOSS	
Pest Name		Palmer amaranth		Common barnyar-		PLANT C		PLANT C		PLANT C		Palmer amaranth		Morning glory	
Part Rated		PLANT P		PLANT P		5/27/2010		5/27/2010		5/27/2010		PLANT P		PLANT P	
Rating Date		5/27/2010		5/27/2010		5/27/2010		5/27/2010		5/27/2010		6/3/2010		6/3/2010	
Rating Type		CONTROL		CONTROL		PHYCHL		PHYNEC		PHYSTU		CONTROL		CONTROL	
Rating Unit		%		%		%		%		%		%		%	
Crop Stage Majority		3 lf		3 lf		3 lf		3 lf		3 lf		4-5 lf		4-5 lf	
Pest Stage Majority		cotyl		cotyl		cotyl		cotyl		cotyl		cotyl		cotyl	
Tri-Eval Interval		21 DA-A		21 DA-A		21 DA-A		21 DA-A		21 DA-A		28 DA-A		28 DA-A	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Unit	Appl Code	Appl Description	8	9	10	11	12	13	14	
1	UTC							0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	Caparol	0.5 lb ai/a	16 oz/a		A	PRE		75.0	81.3	0.0	0.0	0.0	58.8	55.0	
3	Caparol	0.75 lb ai/a	24 oz/a		A	PRE		92.5	98.8	0.0	0.0	0.0	80.0	97.5	
4	Caparol	1 lb ai/a	32 oz/a		A	PRE		92.5	87.5	0.0	0.0	0.0	87.5	97.5	
5	Cotoran	0.5 lb ai/a	16 oz/a		A	PRE		100.0	100.0	0.0	0.0	0.0	98.8	100.0	
6	Cotoran	0.75 lb ai/a	24 oz/a		A	PRE		98.8	98.8	0.0	0.0	0.0	97.5	97.5	
7	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	0.0	0.0	0.0	100.0	100.0	
8	Direx	0.5 lb ai/a	16 oz/a		A	PRE		98.3	96.3	0.0	0.0	0.0	95.0	93.8	
9	Direx	0.75 lb ai/a	24 oz/a		A	PRE		100.0	100.0	0.0	0.0	0.0	100.0	98.8	
10	Direx	1 lb ai/a	32 oz/a		A	PRE		98.8	95.0	0.0	0.0	0.0	93.8	88.8	
11	Dual Magnum	0.95 lb ai/a	16 oz/a		A	PRE		93.8	97.5	0.0	0.0	0.0	82.5	87.5	
12	Dual Magnum	1.43 lb ai/a	24 oz/a		A	PRE		90.0	98.8	0.0	0.0	0.0	85.0	95.0	
13	Dual Magnum	1.9 lb ai/a	32 oz/a		A	PRE		92.5	88.8	0.0	0.0	0.0	80.0	92.5	
14	Prowl H2O	0.95 lb ai/a	32 oz/a		A	PRE		76.3	98.8	0.0	0.0	0.0	57.5	90.0	
15	Prowl H2O	1.43 lb ai/a	48 oz/a		A	PRE		93.8	98.3	0.0	0.0	0.0	83.8	90.0	
16	Prowl H2O	1.9 lb ai/a	64 oz/a		A	PRE		93.8	98.8	0.0	0.0	0.0	86.3	85.0	
17	Reflex	0.188 lb ai/a	12 oz/a		A	PRE		88.8	72.5	0.0	0.0	10.0	76.3	90.0	
18	Reflex	0.25 lb ai/a	16 oz/a		A	PRE		73.8	82.5	0.0	0.0	0.0	52.5	88.8	
19	Reflex	0.375 lb ai/a	24 oz/a		A	PRE		96.3	95.0	0.0	0.0	0.0	91.3	95.8	
20	Valor	0.032 lb ai/a	1 oz/a		A	PRE		100.0	87.5	0.0	0.0	0.0	94.5	95.0	
21	Valor	0.048 lb ai/a	1.5 oz/a		A	PRE		100.0	100.0	7.5	0.0	16.3	98.5	97.5	
22	Valor	0.064 lb ai/a	2 oz/a		A	PRE		99.5	88.8	12.5	0.0	37.5	97.0	97.0	
LSD (P=.05)								9.75	8.46	8.60	0.00	11.26	14.00	8.09	
Standard Deviation								6.90	5.98	6.08	0.00	7.96	9.90	5.72	
CV								7.76	6.7	669.22	0.0	274.66	12.12	6.51	
Bartlett's X2								39.913	36.951	0.745	0.0	0.218	59.427	41.32	
P(Bartlett's X2)								0.001*	0.002*	0.388		0.897	0.001*	0.001*	
Replicate F								8.179	1.476	1.965	0.000	1.332	4.040	3.430	
Replicate Prob(F)								0.0001	0.2295	0.1283	1.0000	0.2719	0.0108	0.0222	
Treatment F								38.687	50.830	1.000	0.000	4.768	21.480	57.660	
Treatment Prob(F)								0.0001	0.0001	0.4762	1.0000	0.0001	0.0001	0.0001	

University of Arkansas-Division of Agriculture

Evaluate Length of Residual Control and Crop Response to Common PRE Herbicides.

Trial ID: HCT-40410
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		PLANT C		PLANT C		PLANT C		AMAPA		IPOSS		ECHCG	
Pest Name		Common barnyar>		6/3/2010		6/3/2010		6/3/2010		Palmer amaranth		Morning glory		Common barnyar>	
Part Rated		PLANT P		PHYCHL		PHYNEC		PHYSTU		PLANT P		PLANT P		PLANT P	
Rating Date		6/3/2010		6/3/2010		6/3/2010		6/3/2010		6/14/2010		6/14/2010		6/14/2010	
Rating Type		CONTROL		PHYCHL		PHYNEC		PHYSTU		CONTROL		CONTROL		CONTROL	
Rating Unit		%		%		%		%		%		%		%	
Crop Stage Majority		4-5 lf		4-5 lf		4-5 lf		4-5 lf		8-10 lf		8-10 lf		8-10 lf	
Pest Stage Majority		cotyl		cotyl		cotyl		cotyl		cotyl		cotyl		cotyl	
Tri-Eval Interval		28 DA-A		28 DA-A		15 DA-A		28 DA-A		39 DA-A		39 DA-A		39 DA-A	
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Appl Unit	Appl Code	Description	15	16	17	18	19	20	21	
1	UTC							0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	Caparol	0.5 lb ai/a	16 oz/a	A	PRE			66.3	0.0	0.0	0.0	42.5	63.8	50.0	
3	Caparol	0.75 lb ai/a	24 oz/a	A	PRE			92.5	0.0	0.0	0.0	63.8	86.3	71.3	
4	Caparol	1 lb ai/a	32 oz/a	A	PRE			75.0	0.0	0.0	0.0	30.0	58.8	33.8	
5	Cotoran	0.5 lb ai/a	16 oz/a	A	PRE			100.0	0.0	0.0	0.0	87.5	94.5	63.5	
6	Cotoran	0.75 lb ai/a	24 oz/a	A	PRE			76.3	0.0	0.0	0.0	88.3	97.0	91.3	
7	Cotoran	1 lb ai/a	32 oz/a	A	PRE			100.0	0.0	0.0	0.0	88.8	96.3	93.3	
8	Direx	0.5 lb ai/a	16 oz/a	A	PRE			88.8	0.0	0.0	0.0	89.5	88.3	51.3	
9	Direx	0.75 lb ai/a	24 oz/a	A	PRE			95.0	0.0	0.0	0.0	97.0	97.0	72.0	
10	Direx	1 lb ai/a	32 oz/a	A	PRE			93.8	0.0	0.0	0.0	91.3	82.5	81.3	
11	Dual Magnum	0.95 lb ai/a	16 oz/a	A	PRE			91.3	0.0	0.0	0.0	52.5	80.8	67.5	
12	Dual Magnum	1.43 lb ai/a	24 oz/a	A	PRE			95.0	0.0	0.0	0.0	53.8	68.3	87.0	
13	Dual Magnum	1.9 lb ai/a	32 oz/a	A	PRE			80.0	0.0	0.0	0.0	58.3	84.5	90.0	
14	Prowl H2O	0.95 lb ai/a	32 oz/a	A	PRE			90.0	0.0	0.0	0.0	50.0	67.0	90.0	
15	Prowl H2O	1.43 lb ai/a	48 oz/a	A	PRE			92.5	0.0	0.0	0.0	66.3	88.3	90.0	
16	Prowl H2O	1.9 lb ai/a	64 oz/a	A	PRE			91.3	0.0	0.0	0.0	88.8	91.3	88.8	
17	Reflex	0.188 lb ai/a	12 oz/a	A	PRE			52.5	0.0	0.0	0.0	65.0	70.0	27.5	
18	Reflex	0.25 lb ai/a	16 oz/a	A	PRE			70.0	0.0	0.0	0.0	61.3	67.5	43.8	
19	Reflex	0.375 lb ai/a	24 oz/a	A	PRE			87.5	0.0	0.0	0.0	85.8	85.0	68.8	
20	Valor	0.032 lb ai/a	1 oz/a	A	PRE			70.0	0.0	0.0	0.0	95.3	72.0	0.0	
21	Valor	0.048 lb ai/a	1.5 oz/a	A	PRE			96.5	0.0	0.0	23.8	97.0	97.0	63.8	
22	Valor	0.064 lb ai/a	2 oz/a	A	PRE			76.3	0.0	0.0	52.5	100.0	92.5	67.5	
LSD (P=.05)		18.25		0.00		0.00		5.34		33.03		36.75		42.24	
Standard Deviation		12.90		0.00		0.00		3.78		23.36		25.99		29.87	
CV		15.95		0.0		0.0		109.03		33.11		33.08		47.2	
Bartlett's X2		67.84		0.0		0.0		3.659		48.661		66.103		52.389	
P(Bartlett's X2)		0.001*		.		.		0.056		0.001*		0.001*		0.001*	
Replicate F		0.802		0.000		0.000		1.028		3.193		0.898		0.809	
Replicate Prob(F)		0.4974		1.0000		1.0000		0.3864		0.0295		0.4475		0.4937	
Treatment F		11.542		0.000		0.000		40.760		4.863		2.693		3.507	
Treatment Prob(F)		0.0001		1.0000		1.0000		0.0001		0.0001		0.0013		0.0001	

University of Arkansas-Division of Agriculture

Evaluate Length of Residual Control and Crop Response to Common PRE Herbicides.

Trial ID: HCT-40410
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		PLANT C	PLANT C	PLANT C	PLANT C	PLANT C
Pest Name		6/14/2010	6/14/2010	6/14/2010	10/4/2010	10/4/2010
Part Rated		PHYCHL	PHYNEC	PHYSTU	WEIGHT	YIELD
Rating Date		%	%	%	lb/plot	lb/ac
Rating Type		8-10 lf	8-10 lf	8-10 lf	Harvest	Harvest
Rating Unit		cotyl	cotyl	cotyl		
Crop Stage Majority		39 DA-A	39 DA-A	39 DA-A	151 DA-A	151 DA-A
Pest Stage Majority						
Tri-Eval Interval						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description
1	UTC					
2	Caparol	0.5 lb ai/a	16 oz/a		A	PRE
3	Caparol	0.75 lb ai/a	24 oz/a		A	PRE
4	Caparol	1 lb ai/a	32 oz/a		A	PRE
5	Cotoran	0.5 lb ai/a	16 oz/a		A	PRE
6	Cotoran	0.75 lb ai/a	24 oz/a		A	PRE
7	Cotoran	1 lb ai/a	32 oz/a		A	PRE
8	Direx	0.5 lb ai/a	16 oz/a		A	PRE
9	Direx	0.75 lb ai/a	24 oz/a		A	PRE
10	Direx	1 lb ai/a	32 oz/a		A	PRE
11	Dual Magnum	0.95 lb ai/a	16 oz/a		A	PRE
12	Dual Magnum	1.43 lb ai/a	24 oz/a		A	PRE
13	Dual Magnum	1.9 lb ai/a	32 oz/a		A	PRE
14	Prowl H2O	0.95 lb ai/a	32 oz/a		A	PRE
15	Prowl H2O	1.43 lb ai/a	48 oz/a		A	PRE
16	Prowl H2O	1.9 lb ai/a	64 oz/a		A	PRE
17	Reflex	0.188 lb ai/a	12 oz/a		A	PRE
18	Reflex	0.25 lb ai/a	16 oz/a		A	PRE
19	Reflex	0.375 lb ai/a	24 oz/a		A	PRE
20	Valor	0.032 lb ai/a	1 oz/a		A	PRE
21	Valor	0.048 lb ai/a	1.5 oz/a		A	PRE
22	Valor	0.064 lb ai/a	2 oz/a		A	PRE
LSD (P=.05)		0.00	0.00	10.03	2.3189	569.918
Standard Deviation		0.00	0.00	7.09	1.6397	402.993
CV		0.0	0.0	623.94	13.06	13.07
Bartlett's X2		0.0	0.0	5.517	18.082	18.082
P(Bartlett's X2)		.	.	0.063	0.644	0.644
Replicate F		0.000	0.000	1.130	4.399	4.398
Replicate Prob(F)		1.0000	1.0000	0.3437	0.0071	0.0071
Treatment F		0.000	0.000	0.946	2.823	2.823
Treatment Prob(F)		1.0000	1.0000	0.5374	0.0008	0.0008

University of Arkansas-Division of Agriculture

Evaluate Length of Residual Control and Crop Response to Common PRE Herbicides.

Trial ID: HCT-40410
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
ECHCG, Echinochloa crus-galli, = US
IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant
C = Crop is Part Rated
P = Pest is Part Rated

Rating Type

STASUB = stand - subjective / emergence
PHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting
WEIGHT = weight
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
lb/ac = pounds per acre

ARM Action Codes

TY1 = 245.7684*25

University of Arkansas-Division of Agriculture

Cotton Injury as Effected by Residual PRE Herbicide and Rate.

Trial ID: HCT-40510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT **Planting Date:** 5/5/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN **Spacing Within Row, Unit:** 3.42 IN
Seed Bed: CRUSTE crusted **Soil Temperature, Unit:** 68 F
Emergence Date: 5/13/2010
Harvested Width, Unit: 6.33 FT **Harvested Length, Unit:** 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory

Pest 3 Type: W **Code:** BRAPP *Brachiaria platyphylla*
Common Name: Broadleaf signalgrass

Pest 4 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Rate	Rate Unit
1.	7/5/2010	GLYPHOSATE	3	lb ae/A	48	OZ/A

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G

Application Description

	A
Application Date:	5/6/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	RD
Air Temperature, Unit:	65.8 F
% Relative Humidity:	68.9
Wind Velocity, Unit:	4.2 MPH
Wind Direction:	ESE
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	68.4 F
Soil Moisture:	dry
% Cloud Cover:	0
Next Rain Occurred On:	5/10/2010

Crop Stage At Each Application

	A
BCOT	
Stage Scale Used:	BBCH
Stage Majority, Percent:	PRE

Pest Stage At Each Application

	A
Stage Majority, Percent:	PRE
Stage Minimum, Percent:	PRE
Stage Minimum, Percent:	PRE
Stage Minimum, Percent:	PRE

University of Arkansas-Division of Agriculture

Cotton Injury as Effected by Residual PRE Herbicide and Rate.

Trial ID: HCT-40510
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment	
	A
Appl. Equipment:	Multi-Boom
Operating Pressure, Unit:	55 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.8 MPH
Carrier:	H2O
Spray Volume, Unit:	12 GPA
Mix Size, Unit:	3 Liters
Propellant:	CO2

University of Arkansas-Division of Agriculture

Cotton Injury as Effected by Residual PRE Herbicide and Rate.

Trial ID: HCT-40510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code	PLANT C	AMAPA	IPOSS	ECHCG	BRAPP	PLANT C	PLANT C	PLANT C							
Pest Name	5/14/2010	Palmer amaranth	Morning glory	Common barnyar>	Broadleaf sign>	5/20/2010	5/20/2010	5/20/2010							
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PHYCHL	PHYNEC	PHYSTU							
Rating Date	5/20/2010	5/20/2010	5/20/2010	5/20/2010	5/20/2010	5/20/2010	5/20/2010	5/20/2010							
Rating Type	STASUB	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL							
Rating Unit	5 ft	%	%	%	%	%	%	%							
Crop Stage Majority	cot-1 lf	cot-1 lf	cot-1 lf	cot-1 lf	cot-1 lf	cot-1 lf	cot-1 lf	cot-1 lf							
Pest Stage Majority		cotyI	cotyI	cotyI	cotyI										
Trt-Eval Interval	8 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A							
Trt No.	Treatment	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	1	2	3	4	5	6	7	8
1		14.8						14.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Cotoran	0.5 lb ai/a	16 oz/a		A	PRE		15.0	100.0	100.0	98.8	97.5	0.0	0.0	0.0
3	Cotoran	0.75 lb ai/a	24 oz/a		A	PRE		12.5	100.0	100.0	99.5	100.0	0.0	0.0	0.0
4	Cotoran	1 lb ai/a	32 oz/a		A	PRE		12.8	100.0	100.0	100.0	100.0	0.0	0.0	0.0
5	Cotoran	1.5 lb ai/a	48 oz/a		A	PRE		14.3	100.0	100.0	99.5	100.0	0.0	0.0	0.0
6	Cotoran	2 lb ai/a	64 oz/a		A	PRE		13.8	100.0	100.0	100.0	100.0	0.0	0.0	0.0
7	Caparol	0.5 lb ai/a	16 oz/a		A	PRE		11.8	100.0	100.0	78.8	83.8	0.0	0.0	0.0
8	Caparol	0.75 lb ai/a	24 oz/a		A	PRE		16.0	100.0	100.0	98.8	90.0	0.0	0.0	0.0
9	Caparol	1 lb ai/a	32 oz/a		A	PRE		13.3	100.0	100.0	100.0	100.0	0.0	0.0	0.0
10	Caparol	1.5 lb ai/a	48 oz/a		A	PRE		15.5	100.0	100.0	92.5	92.5	0.0	0.0	0.0
11	Caparol	2 lb ai/a	64 oz/a		A	PRE		14.5	100.0	100.0	92.5	97.5	0.0	0.0	0.0
12	Direx	0.5 lb ai/a	16 oz/a		A	PRE		14.0	100.0	100.0	92.5	97.5	0.0	0.0	0.0
13	Direx	0.75 lb ai/a	24 oz/a		A	PRE		14.3	100.0	100.0	98.8	100.0	0.0	0.0	0.0
14	Direx	1 lb ai/a	32 oz/a		A	PRE		15.8	100.0	100.0	100.0	100.0	0.0	0.0	0.0
15	Direx	1.5 lb ai/a	48 oz/a		A	PRE		13.5	100.0	100.0	98.8	100.0	0.0	0.0	0.0
16	Direx	2 lb ai/a	64 oz/a		A	PRE		15.3	100.0	100.0	100.0	100.0	0.0	0.0	0.0
17	Reflex	0.125 lb ai/a	8 oz/a		A	PRE		16.8	90.0	100.0	71.3	90.0	0.0	0.0	0.0
18	Reflex	0.188 lb ai/a	12 oz/a		A	PRE		15.5	98.8	100.0	71.8	87.5	0.0	0.0	0.0
19	Reflex	0.25 lb ai/a	16 oz/a		A	PRE		15.0	97.5	100.0	95.0	91.3	0.0	0.0	0.0
20	Reflex	0.375 lb ai/a	24 oz/a		A	PRE		16.8	100.0	100.0	98.8	100.0	0.0	0.0	0.0
21	Reflex	0.5 lb ai/a	32 oz/a		A	PRE		14.8	100.0	100.0	100.0	100.0	0.0	0.0	0.0
LSD (P=.05)		2.39	1.74					0.00	0.00	0.00	15.56	8.85	0.00	0.00	0.00
Standard Deviation		1.69	1.23					0.00	0.00	0.00	11.01	6.26	0.00	0.00	0.00
CV		11.59	1.3					0.0	0.0	0.0	12.25	6.82	0.0	0.0	0.0
Bartlett's X2		23.85	1.328					0.0	0.0	0.0	86.005	22.938	0.0	0.0	0.0
P(Bartlett's X2)		0.249	0.249					.	.	.	0.001*	0.002*	.	.	.
Replicate F		4.134	0.724					0.000	0.000	0.000	2.480	3.918	0.000	0.000	0.000
Replicate Prob(F)		0.0099	0.5418					1.0000	1.0000	1.0000	0.0697	0.0127	1.0000	1.0000	1.0000
Treatment F		2.474	1258.895					0.000	0.000	0.000	16.706	47.733	0.000	0.000	0.000
Treatment Prob(F)		0.0036	0.0001					1.0000	1.0000	1.0000	0.0001	0.0001	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Cotton Injury as Effected by Residual PRE Herbicide and Rate.

Trial ID: HCT-40510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code	PLANT C	AMAPA	IPOSS	PLANT C	PLANT C	PLANT C	AMAPA	IPOSS						
Pest Name	5/21/2010	Palmer amaranth	Morning glory	5/27/2010	5/27/2010	5/27/2010	Palmer amaranth	Morning glory						
Part Rated	PLANT P	PLANT P	PLANT P	PHYCHL	PHYNEC	PHYSTU	PLANT P	PLANT P						
Rating Date	5/27/2010	5/27/2010	5/27/2010	5/27/2010	5/27/2010	5/27/2010	6/3/2010	6/3/2010						
Rating Type	CONTROL	CONTROL	CONTROL	PHYCHL	PHYNEC	PHYSTU	CONTROL	CONTROL						
Rating Unit	5 ft	%	%	%	%	%	%	%						
Crop Stage Majority	1-2 lf	3 lf	3 lf	3 lf	3 lf	3 lf	4-5 lf	4-5 lf						
Pest Stage Majority	2-12"	2-12"	2-12"	2-12"	2-12"	2-12"	2-24"	2-24"						
Trt-Eval Interval	15 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	28 DA-A	28 DA-A						
Trt No.	Treatment	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	9	10	11	12	13	14	15	16
1		15.5					15.5	0.0	0.0	0.0	0.0	0.0	25.0	25.0
2	Cotoran	0.5 lb ai/a	16 oz/a	A	PRE		14.3	98.8	100.0	0.0	0.0	0.0	93.8	100.0
3	Cotoran	0.75 lb ai/a	24 oz/a	A	PRE		13.5	100.0	100.0	0.0	0.0	0.0	100.0	100.0
4	Cotoran	1 lb ai/a	32 oz/a	A	PRE		13.5	100.0	100.0	0.0	0.0	0.0	100.0	100.0
5	Cotoran	1.5 lb ai/a	48 oz/a	A	PRE		15.8	100.0	100.0	0.0	0.0	0.0	100.0	100.0
6	Cotoran	2 lb ai/a	64 oz/a	A	PRE		14.8	100.0	100.0	0.0	0.0	0.0	92.5	100.0
7	Caparol	0.5 lb ai/a	16 oz/a	A	PRE		13.5	90.0	100.0	0.0	0.0	0.0	71.3	100.0
8	Caparol	0.75 lb ai/a	24 oz/a	A	PRE		16.0	97.0	100.0	0.0	0.0	0.0	93.8	100.0
9	Caparol	1 lb ai/a	32 oz/a	A	PRE		14.5	97.5	100.0	0.0	0.0	0.0	96.3	100.0
10	Caparol	1.5 lb ai/a	48 oz/a	A	PRE		14.5	100.0	100.0	0.0	0.0	0.0	100.0	100.0
11	Caparol	2 lb ai/a	64 oz/a	A	PRE		14.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0
12	Direx	0.5 lb ai/a	16 oz/a	A	PRE		15.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0
13	Direx	0.75 lb ai/a	24 oz/a	A	PRE		14.8	100.0	100.0	0.0	0.0	0.0	100.0	100.0
14	Direx	1 lb ai/a	32 oz/a	A	PRE		15.7	100.0	100.0	0.0	0.0	17.5	100.0	100.0
15	Direx	1.5 lb ai/a	48 oz/a	A	PRE		13.0	100.0	100.0	0.0	0.0	33.8	100.0	100.0
16	Direx	2 lb ai/a	64 oz/a	A	PRE		12.3	100.0	100.0	0.0	0.0	57.5	100.0	100.0
17	Reflex	0.125 lb ai/a	8 oz/a	A	PRE		16.3	88.8	100.0	0.0	0.0	0.0	73.8	100.0
18	Reflex	0.188 lb ai/a	12 oz/a	A	PRE		15.8	93.8	100.0	0.0	0.0	0.0	86.3	100.0
19	Reflex	0.25 lb ai/a	16 oz/a	A	PRE		15.0	98.3	100.0	0.0	0.0	0.0	92.5	100.0
20	Reflex	0.375 lb ai/a	24 oz/a	A	PRE		16.5	95.0	100.0	0.0	0.0	0.0	88.8	100.0
21	Reflex	0.5 lb ai/a	32 oz/a	A	PRE		14.3	100.0	100.0	0.0	0.0	0.0	93.8	100.0
LSD (P=.05)		3.04	3.43					0.00	0.00	0.00	0.00	2.54	17.03	15.43
Standard Deviation		2.15	2.43					0.00	0.00	0.00	0.00	1.80	12.04	10.91
CV		14.63	2.6					0.0	0.0	0.0	0.0	34.73	13.26	11.32
Bartlett's X2		18.871	4.758					0.0	0.0	0.0	0.0	0.007	60.571	0.0
P(Bartlett's X2)		0.53	0.575					.	.	.	.	0.996	0.001*	.
Replicate F		2.287	0.739					0.000	0.000	0.000	0.000	2.546	0.687	1.000
Replicate Prob(F)		0.0879	0.5327					1.0000	1.0000	1.0000	1.0000	0.0644	0.5636	0.3992
Treatment F		1.105	318.359					0.000	0.000	0.000	0.000	259.012	8.186	9.000
Treatment Prob(F)		0.3695	0.0001					1.0000	1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Cotton Injury as Effected by Residual PRE Herbicide and Rate.

Trial ID: HCT-40510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code	PLANT C	PLANT C	PLANT C	AMAPA	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C						
Pest Name	6/3/2010	6/3/2010	6/3/2010	Palmer amaranth	6/14/2010	6/14/2010	6/14/2010	6/14/2010	10/4/2010						
Part Rated	PHYCHL	PHYNEC	PHYSTU	CONTROL	PHYCHL	PHYNEC	PHYSTU	WEIGHT	YIELD						
Rating Date	%	%	%	%	%	%	%	lb/plot	lb/ac						
Rating Type	4-5 lf	4-5 lf	4-5 lf	8-10 lf	8-10 lf	8-10 lf	8-10 lf	Harvest	Harvest						
Rating Unit															
Crop Stage Majority	28 DA-A	28 DA-A	28 DA-A	39 DA-A	39 DA-A	39 DA-A	39 DA-A	151 DA-A	151 DA-A						
Pest Stage Majority															
Trt-Eval Interval															
Trt No.	Treatment	Rate	Other	Other	Appl	Appl									
	Name	Rate	Unit	Rate	Unit	Description	17	18	19	20	21	22	23	24	25
1							0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.015	2707.14
2	Cotoran	0.5 lb ai/a	16 oz/a		A	PRE	0.0	0.0	0.0	89.5	0.0	0.0	0.0	12.660	3111.43
3	Cotoran	0.75 lb ai/a	24 oz/a		A	PRE	0.0	0.0	0.0	95.0	0.0	0.0	0.0	14.215	3493.60
4	Cotoran	1 lb ai/a	32 oz/a		A	PRE	0.0	0.0	0.0	99.5	0.0	0.0	0.0	13.813	3394.68
5	Cotoran	1.5 lb ai/a	48 oz/a		A	PRE	0.0	0.0	0.0	97.5	0.0	0.0	0.0	14.495	3562.41
6	Cotoran	2 lb ai/a	64 oz/a		A	PRE	0.0	0.0	0.0	100.0	0.0	0.0	0.0	12.750	3133.55
7	Caparol	0.5 lb ai/a	16 oz/a		A	PRE	0.0	0.0	0.0	71.3	0.0	0.0	0.0	11.645	2861.97
8	Caparol	0.75 lb ai/a	24 oz/a		A	PRE	0.0	0.0	0.0	85.0	0.0	0.0	0.0	12.753	3134.16
9	Caparol	1 lb ai/a	32 oz/a		A	PRE	0.0	0.0	0.0	85.0	0.0	0.0	0.0	13.023	3200.72
10	Caparol	1.5 lb ai/a	48 oz/a		A	PRE	0.0	0.0	0.0	91.3	0.0	0.0	0.0	13.725	3373.17
11	Caparol	2 lb ai/a	64 oz/a		A	PRE	0.0	0.0	0.0	97.5	0.0	0.0	0.0	10.320	2536.33
12	Direx	0.5 lb ai/a	16 oz/a		A	PRE	0.0	0.0	0.0	99.5	0.0	0.0	0.0	15.448	3796.51
13	Direx	0.75 lb ai/a	24 oz/a		A	PRE	0.0	0.0	0.0	100.0	0.0	0.0	0.0	14.393	3537.22
14	Direx	1 lb ai/a	32 oz/a		A	PRE	0.0	0.0	17.5	100.0	0.0	0.0	0.0	13.870	3408.81
15	Direx	1.5 lb ai/a	48 oz/a		A	PRE	0.0	0.0	40.0	100.0	0.0	0.0	13.8	11.825	2906.21
16	Direx	2 lb ai/a	64 oz/a		A	PRE	0.0	0.0	60.0	99.0	0.0	0.0	52.5	11.770	2892.69
17	Reflex	0.125 lb ai/a	8 oz/a		A	PRE	0.0	0.0	0.0	82.5	0.0	0.0	0.0	13.020	3199.90
18	Reflex	0.188 lb ai/a	12 oz/a		A	PRE	0.0	0.0	0.0	87.0	0.0	0.0	0.0	13.740	3376.86
19	Reflex	0.25 lb ai/a	16 oz/a		A	PRE	0.0	0.0	0.0	87.5	0.0	0.0	6.3	13.125	3225.71
20	Reflex	0.375 lb ai/a	24 oz/a		A	PRE	0.0	0.0	0.0	88.8	0.0	0.0	0.0	14.030	3448.13
21	Reflex	0.5 lb ai/a	32 oz/a		A	PRE	0.0	0.0	0.0	95.8	0.0	0.0	0.0	12.725	3127.40
LSD (P=.05)							0.00	0.00	1.54	12.32	0.00	0.00	6.53	2.6921	661.628
Standard Deviation							0.00	0.00	1.09	8.71	0.00	0.00	4.62	1.9036	467.841
CV							0.0	0.0	19.5	9.88	0.0	0.0	133.68	14.57	14.57
Bartlett's X2							0.0	0.0	0.0	42.829	0.0	0.0	3.346	25.87	25.87
P(Bartlett's X2)							.	.	.	0.001*	.	.	0.188	0.17	0.17
Replicate F							0.000	0.000	1.000	0.691	0.000	0.000	0.540	3.271	3.271
Replicate Prob(F)							1.0000	1.0000	0.3992	0.5612	1.0000	1.0000	0.6565	0.0274	0.0274
Treatment F							0.000	0.000	814.600	24.592	0.000	0.000	25.673	1.727	1.727
Treatment Prob(F)							1.0000	1.0000	0.0001	0.0001	1.0000	1.0000	0.0001	0.0549	0.0549

University of Arkansas-Division of Agriculture

Cotton Injury as Effected by Residual PRE Herbicide and Rate.

Trial ID: HCT-40510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US
ECHCG, Echinochloa crus-galli, = US
BRAPP, Brachiaria platyphylla, = US

Part Rated

PLANT = plant
C = Crop is Part Rated
P = Pest is Part Rated

Rating Type

STASUB = stand - subjective / emergence
PHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting
WEIGHT = weight
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
lb/ac = pounds per acre

ARM Action Codes

TY1 = 245.7684*24

University of Arkansas-Division of Agriculture

Efficacy and Phyto Potential of Pyrimax 3.2L Alone and in Tankmix When Applied PRE in Cotton

Trial ID: HCT-40610
Location: Rohwer, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Seed Bed: CRUSTE crusted
Planting Date: 5/5/2010
Rate, Unit: 3.5 S/ROWFT
Spacing Within Row, Unit: 3.42 IN
Soil Temperature, Unit: 68 F
Emergence Date: 5/13/2010

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory

Pest 3 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 29 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Rate	Rate Unit
1.	7/5/2010	GLYPHOSATE	3	lb ae/A	48	OZ/A

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G

Application Description

	A
Application Date:	5/6/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	PRE
Application Placement:	BROSOL
Applied By:	RD
Air Temperature, Unit:	65.8 F
% Relative Humidity:	68.9
Wind Velocity, Unit:	4.2 MPH
Wind Direction:	ESE
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	68.4 F
Soil Moisture:	dry
% Cloud Cover:	0
Next Rain Occurred On:	5/10/2010

Crop Stage At Each Application

	A
BCOT	

Application Equipment

	A
Appl. Equipment:	Multi-Boom
Operating Pressure, Unit:	55 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.8 MPH
Carrier:	H2O
Spray Volume, Unit:	12 GPA
Mix Size, Unit:	3 Liters
Propellant:	CO2

University of Arkansas-Division of Agriculture

Efficacy and Phyto Potential of Pyrimax 3.2L Alone and in Tankmix When Applied PRE in Cotton

Trial ID: HCT-40610
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	PLANT C	AMAPA	ECHCG	PLANT C	PLANT C	PLANT C	PLANT C	AMAPA							
Pest Name	5/14/2010	Palmer amaranth	Common barnyar>	5/20/2010	5/20/2010	5/20/2010	5/21/2010	Palmer amaranth							
Part Rated	5/20/2010	PLANT P	PLANT P	5/20/2010	5/20/2010	5/20/2010	5/27/2010	PLANT P							
Rating Date	STASUB	CONTROL	CONTROL	PHYCHL	PHYNEC	PHYSTU	STASUB	CONTROL							
Rating Type	5 ft	%	%	%	%	%	5 ft	%							
Rating Unit	1 lf	1 lf	1 lf	1 lf	1 lf	1 lf	3 lf	3 lf							
Crop Stage Majority		cotyl	cotyl					2-10"							
Pest Stage Majority		14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	15 DA-A	21 DA-A							
Trt-Eval Interval	8 DA-A														
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	1	2	3	4	5	6	7	8
1	UTC							11.5	0.0	0.0	0.0	0.0	0.0	13.3	0.0
2	PyriMax 3.2L	0.0325 lb ai/a	1.3 oz/a		A	PRE		13.3	100.0	100.0	0.0	0.0	0.0	14.5	91.3
3	PyriMax 3.2L	0.0525 lb ai/a	2.1 oz/a		A	PRE		13.8	100.0	100.0	0.0	0.0	0.0	15.0	91.3
4	Cotoran 4L	0.67 lb ai/a	21.5 oz/a		A	PRE		11.5	100.0	100.0	0.0	0.0	0.0	15.0	98.8
5	Cotton Pro	1.06 lb ai/a	34 oz/a		A	PRE		13.0	100.0	100.0	0.0	0.0	0.0	14.5	95.0
6	Diuron 4L	0.42 lb ai/a	13.5 oz/a		A	PRE		13.3	100.0	100.0	0.0	0.0	0.0	14.0	100.0
7	PyriMax 3.2L	0.0325 lb ai/a	1.3 oz/a		A	PRE		13.3	100.0	100.0	0.0	0.0	0.0	15.8	100.0
	Cotoran 4L	0.67 lb ai/a	21.5 oz/a		A	PRE									
8	PyriMax 3.2L	0.0525 lb ai/a	2.1 oz/a		A	PRE		15.5	100.0	100.0	0.0	0.0	0.0	16.3	100.0
	Cotoran 4L	0.67 lb ai/a	21.5 oz/a		A	PRE									
9	PyriMax 3.2L	0.0325 lb ai/a	1.3 oz/a		A	PRE		10.3	100.0	100.0	0.0	0.0	0.0	12.8	100.0
	Cotton Pro	1.06 lb ai/a	34 oz/a		A	PRE									
10	PyriMax 3.2L	0.0525 lb ai/a	2.1 oz/a		A	PRE		12.3	100.0	100.0	0.0	0.0	0.0	12.5	100.0
	Cotton Pro	1.06 lb ai/a	34 oz/a		A	PRE									
11	PyriMax 3.2L	0.0325 lb ai/a	1.3 oz/a		A	PRE		11.3	100.0	75.0	0.0	0.0	0.0	14.7	100.0
	Diuron 4L	0.42 lb ai/a	13.5 oz/a		A	PRE									
12	PyriMax 3.2L	0.0525 lb ai/a	2.1 oz/a		A	PRE		12.8	100.0	75.0	0.0	0.0	0.0	14.8	100.0
	Diuron 4L	0.42 lb ai/a	13.5 oz/a		A	PRE									
	LSD (P=.05)							5.32	0.00	0.00	0.00	0.00	0.00	3.61	3.33
	Standard Deviation							3.68	0.00	0.00	0.00	0.00	0.00	2.50	2.31
	CV							29.18	0.0	0.0	0.0	0.0	0.0	17.33	2.57
	Bartlett's X2							12.369	0.0	0.0	0.0	0.0	0.0	8.199	3.536
	P(Bartlett's X2)							0.337	.	.	.	.	.	0.695	0.316
	Replicate F							1.304	0.000	0.000	0.000	0.000	0.000	0.636	1.926
	Replicate Prob(F)							0.2897	1.0000	1.0000	1.0000	1.0000	1.0000	0.5974	0.1446
	Treatment F							0.564	0.000	0.000	0.000	0.000	0.000	0.816	608.715
	Treatment Prob(F)							0.8432	1.0000	1.0000	1.0000	1.0000	1.0000	0.6247	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Efficacy and Phyto Potential of Pyrimax 3.2L Alone and in Tankmix When Applied PRE in Cotton

Trial ID: HCT-40610
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		IPOSS		ECHCG		PLANT C		PLANT C		PLANT C		AMAPA		IPOSS	
Pest Name		Morning glory		Common barnyar>		PLANT C		PLANT C		PLANT C		Palmer amaranth		Morning glory	
Part Rated		PLANT P		PLANT P		PLANT C		PLANT C		PLANT C		PLANT P		PLANT P	
Rating Date		5/27/2010		5/27/2010		5/27/2010		5/27/2010		5/27/2010		6/3/2010		6/3/2010	
Rating Type		CONTROL		CONTROL		PHYCHL		PHYNEC		PHYSTU		CONTROL		CONTROL	
Rating Unit		%		%		%		%		%		%		%	
Crop Stage Majority		3 If		3 If		3 If		3 If		3 If		4-5 If		4-5 If	
Pest Stage Majority		2-10"		2-10"		2-10"		2-10"		2-10"		2-12"		2-12"	
Trt-Eval Interval		21 DA-A		21 DA-A		21 DA-A		21 DA-A		21 DA-A		28 DA-A		28 DA-A	
Trt No.	Treatment Name	Rate	Other Unit	Other Rate	Other Unit	Appl Code	Appl Description	9	10	11	12	13	14	15	
1	UTC							0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	PyriMax 3.2L	0.0325 lb ai/a		1.3 oz/a		A	PRE	100.0	93.8	0.0	0.0	0.0	82.5	100.0	
3	PyriMax 3.2L	0.0525 lb ai/a		2.1 oz/a		A	PRE	100.0	98.3	0.0	0.0	0.0	83.8	100.0	
4	Cotoran 4L	0.67 lb ai/a		21.5 oz/a		A	PRE	99.5	98.3	0.0	0.0	0.0	98.8	98.8	
5	Cotton Pro	1.06 lb ai/a		34 oz/a		A	PRE	100.0	80.0	0.0	0.0	0.0	86.3	100.0	
6	Diuron 4L	0.42 lb ai/a		13.5 oz/a		A	PRE	100.0	98.8	0.0	0.0	0.0	100.0	100.0	
7	PyriMax 3.2L	0.0325 lb ai/a		1.3 oz/a		A	PRE	100.0	97.0	0.0	0.0	0.0	100.0	100.0	
	Cotoran 4L	0.67 lb ai/a		21.5 oz/a		A	PRE								
8	PyriMax 3.2L	0.0525 lb ai/a		2.1 oz/a		A	PRE	100.0	93.8	0.0	0.0	0.0	100.0	100.0	
	Cotoran 4L	0.67 lb ai/a		21.5 oz/a		A	PRE								
9	PyriMax 3.2L	0.0325 lb ai/a		1.3 oz/a		A	PRE	100.0	90.0	0.0	0.0	0.0	100.0	100.0	
	Cotton Pro	1.06 lb ai/a		34 oz/a		A	PRE								
10	PyriMax 3.2L	0.0525 lb ai/a		2.1 oz/a		A	PRE	100.0	87.5	0.0	0.0	0.0	97.5	97.5	
	Cotton Pro	1.06 lb ai/a		34 oz/a		A	PRE								
11	PyriMax 3.2L	0.0325 lb ai/a		1.3 oz/a		A	PRE	100.0	87.5	0.0	0.0	0.0	100.0	100.0	
	Diuron 4L	0.42 lb ai/a		13.5 oz/a		A	PRE								
12	PyriMax 3.2L	0.0525 lb ai/a		2.1 oz/a		A	PRE	100.0	96.3	0.0	0.0	0.0	97.5	97.5	
	Diuron 4L	0.42 lb ai/a		13.5 oz/a		A	PRE								
LSD (P=.05)								0.42	9.95	0.00	0.00	0.00	4.92	3.04	
Standard Deviation								0.29	6.89	0.00	0.00	0.00	3.41	2.11	
CV								0.32	8.1	0.0	0.0	0.0	3.91	2.31	
Bartlett's X2								0.0	19.946	0.0	0.0	0.0	7.412	1.532	
P(Bartlett's X2)								.	0.03*	.	.	.	0.192	0.465	
Replicate F								1.000	2.529	0.000	0.000	0.000	1.358	1.683	
Replicate Prob(F)								0.4051	0.0742	1.0000	1.0000	1.0000	0.2726	0.1896	
Treatment F								39964.641	63.215	0.000	0.000	0.000	275.214	743.947	
Treatment Prob(F)								0.0001	0.0001	1.0000	1.0000	1.0000	0.0001	0.0001	

University of Arkansas-Division of Agriculture

Efficacy and Phyto Potential of Pyrimax 3.2L Alone and in Tankmix When Applied PRE in Cotton

Trial ID: HCT-40610
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		PLANT C		PLANT C		PLANT C		AMAPA		PLANT C		PLANT C		PLANT C	
Pest Name		Common barnyard		6/3/2010		6/3/2010		6/3/2010		Palmer amaranth		6/14/2010		6/14/2010		6/14/2010	
Part Rated		PLANT P		PHYCHL		PHYNEC		PHYSTU		PLANT P		PHYCHL		PHYNEC		PHYSTU	
Rating Date		6/3/2010		6/3/2010		6/3/2010		6/3/2010		6/14/2010		6/14/2010		6/14/2010		6/14/2010	
Rating Type		CONTROL		PHYCHL		PHYNEC		PHYSTU		CONTROL		PHYCHL		PHYNEC		PHYSTU	
Rating Unit		%		%		%		%		%		%		%		%	
Crop Stage Majority		4-5 lf		4-5 lf		4-5 lf		4-5 lf		8-10 lf		8-10 lf		8-10 lf		8-10 lf	
Pest Stage Majority		2-12"		2-12"		2-12"		2-12"		2-24"		2-24"		2-24"		2-24"	
Tri-Eval Interval		28 DA-A		28 DA-A		28 DA-A		28 DA-A		39 DA-A		39 DA-A		39 DA-A		39 DA-A	
Trt No.	Treatment Name	Rate	Other Unit	Other Rate	Other Unit	Appl Code	Appl Description	16	17	18	19	20	21	22	23		
1	UTC							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	PyriMax 3.2L	0.0325 lb ai/a		1.3 oz/a		A	PRE	87.5	0.0	0.0	0.0	43.8	0.0	0.0	0.0		
3	PyriMax 3.2L	0.0525 lb ai/a		2.1 oz/a		A	PRE	91.3	0.0	0.0	0.0	65.0	0.0	0.0	0.0		
4	Cotoran 4L	0.67 lb ai/a		21.5 oz/a		A	PRE	96.3	0.0	0.0	0.0	92.8	0.0	0.0	0.0		
5	Cotton Pro	1.06 lb ai/a		34 oz/a		A	PRE	67.5	0.0	0.0	0.0	55.0	0.0	0.0	0.0		
6	Diuron 4L	0.42 lb ai/a		13.5 oz/a		A	PRE	92.5	0.0	0.0	0.0	95.0	0.0	0.0	0.0		
7	PyriMax 3.2L Cotoran 4L	0.0325 lb ai/a 0.67 lb ai/a		1.3 oz/a 21.5 oz/a		A A	PRE PRE	92.0	0.0	0.0	0.0	73.3	0.0	0.0	6.3		
8	PyriMax 3.2L Cotoran 4L	0.0525 lb ai/a 0.67 lb ai/a		2.1 oz/a 21.5 oz/a		A A	PRE PRE	83.8	0.0	0.0	0.0	90.8	0.0	0.0	0.0		
9	PyriMax 3.2L Cotton Pro	0.0325 lb ai/a 1.06 lb ai/a		1.3 oz/a 34 oz/a		A A	PRE PRE	72.5	0.0	0.0	0.0	78.3	0.0	0.0	0.0		
10	PyriMax 3.2L Cotton Pro	0.0525 lb ai/a 1.06 lb ai/a		2.1 oz/a 34 oz/a		A A	PRE PRE	72.5	0.0	0.0	0.0	66.3	0.0	0.0	0.0		
11	PyriMax 3.2L Diuron 4L	0.0325 lb ai/a 0.42 lb ai/a		1.3 oz/a 13.5 oz/a		A A	PRE PRE	75.0	0.0	0.0	0.0	100.0	0.0	0.0	6.3		
12	PyriMax 3.2L Diuron 4L	0.0525 lb ai/a 0.42 lb ai/a		2.1 oz/a 13.5 oz/a		A A	PRE PRE	90.0	0.0	0.0	0.0	98.8	0.0	0.0	0.0		
LSD (P=.05)								13.03	0.00	0.00	0.00	27.86	0.00	0.00	7.03		
Standard Deviation								9.02	0.00	0.00	0.00	19.30	0.00	0.00	4.87		
CV								11.76	0.0	0.0	0.0	26.96	0.0	0.0	467.1		
Bartlett's X2								23.384	0.0	0.0	0.0	32.229	0.0	0.0	0.0		
P(Bartlett's X2)								0.005*	.	.	.	0.001*	.	.	.		
Replicate F								2.629	0.000	0.000	0.000	0.834	0.000	0.000	2.200		
Replicate Prob(F)								0.0665	1.0000	1.0000	1.0000	0.4846	1.0000	1.0000	0.1066		
Treatment F								33.166	0.000	0.000	0.000	8.987	0.000	0.000	1.000		
Treatment Prob(F)								0.0001	1.0000	1.0000	1.0000	0.0001	1.0000	1.0000	0.4671		

University of Arkansas-Division of Agriculture

Efficacy and Phyto Potential of Pymimax 3.2L Alone and in Tankmix When Applied PRE in Cotton

Trial ID: HCT-40610
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
ECHCG, Echinochloa crus-galli, = US
IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant
C = Crop is Part Rated
P = Pest is Part Rated

Rating Type

STASUB = stand - subjective / emergence
PHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting

Rating Unit

% = percent

University of Arkansas-Division of Agriculture

Efficacy of MANA Cotton Herbicides Alone and in Tankmix Applied PRE

Trial ID: HCT-40710
Location: Rohwer, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT **Planting Date:** 5/5/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN **Spacing Within Row, Unit:** 3.42 IN
Seed Bed: CRUSTE crusted **Soil Temperature, Unit:** 68 F
Emergence Date: 5/13/2010

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory

Pest 3 Type: W **Code:** BRAPP *Brachiaria platyphylla*
Common Name: Broadleaf signalgrass

Pest 4 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Rate	Rate Unit
1.	7/5/2010	GLYPHOSATE	3	lb ae/A	48	OZ/A

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G

Application Description

	A
Application Date:	5/6/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	RD
Air Temperature, Unit:	65.8 F
% Relative Humidity:	68.9
Wind Velocity, Unit:	4.2 MPH
Wind Direction:	ESE
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	68.4 F
Soil Moisture:	dry
% Cloud Cover:	0
Next Rain Occurred On:	5/10/2010

Crop Stage At Each Application

	A
BCOT	
Stage Scale Used:	BBCH
Stage Majority, Percent:	PRE

Pest Stage At Each Application

	A
Stage Majority, Percent:	PRE
Stage Minimum, Percent:	PRE
Stage Minimum, Percent:	PRE
Stage Minimum, Percent:	PRE

University of Arkansas-Division of Agriculture

Efficacy of MANA Cotton Herbicides Alone and in Tankmix Applied PRE

Trial ID: HCT-40710
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment	
	A
Appl. Equipment:	Multi-Boom
Operating Pressure, Unit:	55 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.8 MPH
Carrier:	H2O
Spray Volume, Unit:	12 GPA
Mix Size, Unit:	3 Liters
Propellant:	CO2

University of Arkansas-Division of Agriculture

Efficacy of MANA Cotton Herbicides Alone and in Tankmix Applied PRE

Trial ID: HCT-40710
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	AMAPA Palmer amaranth	ECHCG Common barnyar>	AMAPA Palmer amaranth	IPOSS Morning glory	ECHCG Common barnyar>	AMAPA Palmer amaranth						
Pest Name	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P						
Part Rated	5/20/2010	5/20/2010	5/27/2010	5/27/2010	5/27/2010	6/3/2010						
Rating Date	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL						
Rating Type	%	%	%	%	%	%						
Rating Unit	Cot-1 lf	Cot-1 lf	3 lf	3 lf	3 lf	4-5 lf						
Crop Stage Majority	coty1	coty1	2-10*	2-10*	2-10*	2-12*						
Pest Stage Majority	14 DA-A	14 DA-A	21 DA-A	21 DA-A	21 DA-A	28 DA-A						
Tri-Eval Interval												
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	1	2	3	4	5	6
1	UTC	0.0					0.0	0.0	0.0	0.0	0.0	0.0
2	Cotton Pro	1 lb ai/a	32 oz/a		A	PRE	100.0	75.0	96.3	87.5	80.0	92.5
3	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	75.0	97.5	86.3	73.8	95.0
4	Diuron 4L	1 lb ai/a	32 oz/a		A	PRE	100.0	100.0	100.0	97.5	95.0	100.0
5	Cotoran	0.5 lb ai/a	16 oz/a		A	PRE	100.0	100.0	99.5	95.0	97.0	98.8
	Diuron 4L	0.5 lb ai/a	16 oz/a		A	PRE						
6	Cotoran	0.67 lb ai/a	21.4 oz/a		A	PRE	100.0	100.0	99.5	95.0	97.5	98.8
	Diuron 4L	0.67 lb ai/a	21.4 oz/a		A	PRE						
7	Cotoran	0.5 lb ai/a	16 oz/a		A	PRE	100.0	75.0	97.5	75.0	73.8	93.8
	Cotton Pro	0.5 lb ai/a	16 oz/a		A	PRE						
8	Cotoran	0.67 lb ai/a	21.4 oz/a		A	PRE	100.0	72.5	100.0	93.8	77.5	100.0
	Cotton Pro	0.67 lb ai/a	21.4 oz/a		A	PRE						
9	Diuron 4L	0.5 lb ai/a	16 oz/a		A	PRE	100.0	80.0	98.8	90.0	81.3	95.8
	Cotton Pro	0.5 lb ai/a	16 oz/a		A	PRE						
10	Diuron 4L	0.67 lb ai/a	21.4 oz/a		A	PRE	100.0	100.0	100.0	97.5	93.8	100.0
	Cotton Pro	0.67 lb ai/a	21.4 oz/a		A	PRE						
	LSD (P=.05)	0.00					0.00	1.32	2.24	12.01	10.32	3.69
	Standard Deviation	0.00					0.00	0.91	1.54	8.28	7.11	2.54
	CV	0.0					0.0	1.17	1.74	10.13	9.24	2.91
	Bartlett's X2	0.0					0.0	0.0	5.578	13.527	21.229	2.877
	P(Bartlett's X2)	.					.	.	0.349	0.095	0.007*	0.719
	Replicate F	0.000					0.000	1.000	4.087	0.304	2.486	3.261
	Replicate Prob(F)	1.0000					1.0000	0.4079	0.0163	0.8222	0.0820	0.0368
	Treatment F	0.000					0.000	4309.667	1641.653	50.862	65.041	588.424
	Treatment Prob(F)	1.0000					1.0000	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Efficacy of MANA Cotton Herbicides Alone and in Tankmix Applied PRE

Trial ID: HCT-40710
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	IPOSS		ECHCG		BRAPP		AMAPA		IPOSS		ECHCG	
Pest Name	Morning glory		Common barnyar>		Broadleaf sign>		Palmer amaranth		Morning glory		Common barnyar>	
Part Rated	PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P	
Rating Date	6/3/2010		6/3/2010		6/3/2010		6/14/2010		6/14/2010		6/14/2010	
Rating Type	CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL	
Rating Unit	%		%		%		%		%		%	
Crop Stage Majority	4-5 If		4-5 If		4-5 If		8-10 If		8-10 If		8-10 If	
Pest Stage Majority	2-12"		2-12"		2-12"		2-24"		2-24"		2-24"	
Trt-Eval Interval	28 DA-A		28 DA-A		28 DA-A		39 DA-A		39 DA-A		39 DA-A	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	7	8	9	10	11	12
1	UTC						0.0	0.0	0.0	0.0	0.0	0.0
2	Cotton Pro	1 lb ai/a	32 oz/a		A	PRE	81.3	68.8	90.0	84.5	78.8	25.0
3	Cotoran	1 lb ai/a	32 oz/a		A	PRE	78.8	62.5	92.5	96.3	75.0	60.0
4	Diuron 4L	1 lb ai/a	32 oz/a		A	PRE	95.0	92.5	98.8	98.8	85.0	92.5
5	Cotoran	0.5 lb ai/a	16 oz/a		A	PRE	93.8	96.3	97.5	99.0	93.3	73.8
	Diuron 4L	0.5 lb ai/a	16 oz/a		A	PRE						
6	Cotoran	0.67 lb ai/a	21.4 oz/a		A	PRE	92.5	92.5	100.0	100.0	100.0	87.5
	Diuron 4L	0.67 lb ai/a	21.4 oz/a		A	PRE						
7	Cotoran	0.5 lb ai/a	16 oz/a		A	PRE	62.5	60.0	90.0	94.5	37.5	15.0
	Cotton Pro	0.5 lb ai/a	16 oz/a		A	PRE						
8	Cotoran	0.67 lb ai/a	21.4 oz/a		A	PRE	83.8	67.5	95.0	97.0	87.5	40.0
	Cotton Pro	0.67 lb ai/a	21.4 oz/a		A	PRE						
9	Diuron 4L	0.5 lb ai/a	16 oz/a		A	PRE	82.5	75.0	92.5	91.3	57.5	27.5
	Cotton Pro	0.5 lb ai/a	16 oz/a		A	PRE						
10	Diuron 4L	0.67 lb ai/a	21.4 oz/a		A	PRE	96.3	91.3	95.8	97.8	53.8	75.0
	Cotton Pro	0.67 lb ai/a	21.4 oz/a		A	PRE						
LSD (P=.05)							17.53	12.59	3.63	7.61	37.31	29.66
Standard Deviation							12.08	8.68	2.50	5.25	25.71	20.44
CV							15.77	12.29	2.93	6.11	38.48	41.19
Bartlett's X2							11.449	17.573	1.453	26.625	8.66	15.968
P(Bartlett's X2)							0.178	0.025*	0.918	0.001*	0.278	0.043*
Replicate F							0.746	5.184	1.697	2.102	1.013	1.286
Replicate Prob(F)							0.5339	0.0059	0.1913	0.1235	0.4021	0.2993
Treatment F							22.680	42.696	581.362	135.426	5.613	10.058
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0002	0.0001

University of Arkansas-Division of Agriculture

Efficacy of MANA Cotton Herbicides Alone and in Tankmix Applied PRE

Trial ID: HCT-40710
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
ECHCG, Echinochloa crus-galli, = US
IPOSS, Ipomoea sp., = US
BRAPP, Brachiaria platyphylla, = US

Part Rated

PLANT = plant
P = Pest is Part Rated

Rating Unit
% = percent

University of Arkansas-Division of Agriculture

Evaluate Weed Control in Early Layby Application Timings

Trial ID: HCT-40810
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		AMAPA		IPOSS		
Pest Name		Palmer amaranth		Morning glory		Common barnyard		Palmer amaranth		Morning glory		
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		
Rating Date		6/24/2010		6/24/2010		6/24/2010		7/12/2010		7/12/2010		
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		
Rating Unit		%		%		%		%		%		
Crop Stage Majority		10-12 lf		10-12 lf		10-12 lf		8 NAWF		8 NAWF		
Pest Stage Majority		6-36"		6-36"		6-36"		6-60"		6-60"		
Tri-Eval Interval		8 DA-E		8 DA-E		8 DA-E		17 DA-F		17 DA-F		
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	1	2	3	4	5
1	UTC							0.0	0.0	0.0	0.0	0.0
2	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		E	8 lf cotton						
	Valor	0.064 lb ai/a	2 oz/a		E	8 lf cotton						
3	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	97.5	98.8
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		E	8 lf cotton						
	Valor	0.096 lb ai/a	3 oz/a		E	8 lf cotton						
4	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		F	10 lf cotton						
	Valor	0.064 lb ai/a	2 oz/a		F	10 lf cotton						
5	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	99.5	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		F	10 lf cotton						
	Valor	0.096 lb ai/a	3 oz/a		F	10 lf cotton						
6	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	98.8	92.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		G	12 lf cotton						
	Valor	0.064 lb ai/a	2 oz/a		G	12 lf cotton						
7	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	98.3	87.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		G	12 lf cotton						
	Valor	0.096 lb ai/a	3 oz/a		G	12 lf cotton						
8	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	99.5	97.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		E	8 lf cotton						
	Reflex	0.25 lb ai/a	16 oz/a		E	8 lf cotton						
9	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	100.0	99.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		E	8 lf cotton						
	Reflex	0.375 lb ai/a	24 oz/a		E	8 lf cotton						
10	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	98.8	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		F	10 lf cotton						
	Reflex	0.25 lb ai/a	16 oz/a		F	10 lf cotton						
11	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	99.5	94.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		F	10 lf cotton						
	Reflex	0.375 lb ai/a	24 oz/a		F	10 lf cotton						
12	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	100.0	95.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		G	12 lf cotton						
	Reflex	0.25 lb ai/a	16 oz/a		G	12 lf cotton						

University of Arkansas-Division of Agriculture

Evaluate Weed Control in Early Layby Application Timings

Trial ID: HCT-40810
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		AMAPA		IPOSS			
Pest Name		Palmer amaranth		Morning glory		Common barnyard		Palmer amaranth		Morning glory			
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P			
Rating Date		6/24/2010		6/24/2010		6/24/2010		7/12/2010		7/12/2010			
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL			
Rating Unit		%		%		%		%		%			
Crop Stage Majority		10-12 lf		10-12 lf		10-12 lf		8 NAWF		8 NAWF			
Pest Stage Majority		6-36"		6-36"		6-36"		6-60"		6-60"			
Trt-Eval Interval		8 DA-E		8 DA-E		8 DA-E		17 DA-F		17 DA-F			
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	Appl Description	1	2	3	4	5	
13	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	100.0	100.0	98.8	
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton						
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton						
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton						
	MSMA	2	lb ai/a	43	oz/a	G	12 lf cotton						
	Reflex	0.375	lb ai/a	24	oz/a	G	12 lf cotton						
14	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	100.0	100.0	100.0	
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton						
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton						
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton						
	Valor	0.064	lb ai/a	2	oz/a	E	8 lf cotton						
15	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	100.0	99.5	100.0	
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton						
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton						
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton						
	Valor	0.096	lb ai/a	3	oz/a	E	8 lf cotton						
16	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	100.0	93.8	98.8	
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C	4 lf cotton						
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	4 lf cotton						
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton						
	Valor	0.064	lb ai/a	2	oz/a	E	8 lf cotton						
17	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	100.0	100.0	100.0	
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C	4 lf cotton						
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	4 lf cotton						
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton						
	Valor	0.096	lb ai/a	3	oz/a	E	8 lf cotton						
LSD (P=.05)				0.00		0.00		0.00		3.42		7.31	
Standard Deviation				0.00		0.00		0.00		2.39		5.11	
CV				0.0		0.0		0.0		2.57		5.56	
Bartlett's X2				0.0		0.0		0.0		26.462		25.933	
P(Bartlett's X2)				.		.		.		0.001*		0.001*	
Replicate F				0.000		0.000		0.000		2.063		2.062	
Replicate Prob(F)				1.0000		1.0000		1.0000		0.1175		0.1177	
Treatment F				0.000		0.000		0.000		405.315		87.659	
Treatment Prob(F)				1.0000		1.0000		1.0000		0.0001		0.0001	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluate Weed Control in Early Layby Application Timings

Trial ID: HCT-40810
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG		AMAPA		
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>		Palmer amaranth		
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		
Rating Date		7/12/2010		7/23/2010		7/23/2010		7/23/2010		9/14/2010		
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		
Rating Unit		%		%		%		%		%		
Crop Stage Majority		8 NAWF		6 NAWF		6 NAWF		6 NAWF		6 NAWF		
Pest Stage Majority		6-60"		6-72"		6-72"		6-72"		24-84"		
Tri-Eval Interval		17 DA-F		11 DA-G		11 DA-G		11 DA-G		64 DA-G		
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	6	7	8	9	10
1	UTC							0.0	0.0	0.0	0.0	0.0
2	Cotoran	1 lb ai/a	32 oz/a		A	PRE		90.8	100.0	100.0	93.8	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		E	8 lf cotton						
	Valor	0.064 lb ai/a	2 oz/a		E	8 lf cotton						
3	Cotoran	1 lb ai/a	32 oz/a		A	PRE		95.0	96.3	98.8	90.8	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		E	8 lf cotton						
	Valor	0.096 lb ai/a	3 oz/a		E	8 lf cotton						
4	Cotoran	1 lb ai/a	32 oz/a		A	PRE		86.3	100.0	98.8	92.5	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		F	10 lf cotton						
	Valor	0.064 lb ai/a	2 oz/a		F	10 lf cotton						
5	Cotoran	1 lb ai/a	32 oz/a		A	PRE		95.0	100.0	99.5	98.8	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		F	10 lf cotton						
	Valor	0.096 lb ai/a	3 oz/a		F	10 lf cotton						
6	Cotoran	1 lb ai/a	32 oz/a		A	PRE		91.3	98.8	100.0	95.0	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		G	12 lf cotton						
	Valor	0.064 lb ai/a	2 oz/a		G	12 lf cotton						
7	Cotoran	1 lb ai/a	32 oz/a		A	PRE		92.5	97.5	100.0	98.8	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		G	12 lf cotton						
	Valor	0.096 lb ai/a	3 oz/a		G	12 lf cotton						
8	Cotoran	1 lb ai/a	32 oz/a		A	PRE		93.8	99.5	98.8	96.3	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		E	8 lf cotton						
	Reflex	0.25 lb ai/a	16 oz/a		E	8 lf cotton						
9	Cotoran	1 lb ai/a	32 oz/a		A	PRE		94.5	100.0	100.0	97.5	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		E	8 lf cotton						
	Reflex	0.375 lb ai/a	24 oz/a		E	8 lf cotton						
10	Cotoran	1 lb ai/a	32 oz/a		A	PRE		93.3	100.0	100.0	95.0	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		F	10 lf cotton						
	Reflex	0.25 lb ai/a	16 oz/a		F	10 lf cotton						
11	Cotoran	1 lb ai/a	32 oz/a		A	PRE		95.0	98.8	97.5	96.3	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		F	10 lf cotton						
	Reflex	0.375 lb ai/a	24 oz/a		F	10 lf cotton						
12	Cotoran	1 lb ai/a	32 oz/a		A	PRE		96.3	100.0	98.8	100.0	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		G	12 lf cotton						
	Reflex	0.25 lb ai/a	16 oz/a		G	12 lf cotton						

University of Arkansas-Division of Agriculture

Evaluate Weed Control in Early Layby Application Timings

Trial ID: HCT-40810
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG		AMAPA		
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>		Palmer amaranth		
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		
Rating Date		7/12/2010		7/23/2010		7/23/2010		7/23/2010		9/14/2010		
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		
Rating Unit		%		%		%		%		%		
Crop Stage Majority		8 NAWF		6 NAWF		6 NAWF		6 NAWF		6 NAWF		
Pest Stage Majority		6-60*		6-72*		6-72*		6-72*		24-84*		
Trt-Eval Interval		17 DA-F		11 DA-G		11 DA-G		11 DA-G		64 DA-G		
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate Unit	Appl Code	Appl Description	6	7	8	9	10
13	Cotoran	1	lb ai/a	32	oz/a	A	PRE	95.8	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton					
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton					
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton					
	MSMA	2	lb ai/a	43	oz/a	G	12 lf cotton					
	Reflex	0.375	lb ai/a	24	oz/a	G	12 lf cotton					
14	Cotoran	1	lb ai/a	32	oz/a	A	PRE	96.3	98.8	98.8	96.3	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton					
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton					
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton					
	Valor	0.064	lb ai/a	2	oz/a	E	8 lf cotton					
15	Cotoran	1	lb ai/a	32	oz/a	A	PRE	98.8	97.5	98.8	98.8	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton					
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton					
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton					
	Valor	0.096	lb ai/a	3	oz/a	E	8 lf cotton					
16	Cotoran	1	lb ai/a	32	oz/a	A	PRE	96.3	95.0	98.8	95.0	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C	4 lf cotton					
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	4 lf cotton					
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton					
	Valor	0.064	lb ai/a	2	oz/a	E	8 lf cotton					
17	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	96.3	100.0	98.8	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C	4 lf cotton					
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	4 lf cotton					
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton					
	Valor	0.096	lb ai/a	3	oz/a	E	8 lf cotton					
LSD (P=.05)		7.78		4.38		2.82		6.23		0.00		
Standard Deviation		5.45		3.07		1.97		4.36		0.00		
CV		6.13		3.3		2.11		4.8		0.0		
Bartlett's X2		12.286		13.34		6.754		19.789		0.0		
P(Bartlett's X2)		0.583		0.101		0.563		0.101		.		
Replicate F		0.630		1.621		1.895		2.172		0.000		
Replicate Prob(F)		0.5991		0.1969		0.1430		0.1035		1.0000		
Treatment F		72.052		244.721		595.410		116.543		0.000		
Treatment Prob(F)		0.0001		0.0001		0.0001		0.0001		1.0000		

University of Arkansas-Division of Agriculture

Evaluate Weed Control in Early Layby Application Timings

Trial ID: HCT-40810
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code							IPOSS	ECHCG	PLANT C	PLANT C	
Pest Name							Morning glory	Common barnyar>	10/4/2010	10/4/2010	
Part Rated							PLANT P	PLANT P	WEIGHT	YIELD	
Rating Date							9/14/2010	9/14/2010	lb/plot	LB	
Rating Type							CONTROL	CONTROL	Harvest	Harvest	
Rating Unit							%	%			
Crop Stage Majority							6 NAWF	6 NAWF			
Pest Stage Majority							24-84"	24-84"			
Tri-Eval Interval							64 DA-G	64 DA-G	84 DA-G	84 DA-G	
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	Appl Description	11	12	13	14
1	UTC							0.0	0.0	14.3350015	3523.09
2	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	16.0725018	3950.11
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton				
	Valor	0.064	lb ai/a	2	oz/a	E	8 lf cotton				
3	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	14.9850021	3682.84
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton				
	Valor	0.096	lb ai/a	3	oz/a	E	8 lf cotton				
4	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	16.1150014	3960.56
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	F	10 lf cotton				
	Valor	0.064	lb ai/a	2	oz/a	F	10 lf cotton				
5	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	15.6225020	3839.52
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	F	10 lf cotton				
	Valor	0.096	lb ai/a	3	oz/a	F	10 lf cotton				
6	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	19.0100021	4672.06
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	G	12 lf cotton				
	Valor	0.064	lb ai/a	2	oz/a	G	12 lf cotton				
7	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	15.0350014	3695.13
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	G	12 lf cotton				
	Valor	0.096	lb ai/a	3	oz/a	G	12 lf cotton				
8	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	17.1250017	4208.78
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C	6 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton				
	Reflex	0.25	lb ai/a	16	oz/a	E	8 lf cotton				
9	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	15.5950009	3832.76
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton				
	Reflex	0.375	lb ai/a	24	oz/a	E	8 lf cotton				
10	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	16.3125016	4009.10
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	F	10 lf cotton				
	Reflex	0.25	lb ai/a	16	oz/a	F	10 lf cotton				
11	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	16.3300016	4013.40
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	F	10 lf cotton				
	Reflex	0.375	lb ai/a	24	oz/a	F	10 lf cotton				
12	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	16.2525022	3994.35
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	G	12 lf cotton				
	Reflex	0.25	lb ai/a	16	oz/a	G	12 lf cotton				

University of Arkansas-Division of Agriculture

Evaluate Weed Control in Early Layby Application Timings

Trial ID: HCT-40810
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		IPOSS		ECHCG		PLANT C		PLANT C			
Pest Name		Morning glory		Common barnyar>		10/4/2010		10/4/2010			
Part Rated		PLANT P		PLANT P		WEIGHT		YIELD			
Rating Date		9/14/2010		9/14/2010		lb/plot		LB			
Rating Type		CONTROL		CONTROL		Harvest		Harvest			
Rating Unit		%		%							
Crop Stage Majority		6 NAWF		6 NAWF							
Pest Stage Majority		24-84"		24-84"							
Trt-Eval Interval		64 DA-G		64 DA-G		84 DA-G		84 DA-G			
Trt No.	Treatment	Rate	Unit	Other Rate	Other Rate Unit	Appl Code	Appl Description	11	12	13	14
13	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	15.9200017	3912.63
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	D	6 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	G	12 lf cotton				
	Reflex	0.375	lb ai/a	24	oz/a	G	12 lf cotton				
14	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	15.6400019	3843.82
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton				
	Valor	0.064	lb ai/a	2	oz/a	E	8 lf cotton				
15	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	16.3550012	4019.54
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	B	2 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton				
	Valor	0.096	lb ai/a	3	oz/a	E	8 lf cotton				
16	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	15.2100016	3738.14
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C	4 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	4 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton				
	Valor	0.064	lb ai/a	2	oz/a	E	8 lf cotton				
17	Cotoran	1	lb ai/a	32	oz/a	A	PRE	100.0	100.0	15.8450009	3894.20
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C	4 lf cotton				
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	4 lf cotton				
	MSMA	2	lb ai/a	43	oz/a	E	8 lf cotton				
	Valor	0.096	lb ai/a	3	oz/a	E	8 lf cotton				
LSD (P=.05)								0.00	0.00	3.21080002	789.120
Standard Deviation								0.00	0.00	2.24678730	552.194
CV								0.0	0.0	14.05	14.05
Bartlett's X2								0.0	0.0	53.125	53.125
P(Bartlett's X2)								.	.	0.001*	0.001*
Replicate F								0.000	0.000	0.212	0.211
Replicate Prob(F)								1.0000	1.0000	0.8878	0.8880
Treatment F								0.000	0.000	0.820	0.820
Treatment Prob(F)								1.0000	1.0000	0.6571	0.6571

University of Arkansas-Division of Agriculture

Evaluate Weed Control in Early Layby Application Timings

Trial ID: HCT-40810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US
ECHCG, Echinochloa crus-galli, = US

Part Rated

PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

WEIGHT = weight
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
LB = pound

ARM Action Codes

TY1 = 245.7684*[C13]

University of Arkansas-Division of Agriculture

MON 63410 Encasulated Acetochlor Evaluation in Cotton

Trial ID: HCT-40910
Location: Rohwer, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Seed Bed: CRUSTE crusted
Planting Date: 5/5/2010
Rate, Unit: 3.5 S/ROWFT
Spacing Within Row, Unit: 3.42 IN
Soil Temperature, Unit: 68 F
Emergence Date: 5/13/2010
Harvested Width, Unit: 6.33 FT
Harvested Length, Unit: 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
Pest 2 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory
Pest 3 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass
Pest 4 Type: W **Code:** BRAPP *Brachiaria platyphylla*
Common Name: Broadleaf signalgrass

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Study Design: RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	5/6/2010	5/25/2010	6/16/2010
Time of Day:	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	V1-V2	V6-V8
Application Placement:	BROSOI	BANFOL	BANFOL
Applied By:	RD	RD	RD
Air Temperature, Unit:	65.8 F	80.8 F	85.1 F
% Relative Humidity:	68.9	66.57	69
Wind Velocity, Unit:	4.2 MPH	1.95 MPH	4.95 MPH
Wind Direction:	ESE	SSW	ESE
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	68.4 F	78.9 F	84.6
Soil Moisture:	dry	NORMAL	NORMAL
% Cloud Cover:	0	50	40
Next Rain Occurred On:	5/10/2010	5/26/2010	6/17/2010

Crop Stage At Each Application

	A	B	C
BCOT	BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH	BBCH
Stage Majority, Percent:	PRE	1-2 LF	6-8 LF

Pest Stage At Each Application

	A	B	C
Stage Majority, Percent:	PRE	1-4 "	1-6"
Stage Majority, Percent:	PRE	1-4 "	1-6"
Stage Majority, Percent:	PRE	1-4 "	1-6"
Stage Majority, Percent:	PRE	1-4 "	1-6"

University of Arkansas-Division of Agriculture

MON 63410 Encasulated Acetochlor Evaluation in Cotton

Trial ID: HCT-40910
 Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment			
	A	B	C
Appl. Equipment:	Multi-Boom	Multi-Boom	HoodSpray
Operating Pressure, Unit:	55 PSI	55 PSI	35 PSI
Nozzle Type:	Air-Mix	Air-Mix	TeeJet
Nozzle Size:	110015	110015	
Nozzle Spacing, Unit:	19 IN	19 IN	38 IN
Nozzles/Row:	2	2	3
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	4 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	15 GPA
Mix Size, Unit:	3 Liters	3 Liters	2 Gallons
Propellant:	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

MON 63410 Encasulated Acetochlor Evaluation in Cotton

Trial ID: HCT-40910
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		AMAPA		ECHCG		BRAPP		PLANT C	PLANT C	PLANT C			
Pest Name		Palmer amaranth		Common barnyar->		Broadleaf sign->		6/3/2010	6/3/2010	6/3/2010			
Part Rated		PLANT P		PLANT P		PLANT P		PHYCHL	PHYNEC	PHYSTU			
Rating Date		6/3/2010		6/3/2010		6/3/2010		%	%	%			
Rating Type		CONTROL		CONTROL		CONTROL		4-5 lf	4-5 lf	4-5 lf			
Rating Unit		%		%		%		cotyI	cotyI	cotyI			
Crop Stage Majority		4-5 lf		4-5 lf		4-5 lf		9 DA-B	9 DA-B	9 DA-B			
Pest Stage Majority		9 DA-B		9 DA-B		9 DA-B		9 DA-B	9 DA-B	9 DA-B			
Tri-Eval Interval		9 DA-B		9 DA-B		9 DA-B		9 DA-B	9 DA-B	9 DA-B			
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	1	2	3	4	5	6
1	Untreated Check							0.0	0.0	0.0	0.0	0.0	0.0
2	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		100.0	100.0	100.0	0.0	0.0	0.0
	DUAL MAGNUM	0.955 lb ai/a	16 oz/a		B	V1-V2							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
3	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		100.0	100.0	100.0	0.0	0.0	0.0
	PROWL H20	0.95 lb ai/a	32 oz/a		B	V1-V2							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
4	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		100.0	100.0	100.0	0.0	0.0	0.0
	MON 63410	1.125 lb ai/a	48 oz/a		B	V1-V2							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
5	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		100.0	100.0	100.0	0.0	2.5	0.0
	MON 63410	1.125 lb ai/a	48 oz/a		B	V1-V2							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	MON 63410	1.125 lb ai/a	48 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
6	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		100.0	100.0	100.0	0.0	0.0	0.0
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
LSD (P=.05)								0.00	0.00	0.00	0.00	3.08	0.00
Standard Deviation								0.00	0.00	0.00	0.00	2.04	0.00
CV								0.0	0.0	0.0	0.0	489.9	0.0
Bartlett's X2								0.0	0.0	0.0	0.0	0.0	0.0
P(Bartlett's X2)								.	.	.	.	.	.
Replicate F								0.000	0.000	0.000	0.000	1.000	0.000
Replicate Prob(F)								1.0000	1.0000	1.0000	1.0000	0.4199	1.0000
Treatment F								0.000	0.000	0.000	0.000	1.000	0.000
Treatment Prob(F)								1.0000	1.0000	1.0000	1.0000	0.4509	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

MON 63410 Encasulated Acetochlor Evaluation in Cotton

Trial ID: HCT-40910
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		PLANT C	PLANT C	PLANT C			
Pest Name		Palmer amaranth		Morning glory		Common barnyar>		6/14/2010	6/14/2010	6/14/2010			
Part Rated		PLANT P		PLANT P		PLANT P		PHYCHL	PHYNEC	PHYSTU			
Rating Date		6/14/2010		6/14/2010		6/14/2010		%	%	%			
Rating Type		CONTROL		CONTROL		CONTROL		%	%	%			
Rating Unit		%		%		%		%	%	%			
Crop Stage Majority		8-10 lf		8-10 lf		8-10 lf		8-10 lf	8-10 lf	8-10 lf			
Pest Stage Majority		cotyl		cotyl		cotyl							
Tri-Eval Interval		20 DA-B		20 DA-B		20 DA-B		20 DA-B	20 DA-B	20 DA-B			
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	7	8	9	10	11	12
1	Untreated Check							0.0	0.0	0.0	0.0	0.0	0.0
2	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		100.0	100.0	100.0	0.0	0.0	0.0
	DUAL MAGNUM	0.955 lb ai/a	16 oz/a		B	V1-V2							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
3	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		99.0	100.0	100.0	0.0	0.0	0.0
	PROWL H20	0.95 lb ai/a	32 oz/a		B	V1-V2							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
4	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		100.0	100.0	100.0	0.0	0.0	0.0
	MON 63410	1.125 lb ai/a	48 oz/a		B	V1-V2							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
5	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		100.0	100.0	100.0	0.0	0.0	0.0
	MON 63410	1.125 lb ai/a	48 oz/a		B	V1-V2							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	MON 63410	1.125 lb ai/a	48 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
6	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		100.0	100.0	100.0	0.0	0.0	0.0
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
	LSD (P=.05)							0.71	0.00	0.00	0.00	0.00	0.00
	Standard Deviation							0.47	0.00	0.00	0.00	0.00	0.00
	CV							0.57	0.0	0.0	0.0	0.0	0.0
	Bartlett's X2							0.0	0.0	0.0	0.0	0.0	0.0
	P(Bartlett's X2)							.	.	.	.	.	.
	Replicate F							1.000	0.000	0.000	0.000	0.000	0.000
	Replicate Prob(F)							0.4199	1.0000	1.0000	1.0000	1.0000	1.0000
	Treatment F							29883.003	0.000	0.000	0.000	0.000	0.000
	Treatment Prob(F)							0.0001	1.0000	1.0000	1.0000	1.0000	1.0000

University of Arkansas-Division of Agriculture

MON 63410 Encasulated Acetochlor Evaluation in Cotton

Trial ID: HCT-40910
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		PLANT C	PLANT C	PLANT C	PLANT C	PLANT C				
Pest Name		Palmer amaranth		Morning glory		Common barnyar		7/12/2010	7/12/2010	7/12/2010	10/4/2010	10/4/2010				
Part Rated		PLANT P		PLANT P		PLANT P		PHYCHL	PHYNEC	PHYSTU	WEIGHT	YIELD				
Rating Date		7/12/2010		7/12/2010		7/12/2010		%	%	%	lb/plot	LB				
Rating Type		CONTROL		CONTROL		CONTROL		8 NAWF	8 NAWF	8 NAWF	Harvest	Harvest				
Rating Unit		%		%		%		cotyl	cotyl	cotyl						
Crop Stage Majority		8 NAWF		8 NAWF		8 NAWF		26 DA-C	26 DA-C	26 DA-C	110 DA-C	110 DA-C				
Pest Stage Majority		cotyl		cotyl		cotyl										
Tri-Eval Interval		26 DA-C		26 DA-C		26 DA-C										
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Unit	Appl Code	Description	19	20	21	22	23	24	25	26
1	Untreated Check								0.0	0.0	0.0	0.0	0.0	0.0	3.7475	921.02
2	COTORAN 4	1.5	lb ai/a	48	oz/a	A	PRE		100.0	100.0	100.0	0.0	0.0	0.0	14.2100	3492.37
	DUAL MAGNUM	0.955	lb ai/a	16	oz/a	B	V1-V2									
	ROUNDUP POWERMAX	0.77	lb ae/a	22	oz/a	B	V1-V2									
	AMS	2	% w/v	38.4	oz/a	B	V1-V2									
	DIURON	1	lb ai/a	32	oz/a	C	Layby V6-V8									
	ROUNDUP POWERMAX	0.77	lb ae/a	22	oz/a	C	Layby V6-V8									
	AMS	2	% w/v	38.4	oz/a	C	Layby V6-V8									
3	COTORAN 4	1.5	lb ai/a	48	oz/a	A	PRE		100.0	100.0	100.0	0.0	0.0	0.0	14.5900	3585.76
	PROWL H20	0.95	lb ai/a	32	oz/a	B	V1-V2									
	ROUNDUP POWERMAX	0.77	lb ae/a	22	oz/a	B	V1-V2									
	AMS	2	% w/v	38.4	oz/a	B	V1-V2									
	DIURON	1	lb ai/a	32	oz/a	C	Layby V6-V8									
	ROUNDUP POWERMAX	0.77	lb ae/a	22	oz/a	C	Layby V6-V8									
	AMS	2	% w/v	38.4	oz/a	C	Layby V6-V8									
4	COTORAN 4	1.5	lb ai/a	48	oz/a	A	PRE		100.0	100.0	100.0	0.0	0.0	0.0	13.9700	3433.38
	MON 63410	1.125	lb ai/a	48	oz/a	B	V1-V2									
	ROUNDUP POWERMAX	0.77	lb ae/a	22	oz/a	B	V1-V2									
	AMS	2	% w/v	38.4	oz/a	B	V1-V2									
	DIURON	1	lb ai/a	32	oz/a	C	Layby V6-V8									
	ROUNDUP POWERMAX	0.77	lb ae/a	22	oz/a	C	Layby V6-V8									
	AMS	2	% w/v	38.4	oz/a	C	Layby V6-V8									
5	COTORAN 4	1.5	lb ai/a	48	oz/a	A	PRE		100.0	100.0	100.0	0.0	0.0	0.0	12.4908	3069.83
	MON 63410	1.125	lb ai/a	48	oz/a	B	V1-V2									
	ROUNDUP POWERMAX	0.77	lb ae/a	22	oz/a	B	V1-V2									
	AMS	2	% w/v	38.4	oz/a	B	V1-V2									
	MON 63410	1.125	lb ai/a	48	oz/a	C	Layby V6-V8									
	ROUNDUP POWERMAX	0.77	lb ae/a	22	oz/a	C	Layby V6-V8									
	AMS	2	% w/v	38.4	oz/a	C	Layby V6-V8									
6	COTORAN 4	1.5	lb ai/a	48	oz/a	A	PRE		100.0	100.0	100.0	0.0	0.0	0.0	13.6075	3344.29
	ROUNDUP POWERMAX	0.77	lb ae/a	22	oz/a	B	V1-V2									
	AMS	2	% w/v	38.4	oz/a	B	V1-V2									
	DIURON	1	lb ai/a	32	oz/a	C	Layby V6-V8									
	ROUNDUP POWERMAX	0.77	lb ae/a	22	oz/a	C	Layby V6-V8									
	AMS	2	% w/v	38.4	oz/a	C	Layby V6-V8									
	LSD (P=.05)								0.00	0.00	0.00	0.00	0.00	0.00	1.96185	482.157
	Standard Deviation								0.00	0.00	0.00	0.00	0.00	0.00	1.30196	319.978
	CV								0.0	0.0	0.0	0.0	0.0	0.0	10.76	10.76
	Bartlett's X2								0.0	0.0	0.0	0.0	0.0	0.0	5.571	5.571
	P(Bartlett's X2)								.	.	.	.	.	.	0.35	0.35
	Replicate F								0.000	0.000	0.000	0.000	0.000	0.000	0.150	0.150
	Replicate Prob(F)								1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9281	0.9280
	Treatment F								0.000	0.000	0.000	0.000	0.000	0.000	40.747	40.748
	Treatment Prob(F)								1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0001	0.0001

University of Arkansas-Division of Agriculture

MON 63410 Encasulated Acetochlor Evaluation in Cotton

Trial ID: HCT-40910
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
ECHCG, Echinochloa crus-galli, = US
BRAPP, Brachiaria platyphylla, = US
IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

PHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting
WEIGHT = weight
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
LB = pound

ARM Action Codes

TY1 = 245.7684*25

University of Arkansas-Division of Agriculture

Evaluation of Generic Glyphosate Formulations on RR Flex Cotton

Trial ID: HCT-41010
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Seed Bed: CRUSTE crusted
Planting Date: 5/5/2010
Rate, Unit: 3.5 S/ROWFT
Spacing Within Row, Unit: 3.42 IN
Soil Temperature, Unit: 68 F
Emergence Date: 5/13/2010
Harvested Width, Unit: 6.33 FT
Harvested Length, Unit: 28 FT

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Study Design: RACOB L Randomized Complete Block (RCB)

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Type	Rate	Rate Unit
1.	5/6/2010	Cotoran 4	4	F	1	lb ai/A

Soil Description

Description Name: Silt Loam
% Sand: 16
% Silt: 67
% Clay: 17
% OM: 2.2
pH: 7.1
CEC: 14
Texture: SIL silt loam
Soil Name: Herbert Silt Loam
Fert. Level: G
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	6/3/2010	6/16/2010	6/25/2010
Time of Day:	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	3-4 LF	6-8 LF	12-14 LF
Application Placement:	BANFOL	BANFOL	BRODIR
Applied By:	RD	RD	RD
Air Temperature, Unit:	79.6 F	85 F	83.3 F
% Relative Humidity:	79.47	69	46.3
Wind Velocity, Unit:	2.50 MPH	4.95 MPH	2.5 MPH
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	81.0 F	84.6 F	85.5 F
Soil Moisture:	FAIR	FAIR	FAIR
% Cloud Cover:	50	40	40
Next Rain Occurred On:	6/10/2010	6/17/2010	6/29/2010

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GOSHI BCOT	GOSHI BCOT	GOSHI BCOT
Stage Scale Used:	BBCH	BBCH	BBCH
Stage Majority, Percent:	3-4 NODE	6-8 NODE	12-14 ND

Application Equipment

	A	B	C
Appl. Equipment:	Multi-Boom	Multi-Boom	Multi-Boom
Operating Pressure, Unit:	55 PSI	55 PSI	55 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters
Propellant:	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Evaluation of Generic Glyphosate Formulations on RR Flex Cotton

Trial ID: HCT-41010
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C
Pest Name	6/14/2010	6/14/2010	6/14/2010	6/24/2010	6/24/2010	6/24/2010	7/12/2010	7/12/2010
Part Rated	PHYCHL	PHYNEC	PHYSTU	PHYCHL	PHYNEC	PHYSTU	PHYCHL	PHYNEC
Rating Date	%	%	%	%	%	%	%	%
Rating Type	8-10 lf	8-10 lf	8-10 lf	10-12 lf	10-12 lf	10-12 lf	8 NAWF	8 NAWF
Rating Unit								
Crop Stage Majority	11 DA-A	11 DA-A	11 DA-A	8 DA-B	8 DA-B	8 DA-B	17 DA-C	17 DA-C
Pest Stage Majority								
Trt-Eval Interval								
Trt No.	Treatment Name	Rate	Other	Other	Appl	Appl		
		Rate	Rate	Rate	Code	Description		
		Unit	Unit	Unit				
1	Untreated Check	0.0					0.0	0.0
2	ROUNDUP POWERMAX AMS	1.12 lb ae/a	32 oz/a		A	3-4 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		A	3-4 node cotton		
	ROUNDUP POWERMAX AMS	1.12 lb ae/a	32 oz/a		B	6-8 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		B	6-8 node cotton		
	ROUNDUP POWERMAX AMS	1.12 lb ae/a	32 oz/a		C	12-14 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		C	12-14 node cotton		
3	ALLECTO 41 S AMS	1.12 lb ae/a	48 oz/a		A	3-4 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		A	3-4 node cotton		
	ALLECTO 41 S AMS	1.12 lb ae/a	48 oz/a		B	6-8 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		B	6-8 node cotton		
	ALLECTO 41 S AMS	1.12 lb ae/a	48 oz/a		C	12-14 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		C	12-14 node cotton		
4	GENESIS EXTRA AMS	1.12 lb ae/a	48 oz/a		A	3-4 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		A	3-4 node cotton		
	GENESIS EXTRA AMS	1.12 lb ae/a	48 oz/a		B	6-8 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		B	6-8 node cotton		
	GENESIS EXTRA AMS	1.12 lb ae/a	48 oz/a		C	12-14 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		C	12-14 node cotton		
5	Touchdown Total AMS	1.12 lb ae/a	34.4 oz/a		A	3-4 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		A	3-4 node cotton		
	Touchdown Total AMS	1.12 lb ae/a	34.4 oz/a		B	6-8 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		B	6-8 node cotton		
	Touchdown Total AMS	1.12 lb ae/a	34.4 oz/a		C	12-14 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		C	12-14 node cotton		
6	Glyphos X-tra AMS	1.12 lb ae/a	48 oz/a		A	3-4 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		A	3-4 node cotton		
	Glyphos X-tra AMS	1.12 lb ae/a	48 oz/a		B	6-8 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		B	6-8 node cotton		
	Glyphos X-tra AMS	1.12 lb ae/a	48 oz/a		C	12-14 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		C	12-14 node cotton		
7	ROUNDUP POWERMAX AMS	2.25 lb ae/a	64 oz/a		A	3-4 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		A	3-4 node cotton		
	ROUNDUP POWERMAX AMS	2.25 lb ae/a	64 oz/a		B	6-8 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		B	6-8 node cotton		
	ROUNDUP POWERMAX AMS	2.25 lb ae/a	64 oz/a		C	12-14 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		C	12-14 node cotton		
8	ALLECTO 41 S AMS	2.25 lb ae/a	96 oz/a		A	3-4 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		A	3-4 node cotton		
	ALLECTO 41 S AMS	2.25 lb ae/a	96 oz/a		B	6-8 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		B	6-8 node cotton		
	ALLECTO 41 S AMS	2.25 lb ae/a	96 oz/a		C	12-14 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		C	12-14 node cotton		
9	GENESIS EXTRA AMS	2.25 lb ae/a	96 oz/a		A	3-4 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		A	3-4 node cotton		
	GENESIS EXTRA AMS	2.25 lb ae/a	96 oz/a		B	6-8 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		B	6-8 node cotton		
	GENESIS EXTRA AMS	2.25 lb ae/a	96 oz/a		C	12-14 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		C	12-14 node cotton		
10	Touchdown Total AMS	2.25 lb ae/a	69 oz/a		A	3-4 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		A	3-4 node cotton		
	Touchdown Total AMS	2.25 lb ae/a	69 oz/a		B	6-8 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		B	6-8 node cotton		
	Touchdown Total AMS	2.25 lb ae/a	69 oz/a		C	12-14 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		C	12-14 node cotton		
11	Glyphos X-tra AMS	2.25 lb ae/a	96 oz/a		A	3-4 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		A	3-4 node cotton		
	Glyphos X-tra AMS	2.25 lb ae/a	96 oz/a		B	6-8 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		B	6-8 node cotton		
	Glyphos X-tra AMS	2.25 lb ae/a	96 oz/a		C	12-14 node cotton	0.0	0.0
		2 % w/w	38.4 oz/a		C	12-14 node cotton		
	LSD (P=.05)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Standard Deviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	CV	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Bartlett's X2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	P(Bartlett's X2)	.	.	.	.	.	.	.
	Replicate F	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Replicate Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
	Treatment F	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Treatment Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluation of Generic Glyphosate Formulations on RR Flex Cotton

Trial ID: HCT-41010
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code						PLANT C	PLANT C	PLANT C	PLANT C
Pest Name						7/12/2010	7/23/2010	10/4/2010	10/4/2010
Part Rated						PHYSTU	PHYSTU	WEIGHT	YIELD
Rating Date						%	%	lb/plot	lb/ac
Rating Type						8 NAWF	6 NAWF	Harvest	Harvest
Rating Unit									
Crop Stage Majority						17 DA-C	28 DA-C	101 DA-C	101 DA-C
Pest Stage Majority									
Tri-Eval Interval									
Trt No.	Treatment Name	Rate	Other	Other	Appl	Appl			
		Rate	Unit	Rate	Rate	Unit	Code	Description	
1	Untreated Check								9.160 2251.24
2	ROUNDUP POWERMAX AMS	1.12 lb ae/a	2 % w/w	32 oz/a	38.4 oz/a		A	3-4 node cotton	0.0 0.0 13.315 3272.41
	ROUNDUP POWERMAX AMS	1.12 lb ae/a	2 % w/w	32 oz/a	38.4 oz/a		B	6-8 node cotton	
	ROUNDUP POWERMAX AMS	1.12 lb ae/a	2 % w/w	32 oz/a	38.4 oz/a		C	12-14 node cotton	
3	ALLECTO 41 S AMS	1.12 lb ae/a	2 % w/w	48 oz/a	38.4 oz/a		A	3-4 node cotton	0.0 0.0 13.750 3379.32
	ALLECTO 41 S AMS	1.12 lb ae/a	2 % w/w	48 oz/a	38.4 oz/a		B	6-8 node cotton	
	ALLECTO 41 S AMS	1.12 lb ae/a	2 % w/w	48 oz/a	38.4 oz/a		C	12-14 node cotton	
4	GENESIS EXTRA AMS	1.12 lb ae/a	2 % w/w	48 oz/a	38.4 oz/a		A	3-4 node cotton	0.0 0.0 13.115 3223.25
	GENESIS EXTRA AMS	1.12 lb ae/a	2 % w/w	48 oz/a	38.4 oz/a		B	6-8 node cotton	
	GENESIS EXTRA AMS	1.12 lb ae/a	2 % w/w	48 oz/a	38.4 oz/a		C	12-14 node cotton	
5	Touchdown Total AMS	1.12 lb ae/a	2 % w/w	34.4 oz/a	38.4 oz/a		A	3-4 node cotton	0.0 0.0 13.860 3406.35
	Touchdown Total AMS	1.12 lb ae/a	2 % w/w	34.4 oz/a	38.4 oz/a		B	6-8 node cotton	
	Touchdown Total AMS	1.12 lb ae/a	2 % w/w	34.4 oz/a	38.4 oz/a		C	12-14 node cotton	
6	Glyphos X-tra AMS	1.12 lb ae/a	2 % w/w	48 oz/a	38.4 oz/a		A	3-4 node cotton	0.0 0.0 13.395 3292.07
	Glyphos X-tra AMS	1.12 lb ae/a	2 % w/w	48 oz/a	38.4 oz/a		B	6-8 node cotton	
	Glyphos X-tra AMS	1.12 lb ae/a	2 % w/w	48 oz/a	38.4 oz/a		C	12-14 node cotton	
7	ROUNDUP POWERMAX AMS	2.25 lb ae/a	2 % w/w	64 oz/a	38.4 oz/a		A	3-4 node cotton	0.0 0.0 13.030 3202.36
	ROUNDUP POWERMAX AMS	2.25 lb ae/a	2 % w/w	64 oz/a	38.4 oz/a		B	6-8 node cotton	
	ROUNDUP POWERMAX AMS	2.25 lb ae/a	2 % w/w	64 oz/a	38.4 oz/a		C	12-14 node cotton	
8	ALLECTO 41 S AMS	2.25 lb ae/a	2 % w/w	96 oz/a	38.4 oz/a		A	3-4 node cotton	0.0 0.0 13.435 3301.90
	ALLECTO 41 S AMS	2.25 lb ae/a	2 % w/w	96 oz/a	38.4 oz/a		B	6-8 node cotton	
	ALLECTO 41 S AMS	2.25 lb ae/a	2 % w/w	96 oz/a	38.4 oz/a		C	12-14 node cotton	
9	GENESIS EXTRA AMS	2.25 lb ae/a	2 % w/w	96 oz/a	38.4 oz/a		A	3-4 node cotton	0.0 0.0 12.670 3113.89
	GENESIS EXTRA AMS	2.25 lb ae/a	2 % w/w	96 oz/a	38.4 oz/a		B	6-8 node cotton	
	GENESIS EXTRA AMS	2.25 lb ae/a	2 % w/w	96 oz/a	38.4 oz/a		C	12-14 node cotton	
10	Touchdown Total AMS	2.25 lb ae/a	2 % w/w	69 oz/a	38.4 oz/a		A	3-4 node cotton	0.0 0.0 13.525 3324.02
	Touchdown Total AMS	2.25 lb ae/a	2 % w/w	69 oz/a	38.4 oz/a		B	6-8 node cotton	
	Touchdown Total AMS	2.25 lb ae/a	2 % w/w	69 oz/a	38.4 oz/a		C	12-14 node cotton	
11	Glyphos X-tra AMS	2.25 lb ae/a	2 % w/w	96 oz/a	38.4 oz/a		A	3-4 node cotton	0.0 0.0 12.453 3060.43
	Glyphos X-tra AMS	2.25 lb ae/a	2 % w/w	96 oz/a	38.4 oz/a		B	6-8 node cotton	
	Glyphos X-tra AMS	2.25 lb ae/a	2 % w/w	96 oz/a	38.4 oz/a		C	12-14 node cotton	
LSD (P=.05)						0.00	0.00	2.4125	592.922
Standard Deviation						0.00	0.00	1.6684	410.033
CV						0.0	0.0	12.95	12.95
Bartlett's X2						0.0	0.0	13.627	13.627
P(Bartlett's X2)						.	.	0.191	0.191
Replicate F						0.000	0.000	0.294	0.294
Replicate Prob(F)						1.0000	1.0000	0.8297	0.8295
Treatment F						0.000	0.000	2.448	2.449
Treatment Prob(F)						1.0000	1.0000	0.0292	0.0292

University of Arkansas-Division of Agriculture

Evaluation of Generic Glyphosate Formulations on RR Flex Cotton

Trial ID: HCT-41010
Location: Rohwer, AR

Investigator: Kenneth Smith

Part Rated

PLANT = plant

C = Crop is Part Rated

Rating Type

PHYCHL = phytotoxicity - chlorosis

PHYNEC = phytotoxicity - necrosis /burn

PHYSTU = phytotoxicity - stunting

WEIGHT = weight

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

lb/ac = pounds per acre

ARM Action Codes

TY1 = 245.7684*11

University of Arkansas-Division of Agriculture

Efficacy of MANA Cotton Herbicides Alone and in Tankmix When Applied Post-Direct

Trial ID: HCT-41110
Location: Rohwer, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Seed Bed: CRUSTE crusted
Planting Date: 5/5/2010
Rate, Unit: 3.5 S/ROWFT
Spacing Within Row, Unit: 3.42 IN
Soil Temperature, Unit: 68 F
Emergence Date: 5/13/2010
Harvested Width, Unit: 6.33 FT
Harvested Length, Unit: 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory

Pest 3 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 29 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Study Design: RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G
Soil Drainage: G good

Application Description

	A
Application Date:	6/16/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	12" COT
Application Placement:	BRODIR
Applied By:	RD
Air Temperature, Unit:	85.1 F
% Relative Humidity:	69.06
Wind Velocity, Unit:	4.95 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	84.6 F
Soil Moisture:	FAIR
% Cloud Cover:	40
Next Rain Occurred On:	6/17/2010

Crop Stage At Each Application

	A
BCOT	
Stage Scale Used:	BBCH
Stage Majority, Percent:	12"

Pest Stage At Each Application

	A
Stage Majority, Percent:	2-4"
Stage Majority, Percent:	2-4"
Stage Majority, Percent:	2-4"

Application Equipment

	A
Appl. Equipment:	HoodSpray
Operating Pressure, Unit:	35 PSI
Nozzle Type:	TeeJet
Nozzle Spacing, Unit:	38 IN
Nozzles/Row:	3
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	4 IN
Ground Speed, Unit:	3.8 MPH
Carrier:	H2O
Spray Volume, Unit:	15 GPA
Mix Size, Unit:	2 Gallons
Propellant:	CO2

University of Arkansas-Division of Agriculture

Efficacy of MANA Cotton Herbicides Alone and in Tankmix When Applied Post-Direct

Trial ID: HCT-41110
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	AMAPA	IPOSS	ECHCG	AMAPA	IPOSS	ECHCG						
Pest Name	Palmer amaranth	Morning glory	Common barnyar>	Palmer amaranth	Morning glory	Common barnyar>						
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P						
Rating Date	6/24/2010	6/24/2010	6/24/2010	7/12/2010	7/12/2010	7/12/2010						
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL						
Rating Unit	%	%	%	%	%	%						
Crop Stage Majority	10-12 lf	10-12 lf	10-12 lf	8 NAWF	8 NAWF	8 NAWF						
Pest Stage Majority	6-36"	6-36"	6-36"	6-60"	6-60"	6-60"						
Trt-Eval Interval	8 DA-A	8 DA-A	8 DA-A	26 DA-A	26 DA-A	26 DA-A						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	1	2	3	4	5	6
1	UTC						0.0	0.0	0.0	0.0	0.0	0.0
2	Cotton Pro COC	1 lb ai/a 1 % v/v	32 oz/a 1 % v/v		A A	Post-Directed @ 12" Post-Directed @ 12"	100.0	100.0	100.0	92.5	95.0	85.0
3	Cotoran 4L COC	1 lb ai/a 1 % v/v	32 oz/a 1 % v/v		A A	Post-Directed @ 12" Post-Directed @ 12"	100.0	100.0	100.0	96.3	98.8	97.5
4	Diuron 4L COC	1 lb ai/a 1 % v/v	32 oz/a 1 % v/v		A A	Post-Directed @ 12" Post-Directed @ 12"	100.0	100.0	100.0	96.3	100.0	96.3
5	Cotoran 4L Diuron 4L COC	0.5 lb ai/a 0.5 lb ai/a 1 % v/v	16 oz/a 16 oz/a 1 % v/v		A A A	Post-Directed @ 12" Post-Directed @ 12" Post-Directed @ 12"	100.0	100.0	100.0	97.5	98.8	88.8
6	Cotoran 4L Diuron 4L COC	0.5 lb ai/a 0.75 lb ai/a 1 % v/v	16 oz/a 24 oz/a 1 % v/v		A A A	Post-Directed @ 12" Post-Directed @ 12" Post-Directed @ 12"	100.0	100.0	100.0	98.8	100.0	97.5
7	Cotoran 4L Cotton Pro COC	0.5 lb ai/a 0.4 lb ai/a 1 % v/v	16 oz/a 12.8 oz/a 1 % v/v		A A A	Post-Directed @ 12" Post-Directed @ 12" Post-Directed @ 12"	100.0	100.0	100.0	91.3	96.3	85.0
8	Diuron 4L Cotton Pro COC	0.5 lb ai/a 0.4 lb ai/a 1 % v/v	16 oz/a 12.8 oz/a 1 % v/v		A A A	Post-Directed @ 12" Post-Directed @ 12" Post-Directed @ 12"	100.0	100.0	100.0	98.8	98.8	95.8
9	Aim EC COC	0.025 lb ai/a 1 % v/v	1.6 oz/a 1 % v/v		A A	Post-Directed @ 12" Post-Directed @ 12"	100.0	100.0	100.0	100.0	100.0	87.5
10	Envoke COC	0.007 lb ai/a 1 % v/v	0.15 oz/a 1 % v/v		A A	Post-Directed @ 12" Post-Directed @ 12"	100.0	100.0	100.0	97.0	97.5	87.5
11	Suprend COC	1.2 lb ai/a 1 % v/v	24 oz/a 1 % v/v		A A	Post-Directed @ 12" Post-Directed @ 12"	100.0	100.0	100.0	100.0	100.0	93.3
12	PyriMax 3.2L COC	0.065 lb ai/a 1 % v/v	2.6 oz/a 1 % v/v		A A	Post-Directed @ 12" Post-Directed @ 12"	100.0	100.0	100.0	95.0	96.3	86.3
13	Staple LX COC	0.065 lb ai/a 1 % v/v	2.6 oz/a 1 % v/v		A A	Post-Directed @ 12" Post-Directed @ 12"	100.0	100.0	100.0	98.8	98.8	82.5
LSD (P=.05)							0.00	0.00	0.00	7.40	4.35	10.58
Standard Deviation							0.00	0.00	0.00	5.18	3.04	7.40
CV							0.0	0.0	0.0	5.79	3.35	8.89
Bartlett's X2							0.0	0.0	0.0	14.67	8.493	22.698
P(Bartlett's X2)							.	.	.	0.10	0.291	0.019*
Replicate F							0.000	0.000	0.000	1.433	0.138	0.380
Replicate Prob(F)							1.0000	1.0000	1.0000	0.2493	0.9364	0.7677
Treatment F							0.000	0.000	0.000	108.665	322.176	47.727
Treatment Prob(F)							1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Efficacy of MANA Cotton Herbicides Alone and in Tankmix When Applied Post-Direct

Trial ID: HCT-41110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code							PLANT C	PLANT C	
Pest Name							10/4/2010	10/4/2010	
Part Rated							WEIGHT	YIELD	
Rating Date							lb/plot	LB	
Rating Type							Harvest	Harvest	
Rating Unit							110 DA-A	110 DA-A	
Crop Stage Majority									
Pest Stage Majority									
Trt-Eval Interval									
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	7	8
1	UTC							12.4000009	3047.53
2	Cotton Pro COC	1 lb ai/a 1 % v/v	32 oz/a 1 % v/v		A		Post-Directed @ 12" Post-Directed @ 12"	13.7800011	3386.69
3	Cotoran 4L COC	1 lb ai/a 1 % v/v	32 oz/a 1 % v/v		A		Post-Directed @ 12" Post-Directed @ 12"	14.2875018	3511.42
4	Diuron 4L COC	1 lb ai/a 1 % v/v	32 oz/a 1 % v/v		A		Post-Directed @ 12" Post-Directed @ 12"	14.6825014	3608.49
5	Cotoran 4L Diuron 4L COC	0.5 lb ai/a 0.5 lb ai/a 1 % v/v	16 oz/a 16 oz/a 1 % v/v		A		Post-Directed @ 12" Post-Directed @ 12" Post-Directed @ 12"	12.7050012	3122.49
6	Cotoran 4L Diuron 4L COC	0.5 lb ai/a 0.75 lb ai/a 1 % v/v	16 oz/a 24 oz/a 1 % v/v		A		Post-Directed @ 12" Post-Directed @ 12" Post-Directed @ 12"	14.1400018	3475.17
7	Cotoran 4L Cotton Pro COC	0.5 lb ai/a 0.4 lb ai/a 1 % v/v	16 oz/a 12.8 oz/a 1 % v/v		A		Post-Directed @ 12" Post-Directed @ 12" Post-Directed @ 12"	12.8725008	3163.65
8	Diuron 4L Cotton Pro COC	0.5 lb ai/a 0.4 lb ai/a 1 % v/v	16 oz/a 12.8 oz/a 1 % v/v		A		Post-Directed @ 12" Post-Directed @ 12" Post-Directed @ 12"	15.1025015	3711.72
9	Aim EC COC	0.025 lb ai/a 1 % v/v	1.6 oz/a 1 % v/v		A		Post-Directed @ 12" Post-Directed @ 12"	14.6750017	3606.65
10	Envoke COC	0.007 lb ai/a 1 % v/v	0.15 oz/a 1 % v/v		A		Post-Directed @ 12" Post-Directed @ 12"	14.8875013	3658.88
11	Suprend COC	1.2 lb ai/a 1 % v/v	24 oz/a 1 % v/v		A		Post-Directed @ 12" Post-Directed @ 12"	15.3125015	3763.33
12	PyriMax 3.2L COC	0.065 lb ai/a 1 % v/v	2.6 oz/a 1 % v/v		A		Post-Directed @ 12" Post-Directed @ 12"	15.0007511	3686.71
13	Staple LX COC	0.065 lb ai/a 1 % v/v	2.6 oz/a 1 % v/v		A		Post-Directed @ 12" Post-Directed @ 12"	15.7775017	3877.61
LSD (P=.05)							2.15542982	529.720	
Standard Deviation							1.50828210	370.677	
CV							10.56	10.56	
Bartlett's X2							11.039	11.039	
P(Bartlett's X2)							0.526	0.526	
Replicate F							0.517	0.518	
Replicate Prob(F)							0.6733	0.6728	
Treatment F							1.972	1.972	
Treatment Prob(F)							0.0576	0.0576	

University of Arkansas-Division of Agriculture

Efficacy of MANA Cotton Herbicides Alone and in Tankmix When Applied Post-Direct

Trial ID: HCT-41110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US
ECHCG, Echinochloa crus-galli, = US

Part Rated

PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

WEIGHT = weight
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
LB = pound

ARM Action Codes

TY1 = 245.7684*7

University of Arkansas-Division of Agriculture

Crop Response of MON 63410 in RRF Cotton

Trial ID: HCT-41210
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT **Planting Date:** 5/5/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN **Spacing Within Row, Unit:** 3.42 IN
Seed Bed: CRUSTE crusted **Soil Temperature, Unit:** 68 F
Emergence Date: 5/13/2010
Harvested Width, Unit: 6.33 FT **Harvested Length, Unit:** 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
Pest 2 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory
Pest 3 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 29 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Rate	Rate Unit
1.	7/5/2010	GLYPHOSATE	3	lb ae/A	48	OZ/A

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	5/26/2010	6/3/2010	6/16/2010
Time of Day:	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	2 LF	4 LF	8 LF
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RD	RD	RD
Air Temperature, Unit:	81.5 F	79.6 F	85.1 F
% Relative Humidity:	63.92	79.47	69
Wind Velocity, Unit:	1.40 MPH	2.50 MPH	4.9 MPH
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	79.4 F	81.0 F	84.6 F
Soil Moisture:	GOOD	FAIR	FAIR
% Cloud Cover:	50	50	40
Next Rain Occurred On:	6/10/2010	6/10/2010	6/17/2010

Crop Stage At Each Application

	A	B	C
BCOT	BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH	BBCH
Stage Majority, Percent:	2 lf	4 lf	8 lf

Pest Stage At Each Application

	A	B	C
Stage Majority, Percent:	2-4"	2-6"	2-6"
Stage Majority, Percent:	2-4"	2-6"	2-6"
Stage Majority, Percent:	2-4"	2-6"	2-6"

University of Arkansas-Division of Agriculture

Crop Response of MON 63410 in RRF Cotton

Trial ID: HCT-41210
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Application Equipment			
	A	B	C
Appl. Equipment:	Multi-Boom	Multi-Boom	Multi-Boom
Operating Pressure, Unit:	55 PSI	55 PSI	55 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters
Propellant:	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Crop Response of MON 63410 in RRF Cotton

Trial ID: HCT-41210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		PLANT C		PLANT C		PLANT C		AMAPA	
Pest Name		Palmer amaranth		Morning glory		Common barnyard		6/3/2010		6/3/2010		6/3/2010		Palmer amaranth	
Part Rated		PLANT P		PLANT P		PLANT P		PHYDEF		PHYNEC		PHYSTU		PLANT P	
Rating Date		6/3/2010		6/3/2010		6/3/2010		6/3/2010		6/3/2010		6/3/2010		6/14/2010	
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL	
Rating Unit		%		%		%		%		%		%		%	
Crop Stage Majority		4-5 lf		4-5 lf		4-5 lf		4-5 lf		4-5 lf		4-5 lf		8-10 lf	
Pest Stage Majority		2-24"		2-24"		2-24"		2-24"		2-24"		2-24"		2-36"	
Trt-Eval Interval		8 DA-A		8 DA-A		8 DA-A		8 DA-A		8 DA-A		8 DA-A		11 DA-B	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	1	2	3	4	5	6	7		
1	Weed Free						100.0	100.0	100.0	0.0	0.0	0.0	100.0		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton									
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton									
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton									
2	MON 63410	1.13 lb ai/a	48 oz/a		A	2 lf cotton	37.5	88.8	81.3	0.0	0.0	0.0	0.0		
3	MON 63410	1.13 lb ai/a	48 oz/a		A	2 lf cotton	100.0	100.0	100.0	0.0	0.0	0.0	97.5		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton									
4	Dual Magnum	0.95 lb ai/a	16 oz/a		A	2 lf cotton	65.0	83.8	87.5	0.0	0.0	0.0	0.0		
5	Dual Magnum	0.95 lb ai/a	16 oz/a		A	2 lf cotton	98.8	100.0	100.0	0.0	0.0	0.0	95.3		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton									
6	MON 63410	1.13 lb ai/a	48 oz/a		B	4 lf cotton							0.0		
7	MON 63410	1.13 lb ai/a	48 oz/a		B	4 lf cotton							72.5		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton									
8	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton							0.0		
9	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton							100.0		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton									
10	MON 63410	1.13 lb ai/a	48 oz/a		C	8 lf cotton							0.0		
11	MON 63410	1.13 lb ai/a	48 oz/a		C	8 lf cotton							0.0		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton									
12	Dual Magnum	0.95 lb ai/a	16 oz/a		C	8 lf cotton							0.0		
13	Dual Magnum	0.95 lb ai/a	16 oz/a		C	8 lf cotton							0.0		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton									
14	MON 63410	1.69 lb ai/a	72 oz/a		A	2 lf cotton	92.5	95.0	96.3	0.0	0.0	0.0	97.0		
15	MON 63410	1.69 lb ai/a	72 oz/a		A	2 lf cotton	100.0	100.0	100.0	0.0	0.0	0.0	99.5		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton									
16	Dual Magnum	1.43 lb ai/a	24 oz/a		A	2 lf cotton	70.0	97.5	96.3	0.0	0.0	0.0	70.0		
17	Dual Magnum	1.43 lb ai/a	24 oz/a		A	2 lf cotton	100.0	100.0	100.0	0.0	0.0	0.0	99.5		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton									
18	MON 63410	1.69 lb ai/a	72 oz/a		B	4 lf cotton							0.0		
19	MON 63410	1.69 lb ai/a	72 oz/a		B	4 lf cotton							85.8		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton									
20	Dual Magnum	1.43 lb ai/a	24 oz/a		B	4 lf cotton							15.0		
21	Dual Magnum	1.43 lb ai/a	24 oz/a		B	4 lf cotton							97.5		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton									
22	MON 63410	1.69 lb ai/a	72 oz/a		C	8 lf cotton							0.0		
23	MON 63410	1.69 lb ai/a	72 oz/a		C	8 lf cotton							15.0		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton									
24	Dual Magnum	1.43 lb ai/a	24 oz/a		C	8 lf cotton							27.5		
25	Dual Magnum	1.43 lb ai/a	24 oz/a		C	8 lf cotton							0.0		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton									
LSD (P=.05)			13.19				13.19	9.61	8.81	0.00	0.00	0.00	17.81		
Standard Deviation			9.04				9.04	6.58	6.03	0.00	0.00	0.00	12.59		
CV			10.65				10.65	6.85	6.3	0.0	0.0	0.0	29.37		
Bartlett's X2			13.132				13.132	8.081	7.35	0.0	0.0	0.0	56.049		
P(Bartlett's X2)			0.004*				0.004*	0.044*	0.062	.	.	.	0.001*		
Replicate F			1.459				1.459	0.555	0.070	0.000	0.000	0.000	2.232		
Replicate Prob(F)			0.2507				0.2507	0.6495	0.9754	1.0000	1.0000	1.0000	0.0918		
Treatment F			24.637				24.637	3.296	5.070	0.000	0.000	0.000	52.577		
Treatment Prob(F)			0.0001				0.0001	0.0111	0.0009	1.0000	1.0000	1.0000	0.0001		

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Crop Response of MON 63410 in RRF Cotton

Trial ID: HCT-41210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code Pest Name Part Rated Rating Date Rating Type Rating Unit Crop Stage Majority Pest Stage Majority Tri-Eval Interval							PLANT C 6/14/2010 PHYCHL % 8-10 lf 11 DA-B	PLANT C 6/14/2010 PHYNEC % 8-10 lf 11 DA-B	PLANT C 6/14/2010 PHYSTU % 8-10 lf 11 DA-B	PLANT C 6/24/2010 PHYCHL % 10-12 lf 8 DA-C	PLANT C 6/24/2010 PHYNEC % 10-12 lf 8 DA-C	PLANT C 6/24/2010 PHYSTU % 10-12 lf 8 DA-C	PLANT C 7/12/2010 PHYCHL % 8 NAWF 26 DA-C	PLANT C 7/12/2010 PHYNEC % 8 NAWF 26 DA-C	PLANT C 7/12/2010 PHYSTU % 8 NAWF 26 DA-C
Tri No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Code	Appl Description	8	9	10	11	12	13	14	15	16
1	Weed Free						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton									
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton									
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton									
2	MON 63410	1.13 lb ai/a	48 oz/a		A	2 lf cotton	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	28.8
3	MON 63410	1.13 lb ai/a	48 oz/a		A	2 lf cotton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton									
4	Dual Magnum	0.95 lb ai/a	16 oz/a		A	2 lf cotton	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	21.3
5	Dual Magnum	0.95 lb ai/a	16 oz/a		A	2 lf cotton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton									
6	MON 63410	1.13 lb ai/a	48 oz/a		B	4 lf cotton	0.0	18.8	18.8	0.0	0.0	22.5	0.0	0.0	25.0
7	MON 63410	1.13 lb ai/a	48 oz/a		B	4 lf cotton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton									
8	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	15.0
9	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	5.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton									
10	MON 63410	1.13 lb ai/a	48 oz/a		C	8 lf cotton	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	18.8
11	MON 63410	1.13 lb ai/a	48 oz/a		C	8 lf cotton	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0	15.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton									
12	Dual Magnum	0.95 lb ai/a	16 oz/a		C	8 lf cotton	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	35.0
13	Dual Magnum	0.95 lb ai/a	16 oz/a		C	8 lf cotton	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	8.8
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton									
14	MON 63410	1.69 lb ai/a	72 oz/a		A	2 lf cotton	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	31.3
15	MON 63410	1.69 lb ai/a	72 oz/a		A	2 lf cotton	0.0	0.0	6.3	0.0	0.0	2.5	0.0	0.0	12.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton									
16	Dual Magnum	1.43 lb ai/a	24 oz/a		A	2 lf cotton	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	6.3
17	Dual Magnum	1.43 lb ai/a	24 oz/a		A	2 lf cotton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton									
18	MON 63410	1.69 lb ai/a	72 oz/a		B	4 lf cotton	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	23.8
19	MON 63410	1.69 lb ai/a	72 oz/a		B	4 lf cotton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton									
20	Dual Magnum	1.43 lb ai/a	24 oz/a		B	4 lf cotton	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	27.5
21	Dual Magnum	1.43 lb ai/a	24 oz/a		B	4 lf cotton	0.0	12.5	18.8	0.0	0.0	7.5	0.0	0.0	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton									
22	MON 63410	1.69 lb ai/a	72 oz/a		C	8 lf cotton	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	40.0
23	MON 63410	1.69 lb ai/a	72 oz/a		C	8 lf cotton	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0	12.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton									
24	Dual Magnum	1.43 lb ai/a	24 oz/a		C	8 lf cotton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
25	Dual Magnum	1.43 lb ai/a	24 oz/a		C	8 lf cotton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton									
LSD (P=.05)							0.00	11.27	12.95	0.00	0.00	14.92	0.00	0.00	21.69
Standard Deviation							0.00	7.97	9.16	0.00	0.00	10.55	0.00	0.00	15.34
CV							0.0	637.7	523.27	0.0	0.0	251.15	0.0	0.0	102.94
Bartlett's X2							0.0	2.383	3.121	0.0	0.0	33.599	0.0	0.0	40.286
P(Bartlett's X2)							.	0.123	0.21	.	.	0.006*	.	.	0.005*
Replicate F							0.000	1.410	1.466	0.000	0.000	1.875	0.000	0.000	4.054
Replicate Prob(F)							1.0000	0.2469	0.2311	1.0000	1.0000	0.1414	1.0000	1.0000	0.0101
Treatment F							0.000	1.230	1.323	0.000	0.000	0.842	0.000	0.000	2.408
Treatment Prob(F)							1.0000	0.2475	0.1816	1.0000	1.0000	0.6735	1.0000	1.0000	0.0022

University of Arkansas-Division of Agriculture

Crop Response of MON 63410 in RRF Cotton

Trial ID: HCT-41210
Location: Rohwer, AR

Investigator: Kenneth Smith

							PLANT C 10/4/2010 YIELD lb/plot Mature	PLANT C 10/4/2010 YIELD lb/ac Mature
Pest Code							110 DA-C	110 DA-C
Pest Name								
Part Rated								
Rating Date								
Rating Type								
Rating Unit								
Crop Stage Majority								
Pest Stage Majority								
Tri-Eval Interval								
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Code	Appl Description	17	18
Rate Unit								
1	Weed Free							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton	15.3150011	3763.94
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton		
2	MON 63410	1.13 lb ai/a	48 oz/a		A	2 lf cotton	11.3375008	2786.40
3	MON 63410	1.13 lb ai/a	48 oz/a		A	2 lf cotton	15.7725016	3876.38
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton		
4	Dual Magnum	0.95 lb ai/a	16 oz/a		A	2 lf cotton	12.4300015	3054.90
5	Dual Magnum	0.95 lb ai/a	16 oz/a		A	2 lf cotton	14.7275014	3619.55
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton		
6	MON 63410	1.13 lb ai/a	48 oz/a		B	4 lf cotton	11.9325011	2932.63
7	MON 63410	1.13 lb ai/a	48 oz/a		B	4 lf cotton	15.3950020	3783.61
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton		
8	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton	12.9975008	3194.38
9	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton	14.6975017	3612.18
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton		
10	MON 63410	1.13 lb ai/a	48 oz/a		C	8 lf cotton	10.9475013	2690.55
11	MON 63410	1.13 lb ai/a	48 oz/a		C	8 lf cotton	13.1600012	3234.31
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton		
12	Dual Magnum	0.95 lb ai/a	16 oz/a		C	8 lf cotton	9.0850009	2232.81
13	Dual Magnum	0.95 lb ai/a	16 oz/a		C	8 lf cotton	11.7375014	2884.71
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton		
14	MON 63410	1.69 lb ai/a	72 oz/a		A	2 lf cotton	11.1725008	2745.85
15	MON 63410	1.69 lb ai/a	72 oz/a		A	2 lf cotton	15.4475018	3796.51
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton		
16	Dual Magnum	1.43 lb ai/a	24 oz/a		A	2 lf cotton	12.6175016	3100.98
17	Dual Magnum	1.43 lb ai/a	24 oz/a		A	2 lf cotton	13.6825013	3362.73
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf cotton		
18	MON 63410	1.69 lb ai/a	72 oz/a		B	4 lf cotton	10.2325011	2514.83
19	MON 63410	1.69 lb ai/a	72 oz/a		B	4 lf cotton	14.1200013	3470.25
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton		
20	Dual Magnum	1.43 lb ai/a	24 oz/a		B	4 lf cotton	10.7025014	2630.34
21	Dual Magnum	1.43 lb ai/a	24 oz/a		B	4 lf cotton	14.1025014	3465.95
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton		
22	MON 63410	1.69 lb ai/a	72 oz/a		C	8 lf cotton	8.8100013	2165.22
23	MON 63410	1.69 lb ai/a	72 oz/a		C	8 lf cotton	12.2250016	3004.52
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton		
24	Dual Magnum	1.43 lb ai/a	24 oz/a		C	8 lf cotton	11.0050012	2704.68
25	Dual Magnum	1.43 lb ai/a	24 oz/a		C	8 lf cotton	12.5000013	3072.11
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton		
LSD (P=.05)							2.35210919	578.071
Standard Deviation							1.66319232	408.758
CV							13.15	13.15
Bartlett's X2							37.119	37.119
P(Bartlett's X2)							0.043*	0.043*
Replicate F							1.733	1.733
Replicate Prob(F)							0.1679	0.1679
Treatment F							5.702	5.702
Treatment Prob(F)							0.0001	0.0001

University of Arkansas-Division of Agriculture**Crop Response of MON 63410 in RRF Cotton**

Trial ID: HCT-41210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US
ECHCG, Echinochloa crus-galli, = US

Part Rated

PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

PHYDEF = phyto. deformation (cupping, epinasty, leaf wrap, wrinkling)
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting
PHYCHL = phytotoxicity - chlorosis
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
lb/ac = pounds per acre

ARM Action Codes

TY1 = 245.7684*17

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-41310
 Location: Rohwer, AR
 Investigator: Darrin Dodds

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
 Variety: Phytogen 375 WRF
 BBCH Scale: BCOT Planting Date: 5/11/2010
 Planting Method: BEDDED bedded Rate, Unit: 3.5 S/ROWFT
 Depth, Unit: 1 IN
 Row Spacing, Unit: 38 IN Spacing Within Row, Unit: 3.42 IN
 Seed Bed: CRUSTE crusted Soil Temperature, Unit: 68 F
 Emergence Date: 5/17/2010

Crop 2: GOSHI Gossypium hirsutum American upland cotton
 Variety: Fiber Max 9250 GTLL B2
 BBCH Scale: BCOT Planting Date: 5/11/2010
 Planting Method: BEDDED bedded Rate, Unit: 3.5 S/ROWFT
 Depth, Unit: 1 IN
 Row Spacing, Unit: 38 IN Spacing Within Row, Unit: 3.42 IN
 Seed Bed: CRUSTE crusted Soil Temperature, Unit: 68 F
 Emergence Date: 5/17/2010

Pest Description

Pest 1 Type: W Code: AMAPA Amaranthus palmeri
 Common Name: Palmer amaranth

Pest 2 Type: W Code: IPOSS Ipomoea sp.
 Common Name: Morning glory

Pest 3 Type: W Code: ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 12.6 FT
 Plot Length, Unit: 28 FT
 Plot Area, Unit: 352.8 FT2
 Replications: 4 Study Design: SPLPLO Split-Plot

Soil Description

Description Name: Silt Loam Texture: SIL silt loam
 % Sand: 16 % OM: 2.2 Soil Name: Herbert Silt Loam
 % Silt: 67 pH: 7.1 Fert. Level: G
 % Clay: 17 CEC: 14 Soil Drainage: G good

Application Description

	A	B
Application Date:	6/3/2010	6/16/2010
Time of Day:	AM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	1-3 LF	6-8 LF
Application Placement:	BROFOL	BROFOL
Applied By:	RD	RD
Air Temperature, Unit:	79.6 F	85.1 F
% Relative Humidity:	79.47	69.1
Wind Velocity, Unit:	2.50 MPH	4.95 MPH
Wind Direction:	E	E
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	81.0 F	84.6 F
Soil Moisture:	GOOD	GOOD
% Cloud Cover:	50	40
Next Rain Occurred On:	6/10/2010	6/17/2010

Crop Stage At Each Application

	A	B
BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH
Stage Majority, Percent:	1-3 LF	6-8 LF
BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH
Stage Majority, Percent:	1-3 LF	6-8 LF

Pest Stage At Each Application

	A	B
Stage Majority, Percent:	2-4"	2-4"
Stage Majority, Percent:	2-4"	2-4"
Stage Majority, Percent:	2-4"	2-4"

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-41310
Location: Rohwer, AR

Investigator: Darrin Dodds

Application Equipment		
	A	B
Appl. Equipment:	Multi-Boom	Multi-Boom
Operating Pressure, Unit:	55 PSI	55 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	CO2	CO2

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-41310
Location: Rohwer, AR

Investigator: Darrin Dodds

Pest Code	Pest Name	Part Rated	Rating Date	Rating Type	Rating Unit	Crop Stage Majority	Pest Stage Majority	Tri-Eval Interval	AMAPA Palmer amaranth		PLANT C	PLANT C	PLANT C	AMAPA Palmer amaranth		IPOSS Morning glory	ECHCG Common barnyar>
									PLANT P 6/14/2010 CONTROL	% 8-10 If 2-24*	11 DA-A	PLANT C 6/14/2010 PHYCHL	% 8-10 If	11 DA-A	PLANT C 6/14/2010 PHYNEC	% 8-10 If	11 DA-A	PLANT P 6/24/2010 CONTROL	% 10-12 If 6-36*	8 DA-B	PLANT P 6/24/2010 CONTROL	% 10-12 If 6-36*	8 DA-B
Tri Treatment No. Name	Rate	Unit	Other Rate	Other Rate	Unit	Growth Stage	Appl Code		1	2	3	4	5	6	7		
1 ROUNDUP POWERMAX ROUNDUP POWERMAX FM 9250 GTLL	0.75 0.75	lb ae/a lb ae/a	21.3 21.3	oz/a oz/a		1-3 LEAF A 6-8 LEAF B			100.0	0.0	0.0	0.0	100.0	97.5	95.0		
2 ROUNDUP POWERMAX ROUNDUP POWERMAX PHY 375 WRF	0.75 0.75	lb ae/a lb ae/a	21.3 21.3	oz/a oz/a		1-3 LEAF A 6-8 LEAF B			100.0	0.0	0.0	0.0	98.8	96.3	100.0		
3 IGNITE 280 IGNITE 280 FM 9250 GTLL	0.53 0.53	lb ai/a lb ai/a	29 29	oz/a oz/a		1-3 LEAF A 6-8 LEAF B			100.0	0.0	0.0	0.0	100.0	100.0	90.0		
4 IGNITE 280 IGNITE 280 PHY 375 WRF	0.53 0.53	lb ai/a lb ai/a	29 29	oz/a oz/a		1-3 LEAF A 6-8 LEAF B			100.0	0.0	0.0	0.0	100.0	100.0	96.7		
5 ROUNDUP POWERMAX DUAL MAGNUM ROUNDUP POWERMAX FM 9250 GTLL	0.75 1 0.75	lb ae/a lb ai/a lb ae/a	21.3 16.8 21.3	oz/a oz/a oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			99.5	0.0	0.0	0.0	95.0	97.5	85.0		
6 ROUNDUP POWERMAX DUAL MAGNUM ROUNDUP POWERMAX PHY 375 WRF	0.75 1 0.75	lb ae/a lb ai/a lb ae/a	21.3 16.8 21.3	oz/a oz/a oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			97.5	0.0	0.0	0.0	87.5	97.5	75.0		
7 IGNITE 280 DUAL MAGNUM IGNITE 280 FM 9250 GTLL	0.53 1 0.53	lb ai/a lb ai/a lb ai/a	29 16.8 29	oz/a oz/a oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			96.7	0.0	0.0	0.0	68.8	97.5	76.3		
8 IGNITE 280 DUAL MAGNUM IGNITE 280 PHY 375 WRF	0.53 1 0.53	lb ai/a lb ai/a lb ai/a	29 16.8 29	oz/a oz/a oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			95.0	0.0	0.0	0.0	97.5	100.0	77.5		
9 ROUNDUP POWERMAX ENVOKE ROUNDUP POWERMAX FM 9250 GTLL	0.75 0.007 0.75	lb ae/a lb ai/a lb ae/a	21.3 0.15 21.3	oz/a oz/a oz/a		1-3 LEAF A 6-8 LEAF B 6-8 LEAF B			98.8	0.0	0.0	0.0	95.0	100.0	83.8		
10 ROUNDUP POWERMAX ENVOKE ROUNDUP POWERMAX PHY 375 WRF	0.75 0.007 0.75	lb ae/a lb ai/a lb ae/a	21.3 0.15 21.3	oz/a oz/a oz/a		1-3 LEAF A 6-8 LEAF B 6-8 LEAF B			97.0	0.0	0.0	0.0	97.0	100.0	85.0		
11 IGNITE 280 ENVOKE IGNITE 280 FM 9250 GTLL	0.53 0.007 0.53	lb ai/a lb ai/a lb ai/a	29 0.15 29	oz/a oz/a oz/a		1-3 LEAF A 6-8 LEAF B 6-8 LEAF B			98.3	0.0	0.0	0.0	98.8	100.0	88.8		
12 IGNITE 280 ENVOKE IGNITE 280 PHY 375 WRF	0.53 0.007 0.53	lb ai/a lb ai/a lb ai/a	29 0.15 29	oz/a oz/a oz/a		1-3 LEAF A 6-8 LEAF B 6-8 LEAF B			99.0	0.0	0.0	0.0	100.0	100.0	93.8		
13 ROUNDUP POWERMAX MON63410 ROUNDUP POWERMAX FM 9250 GTLL	0.75 1.2 0.75	lb ae/a lb ai/a lb ae/a	21.3 51 21.3	oz/a oz/a oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			98.8	0.0	0.0	0.0	98.8	100.0	97.5		
14 ROUNDUP POWERMAX MON63410 ROUNDUP POWERMAX PHY 375 WRF	0.75 1.2 0.75	lb ae/a lb ai/a lb ae/a	21.3 51 21.3	oz/a oz/a oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			100.0	0.0	0.0	0.0	99.5	100.0	98.8		
15 IGNITE 280 MON63410 IGNITE 280 FM 9250 GTLL	0.53 1.2 0.53	lb ai/a lb ai/a lb ai/a	29 51 29	oz/a oz/a oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			88.8	0.0	0.0	0.0	93.8	100.0	95.0		
16 IGNITE 280 MON63410 IGNITE 280 PHY 375 WRF	0.53 1.2 0.53	lb ai/a lb ai/a lb ai/a	29 51 29	oz/a oz/a oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			88.8	0.0	0.0	0.0	87.5	100.0	92.5		
17 IGNITE 280 IGNITE 280 FM 9250 GTLL	0.53 0.79	lb ai/a lb ai/a	29 43	oz/a oz/a		1-3 LEAF A 6-8 LEAF B			100.0	0.0	0.0	0.0	100.0	100.0	100.0		
18 IGNITE 280 IGNITE 280 PHY 375 WRF	0.53 0.79	lb ai/a lb ai/a	29 43	oz/a oz/a		1-3 LEAF A 6-8 LEAF B			98.8	0.0	0.0	0.0	98.8	100.0	100.0		
19 IGNITE 280 IGNITE 280 FM 9250 GTLL	0.79 0.79	lb ai/a lb ai/a	43 43	oz/a oz/a		1-3 LEAF A 6-8 LEAF B			100.0	0.0	0.0	0.0	100.0	100.0	100.0		

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-41310
Location: Rohwer, AR

Investigator: Darrin Dodds

		AMAPA Palmer amaranth		PLANT C 6/14/2010 PHYCHL	PLANT C 6/14/2010 PHYNEC	PLANT C 6/14/2010 PHYSTU	AMAPA Palmer amaranth		IPOSS Morning glory	ECHCG Common barnyar>			
Pest Code		PLANT P	PLANT C	PLANT C	PLANT C	PLANT C	PLANT P	PLANT P	PLANT P	PLANT P			
Rating Date		6/14/2010	6/14/2010	6/14/2010	6/14/2010	6/14/2010	6/24/2010	6/24/2010	6/24/2010	6/24/2010			
Rating Type		CONTROL	PHYCHL	PHYNEC	PHYSTU	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL			
Rating Unit		%	%	%	%	%	%	%	%	%			
Crop Stage Majority		8-10 lf	8-10 lf	8-10 lf	8-10 lf	10-12 lf	10-12 lf	10-12 lf	10-12 lf	10-12 lf			
Pest Stage Majority		2-24*	2-24*	2-24*	2-24*	6-36*	6-36*	6-36*	6-36*	6-36*			
Trt-Eval Interval		11 DA-A	11 DA-A	11 DA-A	11 DA-A	8 DA-B	8 DA-B	8 DA-B	8 DA-B	8 DA-B			
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4	5	6	7
20	IGNITE 280	0.79 lb ai/a	43 oz/a	43 oz/a	1-3 LEAF A		100.0	0.0	0.0	0.0	100.0	100.0	100.0
	IGNITE 280	0.79 lb ai/a	43 oz/a	43 oz/a	6-8 LEAF B								
	PHY 375 WRF												
	LSD (P=.05)	9.41	0.00	0.00	0.00	0.00	16.38	3.86	14.25				
	Standard Deviation	6.65	0.00	0.00	0.00	0.00	11.58	2.73	10.07				
	CV	6.8	0.0	0.0	0.0	0.0	12.08	2.75	11.01				
	Bartlett's X2	57.95	0.0	0.0	0.0	0.0	79.054	0.891	19.223				
	P(Bartlett's X2)	0.001*	.	.	.	.	0.001*	0.926	0.157				
	Replicate F	0.366	0.000	0.000	0.000	0.000	0.906	1.940	0.671				
	Replicate Prob(F)	0.7778	1.0000	1.0000	1.0000	1.0000	0.4440	0.1333	0.5734				
	Treatment F	1.045	0.000	0.000	0.000	0.000	1.650	0.835	2.826				
	Treatment Prob(F)	0.4295	1.0000	1.0000	1.0000	1.0000	0.0747	0.6578	0.0014				

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean separations are based on the complete error term.
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-41310
Location: Rohwer, AR

Investigator: Darrin Dodds

Pest Code	Pest Name	PLANT C 6/24/2010 PHYCHL %	PLANT C 6/24/2010 PHYNEC %	PLANT C 6/24/2010 PHYSTU %	PLANT C 7/12/2010 PHYCHL %	PLANT C 7/12/2010 PHYNEC %	PLANT C 7/12/2010 PHYSTU %	PLAEME C 7/23/2010 HEIGHT cm
Rating Date	Rating Type	10-12 If	10-12 If	10-12 If	9 NAWF	9 NAWF	9 NAWF	5-6 NAWF
Rating Unit	Crop Stage Majority	8 DA-B	8 DA-B	8 DA-B	26 DA-B	26 DA-B	26 DA-B	37 DA-B
Pest Stage Majority	Tri-Eval Interval							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Stage	Appl Code	
1	ROUNDUP POWERMAX ROUNDUP POWERMAX FM 9250 GTLL	0.75 lb ae/a 0.75 lb ae/a	21.3 oz/a 21.3 oz/a		1-3 LEAF A 6-8 LEAF B			0.0 0.0 0.0 0.0 2.5 103.9
2	ROUNDUP POWERMAX ROUNDUP POWERMAX PHY 375 WRF	0.75 lb ae/a 0.75 lb ae/a	21.3 oz/a 21.3 oz/a		1-3 LEAF A 6-8 LEAF B			0.0 0.0 1.3 0.0 0.0 6.3 110.0
3	IGNITE 280 IGNITE 280 FM 9250 GTLL	0.53 lb ai/a 0.53 lb ai/a	29 oz/a 29 oz/a		1-3 LEAF A 6-8 LEAF B			0.0 0.0 0.0 0.0 0.0 7.5 101.0
4	IGNITE 280 IGNITE 280 PHY 375 WRF	0.53 lb ai/a 0.53 lb ai/a	29 oz/a 29 oz/a		1-3 LEAF A 6-8 LEAF B			0.0 0.0 6.3 0.0 0.0 16.3 106.9
5	ROUNDUP POWERMAX DUAL MAGNUM ROUNDUP POWERMAX FM 9250 GTLL	0.75 lb ae/a 1 lb ai/a 0.75 lb ae/a	21.3 oz/a 16.8 oz/a 21.3 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			0.0 0.0 0.0 0.0 0.0 16.3 95.0
6	ROUNDUP POWERMAX DUAL MAGNUM ROUNDUP POWERMAX PHY 375 WRF	0.75 lb ae/a 1 lb ai/a 0.75 lb ae/a	21.3 oz/a 16.8 oz/a 21.3 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			0.0 0.0 15.0 0.0 0.0 20.0 102.5
7	IGNITE 280 DUAL MAGNUM IGNITE 280 FM 9250 GTLL	0.53 lb ai/a 1 lb ai/a 0.53 lb ai/a	29 oz/a 16.8 oz/a 29 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			0.0 0.0 18.8 0.0 0.0 21.3 94.6
8	IGNITE 280 DUAL MAGNUM IGNITE 280 PHY 375 WRF	0.53 lb ai/a 1 lb ai/a 0.53 lb ai/a	29 oz/a 16.8 oz/a 29 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			0.0 0.0 0.0 0.0 0.0 18.8 103.2
9	ROUNDUP POWERMAX ENVOKE ROUNDUP POWERMAX FM 9250 GTLL	0.75 lb ae/a 0.007 lb ai/a 0.75 lb ae/a	21.3 oz/a 0.15 oz/a 21.3 oz/a		1-3 LEAF A 6-8 LEAF B 6-8 LEAF B			0.0 0.0 3.8 0.0 0.0 12.5 93.2
10	ROUNDUP POWERMAX ENVOKE ROUNDUP POWERMAX PHY 375 WRF	0.75 lb ae/a 0.007 lb ai/a 0.75 lb ae/a	21.3 oz/a 0.15 oz/a 21.3 oz/a		1-3 LEAF A 6-8 LEAF B 6-8 LEAF B			0.0 0.0 5.0 0.0 0.0 6.3 106.5
11	IGNITE 280 ENVOKE IGNITE 280 FM 9250 GTLL	0.53 lb ai/a 0.007 lb ai/a 0.53 lb ai/a	29 oz/a 0.15 oz/a 29 oz/a		1-3 LEAF A 6-8 LEAF B 6-8 LEAF B			0.0 0.0 0.0 0.0 0.0 0.0 101.7
12	IGNITE 280 ENVOKE IGNITE 280 PHY 375 WRF	0.53 lb ai/a 0.007 lb ai/a 0.53 lb ai/a	29 oz/a 0.15 oz/a 29 oz/a		1-3 LEAF A 6-8 LEAF B 6-8 LEAF B			0.0 0.0 12.5 0.0 0.0 7.5 107.8
13	ROUNDUP POWERMAX MON63410 ROUNDUP POWERMAX FM 9250 GTLL	0.75 lb ae/a 1.2 lb ai/a 0.75 lb ae/a	21.3 oz/a 51 oz/a 21.3 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			0.0 0.0 0.0 0.0 0.0 13.8 97.5
14	ROUNDUP POWERMAX MON63410 ROUNDUP POWERMAX PHY 375 WRF	0.75 lb ae/a 1.2 lb ai/a 0.75 lb ae/a	21.3 oz/a 51 oz/a 21.3 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			0.0 0.0 5.0 0.0 0.0 11.3 107.7
15	IGNITE 280 MON63410 IGNITE 280 FM 9250 GTLL	0.53 lb ai/a 1.2 lb ai/a 0.53 lb ai/a	29 oz/a 51 oz/a 29 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			0.0 0.0 0.0 0.0 0.0 10.0 102.0
16	IGNITE 280 MON63410 IGNITE 280 PHY 375 WRF	0.53 lb ai/a 1.2 lb ai/a 0.53 lb ai/a	29 oz/a 51 oz/a 29 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			0.0 0.0 3.8 0.0 0.0 5.0 111.0
17	IGNITE 280 IGNITE 280 FM 9250 GTLL	0.53 lb ai/a 0.79 lb ai/a	29 oz/a 43 oz/a		1-3 LEAF A 6-8 LEAF B			0.0 0.0 0.0 0.0 0.0 3.8 105.1
18	IGNITE 280 IGNITE 280 PHY 375 WRF	0.53 lb ai/a 0.79 lb ai/a	29 oz/a 43 oz/a		1-3 LEAF A 6-8 LEAF B			0.0 0.0 8.8 0.0 0.0 0.0 112.2
19	IGNITE 280 IGNITE 280 FM 9250 GTLL	0.79 lb ai/a 0.79 lb ai/a	43 oz/a 43 oz/a		1-3 LEAF A 6-8 LEAF B			0.0 0.0 0.0 0.0 0.0 0.0 103.1

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-41310
 Location: Rohwer, AR

Investigator: Darrin Dodds

Pest Code							PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLAEME C	
Pest Name							6/24/2010	6/24/2010	6/24/2010	7/12/2010	7/12/2010	7/12/2010	7/23/2010	
Part Rated							PHYCHL	PHYNEC	PHYSTU	PHYCHL	PHYNEC	PHYSTU	HEIGHT	
Rating Date							%	%	%	%	%	%	cm	
Rating Type							10-12 lf	10-12 lf	10-12 lf	9 NAWF	9 NAWF	9 NAWF	5-6 NAWF	
Rating Unit							8 DA-B	8 DA-B	8 DA-B	26 DA-B	26 DA-B	26 DA-B	37 DA-B	
Crop Stage Majority														
Pest Stage Majority														
Tri-Eval Interval														
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate	Growth Unit	Appl Code							
20	IGNITE 280	0.79	lb ai/a	43	oz/a	1-3 LEAF A		8	9	10	11	12	13	14
	IGNITE 280	0.79	lb ai/a	43	oz/a	6-8 LEAF B								
	PHY 375 WRF													
	LSD (P=.05)							0.00	0.00	18.60	0.00	0.00	14.51	12.39
	Standard Deviation							0.00	0.00	13.15	0.00	0.00	10.26	8.76
	CV							0.0	0.0	228.74	0.0	0.0	112.47	8.44
	Bartlett's X2							0.0	0.0	28.116	0.0	0.0	13.244	15.097
	P(Bartlett's X2)							.	.	0.003*	.	.	0.655	0.716
	Replicate F							0.000	0.000	1.016	0.000	0.000	6.594	11.509
	Replicate Prob(F)							1.0000	1.0000	0.3922	1.0000	1.0000	0.0007	0.0001
	Treatment F							0.000	0.000	1.207	0.000	0.000	1.775	1.637
	Treatment Prob(F)							1.0000	1.0000	0.2846	1.0000	1.0000	0.0496	0.0780

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-41310
Location: Rohwer, AR

Investigator: Darrin Dodds

Pest CodeAMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US
ECHCG, Echinochloa crus-galli, = USPart RatedPLANT = plant
PLAEME = plant - emerged
P = Pest is Part Rated
C = Crop is Part RatedRating TypePHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting
HEIGHT = heightRating Unit% = percent
cm = centimeter

University of Arkansas-Division of Agriculture

Evaluate PhytoGen 375 WRF Cotton for Tolerance to Ignite and Ignite Tankmixes.

Trial ID: HCT-41410
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
 Variety: PhytoGen 375 WRF
 BBCH Scale: BCOT
 Planting Method: BEDDED bedded
 Depth, Unit: 1 IN
 Row Spacing, Unit: 38 IN
 Seed Bed: CRUSTE crusted
 Planting Date: 5/5/2010
 Rate, Unit: 3.5 S/ROWFT
 Spacing Within Row, Unit: 3.42 IN
 Soil Temperature, Unit: 68 F
 Emergence Date: 5/13/2010

Crop 2: GOSHI Gossypium hirsutum American upland cotton
 Variety: Delta Pine 0949 B2RF
 BBCH Scale: BCOT
 Planting Method: BEDDED bedded
 Depth, Unit: 1 IN
 Row Spacing, Unit: 38 IN
 Seed Bed: CRUSTE crusted
 Planting Date: 5/5/2010
 Rate, Unit: 3.5 S/ROWFT
 Spacing Within Row, Unit: 3.42 IN
 Soil Temperature, Unit: 68 F
 Emergence Date: 5/13/2010

Harvested Width, Unit: 6.33 FT Harvested Length, Unit: 28 FT

Pest Description

Pest 1 Type: W Code: AMAPA Amaranthus palmeri
 Common Name: Palmer amaranth

Site and Design

Plot Width, Unit: 12.66 FT
 Plot Length, Unit: 28 FT
 Plot Area, Unit: 354.48 FT²
 Replications: 4
 Study Design: RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Silt Loam
 % Sand: 16 % OM: 2.2 Texture: SIL silt loam
 % Silt: 67 pH: 7.1 Soil Name: Herbert Silt Loam
 % Clay: 17 CEC: 14 Fert. Level: G
 Soil Drainage: G good

Application Description

	A	B	C	D	E	F
Application Date:	5/6/2010	5/25/2010	6/3/2010	6/9/2010	6/16/2010	6/25/2010
Time of Day:	AM	AM	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	1 LF	3 LF	6 LF	8 LF	12 LF
Application Placement:	BROSOL	BROFOL	BROFOL	BROFOL	BRODIR	BRODIR
Applied By:	RD	RD	RD	RD	RD	RD
Air Temperature, Unit:	65.8 F	80.8 F	79.6 F	83.6 F	85.1 F	83.3 F
% Relative Humidity:	68.9	66.57	79.47	69.37	69.1	46.4
Wind Velocity, Unit:	4.2 MPH	1.95 MPH	2.50 MPH	1.15 MPH	4.95 MPH	2.45 MPH
Wind Direction:	ESE	SSW	E	E	ESE	SE
Dew Presence (Y/N):	N no	N no	N no	N no	N no	N no
Soil Temperature, Unit:	68.4 F	78.9 F	81.0 F	83.1 F	84.6 F	85.5 F
Soil Moisture:	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR
% Cloud Cover:	50	40	60	45	40	45
Next Rain Occurred On:	5/10/2010	5/26/2010	6/10/2010	6/10/2010	6/17/2010	6/29/2010

Crop Stage At Each Application

	A	B	C	D	E	F
BCOT	BCOT	BCOT	BCOT	BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH	BBCH	BBCH	BBCH	BBCH
Stage Majority, Percent:	PRE	1 LF	3 LF	6 LF	8 LF	12 LF
BCOT	BCOT	BCOT	BCOT	BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH	BBCH	BBCH	BBCH	BBCH
Stage Majority, Percent:	2-6"	2-6"	2-6"	2-6"	2-6"	2-6"

Pest Stage At Each Application

	A	B	C	D	E	F
Stage Majority, Percent:	PRE	2-4"	2-4"	2-4"	2-4"	2-4"

University of Arkansas-Division of Agriculture

Evaluate PhytoGen 375 WRF Cotton for Tolerance to Ignite and Ignite Tankmixes.

Trial ID: HCT-41410
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	Pest Name	PLANT C 6/14/2010 PHYCHL %	PLANT C 6/14/2010 PHYNEC %	PLANT C 6/14/2010 PHYSTU %	AMAPA Palmer amaranth PLANT P 6/24/2010 CONTROL %	PLANT C 6/24/2010 PHYCHL %	PLANT C 6/24/2010 PHYNEC %	PLANT C 6/24/2010 PHYSTU %	PLANT C 7/12/2010 PHYSTU %					
Rating Date	Rating Type	8-10 If	8-10 If	8-10 If	10-12 If 6-36"	10-12 If	10-12 If	10-12 If	9 NAWF					
Rating Unit	Tri-Eval Interval	5 DA-D	5 DA-D	5 DA-D	8 DA-E	8 DA-E	8 DA-E	8 DA-E	17 DA-F					
Trt No.	Treatment Name	Rate Rate Unit	Other Rate Unit	Other Rate Unit	Appl Unit	Appl Description	1	2	3	4	5	6	7	8
1	Phy 375 WRF Weed Free Cotoran Roundup PowerMax Dual Magnum Suprend NIS MSMA Valor	1 lb ai/a 0.77 lb ae/a 0.95 lb ai/a 1.25 lb ai/a 0.25 % v/v 2 lb ai/a 0.064 lb ai/a	32 oz/a 22 oz/a 16 oz/a 25 oz/a 0.25 % v/v 42.7 oz/a 2 oz/a		A C C E E F F	PRE 3 lf cotton 3 lf cotton 8 lf cotton 8 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
2	FM 1773 LL Weed Free Cotoran Ignite 280 Dual Magnum Suprend NIS MSMA Valor	1 lb ai/a 0.53 lb ai/a 0.95 lb ai/a 1.25 lb ai/a 0.25 % v/v 2 lb ai/a 0.064 lb ai/a	32 oz/a 29 oz/a 16 oz/a 25 oz/a 0.25 % v/v 42.7 oz/a 2 oz/a		A C C E E F F	PRE 3 lf cotton 3 lf cotton 8 lf cotton 8 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	6.3	100.0	0.0	0.0	0.0	3.8
3	Phy 375 WRF Cotoran Roundup PowerMax Suprend MSMA Valor	1 lb ai/a 0.77 lb ae/a 1.25 lb ai/a 2 lb ai/a 0.064 lb ai/a	32 oz/a 22 oz/a 25 oz/a 42.7 oz/a 2 oz/a		A B E F F	PRE 1 lf cotton 8 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
4	Phy 375 WRF Cotoran Ignite 280 Suprend MSMA Valor	1 lb ai/a 0.53 lb ai/a 1.25 lb ai/a 2 lb ai/a 0.064 lb ai/a	32 oz/a 29 oz/a 25 oz/a 42.7 oz/a 2 oz/a		A B E F F	PRE 1 lf cotton 8 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
5	FM 1773 LL Cotoran Ignite 280 Suprend NIS MSMA Valor	1 lb ai/a 0.53 lb ai/a 1.25 lb ai/a 0.25 % v/v 2 lb ai/a 0.064 lb ai/a	32 oz/a 29 oz/a 25 oz/a 0.25 % v/v 42.7 oz/a 2 oz/a		A B E E F F	PRE 1 lf cotton 8 lf cotton 8 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	12.5	100.0	0.0	0.0	0.0	0.0
6	Phy 375 WRF Cotoran Roundup PowerMax Suprend NIS MSMA Valor	1 lb ai/a 0.77 lb ae/a 1.25 lb ai/a 0.25 % v/v 2 lb ai/a 0.064 lb ai/a	32 oz/a 22 oz/a 25 oz/a 0.25 % v/v 42.7 oz/a 2 oz/a		A C E E F F	PRE 3 lf cotton 8 lf cotton 8 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
7	Phy 375 WRF Cotoran Ignite 280 Suprend NIS MSMA Valor	1 lb ai/a 0.53 lb ai/a 1.25 lb ai/a 0.25 % v/v 2 lb ai/a 0.064 lb ai/a	32 oz/a 29 oz/a 25 oz/a 0.25 % v/v 42.7 oz/a 2 oz/a		A C E E F F	PRE 3 lf cotton 8 lf cotton 8 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
8	FM 1773 LL Cotoran Ignite 280 Suprend NIS MSMA Valor	1 lb ai/a 0.53 lb ai/a 1.25 lb ai/a 0.25 % v/v 2 lb ai/a 0.064 lb ai/a	32 oz/a 29 oz/a 25 oz/a 0.25 % v/v 42.7 oz/a 2 oz/a		A C E E F F	PRE 3 lf cotton 8 lf cotton 8 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
9	Phy 375 WRF Cotoran Roundup PowerMax Suprend NIS MSMA Valor	1 lb ai/a 0.77 lb ae/a 1.25 lb ai/a 0.25 % v/v 2 lb ai/a 0.064 lb ai/a	32 oz/a 22 oz/a 25 oz/a 0.25 % v/v 42.7 oz/a 2 oz/a		A C E E F F	PRE 3 lf cotton 8 lf cotton 8 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
10	Phy 375 WRF Cotoran Ignite 280 Suprend NIS MSMA Valor	1 lb ai/a 0.53 lb ai/a 1.25 lb ai/a 0.25 % v/v 2 lb ai/a 0.064 lb ai/a	32 oz/a 29 oz/a 25 oz/a 0.25 % v/v 42.7 oz/a 2 oz/a		A C E E F F	PRE 3 lf cotton 8 lf cotton 8 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
11	FM 1773 LL Cotoran Ignite 280 Suprend NIS MSMA Valor	1 lb ai/a 0.53 lb ai/a 1.25 lb ai/a 0.25 % v/v 2 lb ai/a 0.064 lb ai/a	32 oz/a 29 oz/a 25 oz/a 0.25 % v/v 42.7 oz/a 2 oz/a		A C E E F F	PRE 3 lf cotton 8 lf cotton 8 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0

University of Arkansas-Division of Agriculture

Evaluate PhytoGen 375 WRF Cotton for Tolerance to Ignite and Ignite Tankmixes.

Trial ID: HCT-41410
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code Pest Name Part Rated Rating Date Rating Type Rating Unit Crop Stage Majority Pest Stage Majority Tri-Eval Interval	PLANT C 6/14/2010 PHYCHL %	PLANT C 6/14/2010 PHYNEC %	PLANT C 6/14/2010 PHYSTU %	AMAPA Palmer amaranth PLANT P 6/24/2010 CONTROL %	PLANT C 6/24/2010 PHYCHL %	PLANT C 6/24/2010 PHYNEC %	PLANT C 6/24/2010 PHYSTU %	PLANT C 7/12/2010 PHYSTU %						
									8-10 If	8-10 If	8-10 If	10-12 If 6-36"	10-12 If	10-12 If	10-12 If	9 NAWF
Tri- Eval Interval	5 DA-D	5 DA-D	5 DA-D	8 DA-E	8 DA-E	8 DA-E	8 DA-E	17 DA-F						
Trt Treatment No. Name	Rate Unit	Other Rate	Other Rate	Unit	Appl Code	Appl Description	1	2	3	4	5	6	7	8
24 Phy 375 WRF Cotoran Roundup PowerMax Dual Magnum MSMA Valor	1 lb ai/a 0.77 lb ae/a 0.95 lb ai/a 2 lb ai/a 0.064 lb ai/a	32 oz/a 22 oz/a 16 oz/a 42.7 oz/a 2 oz/a			A D D F F	PRE 6 lf cotton 6 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
25 Phy 375 WRF Cotoran Ignite 280 Dual Magnum MSMA Valor	1 lb ai/a 0.53 lb ai/a 0.95 lb ai/a 2 lb ai/a 0.064 lb ai/a	32 oz/a 29 oz/a 16 oz/a 42.7 oz/a 2 oz/a			A D D F F	PRE 6 lf cotton 6 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	8.8	0.0	100.0	0.0	0.0	0.0	0.0
26 FM 1773 LL Cotoran Ignite 280 Dual Magnum MSMA Valor	1 lb ai/a 0.53 lb ai/a 0.95 lb ai/a 2 lb ai/a 0.064 lb ai/a	32 oz/a 29 oz/a 16 oz/a 42.7 oz/a 2 oz/a			A D D F F	PRE 6 lf cotton 6 lf cotton 12 lf cotton Layby 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
27 Phy 375 WRF Cotoran Roundup PowerMax Dual Magnum Roundup PowerMax Roundup PowerMax	1 lb ai/a 0.77 lb ae/a 0.95 lb ai/a 0.77 lb ae/a 0.77 lb ae/a	32 oz/a 22 oz/a 16 oz/a 22 oz/a 22 oz/a			A C C D F	PRE 3 lf cotton 3 lf cotton 6 lf cotton 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
28 Phy 375 WRF Cotoran Roundup PowerMax Dual Magnum Ignite 280 Ignite 280	1 lb ai/a 0.77 lb ae/a 0.95 lb ai/a 0.53 lb ai/a 0.53 lb ai/a	32 oz/a 22 oz/a 16 oz/a 29 oz/a 29 oz/a			A C C D F	PRE 3 lf cotton 3 lf cotton 6 lf cotton 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
29 FM 1773 LL Cotoran Ignite 280 Dual Magnum Ignite 280 Ignite 280	1 lb ai/a 0.53 lb ai/a 0.95 lb ai/a 0.53 lb ai/a 0.53 lb ai/a	32 oz/a 29 oz/a 16 oz/a 29 oz/a 29 oz/a			A C C D F	PRE 3 lf cotton 3 lf cotton 6 lf cotton 12 lf cotton Layby	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
LSD (P=.05)	0.00	3.96	7.66				0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.07
Standard Deviation	0.00	2.80	5.41				0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.17
CV	0.0	202.81	433.19				0.0	0.0	0.0	0.0	0.0	0.0	0.0	630.44
Bartlett's X2	0.0	2.106	3.43				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.584
P(Bartlett's X2)	.	0.349	0.18				.	.	.	.	.	.	.	0.747
Replicate F	0.000	0.220	1.203				0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.094
Replicate Prob(F)	1.0000	0.8820	0.3138				1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.3561
Treatment F	0.000	12.171	2.223				0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.935
Treatment Prob(F)	1.0000	0.0001	0.0027				1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.5653

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluate PhytoGen 375 WRF Cotton for Tolerance to Ignite and Ignite Tankmixes.

Trial ID: HCT-41410
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		PLANT C		PLANT C				
Pest Name		10/4/2010		10/4/2010				
Part Rated		WEIGHT		YIELD				
Rating Date		lb/plot		lb/ac				
Rating Type		Harvest		Harvest				
Rating Unit		101 DA-F		101 DA-F				
Crop Stage Majority								
Pest Stage Majority								
Tri-Eval Interval								
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Code	Appl Description	9	10
1	Phy 375 WRF						11.6275017	2857.67
	Weed Free							
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
2	FM 1773 LL						12.0400012	2959.05
	Weed Free							
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
3	Phy 375 WRF						13.5325016	3325.86
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	1 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
4	Phy 375 WRF						13.0425008	3205.43
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		B	1 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
5	FM 1773 LL						12.5375016	3081.32
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		B	1 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
6	Phy 375 WRF						15.6225010	3839.52
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
7	Phy 375 WRF						15.3925015	3782.99
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
8	FM 1773 LL						15.0225015	3692.06
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
9	Phy 375 WRF						15.6025015	3834.60
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
10	Phy 375 WRF						15.9375016	3916.93
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
11	FM 1773 LL						15.4700018	3802.04
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		

University of Arkansas-Division of Agriculture

Evaluate PhytoGen 375 WRF Cotton for Tolerance to Ignite and Ignite Tankmixes.

Trial ID: HCT-41410
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		PLANT C		PLANT C				
Pest Name		10/4/2010		10/4/2010				
Part Rated		WEIGHT		YIELD				
Rating Date		lb/plot		lb/ac				
Rating Type		Harvest		Harvest				
Rating Unit		101 DA-F		101 DA-F				
Crop Stage Majority								
Pest Stage Majority								
Tri-Eval Interval								
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Code	Appl Description	9	10
12	Phy 375 WRF						16.6425016	4090.20
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
13	Phy 375 WRF						16.1100022	3959.33
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		D	6 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
14	FM 1773 LL						16.5625017	4070.54
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		D	6 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
15	Phy 375 WRF						15.8500020	3895.43
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		F	12 lf cotton Layby		
16	Phy 375 WRF						16.2425019	3991.89
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		F	12 lf cotton Layby		
17	FM 1773 LL						15.6000019	3833.99
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		F	12 lf cotton Layby		
18	Phy 375 WRF						14.7800012	3632.46
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	3 lf cotton		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
19	Phy 375 WRF						14.2000012	3489.91
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		C	3 lf cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		D	6 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
20	FM 1773 LL						14.8775020	3656.42
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		C	3 lf cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		D	6 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
21	Phy 375 WRF						14.7700019	3630.00
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
22	Phy 375 WRF						13.5100016	3320.33
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
23	FM 1773 LL						14.2425008	3500.36
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Suprend	1.25 lb ai/a	25 oz/a		E	8 lf cotton		
	NIS	0.25 % v/v	0.25 % v/v		E	8 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		

University of Arkansas-Division of Agriculture

Evaluate PhytoGen 375 WRF Cotton for Tolerance to Ignite and Ignite Tankmixes.

Trial ID: HCT-41410
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		PLANT C		PLANT C				
Pest Name		10/4/2010		10/4/2010				
Part Rated		WEIGHT		YIELD				
Rating Date		lb/plot		lb/ac				
Rating Type		Harvest		Harvest				
Rating Unit		101 DA-F		101 DA-F				
Crop Stage Majority								
Pest Stage Majority								
Tri-Eval Interval								
Trt No.	Treatment Name	Rate	Other Rate	Other Rate Unit	Appl Code	Appl Description	9	10
24	Phy 375 WRF						15.1375023	3720.32
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
25	Phy 375 WRF						13.5725016	3335.69
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		D	6 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
26	FM 1773 LL						12.6900018	3118.80
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		D	6 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton		
	MSMA	2 lb ai/a	42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby		
27	Phy 375 WRF						13.4675011	3309.89
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		F	12 lf cotton Layby		
28	Phy 375 WRF						13.6975016	3366.41
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		D	6 lf cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		F	12 lf cotton Layby		
29	FM 1773 LL						13.6250014	3348.59
	Cotoran	1 lb ai/a	32 oz/a		A	PRE		
	Ignite 280	0.53 lb ai/a	29 oz/a		C	3 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	3 lf cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		D	6 lf cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		F	12 lf cotton Layby		
LSD (P=.05)						1.71132737		420.608
Standard Deviation						1.21009124		297.414
CV						8.33		8.33
Bartlett's X2						40.36		40.36
P(Bartlett's X2)						0.061		0.061
Replicate F						1.406		1.404
Replicate Prob(F)						0.2466		0.2474
Treatment F						5.238		5.238
Treatment Prob(F)						0.0001		0.0001

University of Arkansas-Division of Agriculture

Evaluate Phytogen 375 WRF Cotton for Tolerance to Ignite and Ignite Tankmixes.

Trial ID: HCT-41410
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US

Part Rated

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

PHYCHL = phytotoxicity - chlorosis

PHYNEC = phytotoxicity - necrosis /burn

PHYSTU = phytotoxicity - stunting

WEIGHT = weight

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

lb/ac = pounds per acre

ARM Action Codes

TY1 = 245.7684*9

University of Arkansas-Division of Agriculture

Evaluate Sequential applications of Ignite and Roundup in Residual Herbicide Programs

Trial ID: HCT-41510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Fiber Max 9250 GTLL B2
BBCH Scale: BCOT **Planting Date:** 5/11/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN **Spacing Within Row, Unit:** 3.42 IN
Seed Bed: CRUSTE crusted **Soil Temperature, Unit:** 68 F
Emergence Date: 5/17/2010

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory

Pest 3 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 29 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G
Soil Drainage: G good

Application Description

	A	B	C	D	E	F
Application Date:	5/13/2010	5/25/2010	6/3/2010	6/9/2010	6/16/2010	6/25/2010
Time of Day:	AM	AM	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	2-LF	4 LF	5 LF	8 LF	12 LF
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL	BROFOL	BRODIR
Applied By:	RD	RD	RD	RD	RD	RD
Air Temperature, Unit:	78.3 F	80.8 F	79.6 F	83.6 F	85.1 F	83.3 F
% Relative Humidity:	78.55	66.57	79.47	69.37	69.1	46.4
Wind Velocity, Unit:	3.85 MPH	1.95 MPH	2.50 MPH	1.15 MPH	4.95 MPH	2.45 MPH
Wind Direction:	ENE	SSW	E	E	ESE	E
Dew Presence (Y/N):	N no	N no	N no	N no	N no	N no
Soil Temperature, Unit:	75.5 F	78.9 F	81.0 F	83.1 F	84.6 F	85.5 F
Soil Moisture:	FAIR	GOOD	FAIR	FAIR	FAIR	FAIR
% Cloud Cover:	40	50	60	45	40	45
Next Rain Occurred On:	5/16/2010	5/26/2010	6/10/2010	6/10/2010	6/17/2010	6/29/2010

Crop Stage At Each Application

	A	B	C	D	E	F
BCOT	BCOT	BCOT	BCOT	BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH	BBCH	BBCH	BBCH	BBCH
Stage Majority, Percent:	PRE	2 LF	4 LF	5 LF	8 LF	12 LF

Pest Stage At Each Application

	A	B	C	D	E	F
Stage Majority, Percent:	PRE	1-4"	1-4"	2-6"	2-6"	2-4"
Stage Majority, Percent:	PRE	1-4"	1-4"	2-6"	2-6"	2-4"
Stage Majority, Percent:	PRE	1-4"	1-4"	2-6"	2-6"	2-4"

Application Equipment

	A	B	C	D	E	F
Appl. Equipment:	Multi-Boom	Multi-Boom	Multi-Boom	Multi-Boom	Multi-Boom	HoodSpray
Operating Pressure, Unit:	55 PSI	55 PSI	55 PSI	55 PSI	55 PSI	35 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	Air-Mix	Air-Mix	TeeJet
Nozzle Size:	110015	110015	110015	110015	110015	
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	19 IN	19 IN	38 IN
Nozzles/Row:	2	2	2	2	2	3
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN	18 IN	4 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA	12 GPA	12 GPA	15 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	3 Liters	3 Liters	2 Gallons
Propellant:	CO2	CO2	CO2	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Evaluate Sequential applications of Ignite and Roundup in Residual Herbicide Programs

Trial ID: HCT-41510
Location: Rohwer, AR

Investigator: Kenneth Smith

University of Arkansas-Division of Agriculture

Evaluate Sequential applications of Ignite and Roundup in Residual Herbicide Programs

Trial ID: HCT-41510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		AMAPA		IPOSS	
Pest Name		Palmer amaranth		Morning glory		Common barnyard		Palmer amaranth		Morning glory	
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P	
Rating Date		6/3/2010		6/3/2010		6/3/2010		6/14/2010		6/14/2010	
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL	
Rating Unit		%		%		%		%		%	
Crop Stage Majority		4-5 lf		4-5 lf		4-5 lf		8-10 lf		8-10 lf	
Pest Stage Majority		2-18"		2-18"		2-18"		2-36"		2-36"	
Trt-Eval Interval		9 DA-B		9 DA-B		9 DA-B		5 DA-D		5 DA-D	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	1	2	3	4	5
1	UTC						0.0	0.0	0.0	0.0	0.0
2	Cotoran	1 lb ai/a	32 oz/a		A	PRE	97.5	100.0	100.0	97.8	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	2 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		D	5 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
3	Cotoran	1 lb ai/a	32 oz/a		A	PRE	94.0	100.0	94.5	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
4	Cotoran	1 lb ai/a	32 oz/a		A	PRE	97.5	97.5	96.3	97.3	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	2 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
5	Cotoran	1 lb ai/a	32 oz/a		A	PRE	96.3	100.0	91.3	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
6	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		B	2 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		D	5 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
7	Cotoran	1 lb ai/a	32 oz/a		A	PRE	95.3	95.0	97.0	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		C	4 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
8	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		B	2 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
9	Cotoran	1 lb ai/a	32 oz/a		A	PRE	89.5	98.8	97.5	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
10	Cotoran	1 lb ai/a	32 oz/a		A	PRE	95.8	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	2 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		D	5 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
11	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		B	2 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		D	5 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
LSD (P=.05)							5.86	2.53	3.36	1.15	0.00
Standard Deviation							4.06	1.75	2.33	0.79	0.00
CV							4.62	1.94	2.62	0.88	0.0
Bartlett's X2							13.947	0.771	2.49	0.294	0.0
P(Bartlett's X2)							0.03*	0.68	0.646	0.588	.
Replicate F							1.027	0.185	0.050	0.288	0.000
Replicate Prob(F)							0.3945	0.9056	0.9848	0.8338	1.0000
Treatment F							208.108	1167.815	645.399	5704.396	0.000
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluate Sequential applications of Ignite and Roundup in Residual Herbicide Programs

Trial ID: HCT-41510
Location: Rohwer, AR

Investigator: Kenneth Smith

		ECHCG Common barnyar>		AMAPA Palmer amaranth		IPOSS Morning glory		ECHCG Common barnyar>		AMAPA Palmer amaranth	
		PLANT P 6/14/2010		PLANT P 6/24/2010		PLANT P 6/24/2010		PLANT P 6/24/2010		PLANT P 7/12/2010	
		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL	
		%		%		%		%		%	
		8-10 If		10 If		10 If		10 If		9 NAWF	
		2-36"		2-36"		2-36"		2-36"		6-60"	
		5 DA-D		8 DA-E		8 DA-E		8 DA-E		17 DA-F	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	6	7	8	9	10
1	UTC						0.0	0.0	0.0	0.0	0.0
2	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	2 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		D	5 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
3	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
4	Cotoran	1 lb ai/a	32 oz/a		A	PRE	99.5	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	2 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
5	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
6	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	99.5	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		B	2 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		D	5 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
7	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		C	4 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
8	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		B	2 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
9	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
10	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	2 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		D	5 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
11	Cotoran	1 lb ai/a	32 oz/a		A	PRE	100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		B	2 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		D	5 lf cotton					
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		E	8 lf cotton					
	MSMA	2.0 lb ai/a	42.7 oz/a		F	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		F	12 lf cotton Layby					
LSD (P=.05)							0.44	0.44	0.00	0.00	0.00
Standard Deviation							0.30	0.30	0.00	0.00	0.00
CV							0.33	0.33	0.0	0.0	0.0
Bartlett's X2							0.0	0.0	0.0	0.0	0.0
P(Bartlett's X2)							.	.	.	.	.
Replicate F							1.000	1.000	0.000	0.000	0.000
Replicate Prob(F)							0.4064	0.4064	1.0000	1.0000	1.0000
Treatment F							39961.004	39961.004	0.000	0.000	0.000
Treatment Prob(F)							0.0001	0.0001	1.0000	1.0000	1.0000

University of Arkansas-Division of Agriculture

Evaluate Sequential applications of Ignite and Roundup in Residual Herbicide Programs

Trial ID: HCT-41510
Location: Rohwer, AR

Investigator: Kenneth Smith

							IPOSS	ECHCG	
							Morning glory	Common barnyar>	
							PLANT P	PLANT P	
							7/12/2010	7/12/2010	
							CONTROL	CONTROL	
							%	%	
							9 NAWF	9 NAWF	
							6-60"	6-60"	
							17 DA-F	17 DA-F	
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	Appl Description		
1	UTC							0.0	0.0
2	Cotoran	1 lb ai/a		32 oz/a		A	PRE	100.0	98.8
	Ignite 280	0.53 lb ai/a		29 oz/a		B	2 lf cotton		
	Ignite 280	0.53 lb ai/a		29 oz/a		D	5 lf cotton		
	Ignite 280	0.53 lb ai/a		29 oz/a		E	8 lf cotton		
	MSMA	2.0 lb ai/a		42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a		2 oz/a		F	12 lf cotton Layby		
3	Cotoran	1 lb ai/a		32 oz/a		A	PRE	100.0	98.8
	Ignite 280	0.53 lb ai/a		29 oz/a		C	4 lf cotton		
	Ignite 280	0.53 lb ai/a		29 oz/a		E	8 lf cotton		
	MSMA	2.0 lb ai/a		42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a		2 oz/a		F	12 lf cotton Layby		
4	Cotoran	1 lb ai/a		32 oz/a		A	PRE	100.0	98.8
	Ignite 280	0.53 lb ai/a		29 oz/a		B	2 lf cotton		
	Dual Magnum	0.95 lb ai/a		16 oz/a		B	2 lf cotton		
	Ignite 280	0.53 lb ai/a		29 oz/a		E	8 lf cotton		
	MSMA	2.0 lb ai/a		42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a		2 oz/a		F	12 lf cotton Layby		
5	Cotoran	1 lb ai/a		32 oz/a		A	PRE	100.0	100.0
	Ignite 280	0.53 lb ai/a		29 oz/a		C	4 lf cotton		
	Dual Magnum	0.95 lb ai/a		16 oz/a		C	4 lf cotton		
	Ignite 280	0.53 lb ai/a		29 oz/a		E	8 lf cotton		
	MSMA	2.0 lb ai/a		42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a		2 oz/a		F	12 lf cotton Layby		
6	Cotoran	1 lb ai/a		32 oz/a		A	PRE	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a		22 oz/a		B	2 lf cotton		
	Roundup PowerMax	0.77 lb ai/a		22 oz/a		D	5 lf cotton		
	Roundup PowerMax	0.77 lb ai/a		22 oz/a		E	8 lf cotton		
	MSMA	2.0 lb ai/a		42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a		2 oz/a		F	12 lf cotton Layby		
7	Cotoran	1 lb ai/a		32 oz/a		A	PRE	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a		22 oz/a		C	4 lf cotton		
	Roundup PowerMax	0.77 lb ai/a		22 oz/a		E	8 lf cotton		
	MSMA	2.0 lb ai/a		42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a		2 oz/a		F	12 lf cotton Layby		
8	Cotoran	1 lb ai/a		32 oz/a		A	PRE	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a		22 oz/a		B	2 lf cotton		
	Dual Magnum	0.95 lb ai/a		16 oz/a		B	2 lf cotton		
	Roundup PowerMax	0.77 lb ai/a		22 oz/a		E	8 lf cotton		
	MSMA	2.0 lb ai/a		42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a		2 oz/a		F	12 lf cotton Layby		
9	Cotoran	1 lb ai/a		32 oz/a		A	PRE	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a		22 oz/a		C	4 lf cotton		
	Dual Magnum	0.95 lb ai/a		16 oz/a		C	4 lf cotton		
	Roundup PowerMax	0.77 lb ai/a		22 oz/a		E	8 lf cotton		
	MSMA	2.0 lb ai/a		42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a		2 oz/a		F	12 lf cotton Layby		
10	Cotoran	1 lb ai/a		32 oz/a		A	PRE	100.0	100.0
	Ignite 280	0.53 lb ai/a		29 oz/a		B	2 lf cotton		
	Dual Magnum	0.95 lb ai/a		16 oz/a		B	2 lf cotton		
	Roundup PowerMax	0.77 lb ai/a		22 oz/a		D	5 lf cotton		
	Ignite 280	0.53 lb ai/a		29 oz/a		E	8 lf cotton		
	MSMA	2.0 lb ai/a		42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a		2 oz/a		F	12 lf cotton Layby		
11	Cotoran	1 lb ai/a		32 oz/a		A	PRE	100.0	100.0
	Roundup PowerMax	0.77 lb ai/a		22 oz/a		B	2 lf cotton		
	Dual Magnum	0.95 lb ai/a		16 oz/a		B	2 lf cotton		
	Ignite 280	0.53 lb ai/a		29 oz/a		D	5 lf cotton		
	Roundup PowerMax	0.77 lb ai/a		22 oz/a		E	8 lf cotton		
	MSMA	2.0 lb ai/a		42.7 oz/a		F	12 lf cotton Layby		
	Valor	0.064 lb ai/a		2 oz/a		F	12 lf cotton Layby		
LSD (P=.05)							0.00	1.69	
Standard Deviation							0.00	1.17	
CV							0.0	1.29	
Bartlett's X2							0.0	0.0	
P(Bartlett's X2)							.	.	
Replicate F							0.000	3.750	
Replicate Prob(F)							1.0000	0.0212	
Treatment F							0.000	2647.667	
Treatment Prob(F)							1.0000	0.0001	

University of Arkansas-Division of Agriculture

Evaluate Sequential applications of Ignite and Roundup in Residual Herbicide Programs

Trial ID: HCT-41510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

ECHCG, Echinochloa crus-galli, = US

Part Rated

PLANT = plant

P = Pest is Part Rated

Rating Unit

% = percent

University of Arkansas-Division of Agriculture

LL/Glycol herbicide systems

Trial ID: HCT-41610
Location: Rohwer, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Fiber Max 9250 GTLL B2
BBCH Scale: BCOT **Planting Date:** 5/11/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN **Spacing Within Row, Unit:** 3.42 IN
Seed Bed: CRUSTE crusted **Soil Temperature, Unit:** 68 F
Emergence Date: 5/17/2010

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory

Pest 3 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 29 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G
Soil Drainage: G good

Application Description

	A	B	C	D	E
Application Date:	5/13/2010	5/25/2010	6/3/2010	6/9/2010	6/16/2010
Time of Day:	AM	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	2 LF	4 LF	6 LF	10LF
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL	BRODIR
Applied By:	RD	RD	RD	RD	RD
Air Temperature, Unit:	78.3 F	80.8 F	79.6 F	83.6 F	85.1 F
% Relative Humidity:	78.6	66.57	79.47	69.37	69.1
Wind Velocity, Unit:	3.85 MPH	1.95 MPH	2.50 MPH	1.15 MPH	4.95 MPH
Wind Direction:	ESE	SSW	E	E	ESE
Dew Presence (Y/N):	N no	N no	N no	N no	N no
Soil Temperature, Unit:	75.6 F	78.9 F	81.0 F	83.1 F	84.6 F
Soil Moisture:	FAIR	FAIR	FAIR	FAIR	FAIR
% Cloud Cover:	60	32	60	60	40
Next Rain Occurred On:	5/16/2010	5/26/2010	6/10/2010	6/10/2010	6/17/2010

Crop Stage At Each Application

	A	B	C	D	E
BCOT	BCOT	BCOT	BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH	BBCH	BBCH	BBCH
Stage Majority, Percent:	PRE	2 LF	4 LF	6 LF	10 LF

Pest Stage At Each Application

	A	B	C	D	E
Stage Majority, Percent:	PRE	2-4"	2-6"	2-6"	2-6"
Stage Majority, Percent:	PRE	2-4"	2-6"	2-6"	2-6"
Stage Majority, Percent:	PRE	2-4"	2-6"	2-6"	2-6"

Application Equipment

	A	B	C	D	E
Appl. Equipment:	Multi-Boom	Multi-Boom	Multi-Boom	Multi-Boom	HoodSpray
Operating Pressure, Unit:	55 PSI	55 PSI	55 PSI	55 PSI	35 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	Air-Mix	TeeJet
Nozzle Size:	110015	110015	110015	110015	
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	19 IN	38 IN
Nozzles/Row:	2	2	2	2	3
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN	4 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA	12 GPA	15 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	3 Liters	2 Gallons
Propellant:	CO2	CO2	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

LL/Glycol herbicide systems

Trial ID: HCT-41610
Location: Rohwer, AR

Investigator: Kenneth Smith

University of Arkansas-Division of Agriculture

LL/Glycol herbicide systems

Trial ID: HCT-41610
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	AMAPA Palmer amaranth	ECHCG Common barnyar->	AMAPA Palmer amaranth	IPOSS Morning glory	ECHCG Common barnyar->							
Pest Name	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Part Rated	5/20/2010	5/20/2010	5/27/2010	5/27/2010	5/27/2010							
Rating Date	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL							
Rating Type	%	%	%	%	%							
Rating Unit	Cot-1 lf	Cot-1 lf	3 lf	3 lf	3 lf							
Crop Stage Majority	1-4*	1-4*	2-8*	2-8*	2-8*							
Pest Stage Majority	21 DA-A	21 DA-A	21 DA-A	28 DA-A	21 DA-A							
Trt-Eval Interval												
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	1	2	3	4	5
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	Ignite 280	0.402 lb ai/a	22 oz/a		B	2 lf		0.0	0.0	50.0	96.3	97.5
3	Ignite 280	0.53 lb ai/a	29 oz/a		B	2lf		0.0	0.0	71.3	98.8	100.0
4	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2lf		0.0	0.0	100.0	100.0	100.0
5	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.402 lb ai/a	22 oz/a		C	4lf						
6	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4lf						
7	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	4 lf						
8	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf		0.0	0.0	100.0	100.0	100.0
	Ignite 280	0.402 lb ai/a	22 oz/a		D	6 lf						
9	Ignite 280	0.402 lb ai/a	22 oz/a		B	2 lf		0.0	0.0	60.0	78.8	96.3
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	6 lf						
10	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	2lf						
	Ignite 280	0.53 lb ai/a	29 oz/a		D	6 lf						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf						
	MSMA	2.02 lb ai/a	43 oz/a		E	10 lf						
	Direx	1 lb ai/a	32 oz/a		E	10 lf						
	LSD (P=.05)							0.00	0.00	9.29	9.36	1.81
	Standard Deviation							0.00	0.00	6.40	6.45	1.25
	CV							0.0	0.0	8.2	7.39	1.39
	Bartlett's X2							0.0	0.0	8.273	11.096	0.061
	P(Bartlett's X2)							.	.	0.004*	0.004*	0.805
	Replicate F							0.000	0.000	0.910	0.655	0.403
	Replicate Prob(F)							1.0000	1.0000	0.4494	0.5866	0.7520
	Treatment F							0.000	0.000	109.946	94.701	2547.985
	Treatment Prob(F)							1.0000	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

LL/Glycol herbicide systems

Trial ID: HCT-41610
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	AMAPA	IPOSS	ECHCG	AMAPA	IPOSS							
Pest Name	Palmer amaranth	Morning glory	Common barnyard	Palmer amaranth	Morning glory							
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date	6/3/2010	6/3/2010	6/3/2010	6/14/2010	6/14/2010							
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL							
Rating Unit	%	%	%	%	%							
Crop Stage Majority	4-5 lf	4-5 lf	4-5 lf	8-10 lf	8-10 lf							
Pest Stage Majority	2-24"	2-24"	2-24"	2-36"	2-36"							
Trt-Eval Interval	21 DA-A	28 DA-A	21 DA-A	21 DA-A	28 DA-A							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	6	7	8	9	10
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	Ignite 280	0.402 lb ai/a		22 oz/a	B	2 lf		0.0	90.0	91.3	43.3	95.0
3	Ignite 280	0.53 lb ai/a		29 oz/a	B	2lf		50.0	93.8	100.0	98.8	86.3
4	Roundup PowerMax	0.77 lb ae/a		22 oz/a	B	2lf		100.0	98.8	98.8	72.5	96.3
5	Cotoran	1 lb ai/a		32 oz/a	A	PRE		96.3	98.8	96.3	100.0	100.0
	Ignite 280	0.402 lb ai/a		22 oz/a	C	4lf						
6	Cotoran	1 lb ai/a		32 oz/a	A	PRE		95.3	100.0	100.0	98.8	100.0
	Ignite 280	0.53 lb ai/a		29 oz/a	C	4lf						
7	Cotoran	1 lb ai/a		32 oz/a	A	PRE		100.0	97.5	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C	4 lf						
8	Roundup PowerMax	0.77 lb ae/a		22 oz/a	B	2 lf		93.8	100.0	100.0	85.0	100.0
	Ignite 280	0.402 lb ai/a		22 oz/a	D	6 lf						
9	Ignite 280	0.402 lb ai/a		22 oz/a	B	2 lf		0.0	81.3	90.0	95.0	100.0
	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C	6 lf						
10	Cotoran	1 lb ai/a		32 oz/a	A	PRE		100.0	100.0	100.0	99.5	100.0
	Ignite 280	0.53 lb ai/a		29 oz/a	B	2lf						
	Ignite 280	0.53 lb ai/a		29 oz/a	D	6 lf						
	Dual Magnum	0.95 lb ai/a		16 oz/a	D	6 lf						
	MSMA	2.02 lb ai/a		43 oz/a	E	10 lf						
	Direx	1 lb ai/a		32 oz/a	E	10 lf						
	LSD (P=.05)							3.07	4.46	2.85	19.11	7.73
	Standard Deviation							2.12	3.07	1.97	13.14	5.32
	CV							3.33	3.57	2.24	16.58	6.06
	Bartlett's X2							1.152	5.761	1.774	39.32	8.344
	P(Bartlett's X2)							0.562	0.33	0.412	0.001*	0.015*
	Replicate F							0.690	3.353	0.162	0.752	1.209
	Replicate Prob(F)							0.5661	0.0335	0.9212	0.5309	0.3263
	Treatment F							1911.612	401.882	995.731	25.541	137.212
	Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

LL/Glycol herbicide systems

Trial ID: HCT-41610
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	ECHCG	AMAPA	IPOSS	ECHCG	AMAPA							
Pest Name	Common barnyar>	Palmer amaranth	Morning glory	Common barnyar>	Palmer amaranth							
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date	6/14/2010	6/24/2010	6/24/2010	6/24/2010	7/12/2010							
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL							
Rating Unit	%	%	%	%	%							
Crop Stage Majority	8-10 lf	10 lf	10 lf	10 lf	8 NAWF							
Pest Stage Majority	2-36"	6-48"	6-48"	6-48"	12-72"							
Trt-Eval Interval	21 DA-A	21 DA-A	28 DA-A	21 DA-A	21 DA-A							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	11	12	13	14	15
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	Ignite 280	0.402 lb ai/a	22 oz/a		B	2 lf		95.0	0.0	67.5	83.8	12.5
3	Ignite 280	0.53 lb ai/a	29 oz/a		B	2lf		96.3	0.0	88.8	86.3	0.0
4	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2lf		95.0	75.0	93.8	93.8	88.8
5	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	93.8	100.0	100.0	88.8
	Ignite 280	0.402 lb ai/a	22 oz/a		C	4lf						
6	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	100.0	97.5	97.5
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4lf						
7	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	100.0	97.5	95.0	87.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	4 lf						
8	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf		100.0	62.5	86.3	88.8	67.5
	Ignite 280	0.402 lb ai/a	22 oz/a		D	6 lf						
9	Ignite 280	0.402 lb ai/a	22 oz/a		B	2 lf		99.5	70.0	88.8	90.0	52.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	6 lf						
10	Cotoran	1 lb ai/a	32 oz/a		A	PRE		100.0	98.8	100.0	100.0	86.3
	Ignite 280	0.53 lb ai/a	29 oz/a		B	2lf						
	Ignite 280	0.53 lb ai/a	29 oz/a		D	6 lf						
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf						
	MSMA	2.02 lb ai/a	43 oz/a		E	10 lf						
	Direx	1 lb ai/a	32 oz/a		E	10 lf						
	LSD (P=.05)							3.35	14.94	22.12	9.77	20.30
	Standard Deviation							2.31	10.28	15.24	6.74	13.99
	CV							2.61	17.13	18.53	8.07	24.07
	Bartlett's X2							5.431	13.027	31.528	5.781	26.109
	P(Bartlett's X2)							0.143	0.011*	0.001*	0.448	0.001*
	Replicate F							1.729	1.625	0.936	1.653	1.868
	Replicate Prob(F)							0.1847	0.2079	0.4368	0.2006	0.1588
	Treatment F							729.537	71.381	16.057	78.637	31.879
	Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

LL/Glycol herbicide systems

Trial ID: HCT-41610
Location: Rohwer, AR

Investigator: Kenneth Smith

							IPOSS	ECHCG		
							Morning glory	Common barnyar>		
							PLANT P	PLANT P		
							7/12/2010	7/12/2010		
							CONTROL	CONTROL		
							%	%		
							8 NAWF	8 NAWF		
							12-72"	12-72"		
							28 DA-A	21 DA-A		
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate	Appl Unit	Appl Code	Description	16	17
1	Untreated Check								0.0	0.0
2	Ignite 280	0.402	lb ai/a	22	oz/a	B	2	lf	0.0	0.0
3	Ignite 280	0.53	lb ai/a	29	oz/a	B	2	lf	0.0	0.0
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2	lf	46.3	46.3
5	Cotoran	1	lb ai/a	32	oz/a	A	PRE		97.5	97.5
	Ignite 280	0.402	lb ai/a	22	oz/a	C	4	lf		
6	Cotoran	1	lb ai/a	32	oz/a	A	PRE		98.8	97.5
	Ignite 280	0.53	lb ai/a	29	oz/a	C	4	lf		
7	Cotoran	1	lb ai/a	32	oz/a	A	PRE		91.3	91.3
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C	4	lf		
8	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B	2	lf	65.0	67.5
	Ignite 280	0.402	lb ai/a	22	oz/a	D	6	lf		
9	Ignite 280	0.402	lb ai/a	22	oz/a	B	2	lf	50.0	50.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C	6	lf		
10	Cotoran	1	lb ai/a	32	oz/a	A	PRE		100.0	100.0
	Ignite 280	0.53	lb ai/a	29	oz/a	B	2	lf		
	Ignite 280	0.53	lb ai/a	29	oz/a	D	6	lf		
	Dual Magnum	0.95	lb ai/a	16	oz/a	D	6	lf		
	MSMA	2.02	lb ai/a	43	oz/a	E	10	lf		
	Direx	1	lb ai/a	32	oz/a	E	10	lf		
LSD (P=.05)							27.90	27.71		
Standard Deviation							19.23	19.10		
CV							35.04	34.72		
Bartlett's X2							27.558	26.88		
P(Bartlett's X2)							0.001*	0.001*		
Replicate F							0.673	0.562		
Replicate Prob(F)							0.5759	0.6447		
Treatment F							19.634	19.844		
Treatment Prob(F)							0.0001	0.0001		

University of Arkansas-Division of Agriculture

LL/Glycol herbicide systems

Trial ID: HCT-41610
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
ECHCG, Echinochloa crus-galli, = US
IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant
P = Pest is Part Rated

Rating Unit

% = percent

University of Arkansas-Division of Agriculture

Evaluate Efficacy of Ignite and Roundup applied Sequentially in Glytol Cotton

Trial ID: HCT-41710
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Fiber Max 9250 GTLL B2
BBCH Scale: BCOT **Planting Date:** 5/11/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN **Spacing Within Row, Unit:** 3.42 IN
Seed Bed: CRUSTE crusted **Soil Temperature, Unit:** 68 F
Emergence Date: 5/17/2010

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory

Pest 3 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 29 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G
Soil Drainage: G good

Application Description

	A	B	C	D
Application Date:	5/25/2010	6/3/2010	6/16/2010	6/25/2010
Time of Day:	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	1 LF	4 LF	8 LF	12 LF
Application Placement:	BROFOL	BROFOL	BROFOL	BRODIR
Applied By:	RD	RD	RD	RD
Air Temperature, Unit:	80.8 F	79.6 F	85.1 F	83.3 F
% Relative Humidity:	66.57	79.47	69.1	46.4
Wind Velocity, Unit:	1.95 MPH	2.50 MPH	4.95 MPH	2.45 MPH
Wind Direction:	SSW	E	ESE	E
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	78.9 F	81.0 F	84.6 F	85.5 F
Soil Moisture:	FAIR	FAIR	FAIR	FAIR
% Cloud Cover:	50	40	40	45
Next Rain Occurred On:	5/26/2010	6/10/2010	6/17/2010	6/29/2010

Crop Stage At Each Application

	A	B	C	D
BCOT	BCOT	BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH	BBCH	BBCH
Stage Majority, Percent:	1 LF	4 LF	8 LF	12 LF

Pest Stage At Each Application

	A	B	C	D
Stage Majority, Percent:	1-3"	2-4"	2-6"	2-6"
Stage Majority, Percent:	1-3"	2-4"	2-6"	2-6"
Stage Majority, Percent:	1-3"	2-4"	2-6"	2-6"

Application Equipment

	A	B	C	D
Appl. Equipment:	Multi-Boom	Multi-Boom	Multi-Boom	HoodSpray
Operating Pressure, Unit:	55 PSI	55 PSI	55 PSI	35 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	TeeJet
Nozzle Size:	110015	110015	110015	
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	38 IN
Nozzles/Row:	2	2	2	3
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	4 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA	15 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	2 Gallons
Propellant:	CO2	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Evaluate Efficacy of Ignite and Roundup applied Sequentially in Glytol Cotton

Trial ID: HCT-41710
Location: Rohwer, AR

Investigator: Kenneth Smith

University of Arkansas-Division of Agriculture

Evaluate Efficacy of Ignite and Roundup applied Sequentially in Glytol Cotton

Trial ID: HCT-41710
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	Pest Name	AMAPA Palmer amaranth PLANT P 6/3/2010 CONTROL %	IPOSS Morning glory PLANT P 6/3/2010 CONTROL %	AMAPA Palmer amaranth PLANT P 6/14/2010 CONTROL %	IPOSS Morning glory PLANT P 6/14/2010 CONTROL %	ECHCG Common barnyar- PLANT P 6/14/2010 CONTROL %
Rate	Unit	Other Rate	Other Rate	Appl Unit	Appl Description	
1	2	3	4	5		
1 UTC		0.0	0.0	0.0	0.0	0.0
2 Roundup PowerMax	0.77 lb ae/a	22 oz/a	A	1 lf cotton	97.5	97.5
Roundup PowerMax	0.77 lb ae/a	22 oz/a	B	4 lf cotton		100.0
Roundup PowerMax	0.77 lb ae/a	22 oz/a	C	8 lf cotton		
MSMA	2 lb ai/a	43 oz/a	D	12 lf cotton Layby		
Valor	0.064 lb ai/a	2 oz/a	D	12 lf cotton Layby		
3 Ignite 280	0.53 lb ai/a	29 oz/a	A	1 lf cotton	95.0	100.0
Ignite 280	0.53 lb ai/a	29 oz/a	B	4 lf cotton		99.5
Ignite 280	0.53 lb ai/a	29 oz/a	C	8 lf cotton		100.0
MSMA	2 lb ai/a	43 oz/a	D	12 lf cotton Layby		
Valor	0.064 lb ai/a	2 oz/a	D	12 lf cotton Layby		
4 Roundup PowerMax	0.77 lb ae/a	22 oz/a	A	1 lf cotton	100.0	100.0
Ignite 280	0.53 lb ai/a	29 oz/a	B	4 lf cotton		100.0
Roundup PowerMax	0.77 lb ae/a	22 oz/a	C	8 lf cotton		
MSMA	2 lb ai/a	43 oz/a	D	12 lf cotton Layby		
Valor	0.064 lb ai/a	2 oz/a	D	12 lf cotton Layby		
5 Ignite 280	0.53 lb ai/a	29 oz/a	A	1 lf cotton	100.0	100.0
Roundup PowerMax	0.77 lb ae/a	22 oz/a	B	4 lf cotton		100.0
Ignite 280	0.53 lb ai/a	29 oz/a	C	8 lf cotton		
MSMA	2 lb ai/a	43 oz/a	D	12 lf cotton Layby		
Valor	0.064 lb ai/a	2 oz/a	D	12 lf cotton Layby		
6 Roundup PowerMax	0.77 lb ae/a	22 oz/a	A	1 lf cotton	100.0	100.0
Dual Magnum	0.95 lb ai/a	16 oz/a	A	1 lf cotton		99.5
Ignite 280	0.53 lb ai/a	29 oz/a	B	4 lf cotton		100.0
Roundup PowerMax	0.77 lb ae/a	22 oz/a	C	8 lf cotton		
MSMA	2 lb ai/a	43 oz/a	D	12 lf cotton Layby		
Valor	0.064 lb ai/a	2 oz/a	D	12 lf cotton Layby		
7 Ignite 280	0.53 lb ai/a	29 oz/a	A	1 lf cotton	97.5	100.0
Dual Magnum	0.95 lb ai/a	16 oz/a	A	1 lf cotton		100.0
Roundup PowerMax	0.77 lb ae/a	22 oz/a	B	4 lf cotton		
Ignite 280	0.53 lb ai/a	29 oz/a	C	8 lf cotton		
MSMA	2 lb ai/a	43 oz/a	D	12 lf cotton Layby		
Valor	0.064 lb ai/a	2 oz/a	D	12 lf cotton Layby		
8 Roundup PowerMax	0.77 lb ae/a	22 oz/a	A	1 lf cotton	100.0	100.0
Roundup PowerMax	0.77 lb ae/a	22 oz/a	B	4 lf cotton		100.0
Dual Magnum	0.95 lb ai/a	16 oz/a	B	4 lf cotton		
Roundup PowerMax	0.77 lb ae/a	22 oz/a	C	8 lf cotton		
MSMA	2 lb ai/a	43 oz/a	D	12 lf cotton Layby		
Valor	0.064 lb ai/a	2 oz/a	D	12 lf cotton Layby		
9 Ignite 280	0.53 lb ai/a	29 oz/a	A	1 lf cotton	97.5	100.0
Ignite 280	0.53 lb ai/a	29 oz/a	B	4 lf cotton		100.0
Dual Magnum	0.95 lb ai/a	16 oz/a	B	4 lf cotton		
Ignite 280	0.53 lb ai/a	29 oz/a	C	8 lf cotton		
MSMA	2 lb ai/a	43 oz/a	D	12 lf cotton Layby		
Valor	0.064 lb ai/a	2 oz/a	D	12 lf cotton Layby		
10 Roundup PowerMax	0.77 lb ae/a	22 oz/a	A	1 lf cotton	100.0	100.0
Ignite 280	0.53 lb ai/a	29 oz/a	B	4 lf cotton		100.0
Dual Magnum	0.95 lb ai/a	16 oz/a	B	4 lf cotton		
Roundup PowerMax	0.77 lb ae/a	22 oz/a	C	8 lf cotton		
MSMA	2 lb ai/a	43 oz/a	D	12 lf cotton Layby		
Valor	0.064 lb ai/a	2 oz/a	D	12 lf cotton Layby		
11 Ignite 280	0.53 lb ai/a	29 oz/a	A	1 lf cotton	100.0	100.0
Roundup PowerMax	0.77 lb ae/a	22 oz/a	B	4 lf cotton		100.0
Dual Magnum	0.95 lb ai/a	16 oz/a	B	4 lf cotton		
Ignite 280	0.53 lb ai/a	29 oz/a	C	8 lf cotton		
MSMA	2 lb ai/a	43 oz/a	D	12 lf cotton Layby		
Valor	0.064 lb ai/a	2 oz/a	D	12 lf cotton Layby		
LSD (P=.05)		2.10		1.26	0.63	0.00
Standard Deviation		1.46		0.87	0.43	0.00
CV		1.62		0.96	0.48	0.0
Bartlett's X2		0.0		0.0	0.0	0.0
P(Bartlett's X2)		.		.	.	.
Replicate F		1.786		1.000	0.645	0.000
Replicate Prob(F)		0.1711		0.4064	0.5921	1.0000
Treatment F		1677.000		4779.000	19317.002	0.000
Treatment Prob(F)		0.0001		0.0001	0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluate Efficacy of Ignite and Roundup applied Sequentially in Glytol Cotton

Trial ID: HCT-41710
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code	AMAPA	IPOSS	ECHCG	AMAPA	IPOSS	ECHCG						
Pest Name	Palmer amaranth	Morning glory	Common barnyar>	Palmer amaranth	Morning glory	Common barnyar>						
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P						
Rating Date	6/24/2010	6/24/2010	6/24/2010	7/12/2010	7/12/2010	7/12/2010						
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL						
Rating Unit	%	%	%	%	%	%						
Crop Stage Majority	10 lf	10 lf	10 lf	9 NAWF	9 NAWF	9 NAWF						
Pest Stage Majority	2-48"	2-48"	2-48"	6-72"	6-72"	6-72"						
Trt-Eval Interval	8 DA-C	8 DA-C	8 DA-C	17 DA-D	17 DA-D	17 DA-D						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	6	7	8	9	10	11
1	UTC	0.0					0.0	0.0	0.0	0.0	0.0	0.0
2	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	1 lf cotton	100.0	100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby						
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby						
3	Ignite 280	0.53 lb ai/a	29 oz/a		A	1 lf cotton	100.0	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton						
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby						
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby						
4	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	1 lf cotton	100.0	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby						
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby						
5	Ignite 280	0.53 lb ai/a	29 oz/a		A	1 lf cotton	100.0	100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton						
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby						
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby						
6	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	1 lf cotton	100.0	100.0	100.0	100.0	100.0	100.0
	Dual Magnum	0.95 lb ai/a	16 oz/a		A	1 lf cotton						
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby						
7	Ignite 280	0.53 lb ai/a	29 oz/a		A	1 lf cotton	100.0	100.0	100.0	100.0	100.0	100.0
	Dual Magnum	0.95 lb ai/a	16 oz/a		A	1 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton						
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby						
8	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	1 lf cotton	100.0	100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby						
9	Ignite 280	0.53 lb ai/a	29 oz/a		A	1 lf cotton	100.0	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton						
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby						
10	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	1 lf cotton	100.0	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby						
11	Ignite 280	0.53 lb ai/a	29 oz/a		A	1 lf cotton	100.0	98.8	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton						
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton						
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton						
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby						
LSD (P=.05)	0.00					0.00	1.09	0.00	0.00	0.00	0.00	
Standard Deviation	0.00					0.00	0.75	0.00	0.00	0.00	0.00	
CV	0.0					0.0	0.83	0.0	0.0	0.0	0.0	
Bartlett's X2	0.0					0.0	0.0	0.0	0.0	0.0	0.0	
P(Bartlett's X2)	.					.	.	.	.	.	.
Replicate F	0.000					0.000	1.000	0.000	0.000	0.000	0.000	
Replicate Prob(F)	1.0000					1.0000	0.4064	1.0000	1.0000	1.0000	1.0000	
Treatment F	0.000					0.000	6385.001	0.000	0.000	0.000	0.000	
Treatment Prob(F)	1.0000					1.0000	0.0001	1.0000	1.0000	1.0000	1.0000	

University of Arkansas-Division of Agriculture

Evaluate Efficacy of Ignite and Roundup applied Sequentially in Glytol Cotton

Trial ID: HCT-41710
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

ECHCG, Echinochloa crus-galli, = US

Part Rated

PLANT = plant

P = Pest is Part Rated

Rating Unit

% = percent

University of Arkansas-Division of Agriculture

Crop Response of MON 63410 in LL Cotton

Trial ID: HCT-41810
Location: Rohwer, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Fiber Max 1773 LL B2
BBCH Scale: BCOT
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Seed Bed: CRUSTE crusted
Planting Date: 5/5/2010
Rate, Unit: 3.5 S/ROWFT
Spacing Within Row, Unit: 3.42 IN
Soil Temperature, Unit: 68 F
Emergence Date: 5/13/2010
Harvested Width, Unit: 6.33 FT
Harvested Length, Unit: 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA **Amaranthus palmeri**
Common Name: Palmer amaranth

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Study Design: RACOB L Randomized Complete Block (RCB)

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Rate	Rate Unit
1.	7/5/2010	IGNITE 280	2.34	LB A/A	40	OZ/A

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	5/26/2010	6/3/2010	6/16/2010
Time of Day:	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	2 LF	4 LF	8 LF
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RD	RD	RD
Air Temperature, Unit:	81.5 F	79.6 F	85.1 F
% Relative Humidity:	63.92	79.47	69
Wind Velocity, Unit:	1.40 MPH	2.50 MPH	4.9 MPH
Wind Direction:	W	E	E
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	79.4 F	81.0 F	84.6 F
Soil Moisture:	FAIR	FAIR	FAIR
% Cloud Cover:	40	50	45
Next Rain Occurred On:	6/10/2010	6/10/2010	6/17/2010

Crop Stage At Each Application

	A	B	C
BCOT	BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH	BBCH
Stage Majority, Percent:	2 LF	4 LF	8 LF

Pest Stage At Each Application

	A	B	C
Stage Majority, Percent:	2-4"	2-6"	2-6"

Application Equipment

	A	B	C
Appl. Equipment:	Multi-Boom	Multi-Boom	Multi-Boom
Operating Pressure, Unit:	55 PSI	55 PSI	55 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters
Propellant:	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Crop Response of MON 63410 in LL Cotton

Trial ID: HCT-41810
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		AMAPA		PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C		
Pest Name		Palmer amaranth		6/3/2010	6/3/2010	6/3/2010	6/14/2010	6/14/2010	6/14/2010	6/14/2010	6/24/2010	6/24/2010	6/24/2010		
Part Rated		PLANT P		PHYCHL	PHYNEC	PHYSTU	PHYCHL	PHYNEC	PHYSTU	PHYCHL	PHYNEC	PHYCHL	PHYNEC		
Rating Date		6/3/2010		%	%	%	%	%	%	%	%	%	%		
Rating Type		CONTROL		4-5 If	4-5 If	4-5 If	8-10 If	8-10 If	8-10 If	8-10 If	10-12 If	10-12 If	10-12 If		
Rating Unit		2-24"		8 DA-A	8 DA-A	8 DA-A	8 DA-A	11 DA-B	11 DA-B	11 DA-B	8 DA-C	8 DA-C	8 DA-C		
Crop Stage Majority		4-5 If		4-5 If	4-5 If	4-5 If	8-10 If	8-10 If	8-10 If	8-10 If	10-12 If	10-12 If	10-12 If		
Pest Stage Majority		8 DA-A		8 DA-A	8 DA-A	8 DA-A	11 DA-B	11 DA-B	11 DA-B	11 DA-B	8 DA-C	8 DA-C	8 DA-C		
Trt-Eval Interval		8 DA-A		8 DA-A	8 DA-A	8 DA-A	11 DA-B	11 DA-B	11 DA-B	11 DA-B	8 DA-C	8 DA-C	8 DA-C		
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	1	2	3	4	5	6	7	8	9
1	Weed Free						0.0	0.0	0.0	0.0	0.0	12.5	12.5	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		A	2 lf cotton									
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton									
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton									
2	MON 63410	1.13 lb ai/a	48 oz/a		A	2 lf cotton	55.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	MON 63410	1.13 lb ai/a	48 oz/a		A	2 lf cotton	97.5	0.0	0.0	11.3	0.0	6.3	12.5	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		A	2 lf cotton									
4	Dual Magnum	0.95 lb ai/a	16 oz/a		A	2 lf cotton	65.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Dual Magnum	0.95 lb ai/a	16 oz/a		A	2 lf cotton	98.8	0.0	0.0	7.5	0.0	6.3	12.5	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		A	2 lf cotton									
6	MON 63410	1.13 lb ai/a	48 oz/a		B	4 lf cotton					0.0	0.0	0.0	0.0	0.0
7	MON 63410	1.13 lb ai/a	48 oz/a		B	4 lf cotton					0.0	0.0	12.5	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton									
8	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton					0.0	0.0	0.0	0.0	0.0
9	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton					0.0	12.5	18.8	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton									
10	MON 63410	1.13 lb ai/a	48 oz/a		C	8 lf cotton					0.0	0.0	0.0	0.0	0.0
11	MON 63410	1.13 lb ai/a	48 oz/a		C	8 lf cotton					0.0	0.0	0.0	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton									
12	Dual Magnum	0.95 lb ai/a	16 oz/a		C	8 lf cotton					0.0	0.0	0.0	0.0	0.0
13	Dual Magnum	0.95 lb ai/a	16 oz/a		C	8 lf cotton					0.0	0.0	0.0	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton									
14	MON 63410	1.69 lb ai/a	72 oz/a		A	2 lf cotton	93.8	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0
15	MON 63410	1.69 lb ai/a	72 oz/a		A	2 lf cotton	97.5	0.0	0.0	18.8	0.0	0.0	5.0	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		A	2 lf cotton									
16	Dual Magnum	1.43 lb ai/a	24 oz/a		A	2 lf cotton	97.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	Dual Magnum	1.43 lb ai/a	24 oz/a		A	2 lf cotton	100.0	0.0	0.0	8.8	0.0	12.5	18.8	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		A	2 lf cotton									
18	MON 63410	1.69 lb ai/a	72 oz/a		B	4 lf cotton					0.0	0.0	0.0	0.0	0.0
19	MON 63410	1.69 lb ai/a	72 oz/a		B	4 lf cotton					0.0	12.5	25.0	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton									
20	Dual Magnum	1.43 lb ai/a	24 oz/a		B	4 lf cotton					0.0	0.0	5.0	0.0	0.0
21	Dual Magnum	1.43 lb ai/a	24 oz/a		B	4 lf cotton					0.0	0.0	0.0	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton									
22	MON 63410	1.69 lb ai/a	72 oz/a		C	8 lf cotton					0.0	0.0	0.0	0.0	0.0
23	MON 63410	1.69 lb ai/a	72 oz/a		C	8 lf cotton					0.0	0.0	0.0	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton									
24	Dual Magnum	1.43 lb ai/a	24 oz/a		C	8 lf cotton					0.0	0.0	0.0	0.0	0.0
25	Dual Magnum	1.43 lb ai/a	24 oz/a		C	8 lf cotton					0.0	0.0	0.0	0.0	0.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton									
LSD (P=.05)		6.25		0.00			6.25	0.00	0.00	11.01	0.00	15.06	23.53	0.00	0.00
Standard Deviation		4.28		0.00			4.28	0.00	0.00	7.54	0.00	10.65	16.64	0.00	0.00
CV		5.47		0.0			5.47	0.0	0.0	126.29	0.0	425.9	339.58	0.0	0.0
Bartlett's X2		11.828		0.0			11.828	0.0	0.0	9.406	0.0	3.06	8.68	0.0	0.0
P(Bartlett's X2)		0.066					0.066			0.052		0.691	0.37		
Replicate F		7.672		0.000			7.672	0.000	0.000	0.826	0.000	0.809	0.425	0.000	0.000
Replicate Prob(F)		0.0009		1.0000			0.0009	1.0000	1.0000	0.4925	1.0000	0.4932	0.7357	1.0000	1.0000
Treatment F		247.599		0.000			247.599	0.000	0.000	3.043	0.000	0.804	0.844	0.000	0.000
Treatment Prob(F)		0.0001		1.0000			0.0001	1.0000	1.0000	0.0164	1.0000	0.7200	0.6704	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Crop Response of MON 63410 in LL Cotton

Trial ID: HCT-41810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US

Part Rated

PLANT = plant

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

PHYCHL = phytotoxicity - chlorosis

PHYNEC = phytotoxicity - necrosis /burn

PHYSTU = phytotoxicity - stunting

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

lb/ac = pounds per acre

University of Arkansas-Division of Agriculture

Evaluation of Warrant on DP and PHY 375 Cotton

Trial ID: HCT-41910
Location: Rohwer, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Phytogen 375 WRF
BBCH Scale: BCOT **Planting Date:** 8/4/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN

Crop 2: GOSHI Gossypium hirsutum American upland cotton
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT **Planting Date:** 8/4/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Application Description

	A
Application Date:	8/23/2010
Time of Day:	Morning
Application Method:	SPRAY
Application Timing:	2 lf
Application Placement:	BROFOL
Applied By:	RD
Air Temperature, Unit:	87.5 F
% Relative Humidity:	68.2
Wind Velocity, Unit:	1.6 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	90.7 F
Soil Moisture:	FAIR
% Cloud Cover:	55
Next Rain Occurred On:	8/29/2010

Crop Stage At Each Application

	A
BCOT	
Stage Scale Used:	BBCH
Stage Majority, Percent:	2 LF
BCOT	
Stage Scale Used:	BBCH
Stage Majority, Percent:	2 LF

Application Equipment

	A
Appl. Equipment:	Multi-Boom
Operating Pressure, Unit:	55 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
Boom Length, Unit:	6.33 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.8 MPH
Carrier:	H2O
Spray Volume, Unit:	12 GPA
Mix Size, Unit:	3 Liters
Propellant:	CO2

University of Arkansas-Division of Agriculture

Evaluation of Warrant on DP and PHY 375 Cotton

Trial ID: HCT-41910
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C						
Pest Name	8/26/2010	8/26/2010	8/26/2010	9/3/2010	9/3/2010	9/3/2010						
Part Rated	PHYCHL	PHYNEC	PHYSTU	PHYCHL	PHYNEC	PHYSTU						
Rating Date	%	%	%	%	%	%						
Rating Type	3-4 lf	3-4 lf	3-4 lf	5 lf	5 lf	5 lf						
Rating Unit												
Crop Stage Majority	3 DA-A	3 DA-A	3 DA-A	11 DA-A	11 DA-A	11 DA-A						
Pest Stage Majority												
Tri-Eval Interval												
Tri No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Code	Appl Description	1	2	3	4	5	6
1	PHY 375 WRF						0.0	0.0	0.0	0.0	0.0	0.0
2	DP						0.0	0.0	0.0	0.0	0.0	0.0
3	DP Warrant	2.25 lb ai/a	96 oz/a		A	2 lf	0.0	0.0	0.0	0.0	0.0	0.0
4	PHY 375 WRF Warrant	2.25 lb ai/a	96 oz/a		A	2 lf	0.0	6.3	0.0	0.0	3.8	0.0
5	PHY 375 WRF Warrant	1.13 lb ai/a	48 oz/a		A	2 lf	0.0	0.0	0.0	0.0	0.0	0.0
6	DP Warrant	1.13 lb ai/a	48 oz/a		A	2 lf	0.0	0.0	0.0	0.0	0.0	0.0
7	DP Warrant	1.13 lb ai/a	48 oz/a		A	2 lf	0.0	2.5	0.0	0.0	1.3	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf						
8	PHY 375 WRF Warrant	1.13 lb ai/a	48 oz/a		A	2 lf	0.0	10.0	0.0	0.0	6.3	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf						
9	PHY 375 WRF Warrant	1.13 lb ai/a	48 oz/a		A	2 lf	0.0	11.3	0.0	0.0	8.8	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf						
	Orthene	1.0 lb ai/a	17.8 oz/a		A	2 lf						
	NIS	0.25 % v/v	0.25 % v/v		A	2 lf						
10	DP Warrant	1.13 lb ai/a	48 oz/a		A	2 lf	0.0	2.5	0.0	0.0	1.3	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf						
	Orthene	1.0 lb ai/a	17.8 oz/a		A	2 lf						
	NIS	0.25 % v/v	0.25 % v/v		A	2 lf						
11	DP Dual Magnum	0.95 lb ai/a	16 oz/a		A	2 lf	0.0	1.3	0.0	0.0	1.3	0.0
12	PHY 375 WRF Dual Magnum	0.95 lb ai/a	16 oz/a		A	2 lf	0.0	2.5	0.0	0.0	1.3	0.0
13	PHY 375 WRF Dual Magnum	1.9 lb ai/a	32 oz/a		A	2 lf	0.0	0.0	0.0	0.0	0.0	0.0
14	DP Dual Magnum	1.9 lb ai/a	32 oz/a		A	2 lf	0.0	0.0	0.0	0.0	0.0	0.0
15	DP Dual Magnum	0.95 lb ai/a	16 oz/a		A	2 lf	0.0	0.0	0.0	0.0	0.0	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf						
16	PHY 375 WRF Dual Magnum	0.95 lb ai/a	16 oz/a		A	2 lf	0.0	2.5	0.0	0.0	1.3	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf						
17	PHY 375 WRF Ignite 280	0.53 lb ai/a	29 oz/a		A	2 lf	0.0	6.3	0.0	0.0	3.8	0.0
18	DP Ignite 280	0.53 lb ai/a	29 oz/a		A	2 lf	100.0	100.0	100.0	100.0	100.0	100.0
19	DP Ignite 280	0.53 lb ai/a	29 oz/a		A	2 lf	100.0	100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf						
20	PHY 375 WRF Ignite 280	0.53 lb ai/a	29 oz/a		A	2 lf	0.0	6.3	0.0	0.0	5.0	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	2 lf						
	LSD (P=.05)						0.00	7.37	0.00	0.00	5.45	0.00
	Standard Deviation						0.00	5.21	0.00	0.00	3.86	0.00
	CV						0.0	41.48	0.0	0.0	33.0	0.0
	Bartlett's X2						0.0	11.408	0.0	0.0	18.12	0.0
	P(Bartlett's X2)						.	0.249	.	.	0.034*	.
	Replicate F						0.000	3.633	0.000	0.000	2.710	0.000
	Replicate Prob(F)						1.0000	0.0181	1.0000	1.0000	0.0534	1.0000
	Treatment F						0.000	133.458	0.000	0.000	246.912	0.000
	Treatment Prob(F)						1.0000	0.0001	1.0000	1.0000	0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Part Rated
PLANT = plant
C = Crop is Part Rated
Rating Type
PHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting
Rating Unit
% = percent

University of Arkansas-Division of Agriculture

Efficacy and Selectivity of Dawn, Reflex, and Goal 2 XL Applied EPP and PRE in Cotton

Trial ID: HCT-43110
Location: Marianna, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: PhytoGen 375 WRF
BBCH Scale: BCOT
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Seed Bed: CRUSTE crusted
Planting Date: 5/24/2010
Rate, Unit: 3.5 S/ROWFT
Spacing Within Row, Unit: 3.42 IN
Soil Temperature, Unit: 68 F
Emergence Date: 6/1/2010
Harvested Width, Unit: 6.33 FT
Harvested Length, Unit: 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA **Amaranthus palmeri**
Common Name: Palmer amaranth
Description: Glyphosate-Resistant

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Study Design: RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Loring Silt Loam
% Sand: 1 **% OM:** 2 **Texture:** SIL silt loam
% Silt: 82 **pH:** 7 **Soil Name:** Loring Silt Loam
% Clay: 17 **CEC:** 15 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B
Application Date:	5/10/2010	6/24/2010
Time of Day:	AM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	14 DPP	PRE
Application Placement:	BROSOL	BROSOL
Applied By:	RD	RD
Air Temperature, Unit:	56.6 F	85 F
% Relative Humidity:	91.48	71
Wind Velocity, Unit:	9.55 MPH	2.9 MPH
Wind Direction:	NW	W
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	64.5 F	86 F
Soil Moisture:	FAIR	FAIR
% Cloud Cover:	40	50
Next Rain Occurred On:	6/25/2010	6/25/2010

Crop Stage At Each Application

	A	B
BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH
Stage Majority, Percent:	14 dpp	PRE

Pest Stage At Each Application

	A	B
Stage Majority, Percent:	14dpp	PRE

Application Equipment

	A	B
Appl. Equipment:	Hand Boom	Multi-Boom
Operating Pressure, Unit:	45 PSI	55 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3.5 MPH	3.8 MPH
Carrier:	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	CO2	CO2

University of Arkansas-Division of Agriculture

Efficacy and Selectivity of Dawn, Reflex, and Goal 2 XL Applied EPP and PRE in Cotton

Trial ID: HCT-43110
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA Palmer amaranth		PLANT C		AMAPA Palmer amaranth		PLANT C		AMAPA Palmer amaranth		PLANT C	
Pest Name		PLANT P		PHYGEN		PLANT P		PHYGEN		PLANT P		PHYGEN	
Part Rated		6/14/2010		6/14/2010		6/21/2010		6/21/2010		7/1/2010		7/1/2010	
Rating Date		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL	
Rating Type		%		%		%		%		%		%	
Rating Unit		3 If		3 If		4 If		4 If		7-8 If		7-8If	
Crop Stage Majority		2-12"		2-12"		2-24"		2-24"		2-24"		2-24"	
Pest Stage Majority		35 DA-A		35 DA-A		42 DA-A		42 DA-A		7 DA-B		7 DA-B	
Tri-Eval Interval													
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Unit	Appl Code	Appl Description	1	2	3	4	5	6
1		0.0						0.0	0.0	0.0	0.0	0.0	0.0
2	Dawn	0.375 lb ai/a	24 oz/a			A	14 DPP	96.3	0.0	83.8	0.0	75.0	0.0
	Glyphs X-tra	0.75 lb ai/a	32 oz/a			A	14 DPP						
3	Reflex	0.375 lb ai/a	24 oz/a			A	14 DPP	83.8	0.0	82.5	0.0	73.8	0.0
	Glyphs X-tra	0.75 lb ai/a	32 oz/a			A	14 DPP						
4	Dawn	0.375 lb ai/a	24 oz/a			B	PRE	98.3	0.0	92.5	0.0	89.5	0.0
5	Reflex	0.375 lb ai/a	24 oz/a			B	PRE	100.0	0.0	97.5	0.0	96.3	0.0
6	Dawn	0.25 lb ai/a	16 oz/a			B	PRE	95.0	0.0	87.5	0.0	82.5	0.0
7	Reflex	0.25 lb ai/a	16 oz/a			B	PRE	97.5	0.0	90.0	0.0	87.5	0.0
8	Dawn	0.188 lb ai/a	12 oz/a			B	PRE	98.8	0.0	87.0	0.0	81.3	0.0
9	Reflex	0.188 lb ai/a	12 oz/a			B	PRE	98.3	0.0	88.8	0.0	83.8	0.0
10	Dawn	0.188 lb ai/a	12 oz/a			B	PRE	100.0	0.0	95.0	0.0	95.0	0.0
	Prowl H2O	1 lb ai/a	33.7 oz/a			B	PRE						
11	Reflex	0.188 lb ai/a	12 oz/a			B	PRE	83.8	0.0	74.0	0.0	72.5	0.0
	Prowl H2O	1 lb ai/a	33.7 oz/a			B	PRE						
12	Goal 2XL	0.25 lb ai/a	16 oz/a			B	PRE	90.0	0.0	90.0	0.0	93.8	0.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a			B	PRE						
13	Goal 2XL	0.25 lb ai/a	16 oz/a			A	14 DPP	78.8	0.0	69.0	0.0	72.5	0.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a			A	14 DPP						
14	Goal 2XL	0.25 lb ai/a	16 oz/a			A	14 DPP remove bed	81.3	0.0	80.0	0.0	83.3	0.0
	Roundup PowerMax	0.77 lb ai/a	22 oz/a			A	14 DPP remove bed						
LSD (P=.05)		14.76		0.00				25.58	0.00			18.42	0.00
Standard Deviation		10.33		0.00				17.90	0.00			12.89	0.00
CV		12.03		0.0				22.43	0.0			16.61	0.0
Bartlett's X2		36.538		0.0				43.875	0.0			18.794	0.0
P(Bartlett's X2)		0.001*		.				0.001*	.			0.094	.
Replicate F		6.293		0.000				8.880	0.000			5.893	0.000
Replicate Prob(F)		0.0014		1.0000				0.0001	1.0000			0.0020	1.0000
Treatment F		25.020		0.000				7.342	0.000			13.624	0.000
Treatment Prob(F)		0.0001		1.0000				0.0001	1.0000			0.0001	1.0000

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Efficacy and Selectivity of Dawn, Reflex, and Goal 2 XL Applied EPP and PRE in Cotton

Trial ID: HCT-43110
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		PLANT C		PLANT C		PLANT C			
Pest Name		Palmer amaranth		7/9/2010		9/24/2010		9/24/2010			
Part Rated		PLANT P		PHYGEN		YIELD		YIELD			
Rating Date		7/9/2010		8-9 lf		lb/plot		lb/ac			
Rating Type		CONTROL		%		Harvest		Harvest			
Rating Unit		8-9 lf		8-9lf							
Crop Stage Majority		2-36"		15 DA-B		92 DA-B		92 DA-B			
Pest Stage Majority		15 DA-B									
Trt-Eval Interval											
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Unit	Appl Code	Appl Description	7	8	9	10
1								0.0	0.0	0.80	196.61
2	Dawn	0.375 lb ai/a	24 oz/a			A	14 DPP	43.8	0.0	5.13	1259.56
	Glyphos X-tra	0.75 lb ai/a	32 oz/a			A	14 DPP				
3	Reflex	0.375 lb ai/a	24 oz/a			A	14 DPP	49.5	0.0	3.88	952.35
	Glyphos X-tra	0.75 lb ai/a	32 oz/a			A	14 DPP				
4	Dawn	0.375 lb ai/a	24 oz/a			B	PRE	80.8	0.0	6.05	1486.90
5	Reflex	0.375 lb ai/a	24 oz/a			B	PRE	93.3	0.0	5.63	1382.45
6	Dawn	0.25 lb ai/a	16 oz/a			B	PRE	87.5	0.0	3.40	835.61
7	Reflex	0.25 lb ai/a	16 oz/a			B	PRE	88.3	0.0	6.95	1708.09
8	Dawn	0.188 lb ai/a	12 oz/a			B	PRE	68.3	0.0	4.75	1167.40
9	Reflex	0.188 lb ai/a	12 oz/a			B	PRE	72.5	0.0	4.30	1056.80
10	Dawn	0.188 lb ai/a	12 oz/a			B	PRE	97.5	0.0	5.50	1351.73
	Prowl H2O	1 lb ai/a	33.7 oz/a			B	PRE				
11	Reflex	0.188 lb ai/a	12 oz/a			B	PRE	60.0	0.0	3.73	915.49
	Prowl H2O	1 lb ai/a	33.7 oz/a			B	PRE				
12	Goal 2XL	0.25 lb ai/a	16 oz/a			B	PRE	92.8	0.0	4.40	1081.38
	Roundup PowerMax	0.77 lb ai/a	22 oz/a			B	PRE				
13	Goal 2XL	0.25 lb ai/a	16 oz/a			A	14 DPP	60.0	0.0	4.83	1185.83
	Roundup PowerMax	0.77 lb ai/a	22 oz/a			A	14 DPP				
14	Goal 2XL	0.25 lb ai/a	16 oz/a			A	14 DPP remove bed	64.5	0.0	3.58	878.62
	Roundup PowerMax	0.77 lb ai/a	22 oz/a			A	14 DPP remove bed				
LSD (P=.05)								42.55	0.00	2.740	673.315
Standard Deviation								29.77	0.00	1.917	471.159
CV								43.49	0.0	42.67	42.67
Bartlett's X2								34.411	0.0	14.158	14.158
P(Bartlett's X2)								0.001*	.	0.363	0.363
Replicate F								2.699	0.000	4.468	4.468
Replicate Prob(F)								0.0589	1.0000	0.0086	0.0086
Treatment F								3.049	0.000	2.346	2.346
Treatment Prob(F)								0.0035	1.0000	0.0200	0.0200

University of Arkansas-Division of Agriculture

Efficacy and Selectivity of Dawn, Reflex, and Goal 2 XL Applied EPP and PRE in Cotton

Trial ID: HCT-43110
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code
AMAPA, Amaranthus palmeri, = US
Part Rated
PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated
Rating Type
PHYGEN = phytotoxicity - general / injury
YIELD = yield
Rating Unit
% = percent
lb/plot = pounds per plot
lb/ac = pounds per acre
ARM Action Codes
TY1 = 245.7684*9

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in GT Cotton

Trial ID: HCT-43210
Location: Marianna, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: PhytoGen 375 WRF
BBCH Scale: BCOT
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Seed Bed: CRUSTE crusted
Planting Date: 5/24/2010
Rate, Unit: 3.5 S/ROWFT
Spacing Within Row, Unit: 3.42 IN
Soil Temperature, Unit: 68 F
Emergence Date: 6/1/2010
Harvested Width, Unit: 6.33 FT
Harvested Length, Unit: 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA **Amaranthus palmeri**
Common Name: Palmer amaranth
Description: Glyphosate-Resistant

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Study Design: RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Loring Silt Loam
% Sand: 1 **% OM:** 2 **Texture:** SIL silt loam
% Silt: 82 **pH:** 7 **Soil Name:** Loring Silt Loam
% Clay: 17 **CEC:** 15 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C	D	E
Application Date:	5/10/2010	5/24/2010	6/15/2010	7/1/2010	7/22/2010
Time of Day:	AM	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	14 DPP	PRE	2-3 LF	8-10 NODE	12-13 NOD
Application Placement:	BROSOL	BROSOL	BROFOL	BROFOL	BRODIR
Applied By:	RD	RD	RD	RD	RD
Air Temperature, Unit:	56.6 F	84.6 F	86.4 F	76.8 F	8.3 F
% Relative Humidity:	91.48	65.6	61.71	88.5	79.3
Wind Velocity, Unit:	9.55 MPH	1 MPH	6.35 MPH	5.3 MPH	3.25 MPH
Dew Presence (Y/N):	N no	N no	N no	N no	N no
Soil Temperature, Unit:	64.5 F	78.9 F	83.5 F	85.9 F	84 F
Soil Moisture:	GOOD	GOOD	GOOD	GOOD	GOOD
% Cloud Cover:	40	40	40	90	50
Next Rain Occurred On:	6/25/2010	6/25/2010	6/25/2010	7/13/2010	8/9/2010

Crop Stage At Each Application

	A	B	C	D	E
BCOT	BCOT	BCOT	BCOT	BCOT	BCOT
Stage Scale Used:	BBCH	BBCH	BBCH	BBCH	BBCH
Stage Majority, Percent:	14 DPP	PRE	2-3 LF	8-10 LF	12-13 LF

Pest Stage At Each Application

	A	B	C	D	E
Stage Majority, Percent:	PRE	PRE	1-3"	1-3"	2-6"

Application Equipment

	A	B	C	D	E
Appl. Equipment:	Hand Boom	Multi-Boom	Multi-Boom	HoodSpray	HoodSpray
Operating Pressure, Unit:	45 PSI	55 PSI	55 PSI	35 PSI	35 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	TeeJet	TeeJet
Nozzle Size:	110015	110015	110015		
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	38 IN	38 IN
Nozzles/Row:	2	2	2	3	3
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	4 IN	4 IN
Ground Speed, Unit:	3.5 MPH	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA	15 GPA	15 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	2 Gallons	2 Gallons
Propellant:	CO2	CO2	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in GT Cotton

Trial ID: HCT-43210
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code	AMAPA	AMAPA	AMAPA	AMAPA	AMAPA							
Pest Name	Palmer amaranth	Palmer amaranth	Palmer amaranth	Palmer amaranth	Palmer amaranth							
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date	6/14/2010	6/21/2010	7/1/2010	7/9/2010	7/13/2010							
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL							
Rating Unit	%	%	%	%	%							
Crop Stage Majority	2-3 lf	4 lf	7-8 lf	8-9 lf	10 lf							
Pest Stage Majority	coty1	2-24"	2-24"	2-36"	2-48"							
Tri-Eval Interval	35 DA-A	42 DA-A	16 DA-C	8 DA-D	12 DA-D							
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	Appl Description	1	2	3	4	5
1	UTC	0.0						0.0	0.0	0.0	0.0	0.0
2	Reflex	0.25	lb ai/a	16	oz/a	A	14 DPP	100.0	100.0	100.0	100.0	100.0
	Sequence	1.64	lb ai/a	40	oz/a	C	2-3 lf cotton					
	Suprend	1.2	lb ai/a	24	oz/a	D	8-10 lf cotton					
	MSMA	2.02	lb ai/a	43	oz/a	E	12-13 node cotton					
	Valor	0.064	lb ai/a	2	oz/a	E	12-13 node cotton					
3	Cotoran	1	lb ai/a	32	oz/a	B	PRE	100.0	100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	C	2-3 lf cotton					
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	2-3 lf cotton					
	Prefix	1.32	lb ai/a	32	oz/a	E	12-13 node cotton					
	Touchdown Total	0.75	lb ai/a	23	oz/a	E	12-13 node cotton					
4	Cotoran	1	lb ai/a	32	oz/a	B	PRE	98.8	99.0	100.0	100.0	97.5
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	C	2-3 lf cotton					
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	2-3 lf cotton					
	Prefix	1.32	lb ai/a	32	oz/a	E	12-13 node cotton					
	Caparol	1	lb ai/a	32	oz/a	E	12-13 node cotton					
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	E	12-13 node cotton					
5	Cotoran	1	lb ai/a	32	oz/a	B	PRE	99.5	96.5	100.0	100.0	97.5
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	C	2-3 lf cotton					
	Dual Magnum	0.95	lb ai/a	16	oz/a	C	2-3 lf cotton					
	Prefix	1.32	lb ai/a	32	oz/a	E	12-13 node cotton					
	Caparol	1.5	lb ai/a	48	oz/a	E	12-13 node cotton					
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	E	12-13 node cotton					
6	Roundup PowerMax	0.77	lb ai/a	22	oz/a	A	14 DPP	100.0	100.0	100.0	100.0	100.0
	2,4-D Ester	0.5	lb ai/a	16	oz/a	A	14 DPP					
	Basis	0.0234	lb ai/a	0.5	oz/a	A	14 DPP					
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	B	PRE					
	Staple LX	0.0425	lb ai/a	1.7	oz/a	B	PRE					
	Dirax	0.625	lb ai/a	20	oz/a	B	PRE					
	COC	1	% v/v	1	% v/v	B	PRE					
	Sequence	1.64	lb ai/a	40	oz/a	C	2-3 lf cotton					
	Roundup PowerMax	0.77	lb ai/a	22	oz/a	D	8-10 lf cotton					
	Staple LX	0.0425	lb ai/a	1.7	oz/a	D	8-10 lf cotton					
	MSMA	2.02	lb ai/a	43	oz/a	E	12-13 node cotton					
	Valor	0.064	lb ai/a	2	oz/a	E	12-13 node cotton					
	NIS	0.25	% v/v	0.25	% v/v	E	12-13 node cotton					
7	Cotoran	1	lb ai/a	32	oz/a	B	PRE	98.8	99.5	100.0	98.8	97.5
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	C	2-3 lf cotton					
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	D	8-10 lf cotton					
	Touchdown Total	0.77	lb ai/a	23.6	oz/a	E	12-13 node cotton					
LSD (P=.05)		2.07						2.07	2.57	0.00	1.40	3.74
Standard Deviation		1.40						1.40	1.73	0.00	0.94	2.52
CV		1.64						1.64	2.04	0.0	1.1	2.98
Bartlett's X2		2.438						2.438	7.802	0.0	0.0	0.992
P(Bartlett's X2)		0.296						0.296	0.02*	.	.	0.609
Replicate F		0.929						0.929	1.333	0.000	1.000	3.188
Replicate Prob(F)		0.4471						0.4471	0.2947	1.0000	0.4155	0.0488
Treatment F		2904.178						2904.178	1875.222	0.000	6374.334	878.625
Treatment Prob(F)		0.0001						0.0001	0.0001	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in GT Cotton

Trial ID: HCT-43210
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		AMAPA		PLANT C	PLANT C
Pest Name		Palmer amaranth		Palmer amaranth		9/24/2010	9/24/2010
Part Rated		PLANT P		PLANT P			
Rating Date		7/22/2010		8/3/2010			
Rating Type		CONTROL		CONTROL		YIELD	YIELD
Rating Unit		%		%		lb/plot	lb/ac
Crop Stage Majority		12 Node		6 NAWF		Harvest	Harvest
Pest Stage Majority		2-48"		6-60"			
Tri-Eval Interval		21 DA-D		12 DA-E		64 DA-E	64 DA-E
Tri No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description
1	UTC	0.0					
2	Reflex	0.25 lb ai/a	16 oz/a		A	14	DPP
	Sequence	1.64 lb ai/a	40 oz/a		C	2-3	If cotton
	Suprend	1.2 lb ai/a	24 oz/a		D	8-10	If cotton
	MSMA	2.02 lb ai/a	43 oz/a		E	12-13	node cotton
	Valor	0.064 lb ai/a	2 oz/a		E	12-13	node cotton
3	Cotoran	1 lb ai/a	32 oz/a		B	PRE	
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		C	2-3	If cotton
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	2-3	If cotton
	Prefix	1.32 lb ai/a	32 oz/a		E	12-13	node cotton
	Touchdown Total	0.75 lb ai/a	23 oz/a		E	12-13	node cotton
4	Cotoran	1 lb ai/a	32 oz/a		B	PRE	
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		C	2-3	If cotton
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	2-3	If cotton
	Prefix	1.32 lb ai/a	32 oz/a		E	12-13	node cotton
	Caparol	1 lb ai/a	32 oz/a		E	12-13	node cotton
	Touchdown Total	0.77 lb ai/a	23.6 oz/a		E	12-13	node cotton
5	Cotoran	1 lb ai/a	32 oz/a		B	PRE	
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		C	2-3	If cotton
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	2-3	If cotton
	Prefix	1.32 lb ai/a	32 oz/a		E	12-13	node cotton
	Caparol	1.5 lb ai/a	48 oz/a		E	12-13	node cotton
	Touchdown Total	0.77 lb ai/a	23.6 oz/a		E	12-13	node cotton
6	Roundup PowerMax	0.77 lb ai/a	22 oz/a		A	14	DPP
	2,4-D Ester	0.5 lb ai/a	16 oz/a		A	14	DPP
	Basis	0.0234 lb ai/a	0.5 oz/a		A	14	DPP
	Gramoxone Inteon	0.625 lb ai/a	40 oz/a		B	PRE	
	Staple LX	0.0425 lb ai/a	1.7 oz/a		B	PRE	
	Direx	0.625 lb ai/a	20 oz/a		B	PRE	
	COC	1 % v/v	1 % v/v		B	PRE	
	Sequence	1.64 lb ai/a	40 oz/a		C	2-3	If cotton
	Roundup PowerMax	0.77 lb ai/a	22 oz/a		D	8-10	If cotton
	Staple LX	0.0425 lb ai/a	1.7 oz/a		D	8-10	If cotton
	MSMA	2.02 lb ai/a	43 oz/a		E	12-13	node cotton
	Valor	0.064 lb ai/a	2 oz/a		E	12-13	node cotton
	NIS	0.25 % v/v	0.25 % v/v		E	12-13	node cotton
7	Cotoran	1 lb ai/a	32 oz/a		B	PRE	
	Touchdown Total	0.77 lb ai/a	23.6 oz/a		C	2-3	If cotton
	Touchdown Total	0.77 lb ai/a	23.6 oz/a		D	8-10	If cotton
	Touchdown Total	0.77 lb ai/a	23.6 oz/a		E	12-13	node cotton
LSD (P=.05)		1.77				2.82	2.393
Standard Deviation		1.19				1.90	1.611
CV		1.4				2.24	30.64
Bartlett's X2		4.306				1.722	4.493
P(Bartlett's X2)		0.23				0.423	0.61
Replicate F		0.493				3.728	1.761
Replicate Prob(F)		0.6916				0.0303	0.1907
Treatment F		3974.950				1553.141	3.113
Treatment Prob(F)		0.0001				0.0001	0.0285

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in GT Cotton

Trial ID: HCT-43210
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US

Part Rated

PLANT = plant

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

lb/ac = pounds per acre

ARM Action Codes

TY1 = 245.7684*8

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in Liberty Link Cotton

Trial ID: HCT-43310
Location: Marianna, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Fiber Max 1773 LL B2
BBCH Scale: BCOT **Planting Date:** 6/1/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN **Spacing Within Row, Unit:** 3.42 IN
Seed Bed: CRUSTE crusted **Soil Temperature, Unit:** 68 F
Emergence Date: 6/5/2010

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
Description: Glyphosate-Resistant

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Loring Silt Loam
% Sand: 1 **% OM:** 2 **Texture:** SIL silt loam
% Silt: 82 **pH:** 7 **Soil Name:** Loring Silt Loam
% Clay: 17 **CEC:** 15 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C	D
Application Date:	5/10/2010	6/1/2010	6/21/2010	7/22/2010
Time of Day:	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	21 DPP	PRE	4 LF	12-14 NOD
Application Placement:	BROSOL	BROSOL	BANFOL	BRODIR
Applied By:	RD	RD	RD	RD
Air Temperature, Unit:	56.6 F	84.4 F	85.8 F	83.3 F
% Relative Humidity:	91.48	67.6	60	79.3
Wind Velocity, Unit:	9.55 MPH	3.6 MPH	1.1 MPH	3.25 MPH
Wind Direction:	NW			
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	64.5 F	80.0 F	82.6 F	84 F
Soil Moisture:	FAIR	GOOD	GOOD	GOOD
% Cloud Cover:		40	40	50
Next Rain Occurred On:		6/25/2010	6/25/2010	8/9/2010

Crop Stage At Each Application

	A	B	C	D
BCOT	BCOT	BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH	BBCH	BBCH
Stage Majority, Percent:	21 DPP	PRE	4 LF	12-13 LF

Pest Stage At Each Application

	A	B	C	D
Stage Majority, Percent:	PRE	PRE	1-4"	1-6"

Application Equipment

	A	B	C	D
Appl. Equipment:	Hand Boom	Multi-Boom	Multi-Boom	HoodSpray
Operating Pressure, Unit:	45 PSI	55 PSI	55 PSI	35 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	TeeJet
Nozzle Size:	110015	110015	110015	
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	38 IN
Nozzles/Row:	2	2	2	3
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	4 IN
Ground Speed, Unit:	3.5 MPH	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA	15 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	2 Gallons
Propellant:	CO2	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in Liberty Link Cotton

Trial ID: HCT-43310
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code	AMAPA Palmer amaranth	AMAPA Palmer amaranth	AMAPA Palmer amaranth	AMAPA Palmer amaranth	AMAPA Palmer amaranth						
Pest Name	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P						
Part Rated	6/14/2010	6/21/2010	7/1/2010	7/9/2010	7/13/2010						
Rating Date	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL						
Rating Type	%	%	%	%	%						
Rating Unit	1-2 lf	4 lf	6-8 lf	8-9 lf	8-10 lf						
Crop Stage Majority	coty1	2-24*	2-24*	2-36*	2-48*						
Pest Stage Majority	13 DA-B	20 DA-B	10 DA-C	18 DA-C	22 DA-C						
Trt-Eval Interval											
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Code	Appl Description	1	2	3	4	5
1	UTC						0.0	0.0	0.0	0.0	0.0
2	Reflex	0.25 lb ai/a	16 oz/a		A	21DPP	100.0	100.0	100.0	100.0	97.5
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton					
	Valor	0.064 lb ai/a	2 oz/a		D	12-13 node cotton					
3	Cotoran	1 lb ai/a	32 oz/a		B	PRE	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	Prefix	1.32 lb ai/a	32 oz/a		D	12-13 node cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton					
4	Cotoran	1 lb ai/a	32 oz/a		B	PRE	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	Prefix	1.32 lb ai/a	32 oz/a		D	12-13 node cotton					
	Caparol	1 lb ai/a	32 oz/a		D	12-13 node cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton					
5	Cotoran	1 lb ai/a	32 oz/a		B	PRE	100.0	100.0	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	Prefix	1.32 lb ai/a	32 oz/a		D	12-13 node cotton					
	Caparol	1.5 lb ai/a	48 oz/a		D	12-13 node cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton					
6	Caparol	1 lb ai/a	32 oz/a		B	PRE	100.0	94.5	100.0	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton					
	MSMA	2.02 lb ai/a	43 oz/a		D	12-13 node cotton					
	Direx	0.75 lb ai/a	24 oz/a		D	12-13 node cotton					
7	Cotoran	1 lb ai/a	32 oz/a		B	PRE	100.0	100.0	100.0	100.0	99.5
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton					
	Ignite 280	0.73 lb ai/a	40 oz/a		D	12-13 node cotton					
LSD (P=.05)							0.00	3.74	0.00	0.00	2.89
Standard Deviation							0.00	2.52	0.00	0.00	1.95
CV							0.0	2.96	0.0	0.0	2.28
Bartlett's X2							0.0	0.0	0.0	0.0	5.6
P(Bartlett's X2)							.	.	.	.	0.018*
Replicate F							0.000	1.000	0.000	0.000	0.854
Replicate Prob(F)							1.0000	0.4155	1.0000	1.0000	0.4829
Treatment F							0.000	888.444	0.000	0.000	1492.130
Treatment Prob(F)							1.0000	0.0001	1.0000	1.0000	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in Liberty Link Cotton

Trial ID: HCT-43310
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		AMAPA				
Pest Name		Palmer amaranth		Palmer amaranth				
Part Rated		PLANT P		PLANT P				
Rating Date		7/22/2010		8/3/2010				
Rating Type		CONTROL		CONTROL				
Rating Unit		%		%				
Crop Stage Majority		12 Node		7 NAWF				
Pest Stage Majority		2-48"		6-60"				
Tri-Eval Interval		31 DA-C		12 DA-D				
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Code	Appl Description	6	7
1	UTC						0.0	0.0
2	Reflex	0.25 lb ai/a	16 oz/a		A	21DPP	99.5	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton		
	Valor	0.064 lb ai/a	2 oz/a		D	12-13 node cotton		
3	Cotoran	1 lb ai/a	32 oz/a		B	PRE	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton		
	Prefix	1.32 lb ai/a	32 oz/a		D	12-13 node cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton		
4	Cotoran	1 lb ai/a	32 oz/a		B	PRE	100.0	98.8
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton		
	Prefix	1.32 lb ai/a	32 oz/a		D	12-13 node cotton		
	Caparol	1 lb ai/a	32 oz/a		D	12-13 node cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton		
5	Cotoran	1 lb ai/a	32 oz/a		B	PRE	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton		
	Prefix	1.32 lb ai/a	32 oz/a		D	12-13 node cotton		
	Caparol	1.5 lb ai/a	48 oz/a		D	12-13 node cotton		
	Ignite 280	0.53 lb ai/a	29 oz/a		D	12-13 node cotton		
6	Caparol	1 lb ai/a	32 oz/a		B	PRE	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton		
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton		
	MSMA	2.02 lb ai/a	43 oz/a		D	12-13 node cotton		
	Direx	0.75 lb ai/a	24 oz/a		D	12-13 node cotton		
7	Cotoran	1 lb ai/a	32 oz/a		B	PRE	100.0	99.5
	Ignite 280	0.53 lb ai/a	29 oz/a		C	4 lf cotton		
	Ignite 280	0.73 lb ai/a	40 oz/a		D	12-13 node cotton		
LSD (P=.05)							0.56	1.42
Standard Deviation							0.38	0.96
CV							0.44	1.12
Bartlett's X2							0.0	2.178
P(Bartlett's X2)							.	0.14
Replicate F							1.000	1.909
Replicate Prob(F)							0.4155	0.1643
Treatment F							39934.336	6198.403
Treatment Prob(F)							0.0001	0.0001

University of Arkansas-Division of Agriculture

Control of Glyphosate-Resistant Palmer in Liberty Link Cotton

Trial ID: HCT-43310
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code
AMAPA, Amaranthus palmeri, = US
Part Rated
PLANT = plant
P = Pest is Part Rated
Rating Unit
% = percent

University of Arkansas-Division of Agriculture

Evaluate Weed Control in Early Layby Application Timings

Trial ID: HCT-43410
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA	AMAPA	AMAPA	AMAPA	AMAPA	PLANT C	PLANT C						
Pest Name		Palmer amaranth	Palmer amaranth	Palmer amaranth	Palmer amaranth	Palmer amaranth	9/24/2010	9/24/2010						
Part Rated		PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	YIELD	YIELD						
Rating Date		6/21/2010	7/13/2010	7/22/2010	8/3/2010	9/23/2010	lb/plot	lb/ac						
Rating Type		CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	Harvest	Harvest						
Rating Unit		%	%	%	%	%								
Crop Stage Majority		4 lf	10 lf	12-13 lf	6 NAWF	Harvest								
Pest Stage Majority		2-24"	2-48"	2-48"	2-60"	2-72"								
Trt-Eval Interval		6 DA-B	12 DA-D	8 DA-F	12 DA-G	63 DA-G	64 DA-G	64 DA-G						
Trt No.	Treatment	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	1	2	3	4	5	6	7
13	Cotoran	1 lb ai/a	32 oz/a		A	PRE		66.3	98.8	93.8	100.0	100.0	4.73	1161.26
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton								
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton								
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		D	6 lf cotton								
	Dual Magnum	0.95 lb ai/a	16 oz/a		D	6 lf cotton								
	MSMA	2 lb ai/a	43 oz/a		G	12 lf cotton								
	Reflex	0.375 lb ai/a	24 oz/a		G	12 lf cotton								
14	Cotoran	1 lb ai/a	32 oz/a		A	PRE		66.3	92.5	96.3	96.3	96.3	5.53	1357.87
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton								
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton								
	MSMA	2 lb ai/a	43 oz/a		E	8 lf cotton								
	Valor	0.064 lb ai/a	2 oz/a		E	8 lf cotton								
15	Cotoran	1 lb ai/a	32 oz/a		A	PRE		66.3	95.0	97.5	97.5	97.5	4.85	1191.98
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	2 lf cotton								
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	2 lf cotton								
	MSMA	2 lb ai/a	43 oz/a		E	8 lf cotton								
	Valor	0.096 lb ai/a	3 oz/a		E	8 lf cotton								
16	Cotoran	1 lb ai/a	32 oz/a		A	PRE		22.5	97.5	83.8	91.3	91.3	4.68	1148.97
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	4 lf cotton								
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton								
	MSMA	2 lb ai/a	43 oz/a		E	8 lf cotton								
	Valor	0.064 lb ai/a	2 oz/a		E	8 lf cotton								
17	Cotoran	1 lb ai/a	32 oz/a		A	PRE		10.0	82.5	75.0	83.8	83.8	5.60	1376.30
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	4 lf cotton								
	Dual Magnum	0.95 lb ai/a	16 oz/a		C	4 lf cotton								
	MSMA	2 lb ai/a	43 oz/a		E	8 lf cotton								
	Valor	0.096 lb ai/a	3 oz/a		E	8 lf cotton								
LSD (P=.05)			23.63	9.27				10.32	6.27	6.27	6.27	6.27	1.703	418.644
Standard Deviation			16.54	6.49				7.22	4.39	4.39	4.39	4.39	1.192	292.950
CV			26.68	7.16				7.98	4.8	4.8	4.8	4.8	25.37	25.37
Bartlett's X2			16.702	36.681				52.344	50.597	50.597	50.597	50.597	26.557	26.557
P(Bartlett's X2)			0.337	0.001*				0.001*	0.001*	0.001*	0.001*	0.001*	0.047*	0.047*
Replicate F			8.185	0.867				2.297	1.316	1.316	1.316	1.316	2.719	2.719
Replicate Prob(F)			0.0002	0.4648				0.0895	0.2800	0.2800	0.2800	0.2800	0.0548	0.0548
Treatment F			9.955	53.377				45.116	118.626	118.626	118.626	118.626	4.698	4.698
Treatment Prob(F)			0.0001	0.0001				0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 AMAPA, Amaranthus palmeri, = US
Part Rated
 PLANT = plant
 P = Pest is Part Rated
 C = Crop is Part Rated
Rating Type
 YIELD = yield
Rating Unit
 % = percent
 lb/plot = pounds per plot
 lb/ac = pounds per acre
ARM Action Codes
 TY1 = 245.7684*[C6]

University of Arkansas-Division of Agriculture

MON 63410 Encasulated Acetochlor Evaluation in Cotton

Trial ID: HCT-43510
Location: Marianna, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: PhytoGen 375 WRF
BBCH Scale: BCOT
Planting Date: 5/24/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN **Spacing Within Row, Unit:** 3.42 IN
Seed Bed: CRUSTE crusted **Soil Temperature, Unit:** 68 F
Emergence Date: 6/1/2010
Harvested Width, Unit: 6.33 FT **Harvested Length, Unit:** 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA **Amaranthus palmeri**
Common Name: Palmer amaranth
Description: Glyphosate-Resistant

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Loring Silt Loam
% Sand: 1 **% OM:** 2 **Texture:** SIL silt loam
% Silt: 82 **pH:** 7 **Soil Name:** Loring Silt Loam
% Clay: 17 **CEC:** 15 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	5/24/2010	6/15/2010	7/1/2010
Time of Day:	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	V1-V2	V6-V8
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	RD	RD	RD
Air Temperature, Unit:	84.8 F	92.5 F	77.6 F
% Relative Humidity:	65.59	50	62.4
Wind Velocity, Unit:	1.00 MPH	6.3 MPH	4.7 MPH
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	78.0 F	92.3 F	85.9 F
Soil Moisture:	FAIR	GOOD	GOOD
% Cloud Cover:	50	50	50
Next Rain Occurred On:	6/25/2010	6/25/2010	7/13/2010

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GOSHI BCOT	GOSHI BCOT	GOSHI BCOT
Stage Scale Used:	BBCH	BBCH	BBCH
Stage Majority, Percent:	PRE	V1-V2	V6-V8

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W
Stage Majority, Percent:	PRE	1-4"	1-6"

Application Equipment

	A	B	C
Appl. Equipment:	Multi-Boom	Multi-Boom	HoodSpray
Operating Pressure, Unit:	55 PSI	55 PSI	35 PSI
Nozzle Type:	Air-Mix	Air-Mix	TeeJet
Nozzle Size:	110015	110015	
Nozzle Spacing, Unit:	19 IN	19 IN	38 IN
Nozzles/Row:	2	2	3
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	4 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	15 GPA
Mix Size, Unit:	3 Liters	3 Liters	2 Gallons
Propellant:	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

MON 63410 Encasulated Acetochlor Evaluation in Cotton

Trial ID: HCT-43510
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		AMAPA		AMAPA		AMAPA		PLANT C	PLANT C		
Pest Name		Palmer amaranth		Palmer amaranth		Palmer amaranth		Palmer amaranth		7/9/2010	7/9/2010		
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PHYSTU	PHYCHL		
Rating Date		6/14/2010		6/21/2010		7/1/2010		7/9/2010		8-9 If	8-9 If		
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		%	%		
Rating Unit		%		%		%		%					
Crop Stage Majority		1-2 If		4 If		7-8 If		8-9 If					
Pest Stage Majority		0-12"		2-24"		2-24"		2-36"					
Tri-Eval Interval		21 DA-A		28 DA-A		16 DA-B		8 DA-C		8 DA-C	8 DA-C		
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	1	2	3	4	5	6
1	Untreated Check							0.0	0.0	0.0	0.0	0.0	0.0
2	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		100.0	92.5	92.5	95.0	0.0	0.0
	DUAL MAGNUM	0.955 lb ai/a	16 oz/a		B	V1-V2							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
3	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		98.8	81.3	85.0	91.3	0.0	0.0
	PROWL H20	0.95 lb ai/a	32 oz/a		B	V1-V2							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
4	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		98.8	86.3	87.0	86.3	0.0	0.0
	MON 63410	1.125 lb ai/a	48 oz/a		B	V1-V2							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
5	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		100.0	88.8	83.8	87.5	0.0	0.0
	MON 63410	1.125 lb ai/a	48 oz/a		B	V1-V2							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	MON 63410	1.125 lb ai/a	48 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
6	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		98.8	76.3	80.0	86.3	0.0	0.0
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2							
	AMS	2 % w/v	38.4 oz/a		B	V1-V2							
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8							
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8							
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8							
LSD (P=.05)								2.84	12.25	12.58	15.78	0.00	0.00
Standard Deviation								1.88	8.13	8.35	10.47	0.00	0.00
CV								2.28	11.48	11.7	14.08	0.0	0.0
Bartlett's X2								0.0	0.455	3.81	4.213	0.0	0.0
P(Bartlett's X2)								.	0.978	0.432	0.378	.	.
Replicate F								0.294	0.042	0.603	0.263	0.000	0.000
Replicate Prob(F)								0.8290	0.9881	0.6230	0.8511	1.0000	1.0000
Treatment F								1854.647	74.824	71.130	48.853	0.000	0.000
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

MON 63410 Encapsulated Acetochlor Evaluation in Cotton

Trial ID: HCT-43510
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		PALMER C		AMAPA Palmer amaranth		AMAPA Palmer amaranth		PLANT C		PLANT C		
Pest Name		7/9/2010		7/13/2010		7/22/2010		9/24/2010		9/24/2010		
Part Rated		PHYNEC		CONTROL		CONTROL		YIELD		YIELD		
Rating Date		%		%		%		lb/plot		lb/ac		
Rating Type		8-9 lf		10 lf		12-13 lf		Harvest		Harvest		
Rating Unit		2-48"		2-48"		2-48"						
Crop Stage Majority		8 DA-C		12 DA-C		21 DA-C		85 DA-C		85 DA-C		
Pest Stage Majority												
Tri-Eval Interval												
Trt No.	Treatment Name	Rate	Other	Other	Appl Unit	Appl Code	Description	7	8	9	10	11
1	Untreated Check							0.0	0.0	0.0	1.50	368.65
2	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		0.0	100.0	100.0	4.23	1038.37
	DUAL MAGNUM	0.955 lb ai/a	16 oz/a		B	V1-V2						
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2						
	AMS	2 % w/v	38.4 oz/a		B	V1-V2						
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8						
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8						
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8						
3	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		0.0	97.0	93.8	6.78	1665.08
	PROWL H20	0.95 lb ai/a	32 oz/a		B	V1-V2						
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2						
	AMS	2 % w/v	38.4 oz/a		B	V1-V2						
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8						
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8						
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8						
4	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		0.0	92.5	92.5	5.83	1431.60
	MON 63410	1.125 lb ai/a	48 oz/a		B	V1-V2						
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2						
	AMS	2 % w/v	38.4 oz/a		B	V1-V2						
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8						
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8						
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8						
5	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		0.0	93.8	95.8	4.83	1185.83
	MON 63410	1.125 lb ai/a	48 oz/a		B	V1-V2						
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2						
	AMS	2 % w/v	38.4 oz/a		B	V1-V2						
	MON 63410	1.125 lb ai/a	48 oz/a		C	Layby V6-V8						
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8						
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8						
6	COTORAN 4	1.5 lb ai/a	48 oz/a		A	PRE		0.0	94.5	96.3	6.00	1474.61
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		B	V1-V2						
	AMS	2 % w/v	38.4 oz/a		B	V1-V2						
	DIURON	1 lb ai/a	32 oz/a		C	Layby V6-V8						
	ROUNDUP POWERMAX	0.77 lb ae/a	22 oz/a		C	Layby V6-V8						
	AMS	2 % w/v	38.4 oz/a		C	Layby V6-V8						
	LSD (P=.05)							0.00	7.89	8.51	2.267	557.077
	Standard Deviation							0.00	5.23	5.65	1.504	369.698
	CV							0.0	6.57	7.08	30.96	30.96
	Bartlett's X2							0.0	0.701	0.624	5.872	5.872
	P(Bartlett's X2)							.	0.873	0.891	0.319	0.319
	Replicate F							0.000	0.411	0.430	1.798	1.798
	Replicate Prob(F)							1.0000	0.7474	0.7345	0.1907	0.1907
	Treatment F							0.000	223.197	192.174	6.220	6.220
	Treatment Prob(F)							1.0000	0.0001	0.0001	0.0026	0.0026

University of Arkansas-Division of Agriculture**MON 63410 Encasulated Acetochlor Evaluation in Cotton**

Trial ID: HCT-43510
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US

Part Rated

PLANT = plant

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

PHYSTU = phytotoxicity - stunting

PHYCHL = phytotoxicity - chlorosis

PHYNEC = phytotoxicity - necrosis /burn

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

lb/ac = pounds per acre

ARM Action Codes

TY1 = 245.7684*10

University of Arkansas-Division of Agriculture

Evaluation of MON 63410 for Crop Response and Length of Palmer Amaranth Residual Control in Cotton

Trial ID: HCT-43610
Location: Rohwer, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Phytogen 375 WRF
BBCH Scale: BCOT **Planting Date:** 5/24/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN **Spacing Within Row, Unit:** 3.42 IN
Seed Bed: CRUSTE crusted **Soil Temperature, Unit:** 68 F
Emergence Date: 6/1/2010

Pest Description

Pest 1 Type: W **Code:** AMAPA **Amaranthus palmeri**
Common Name: Palmer amaranth
Description: Glyphosate-Resistant

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Loring Silt Loam
% Sand: 1 **% OM:** 2 **Texture:** SIL silt loam
% Silt: 82 **pH:** 7 **Soil Name:** Loring Silt Loam
% Clay: 17 **CEC:** 15 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B
Application Date:	5/24/2010	6/15/2010
Time of Day:	AM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	2-3 LF
Application Placement:	BROSOL	BROFOL
Applied By:	RD	RD
Air Temperature, Unit:	84.8 F	92.5 F
% Relative Humidity:	65.59	50
Wind Velocity, Unit:	1.00 MPH	6.3 MPH
Wind Direction:	SSE	ESE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	78.0 F	92.3 F
Soil Moisture:	FAIR	DRY
% Cloud Cover:	50	50
Next Rain Occurred On:	6/25/2010	6/25/2010

Crop Stage At Each Application

	A	B
BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH
Stage Majority, Percent:	PRE	2-3LF

Pest Stage At Each Application

	A	B
Stage Majority, Percent:	PRE	1-4"

Application Equipment

	A	B
Appl. Equipment:	Multi-Boom	Multi-Boom
Operating Pressure, Unit:	55 PSI	55 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	CO2	CO2

University of Arkansas-Division of Agriculture

Evaluation of MON 63410 for Crop Response and Length of Palmer Amaranth Residual Control in Cotton

Trial ID: HCT-43610
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	AMAPA Palmer amaranth	AMAPA Palmer amaranth	PLANT C 7/1/2010	PLANT C 7/1/2010	PLANT C 7/1/2010	AMAPA Palmer amaranth	PLANT C 7/9/2010	AMAPA Palmer amaranth							
Pest Name	PLANT P 6/21/2010	PLANT P 7/1/2010	PHYCHL 7/1/2010	PHYNEC 7/1/2010	PHYSTU 7/1/2010	PLANT P 7/9/2010	PHYSTU 7/9/2010	PLANT P 7/13/2010							
Part Rated	CONTROL	CONTROL	%	%	%	CONTROL	PHYSTU	CONTROL							
Rating Date	%	%	7-8 If	7-8 If	7-8 If	%	%	%							
Rating Type	4 If	7-8 If	7-8 If	7-8 If	7-8 If	8-9 If	8-9 If	10 If							
Rating Unit	2-24*	2-24*	16 DA-B	16 DA-B	16 DA-B	2-36*	2-36*	2-48*							
Crop Stage Majority	6 DA-B	16 DA-B	16 DA-B	16 DA-B	16 DA-B	24 DA-B	24 DA-B	28 DA-B							
Pest Stage Majority															
Trt-Eval Interval															
Trt No.	Treatment	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	1	2	3	4	5	6	7	8
1	UTC							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Cotoran MON 63410	1 lb ai/a 0.75 lb ai/a	32 oz/a 32 oz/a		A B	PRE 2-3 If		60.0	78.8	0.0	0.0	0.0	80.0	8.8	78.8
3	Cotoran MON 63410	1 lb ai/a 1.13 lb ai/a	32 oz/a 48 oz/a		A B	PRE 2-3 If		57.5	71.3	0.0	0.0	0.0	60.0	0.0	56.3
4	Cotoran MON 63410	1 lb ai/a 1.5 lb ai/a	32 oz/a 64 oz/a		A B	PRE 2-3 If		60.0	76.3	0.0	0.0	0.0	78.8	0.0	63.8
5	Cotoran Dual Magnum	1 lb ai/a 0.714 lb ai/a	32 oz/a 12 oz/a		A B	PRE 2-3 If		50.0	75.0	0.0	0.0	0.0	67.5	0.0	52.5
6	Cotoran Dual Magnum	1 lb ai/a 0.95 lb ai/a	32 oz/a 16 oz/a		A B	PRE 2-3 If		21.3	70.0	0.0	0.0	0.0	37.5	7.5	36.3
7	Cotoran Dual Magnum	1 lb ai/a 1.43 lb ai/a	32 oz/a 24 oz/a		A B	PRE 2-3 If		70.0	87.5	0.0	0.0	0.0	83.3	7.5	81.3
8	Cotoran Me-Too-Lachlor	1 lb ai/a 0.75 lb ai/a	32 oz/a 12 oz/a		A B	PRE 2-3 If		20.0	48.8	0.0	0.0	0.0	38.8	27.5	32.5
9	Cotoran Me-Too-Lachlor	1 lb ai/a 1 lb ai/a	32 oz/a 16 oz/a		A B	PRE 2-3 If		35.0	70.0	0.0	0.0	0.0	37.5	17.5	25.0
10	Cotoran Me-Too-Lachlor	1 lb ai/a 1.5 lb ai/a	32 oz/a 24 oz/a		A B	PRE 2-3 If		30.0	68.8	0.0	0.0	0.0	40.0	13.8	35.0
11	Cotoran Me-Too-Lachlor	1 lb ai/a 2 lb ai/a	32 oz/a 32 oz/a		A B	PRE 2-3 If		40.0	42.5	0.0	0.0	0.0	38.8	15.0	31.3
LSD (P=.05)		58.88		32.78		0.00	0.00	0.00		48.76		20.43		54.35	
Standard Deviation		40.78		22.70		0.00	0.00	0.00		33.77		14.15		37.64	
CV		101.08		36.26		0.0	0.0	0.0		66.09		159.66		84.07	
Bartlett's X2		0.314		13.339		0.0	0.0	0.0		8.287		7.337		3.221	
P(Bartlett's X2)		1.00		0.148		.	.	.		0.506		0.291		0.955	
Replicate F		0.985		0.539		0.000	0.000	0.000		0.608		0.881		0.426	
Replicate Prob(F)		0.4128		0.6591		1.0000	1.0000	1.0000		0.6150		0.4618		0.7357	
Treatment F		1.102		4.624		0.000	0.000	0.000		2.242		1.601		1.675	
Treatment Prob(F)		0.3920		0.0005		1.0000	1.0000	1.0000		0.0428		0.1544		0.1332	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
AMAPA, Amaranthus palmeri, = US
Part Rated
PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated
Rating Type
PHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting
Rating Unit
% = percent

University of Arkansas-Division of Agriculture

Evaluation of RRF System Value

Trial ID: HCT-43710
 Location: Marianna, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: PhytoGen 375 WRF
BBCH Scale: BCOT
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Seed Bed: CRUSTE crusted
Planting Date: 5/24/2010
Rate, Unit: 3.5 S/ROWFT
Spacing Within Row, Unit: 3.42 IN
Soil Temperature, Unit: 68 F
Emergence Date: 6/1/2010
Harvested Width, Unit: 6.33 FT
Harvested Length, Unit: 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA **Amaranthus palmeri**
Common Name: Palmer amaranth
Description: Glyphosate-Resistant

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Study Design: RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Loring Silt Loam
% Sand: 1 **% OM:** 2 **Texture:** SIL silt loam
% Silt: 82 **pH:** 7 **Soil Name:** Loring Silt Loam
% Clay: 17 **CEC:** 15 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C	D
Application Date:	5/24/2010	6/15/2010	7/8/2010	7/22/2010
Time of Day:	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	1-3 LF	8 LF	12 LF
Application Placement:	BROSOL	BROFOL	BROSOL	BROSOL
Applied By:	RD	RD	RD	RD
Air Temperature, Unit:	84.8 F	92.5 F	85.4 F	87.3 F
% Relative Humidity:	65.59	50	67.3	67.7
Wind Velocity, Unit:	1.00 MPH	6.3 MPH	0.7 MPH	3.2 MPH
Wind Direction:	SSE	ESE	SE	SE
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	78.0 F	92.3 F	81.3 F	84 F
Soil Moisture:	DRY	DRY	GOOD	GOOD
% Cloud Cover:	50	50	45	45
Next Rain Occurred On:	6/25/2010	6/25/2010	7/13/2010	8/9/2010

Crop Stage At Each Application

	A	B	C	D
BCOT	BCOT	BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH	BBCH	BBCH
Stage Majority, Percent:	PRE	1-3 LF	8 LF	12 LF

Pest Stage At Each Application

	A	B	C	D
Stage Majority, Percent:	PRE	1-4"	1-6"	1-6"

Application Equipment

	A	B	C	D
Appl. Equipment:	Multi-Boom	Multi-Boom	HoodSpray	HoodSpray
Operating Pressure, Unit:	55 PSI	55 PSI	35 PSI	35 PSI
Nozzle Type:	Air-Mix	Air-Mix	TeeJet	TeeJet
Nozzle Size:	110015	110015		
Nozzle Spacing, Unit:	19 IN	19 IN	38 IN	38 IN
Nozzles/Row:	2	2	3	3
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	4 IN	4 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	15 GPA	15 GPA
Mix Size, Unit:	3 Liters	3 Liters	2 Gallons	2 Gallons
Propellant:	CO2	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Evaluation of RRF System Value

Trial ID: HCT-43710
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		AMAPA		AMAPA		PLANT C		PLANT C		AMAPA		
Pest Name		Palmer amaranth		Palmer amaranth		Palmer amaranth		7/1/2010		7/1/2010		Palmer amaranth		
Part Rated		PLANT P		PLANT P		PLANT P		PHYNEC		PHYSTU		PLANT P		
Rating Date		6/14/2010		6/21/2010		7/1/2010		%		%		7/9/2010		
Rating Type		CONTROL		CONTROL		CONTROL		%		%		CONTROL		
Rating Unit		%		%		%		%		%		%		
Crop Stage Majority		1-2 lf		4 lf		7-8 lf		7-8 lf		7-8 lf		8-9 lf		
Pest Stage Majority		2-12"		2-24"		2-24"		2-24"		2-24"		2-36"		
Tri-Eval Interval		21 DA-A		6 DA-B		16 DA-B		16 DA-B		16 DA-B		24 DA-B		
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Unit	Appl Code	Description	1	2	3	4	5	6
1	UTC								0.0	0.0	0.0	0.0	0.0	0.0
2	Cotoran	1 lb ai/a	32 oz/a			A	PRE		96.3	96.3	97.0	2.5	2.5	99.5
	Reflex	0.25 lb ai/a	16 oz/a			A	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Valor	0.064 lb ai/a	2 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
3	Reflex	0.25 lb ai/a	16 oz/a			A	PRE		100.0	100.0	100.0	0.0	0.0	100.0
	Diuron	0.5 lb ai/a	16 oz/a			A	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Valor	0.064 lb ai/a	2 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
4	Diuron	0.5 lb ai/a	16 oz/a			A	PRE		100.0	100.0	100.0	2.5	3.8	100.0
	Cotoran	1 lb ai/a	32 oz/a			A	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Reflex	0.25 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
5	Cotoran	1 lb ai/a	32 oz/a			A	PRE		98.8	96.3	100.0	0.0	0.0	100.0
	Reflex	0.25 lb ai/a	16 oz/a			A	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
6	Cotoran	1 lb ai/a	32 oz/a			A	PRE		83.8	92.5	96.3	6.3	15.0	97.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
7	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT		0.0	73.8	65.0	17.5	55.0	53.8
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
8	Cotoran	1 lb ai/a	32 oz/a			A	PRE		86.3	91.3	88.8	2.5	2.5	82.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
9	Cotoran	1 lb ai/a	32 oz/a			A	PRE		98.8	100.0	98.8	0.0	0.0	100.0
	Reflex	0.25 lb ai/a	16 oz/a			A	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
10	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT		0.0	85.0	91.3	0.0	37.5	76.3
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
11	Reflex	0.25 lb ai/a	16 oz/a			A	PRE		98.8	95.0	95.0	0.0	7.5	95.0
	Prowl H2O	1 lb ai/a	33.6 oz/a			A	PRE							
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Staple LX	0.0625 lb ai/a	2.5 oz/a			B	1-3 lf OTT							
	NIS	0.25 lb ai/a	0.2 %v/v			B	1-3 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			C	8 lf PD							
	Cotoran	1 lb ai/a	32 oz/a			C	8 lf PD							
	NIS	0.25 lb ai/a	0.2 %v/v			C	8 lf PD							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							

University of Arkansas-Division of Agriculture

Evaluation of RRF System Value

Trial ID: HCT-43710
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code	AMAPA	AMAPA	AMAPA			AMAPA							
Pest Name	Palmer amaranth	Palmer amaranth	Palmer amaranth	PLANT C	PLANT C	Palmer amaranth							
Part Rated	PLANT P	PLANT P	PLANT P	7/1/2010	7/1/2010	PLANT P							
Rating Date	6/14/2010	6/21/2010	7/1/2010	7/1/2010	7/1/2010	7/9/2010							
Rating Type	CONTROL	CONTROL	CONTROL	PHYNEC	PHYSTU	CONTROL							
Rating Unit	%	%	%	%	%	%							
Crop Stage Majority	1-2 lf	4 lf	7-8 lf	7-8 lf	7-8 lf	8-9 lf							
Pest Stage Majority	2-12"	2-24"	2-24"	2-24"	2-24"	2-36"							
Trt-Eval Interval	21 DA-A	6 DA-B	16 DA-B	16 DA-B	16 DA-B	24 DA-B							
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	Appl Description	1	2	3	4	5	6
12	Cotoran	1 lb ai/a		32 oz/a		A	PRE	75.0	90.0	91.3	0.0	0.0	92.5
	Roundup PowerMax	0.77 lb ae/a		22 oz/a		B	1-3 lf OTT						
	Dual Magnum	0.95 lb ai/a		16 oz/a		B	1-3 lf OTT						
	SA-0070104	1.38 lb ai/a		24 oz/a		C	8 lf PD						
	MSMA	2.02 lb ai/a		43 oz/a		D	Layby 12 node cotton						
	Valor	0.064 lb ai/a		2 oz/a		D	Layby 12 node cotton						
	NIS	0.25 lb ai/a		0.2 %v/v		D	Layby 12 node cotton						
	LSD (P=.05)							8.71	6.98	11.03	5.62	12.70	11.57
	Standard Deviation							6.04	4.83	7.64	3.89	8.80	8.01
	CV							8.65	5.69	8.96	149.55	85.32	9.65
	Bartlett's X2							16.148	3.697	19.195	0.864	13.098	19.732
	P(Bartlett's X2)							0.013*	0.814	0.008*	0.93	0.041*	0.001*
	Replicate F							1.925	0.416	0.769	0.401	2.213	1.202
	Replicate Prob(F)							0.1446	0.7425	0.5196	0.7535	0.1050	0.3241
	Treatment F							201.114	132.324	55.740	6.777	16.266	54.776
	Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluation of RRF System Value

Trial ID: HCT-43710
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA Palmer amaranth		AMAPA Palmer amaranth		AMAPA Palmer amaranth		PLANT C	PLANT C					
Pest Name		7/9/2010		7/13/2010		7/22/2010		9/24/2010	9/24/2010					
Part Rated		PLANT P		PLANT P		PLANT P		YIELD	YIELD					
Rating Date		7/13/2010		7/13/2010		7/22/2010		lb/plot	lb/ac					
Rating Type		CONTROL		CONTROL		CONTROL		Harvest	Harvest					
Rating Unit		%		%		%								
Crop Stage Majority		8-9 lf		10 lf		12-13 lf								
Pest Stage Majority		2-48"		2-48"		2-48"								
Tri-Eval Interval		24 DA-B		6 DA-C		14 DA-C		64 DA-D	64 DA-D					
Tri No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Unit	Appl Code	Description	7	8	9	10	11	12
1	UTC								0.0	0.0	0.0	0.0	0.00	0.00
2	Cotoran	1 lb ai/a	32 oz/a			A	PRE		5.0	98.8	98.8	100.0	2.45	602.13
	Reflex	0.25 lb ai/a	16 oz/a			A	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Valor	0.064 lb ai/a	2 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
3	Reflex	0.25 lb ai/a	16 oz/a			A	PRE		5.0	100.0	100.0	100.0	2.75	675.86
	Diuron	0.5 lb ai/a	16 oz/a			A	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Valor	0.064 lb ai/a	2 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
4	Diuron	0.5 lb ai/a	16 oz/a			A	PRE		11.3	100.0	100.0	100.0	2.30	565.27
	Cotoran	1 lb ai/a	32 oz/a			A	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Reflex	0.25 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
5	Cotoran	1 lb ai/a	32 oz/a			A	PRE		3.8	100.0	100.0	100.0	4.10	1007.65
	Reflex	0.25 lb ai/a	16 oz/a			A	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
6	Cotoran	1 lb ai/a	32 oz/a			A	PRE		18.8	100.0	100.0	100.0	3.45	847.90
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
7	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT		55.0	82.0	68.8	90.0	2.25	552.98
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
8	Cotoran	1 lb ai/a	32 oz/a			A	PRE		20.0	97.8	98.8	100.0	4.03	989.22
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
9	Cotoran	1 lb ai/a	32 oz/a			A	PRE		7.5	100.0	100.0	100.0	4.20	1032.23
	Reflex	0.25 lb ai/a	16 oz/a			A	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
10	Roundup PowerMax	0.77 lb ae/a	22 oz/a			B	1-3 lf OTT		25.0	83.8	85.0	98.8	1.98	485.39
	Roundup PowerMax	0.77 lb ae/a	22 oz/a			C	8 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							
11	Reflex	0.25 lb ai/a	16 oz/a			A	PRE		12.5	96.3	98.8	98.8	3.10	761.88
	Prowl H2O	1 lb ai/a	33.6 oz/a			A	PRE							
	MON 63410	1.13 lb ai/a	48 oz/a			B	1-3 lf OTT							
	Staple LX	0.0625 lb ai/a	2.5 oz/a			B	1-3 lf OTT							
	NIS	0.25 lb ai/a	0.2 %v/v			B	1-3 lf OTT							
	MSMA	2.02 lb ai/a	43 oz/a			C	8 lf PD							
	Cotoran	1 lb ai/a	32 oz/a			C	8 lf PD							
	NIS	0.25 lb ai/a	0.2 %v/v			C	8 lf PD							
	MSMA	2.02 lb ai/a	43 oz/a			D	Layby 12 node cotton							
	Diuron	0.5 lb ai/a	16 oz/a			D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v			D	Layby 12 node cotton							

University of Arkansas-Division of Agriculture

Evaluation of RRF System Value

Trial ID: HCT-43710
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		AMAPA		AMAPA							
Pest Name		Palmer amaranth		Palmer amaranth		Palmer amaranth							
Part Rated		PLANT C	PLANT P	PLANT P	PLANT P	PLANT C	PLANT C						
Rating Date		7/9/2010	7/13/2010	7/22/2010	8/3/2010	9/24/2010	9/24/2010						
Rating Type		PHYSTU	CONTROL	CONTROL	CONTROL	CONTROL	YIELD						
Rating Unit		%	%	%	%	%	lb/plot						
Crop Stage Majority		8-9 lf	10 lf	12-13 lf	6 NAWF	Harvest	Harvest						
Pest Stage Majority			2-48"	2-48"	2-72"								
Tri-Eval Interval		24 DA-B	6 DA-C	14 DA-C	12 DA-D	64 DA-D	64 DA-D						
Tri No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	7	8	9	10	11	12
12	Cotoran	1 lb ai/a	32 oz/a		A	PRE		5.0	92.5	93.8	100.0	3.30	811.04
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	1-3 lf OTT							
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	1-3 lf OTT							
	SA-0070104	1.38 lb ai/a	24 oz/a		C	8 lf PD							
	MSMA	2.02 lb ai/a	43 oz/a		D	Layby 12 node cotton							
	Valor	0.064 lb ai/a	2 oz/a		D	Layby 12 node cotton							
	NIS	0.25 lb ai/a	0.2 %v/v		D	Layby 12 node cotton							
	LSD (P=.05)							17.69	10.90	11.61	4.91	1.880	462.114
	Standard Deviation							12.25	7.55	8.04	3.40	1.302	320.043
	CV							87.13	8.62	9.25	3.75	46.1	46.1
	Bartlett's X2							10.808	17.679	22.233	9.057	5.944	5.944
	P(Bartlett's X2)							0.373	0.003*	0.001*	0.011*	0.82	0.82
	Replicate F							5.332	1.892	1.340	1.623	1.520	1.520
	Replicate Prob(F)							0.0042	0.1501	0.2782	0.2028	0.2274	0.2274
	Treatment F							5.950	56.300	51.798	284.803	3.239	3.239
	Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0043	0.0043

University of Arkansas-Division of Agriculture**Evaluation of RRF System Value**

Trial ID: HCT-43710
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code
AMAPA, Amaranthus palmeri, = US
Part Rated
PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated
Rating Type
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting
YIELD = yield
Rating Unit
% = percent
lb/plot = pounds per plot
lb/ac = pounds per acre
ARM Action Codes
TY1 = 245.7684*[C11]

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-43810
 Location: Marianna, AR

Investigator: Darrin Dodds

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Phytogen 375 WRF
BBCH Scale: BCOT **Planting Date:** 5/24/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN **Spacing Within Row, Unit:** 3.42 IN
Seed Bed: CRUSTE crusted **Soil Temperature, Unit:** 68 F
Emergence Date: 6/1/2010

Crop 2: GOSHI Gossypium hirsutum American upland cotton
Variety: Fiber Max 9250 GTLL B2 **Description:** Glytol from Bayer
BBCH Scale: BCOT **Planting Date:** 5/24/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN **Spacing Within Row, Unit:** 3.42 IN
Seed Bed: CRUSTE crusted **Soil Temperature, Unit:** 68 F
Emergence Date: 6/1/2010

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
Description: Glyphosate-Resistant

Site and Design

Plot Width, Unit: 12.67 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.76 FT²
Replications: 4 **Study Design:** SPLPLO Split-Plot

Soil Description

Description Name: Loring Silt Loam
% Sand: 1 **% OM:** 2 **Texture:** SIL silt loam
% Silt: 82 **pH:** 7 **Soil Name:** Loring Silt Loam
% Clay: 17 **CEC:** 15 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B
Application Date:	6/15/2010	7/1/2010
Time of Day:	AM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	1-3 LF	6-8 LF
Application Placement:	BROFOL	BROFOL
Applied By:	RD	RD
Air Temperature, Unit:	92.5 F	77.6 F
% Relative Humidity:	50	62.4
Wind Velocity, Unit:	6.3 MPH	4.7 MPH
Dew Presence (Y/N):		N no
Soil Temperature, Unit:	92.3 F	85.9 F
Soil Moisture:	DRY	GOOD
% Cloud Cover:		50
Next Rain Occurred On:		7/13/2010

Crop Stage At Each Application

	A	B
BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH
Stage Majority, Percent:	2 LF	8 LF
BCOT	BCOT	

Pest Stage At Each Application

	A	B
Stage Majority, Percent:	1-4"	1-4"

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-43810
Location: Marianna, AR

Investigator: Darrin Dodds

Application Equipment		
	A	B
Appl. Equipment:	Multi-Boom	HoodSpray
Operating Pressure, Unit:	55 PSI	35 PSI
Nozzle Type:	Air-Mix	TeeJet
Nozzle Size:	110015	
Nozzle Spacing, Unit:	19 IN	38 IN
Nozzles/Row:	2	3
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	4 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O
Spray Volume, Unit:	12 GPA	15 GPA
Mix Size, Unit:	3 Liters	2 Gallons
Propellant:	CO2	CO2

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-43810
Location: Marianna, AR

Investigator: Darrin Dodds

Pest Code	Pest Name	Part Rated	Rating Date	Rating Type	Rating Unit	Crop Stage Majority	Pest Stage Majority	Tri-Eval Interval	AMAPA Palmer amaranth		PLANT C 6/21/2010		PLANT C 6/21/2010		AMAPA Palmer amaranth		AMAPA Palmer amaranth	
									PLANT P 6/21/2010 CONTROL %	PLANT C 6/21/2010 PHYCHL %	PLANT C 6/21/2010 PHYNEC %	PLANT C 6/21/2010 PHYSTU %	PLANT P 7/1/2010 CONTROL %	PLANT P 7/9/2010 CONTROL %	PLANT C 7/9/2010 PHYCHL %			
Tri No.	Treatment	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code		1	2	3	4	5	6	7			
1	ROUNDUP POWERMAX ROUNDUP POWERMAX FM 9250 GTLL	0.75 0.75	lb ae/a lb ae/a	21.3 21.3	oz/a oz/a	1-3 LEAF A 6-8 LEAF B			50.0	0.0	0.0	0.0	72.5	70.8	0.0			
2	ROUNDUP POWERMAX ROUNDUP POWERMAX PHY 375 WRF	0.75 0.75	lb ae/a lb ae/a	21.3 21.3	oz/a oz/a	1-3 LEAF A 6-8 LEAF B			47.5	0.0	0.0	0.0	73.8	73.8	0.0			
3	IGNITE 280 IGNITE 280 FM 9250 GTLL	0.53 0.53	lb ai/a lb ai/a	29 29	oz/a oz/a	1-3 LEAF A 6-8 LEAF B			92.5	0.0	0.0	0.0	83.3	97.5	0.0			
4	IGNITE 280 IGNITE 280 PHY 375 WRF	0.53 0.53	lb ai/a lb ai/a	29 29	oz/a oz/a	1-3 LEAF A 6-8 LEAF B			93.3	0.0	0.0	0.0	75.0	95.0	2.5			
5	ROUNDUP POWERMAX DUAL MAGNUM ROUNDUP POWERMAX FM 9250 GTLL	0.75 1 0.75	lb ae/a lb ai/a lb ae/a	21.3 16.8 21.3	oz/a oz/a oz/a	1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			61.3	0.0	0.0	0.0	87.5	90.0	0.0			
6	ROUNDUP POWERMAX DUAL MAGNUM ROUNDUP POWERMAX PHY 375 WRF	0.75 1 0.75	lb ae/a lb ai/a lb ae/a	21.3 16.8 21.3	oz/a oz/a oz/a	1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			66.3	0.0	0.0	0.0	83.8	81.3	0.0			
7	IGNITE 280 DUAL MAGNUM IGNITE 280 FM 9250 GTLL	0.53 1 0.53	lb ai/a lb ai/a lb ai/a	29 16.8 29	oz/a oz/a oz/a	1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			96.3	0.0	0.0	0.0	96.3	100.0	0.0			
8	IGNITE 280 DUAL MAGNUM IGNITE 280 PHY 375 WRF	0.53 1 0.53	lb ai/a lb ai/a lb ai/a	29 16.8 29	oz/a oz/a oz/a	1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			92.5	0.0	0.0	0.0	87.5	96.3	0.0			
9	ROUNDUP POWERMAX ENVOKE ROUNDUP POWERMAX FM 9250 GTLL	0.75 0.007 0.75	lb ae/a lb ai/a lb ae/a	21.3 0.15 21.3	oz/a oz/a oz/a	1-3 LEAF A 6-8 LEAF B 6-8 LEAF B			45.0	0.0	0.0	0.0	72.5	81.3	17.5			
10	ROUNDUP POWERMAX ENVOKE ROUNDUP POWERMAX PHY 375 WRF	0.75 0.007 0.75	lb ae/a lb ai/a lb ae/a	21.3 0.15 21.3	oz/a oz/a oz/a	1-3 LEAF A 6-8 LEAF B 6-8 LEAF B			57.5	0.0	0.0	0.0	76.3	66.3	22.5			
11	IGNITE 280 ENVOKE IGNITE 280 FM 9250 GTLL	0.53 0.007 0.53	lb ai/a lb ai/a lb ai/a	29 0.15 29	oz/a oz/a oz/a	1-3 LEAF A 6-8 LEAF B 6-8 LEAF B			94.5	0.0	0.0	0.0	96.3	100.0	10.0			
12	IGNITE 280 ENVOKE IGNITE 280 PHY 375 WRF	0.53 0.007 0.53	lb ai/a lb ai/a lb ai/a	29 0.15 29	oz/a oz/a oz/a	1-3 LEAF A 6-8 LEAF B 6-8 LEAF B			92.5	0.0	0.0	0.0	93.8	98.8	25.0			
13	ROUNDUP POWERMAX MON63410 ROUNDUP POWERMAX FM 9250 GTLL	0.75 1.2 0.75	lb ae/a lb ai/a lb ae/a	21.3 51 21.3	oz/a oz/a oz/a	1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			32.5	0.0	0.0	0.0	50.0	67.5	0.0			
14	ROUNDUP POWERMAX MON63410 ROUNDUP POWERMAX PHY 375 WRF	0.75 1.2 0.75	lb ae/a lb ai/a lb ae/a	21.3 51 21.3	oz/a oz/a oz/a	1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			41.3	0.0	0.0	0.0	51.3	65.0	0.0			
15	IGNITE 280 MON63410 IGNITE 280 FM 9250 GTLL	0.53 1.2 0.53	lb ai/a lb ai/a lb ai/a	29 51 29	oz/a oz/a oz/a	1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			91.3	0.0	0.0	0.0	93.3	99.0	0.0			
16	IGNITE 280 MON63410 IGNITE 280 PHY 375 WRF	0.53 1.2 0.53	lb ai/a lb ai/a lb ai/a	29 51 29	oz/a oz/a oz/a	1-3 LEAF A 1-3 LEAF A 6-8 LEAF B			92.5	0.0	0.0	0.0	85.0	99.0	0.0			
17	IGNITE 280 IGNITE 280 FM 9250 GTLL	0.53 0.79	lb ai/a lb ai/a	29 43	oz/a oz/a	1-3 LEAF A 6-8 LEAF B			94.5	0.0	0.0	0.0	84.5	98.8	0.0			
18	IGNITE 280 IGNITE 280 PHY 375 WRF	0.53 0.79	lb ai/a lb ai/a	29 43	oz/a oz/a	1-3 LEAF A 6-8 LEAF B			91.3	0.0	0.0	0.0	83.8	97.0	2.5			
19	IGNITE 280 IGNITE 280 FM 9250 GTLL	0.79 0.79	lb ai/a lb ai/a	43 43	oz/a oz/a	1-3 LEAF A 6-8 LEAF B			92.5	0.0	0.0	0.0	81.3	95.8	0.0			

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-43810
Location: Marianna, AR

Investigator: Darrin Dodds

Pest Code	AMAPA Palmer amaranth	PLANT C 6/21/2010	PLANT C 6/21/2010	PLANT C 6/21/2010	AMAPA Palmer amaranth	AMAPA Palmer amaranth	PLANT C 7/9/2010
Pest Name	PLANT P	PHYCHL	PHYNEC	PHYSTU	PLANT P	CONTROL	PHYCHL
Part Rated	6/21/2010	6/21/2010	6/21/2010	6/21/2010	7/1/2010	7/9/2010	7/9/2010
Rating Date	CONTROL	PHYCHL	PHYNEC	PHYSTU	CONTROL	CONTROL	PHYCHL
Rating Type	%	%	%	%	%	%	%
Rating Unit	4 lf	4 lf	4 lf	4 lf	7-8 lf	8-9 lf	8-9 lf
Crop Stage Majority	2-24*	4 lf	4 lf	4 lf	2-24*	2-36*	8-9 lf
Pest Stage Majority	6 DA-A	6 DA-A	6 DA-A	6 DA-A	16 DA-A	8 DA-B	8 DA-B
Trt-Eval Interval							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	
20	IGNITE 280	0.79 lb ai/a	43 oz/a	1-3 LEAF A			
	IGNITE 280	0.79 lb ai/a	43 oz/a	6-8 LEAF B			
	PHY 375 WRF						
LSD (P=.05)	21.59	0.00	0.00	0.00	24.18	21.15	5.16
Standard Deviation	15.27	0.00	0.00	0.00	17.10	14.96	3.65
CV	20.16	0.0	0.0	0.0	21.21	16.9	88.45
Bartlett's X2	85.339	0.0	0.0	0.0	39.442	82.707	1.962
P(Bartlett's X2)	0.001*	.	.	.	0.004*	0.001*	0.923
Replicate F	0.276	0.000	0.000	0.000	4.912	2.379	1.659
Replicate Prob(F)	0.8427	1.0000	1.0000	1.0000	0.0042	0.0792	0.1860
Treatment F	8.688	0.000	0.000	0.000	2.179	3.024	19.231
Treatment Prob(F)	0.0001	1.0000	1.0000	1.0000	0.0124	0.0007	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean separations are based on the complete error term.

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-43810
Location: Marianna, AR

Investigator: Darrin Dodds

Pest Code	Pest Name	PLANT C 7/9/2010 PHYNEC %	PLANT C 7/9/2010 PHYSTU %	AMAPA Palmer amaranth PLANT P 7/13/2010 CONTROL %	PLANT C 7/13/2010 PHYCHL %	PLANT C 7/13/2010 PHYNEC %	PLANT C 7/13/2010 PHYSTU %	
Rating Date	Rating Type	8-9 If	8-9 If	10 If 2-36"	10 If	10 If	10 If	
Rating Unit	Crop Stage Majority	8 DA-B	8 DA-B	12 DA-B	12 DA-B	12 DA-B	12 DA-B	
Tri-Eval Interval								
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code		
1	ROUNDUP POWERMAX FM 9250 GTLL	0.75 lb ae/a	21.3 oz/a		1-3 LEAF A 6-8 LEAF B		0.0	2.5
2	ROUNDUP POWERMAX PHY 375 WRF	0.75 lb ae/a	21.3 oz/a		1-3 LEAF A 6-8 LEAF B		0.0	8.8
3	IGNITE 280 FM 9250 GTLL	0.53 lb ai/a	29 oz/a		1-3 LEAF A 6-8 LEAF B		0.0	2.5
4	IGNITE 280 PHY 375 WRF	0.53 lb ai/a	29 oz/a		1-3 LEAF A 6-8 LEAF B		10.0	15.0
5	ROUNDUP POWERMAX DUAL MAGNUM FM 9250 GTLL	0.75 lb ae/a 1 lb ai/a	21.3 oz/a 16.8 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B		0.0	12.5
6	ROUNDUP POWERMAX DUAL MAGNUM PHY 375 WRF	0.75 lb ae/a 1 lb ai/a	21.3 oz/a 16.8 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B		0.0	2.5
7	IGNITE 280 DUAL MAGNUM FM 9250 GTLL	0.53 lb ai/a 1 lb ai/a	29 oz/a 16.8 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B		3.8	0.0
8	IGNITE 280 DUAL MAGNUM PHY 375 WRF	0.53 lb ai/a 1 lb ai/a	29 oz/a 16.8 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B		3.8	5.0
9	ROUNDUP POWERMAX ENVOKE FM 9250 GTLL	0.75 lb ae/a 0.007 lb ai/a	21.3 oz/a 0.15 oz/a		1-3 LEAF A 6-8 LEAF B 6-8 LEAF B		12.5	0.0
10	ROUNDUP POWERMAX ENVOKE PHY 375 WRF	0.75 lb ae/a 0.007 lb ai/a	21.3 oz/a 0.15 oz/a		1-3 LEAF A 6-8 LEAF B 6-8 LEAF B		21.3	0.0
11	IGNITE 280 ENVOKE FM 9250 GTLL	0.53 lb ai/a 0.007 lb ai/a	29 oz/a 0.15 oz/a		1-3 LEAF A 6-8 LEAF B 6-8 LEAF B		10.0	0.0
12	IGNITE 280 ENVOKE PHY 375 WRF	0.53 lb ai/a 0.007 lb ai/a	29 oz/a 0.15 oz/a		1-3 LEAF A 6-8 LEAF B 6-8 LEAF B		18.8	12.5
13	ROUNDUP POWERMAX MON63410 FM 9250 GTLL	0.75 lb ae/a 1.2 lb ai/a	21.3 oz/a 51 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B		0.0	0.0
14	ROUNDUP POWERMAX MON63410 PHY 375 WRF	0.75 lb ae/a 1.2 lb ai/a	21.3 oz/a 51 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B		0.0	2.5
15	IGNITE 280 MON63410 FM 9250 GTLL	0.53 lb ai/a 1.2 lb ai/a	29 oz/a 51 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B		0.0	0.0
16	IGNITE 280 MON63410 PHY 375 WRF	0.53 lb ai/a 1.2 lb ai/a	29 oz/a 51 oz/a		1-3 LEAF A 1-3 LEAF A 6-8 LEAF B		8.8	0.0
17	IGNITE 280 FM 9250 GTLL	0.53 lb ai/a 0.79 lb ai/a	29 oz/a 43 oz/a		1-3 LEAF A 6-8 LEAF B		0.0	0.0
18	IGNITE 280 PHY 375 WRF	0.53 lb ai/a 0.79 lb ai/a	29 oz/a 43 oz/a		1-3 LEAF A 6-8 LEAF B		18.8	7.5
19	IGNITE 280 FM 9250 GTLL	0.79 lb ai/a 0.79 lb ai/a	43 oz/a 43 oz/a		1-3 LEAF A 6-8 LEAF B		0.0	0.0

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-43810
Location: Marianna, AR

Investigator: Darrin Dodds

Pest Code	PLANT C	PLANT C	AMAPA Palmer amaranth	PLANT C	PLANT C	PLANT C
Pest Name	7/9/2010	7/9/2010	7/13/2010	7/13/2010	7/13/2010	7/13/2010
Part Rated	PHYNEC	PHYSTU	CONTROL	PHYCHL	PHYNEC	PHYSTU
Rating Date	%	%	%	%	%	%
Rating Type	8-9 If	8-9 If	10 If	10 If	10 If	10 If
Rating Unit			2-36"			coty/
Crop Stage Majority	8 DA-B	8 DA-B	12 DA-B	12 DA-B	12 DA-B	12 DA-B
Pest Stage Majority						
Trt-Eval Interval						
Trt No.	8	9	10	11	12	13
Treatment Name						
Rate						
Unit						
Other Rate						
Other Rate Unit						
Growth Stage						
Appl Code						
20 IGNITE 280	0.79 lb ai/a	43 oz/a	1-3 LEAF A	16.3	8.8	98.8
IGNITE 280	0.79 lb ai/a	43 oz/a	6-8 LEAF B			0.0
PHY 375 WRF						0.0
15.0						
LSD (P=.05)	5.93	9.86	13.63	0.00	0.00	11.52
Standard Deviation	4.19	6.97	9.64	0.00	0.00	8.15
CV	67.79	122.58	10.48	0.0	0.0	188.9
Bartlett's X2	6.866	5.833	50.266	0.0	0.0	12.17
P(Bartlett's X2)	0.651	0.756	0.001*	.	.	0.274
Replicate F	1.012	1.961	2.502	0.000	0.000	0.306
Replicate Prob(F)	0.3940	0.1301	0.0684	1.0000	1.0000	0.8209
Treatment F	13.330	7.181	4.447	0.000	0.000	1.819
Treatment Prob(F)	0.0001	0.0001	0.0001	1.0000	1.0000	0.0427

University of Arkansas-Division of Agriculture

Glytol/Liberty Link technology evaluation,

Trial ID: HCT-43810
Location: Marianna, AR

Investigator: Darrin Dodds

Pest Code
AMAPA, Amaranthus palmeri, = US
Part Rated
PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated
Rating Type
PHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis /burn
PHYSTU = phytotoxicity - stunting
Rating Unit
% = percent

University of Arkansas-Division of Agriculture

Evaluate Efficacy of Ignite and Roundup applied Sequentially in Glytol Cotton

Trial ID: HCT-43910
Location: Marianna, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Fiber Max 9250 GTLL B2 **Description:** Glytol from Bayer
BBCH Scale: BCOT **Planting Date:** 5/24/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN **Spacing Within Row, Unit:** 3.42 IN
Seed Bed: CRUSTE crusted **Soil Temperature, Unit:** 68 F
Emergence Date: 6/1/2010

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
Description: Glyphosate-Resistant

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Loring Silt Loam
% Sand: 1 **% OM:** 2 **Texture:** SIL silt loam
% Silt: 82 **pH:** 7 **Soil Name:** Loring Silt Loam
% Clay: 17 **CEC:** 15 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C	D
Application Date:	6/8/2010	6/21/2010	7/1/2010	7/22/2010
Time of Day:	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	1 LF	4 LF	6 LF	12 LF
Application Placement:	BROFOL	BROFOL	BROFOL	BROSOI
Applied By:	RD	RD	RD	RD
Air Temperature, Unit:	93.5 F	90 F	77.6 F	87.3 F
% Relative Humidity:	61	57.4	62.4	67.7
Wind Velocity, Unit:	6.5 MPH	1.5 MPH	4.7 MPH	3.2 MPH
Wind Direction:	ESE	S	ESE	SE
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	91.2 F	82.5 F	85.9 F	84 F
Soil Moisture:	DRY	FAIR	GOOD	GOOD
% Cloud Cover:	50	40	50	45
Next Rain Occurred On:	6/25/2010	6/25/2010	7/13/2010	8/9/2010

Crop Stage At Each Application

	A	B	C	D
BCOT	BCOT	BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH	BBCH	BBCH
Stage Majority, Percent:	1 LF	4 LF	8 LF	12 LF

Pest Stage At Each Application

	A	B	C	D
Stage Majority, Percent:	0-4"	0-4"	0-6"	0-6"

Application Equipment

	A	B	C	D
Appl. Equipment:	Multi-Boom	Multi-Boom	Multi-Boom	HoodSpray
Operating Pressure, Unit:	55 PSI	55 PSI	55 PSI	35 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	TeeJet
Nozzle Size:	110015	110015	110015	
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	38 IN
Nozzles/Row:	2	2	2	3
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	4 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA	15 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	2 Gallons
Propellant:	CO2	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Evaluate Efficacy of Ignite and Roundup applied Sequentially in Glytol Cotton

Trial ID: HCT-43910
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code	Pest Name	AMAPA Palmer amaranth PLANT P	AMAPA Palmer amaranth PLANT P	AMAPA Palmer amaranth PLANT P	AMAPA Palmer amaranth PLANT P	AMAPA Palmer amaranth PLANT P					
Rating Date		6/14/2010	6/21/2010	7/1/2010	7/9/2010	7/13/2010					
Rating Type		CONTROL	CONTROL	CONTROL	CONTROL	CONTROL					
Rating Unit		%	%	%	%	%					
Crop Stage Majority		1-2 lf	4 lf	7-8 lf	8-9 lf	10 lf					
Pest Stage Majority		2-12"	2-24"	2-24"	2-24"	2-36"					
Trt-Eval Interval		6 DA-A	13 DA-A	10 DA-B	8 DA-C	12 DA-C					
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	1	2	3	4	5
1	UTC						0.0	0.0	0.0	0.0	0.0
2	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	1 lf cotton	93.3	56.3	85.0	81.3	87.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton					
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton					
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby					
3	Ignite 280	0.53 lb ai/a	29 oz/a		A	1 lf cotton	98.8	80.0	97.5	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton					
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby					
4	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	1 lf cotton	90.8	72.5	93.8	97.5	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton					
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton					
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby					
5	Ignite 280	0.53 lb ai/a	29 oz/a		A	1 lf cotton	91.3	70.0	85.0	90.0	96.3
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton					
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby					
6	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	1 lf cotton	95.0	61.3	98.8	98.3	99.5
	Dual Magnum	0.95 lb ai/a	16 oz/a		A	1 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton					
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton					
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby					
7	Ignite 280	0.53 lb ai/a	29 oz/a		A	1 lf cotton	99.5	96.3	100.0	100.0	100.0
	Dual Magnum	0.95 lb ai/a	16 oz/a		A	1 lf cotton					
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton					
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby					
8	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	1 lf cotton	89.5	67.5	82.5	88.8	87.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton					
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton					
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby					
9	Ignite 280	0.53 lb ai/a	29 oz/a		A	1 lf cotton	96.3	90.0	97.5	100.0	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton					
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby					
10	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	1 lf cotton	90.0	55.0	97.5	97.5	100.0
	Ignite 280	0.53 lb ai/a	29 oz/a		B	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton					
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C	8 lf cotton					
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby					
11	Ignite 280	0.53 lb ai/a	29 oz/a		A	1 lf cotton	100.0	96.3	97.5	100.0	100.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B	4 lf cotton					
	Dual Magnum	0.95 lb ai/a	16 oz/a		B	4 lf cotton					
	Ignite 280	0.53 lb ai/a	29 oz/a		C	8 lf cotton					
	MSMA	2 lb ai/a	43 oz/a		D	12 lf cotton Layby					
	Valor	0.064 lb ai/a	2 oz/a		D	12 lf cotton Layby					
LSD (P=.05)							12.09	24.94	12.89	8.83	7.36
Standard Deviation							8.37	17.27	8.93	6.12	5.10
CV							9.75	25.51	10.5	7.06	5.78
Bartlett's X2							24.776	13.632	22.999	11.86	13.165
P(Bartlett's X2)							0.002*	0.136	0.003*	0.037*	0.004*
Replicate F							1.679	4.438	2.606	1.617	1.186
Replicate Prob(F)							0.1926	0.0107	0.0700	0.2062	0.3317
Treatment F							47.101	9.684	41.913	92.303	135.628
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluate Efficacy of Ignite and Roundup applied Sequentially in Glytol Cotton

Trial ID: HCT-43910
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		AMAPA		
Pest Name		Palmer amaranth		Palmer amaranth		
Part Rated		PLANT P		PLANT P		
Rating Date		7/22/2010		8/3/2010		
Rating Type		CONTROL		CONTROL		
Rating Unit		%		%		
Crop Stage Majority		12-13 lf		6 NAWF		
Pest Stage Majority		2-48"		6-60"		
Tri-Eval Interval		21 DA-C		12 DA-D		
Trt No.	Treatment Name	Rate	Other	Other	Appl	Appl
		Rate	Rate	Rate	Unit	Description
1	UTC					
		0.0				0.0
2	Roundup PowerMax	0.77	lb ae/a	22	oz/a	A 1 lf cotton
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B 4 lf cotton
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C 8 lf cotton
	MSMA	2	lb ai/a	43	oz/a	D 12 lf cotton Layby
	Valor	0.064	lb ai/a	2	oz/a	D 12 lf cotton Layby
		87.5				93.8
3	Ignite 280	0.53	lb ai/a	29	oz/a	A 1 lf cotton
	Ignite 280	0.53	lb ai/a	29	oz/a	B 4 lf cotton
	Ignite 280	0.53	lb ai/a	29	oz/a	C 8 lf cotton
	MSMA	2	lb ai/a	43	oz/a	D 12 lf cotton Layby
	Valor	0.064	lb ai/a	2	oz/a	D 12 lf cotton Layby
		100.0				100.0
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	A 1 lf cotton
	Ignite 280	0.53	lb ai/a	29	oz/a	B 4 lf cotton
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C 8 lf cotton
	MSMA	2	lb ai/a	43	oz/a	D 12 lf cotton Layby
	Valor	0.064	lb ai/a	2	oz/a	D 12 lf cotton Layby
		100.0				100.0
5	Ignite 280	0.53	lb ai/a	29	oz/a	A 1 lf cotton
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B 4 lf cotton
	Ignite 280	0.53	lb ai/a	29	oz/a	C 8 lf cotton
	MSMA	2	lb ai/a	43	oz/a	D 12 lf cotton Layby
	Valor	0.064	lb ai/a	2	oz/a	D 12 lf cotton Layby
		92.5				98.3
6	Roundup PowerMax	0.77	lb ae/a	22	oz/a	A 1 lf cotton
	Dual Magnum	0.95	lb ai/a	16	oz/a	A 1 lf cotton
	Ignite 280	0.53	lb ai/a	29	oz/a	B 4 lf cotton
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C 8 lf cotton
	MSMA	2	lb ai/a	43	oz/a	D 12 lf cotton Layby
	Valor	0.064	lb ai/a	2	oz/a	D 12 lf cotton Layby
		100.0				100.0
7	Ignite 280	0.53	lb ai/a	29	oz/a	A 1 lf cotton
	Dual Magnum	0.95	lb ai/a	16	oz/a	A 1 lf cotton
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B 4 lf cotton
	Ignite 280	0.53	lb ai/a	29	oz/a	C 8 lf cotton
	MSMA	2	lb ai/a	43	oz/a	D 12 lf cotton Layby
	Valor	0.064	lb ai/a	2	oz/a	D 12 lf cotton Layby
		100.0				100.0
8	Roundup PowerMax	0.77	lb ae/a	22	oz/a	A 1 lf cotton
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B 4 lf cotton
	Dual Magnum	0.95	lb ai/a	16	oz/a	B 4 lf cotton
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C 8 lf cotton
	MSMA	2	lb ai/a	43	oz/a	D 12 lf cotton Layby
	Valor	0.064	lb ai/a	2	oz/a	D 12 lf cotton Layby
		87.5				95.0
9	Ignite 280	0.53	lb ai/a	29	oz/a	A 1 lf cotton
	Ignite 280	0.53	lb ai/a	29	oz/a	B 4 lf cotton
	Dual Magnum	0.95	lb ai/a	16	oz/a	B 4 lf cotton
	Ignite 280	0.53	lb ai/a	29	oz/a	C 8 lf cotton
	MSMA	2	lb ai/a	43	oz/a	D 12 lf cotton Layby
	Valor	0.064	lb ai/a	2	oz/a	D 12 lf cotton Layby
		100.0				100.0
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	A 1 lf cotton
	Ignite 280	0.53	lb ai/a	29	oz/a	B 4 lf cotton
	Dual Magnum	0.95	lb ai/a	16	oz/a	B 4 lf cotton
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	C 8 lf cotton
	MSMA	2	lb ai/a	43	oz/a	D 12 lf cotton Layby
	Valor	0.064	lb ai/a	2	oz/a	D 12 lf cotton Layby
		100.0				100.0
11	Ignite 280	0.53	lb ai/a	29	oz/a	A 1 lf cotton
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	B 4 lf cotton
	Dual Magnum	0.95	lb ai/a	16	oz/a	B 4 lf cotton
	Ignite 280	0.53	lb ai/a	29	oz/a	C 8 lf cotton
	MSMA	2	lb ai/a	43	oz/a	D 12 lf cotton Layby
	Valor	0.064	lb ai/a	2	oz/a	D 12 lf cotton Layby
		100.0				100.0
LSD (P=.05)		9.50				3.34
Standard Deviation		6.58				2.31
CV		7.48				2.58
Bartlett's X2		1.007				2.53
P(Bartlett's X2)		0.604				0.282
Replicate F		2.115				1.577
Replicate Prob(F)		0.1191				0.2154
Treatment F		80.979				667.026
Treatment Prob(F)		0.0001				0.0001

University of Arkansas-Division of Agriculture

Evaluate Efficacy of Ignite and Roundup applied Sequentially in Glytol Cotton

Trial ID: HCT-43910
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code
AMAPA, Amaranthus palmeri, = US
Part Rated
PLANT = plant
P = Pest is Part Rated
Rating Unit
% = percent

University of Arkansas-Division of Agriculture

Efficacy of Ignite and Roundup Alone and in Tankmix in Glytol Cotton

Trial ID: HCT-44010
Location: Marianna, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: Fiber Max 9250 GTLL B2
Description: Glytol from Bayer
BBCH Scale: BCOT
Planting Date: 5/24/2010
Planting Method: BEDDED bedded
Rate, Unit: 3.5 S/ROWFT
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Spacing Within Row, Unit: 3.42 IN
Seed Bed: CRUSTE crusted
Soil Temperature, Unit: 68 F
Emergence Date: 6/1/2010

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
Description: Glyphosate-Resistant

Pest 2 Type: W **Code:** IPOSS *Ipomoea sp.*
Common Name: Morning glory

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Study Design: RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: Loring Silt Loam
% Sand: 1 **% OM:** 2 **Texture:** SIL silt loam
% Silt: 82 **pH:** 7 **Soil Name:** Loring Silt Loam
% Clay: 17 **CEC:** 15 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A
Application Date:	6/15/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	3-4" PW MG
Application Placement:	BROFOL
Applied By:	RD
Air Temperature, Unit:	92.5 F
% Relative Humidity:	50
Wind Velocity, Unit:	6.3 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	92.3 F
Soil Moisture:	DRY
% Cloud Cover:	50

Crop Stage At Each Application

	A
BCOT	
Stage Scale Used:	BBCH
Stage Majority, Percent:	2 LF

Pest Stage At Each Application

	A
Stage Majority, Percent:	3-4"
Stage Majority, Percent:	3-4"

Application Equipment

	A
Appl. Equipment:	Multi-Boom
Operating Pressure, Unit:	55 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.8 MPH
Carrier:	H2O
Spray Volume, Unit:	12 GPA
Mix Size, Unit:	3 Liters
Propellant:	CO2

University of Arkansas-Division of Agriculture

Efficacy of Ignite and Roundup Alone and in Tankmix in Glytol Cotton

Trial ID: HCT-44010
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code	AMAPA	AMAPA	IPOSS	AMAPA	IPOSS	AMAPA	IPOSS							
Pest Name	Palmer amaranth	Palmer amaranth	Morning glory	Palmer amaranth	Morning glory	Palmer amaranth	Morning glory							
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date	6/21/2010	7/1/2010	7/1/2010	7/9/2010	7/9/2010	7/13/2010	7/13/2010							
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL							
Rating Unit	%	%	%	%	%	%	%							
Crop Stage Majority	4 lf	7-8 lf	7-8 lf	8-9 lf	8-9 lf	10 lf	10 lf							
Pest Stage Majority	2-24"	2-24"	2-24"	2-36"	2-36"	2-48"	2-48"							
Trt-Eval Interval	6 DA-A	16 DA-A	16 DA-A	24 DA-A	24 DA-A	28 DA-A	28 DA-A							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	1	2	3	4	5	6	7
1	UTC							0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Ignite 280	0.402 lb ai/a	22 oz/a		A	3-4"	PW&MG	87.5	52.5	100.0	30.0	86.3	42.5	45.0
3	Ignite 280	0.53 lb ai/a	29 oz/a		A	3-4"	PW&MG	91.3	78.8	100.0	68.8	91.3	68.8	70.0
4	Roundup PowerMax	0.56 lb ae/a	16 oz/a		A	3-4"	PW&MG	40.0	30.0	100.0	30.0	87.5	57.5	57.5
5	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	3-4"	PW&MG	55.0	27.5	100.0	21.3	86.3	42.5	42.5
6	Ignite 280	0.402 lb ai/a	22 oz/a		A	3-4"	PW&MG	92.5	68.8	100.0	63.8	90.0	70.0	72.5
	Roundup PowerMax	0.56 lb ae/a	16 oz/a		A	3-4"	PW&MG							
7	Ignite 280	0.402 lb ai/a	22 oz/a		A	3-4"	PW&MG	93.8	88.3	100.0	82.0	94.5	87.5	92.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	3-4"	PW&MG							
8	Ignite 280	0.53 lb ai/a	29 oz/a		A	3-4"	PW&MG	94.5	85.0	100.0	72.0	90.8	77.5	77.5
	Roundup PowerMax	0.56 lb ae/a	16 oz/a		A	3-4"	PW&MG							
9	Ignite 280	0.53 lb ai/a	29 oz/a		A	3-4"	PW&MG	95.0	89.5	100.0	70.0	92.5	73.8	81.3
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		A	3-4"	PW&MG							
	LSD (P=.05)							6.60	28.73	0.00	38.03	10.67	27.67	26.43
	Standard Deviation							4.52	19.69	0.00	26.06	7.31	18.96	18.11
	CV							6.27	34.06	0.0	53.58	9.15	32.82	30.25
	Bartlett's X2							10.462	13.135	0.0	8.8	11.391	9.399	11.376
	P(Bartlett's X2)							0.106	0.069	.	0.267	0.122	0.225	0.123
	Replicate F							2.104	0.667	0.000	0.556	1.521	0.355	0.685
	Replicate Prob(F)							0.1262	0.5805	1.0000	0.6492	0.2346	0.7857	0.5697
	Treatment F							220.717	10.696	0.000	4.828	67.784	7.791	9.466
	Treatment Prob(F)							0.0001	0.0001	1.0000	0.0012	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code	AMAPA, Amaranthus palmeri, = US
	IPOSS, Ipomoea sp., = US
Part Rated	PLANT = plant
	P = Pest is Part Rated
Rating Unit	% = percent

University of Arkansas-Division of Agriculture

The Evaluation of Metolachlor Formulations in Sorghum

Trial ID: HGS-70110
Location: Rohwer, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: SORBI Sorghum bicolor Grain Sorghum
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT **Planting Date:** 5/11/2010
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Emergence Date: 5/17/2010
Harvest Equipment: Massey #8
Harvested Width, Unit: 6.33 FT **Harvested Length, Unit:** 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA **Amaranthus palmeri**
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOSS **Ipomoea sp.**
Common Name: Morning glory

Pest 3 Type: W **Code:** ECHCG **Echinochloa crus-galli**
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 29 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G
Soil Drainage: G good

Application Description

	A
Application Date:	5/13/2010
Time of Day:	Morning
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROFOL
Applied By:	RD
Air Temperature, Unit:	78.8 F
% Relative Humidity:	78.6
Wind Velocity, Unit:	3.85 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	75.6 F
Soil Moisture:	FAIR
Next Rain Occurred On:	5/16/2010

Crop Stage At Each Application

	A
BCOT	
Stage Scale Used:	BBCH
Stage Majority, Percent:	PRE

Pest Stage At Each Application

	A
Stage Majority, Percent:	PRE
Stage Majority, Percent:	PRE
Stage Majority, Percent:	PRE

Application Equipment

	A
Appl. Equipment:	Multi-Boom
Operating Pressure, Unit:	55 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.8 MPH
Carrier:	H2O
Spray Volume, Unit:	12 GPA
Mix Size, Unit:	3 Liters
Propellant:	CO2

University of Arkansas-Division of Agriculture

The Evaluation of Metolachlor Formulations in Sorghum

Trial ID: HGS-70110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	AMAPA Palmer amaranth	ECHCG Common barnyar>	IPOSS Morning glory	PLANT C 5/20/2010	AMAPA Palmer amaranth	ECHCG Common barnyar>							
Pest Name	PLANT P	PLANT P	PLANT P	PHYGEN	PLANT P	PLANT P							
Part Rated	5/20/2010	5/20/2010	5/20/2010	5/27/2010	5/27/2010	5/27/2010							
Rating Date	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL							
Rating Type	%	%	%	%	%	%							
Rating Unit	Cot-1 lf	Cot-1 lf	Cot-1 lf	Cot-1 lf	2 lf	2 lf							
Crop Stage Majority	21 DA-A	21 DA-A	28 DA-A	15 DA-A	21 DA-A	21 DA-A							
Pest Stage Majority													
Trt-Eval Interval													
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	1	2	3	4	5	6
1	UTC							0.0	0.0	0.0	0.0	0.0	0.0
2	Dual II Magnum	0.75 lb ai/a	12.6 oz/a		Pre	A	PRE	98.8	96.3	93.3	0.0	97.5	100.0
3	Me-Too-Lachlor	0.75 lb ai/a	12 oz/a		Pre	A	PRE	98.8	83.8	90.8	0.0	92.5	93.8
4	Cinch	0.75 lb ai/a	12.6 oz/a		Pre	A	PRE	97.5	86.3	97.5	0.0	95.0	92.5
5	Stalwart	0.75 lb ai/a	12 oz/a		Pre	A	PRE	100.0	97.5	93.8	0.0	100.0	93.8
6	Parrlay	0.75 lb ai/a	12 oz/a		Pre	A	PRE	100.0	100.0	95.0	0.0	97.5	95.0
7	Dual II Magnum	1 lb ai/a	16.8 oz/a		Pre	A	PRE	95.0	85.0	85.0	0.0	93.8	87.5
8	Me-Too-Lachlor	1 lb ai/a	16 oz/a		Pre	A	PRE	97.5	93.8	92.5	0.0	96.3	91.3
9	Cinch	1 lb ai/a	16.8 oz/a		Pre	A	PRE	97.5	88.8	90.0	0.0	100.0	95.0
10	Stalwart	1 lb ai/a	16 oz/a		Pre	A	PRE	93.8	83.8	86.3	0.0	86.3	85.0
11	Parrlay	1 lb ai/a	16 oz/a		Pre	A	PRE	96.3	88.8	90.0	0.0	92.5	87.5
12	Dual II Magnum	1.25 lb ai/a	21 oz/a		Pre	A	PRE	93.8	85.0	83.8	0.0	98.8	92.5
13	Me-Too-Lachlor	1.25 lb ai/a	20 oz/a		Pre	A	PRE	93.8	87.5	81.3	0.0	98.8	93.8
14	Cinch	1.25 lb ai/a	21 oz/a		Pre	A	PRE	98.8	92.5	81.3	0.0	93.8	90.8
15	Stalwart	1.25 lb ai/a	20 oz/a		Pre	A	PRE	87.5	86.3	90.0	0.0	91.3	93.8
16	Parrlay	1.25 lb ai/a	20 oz/a		Pre	A	PRE	96.3	87.5	91.3	0.0	97.5	98.8
LSD (P=.05)								6.40	12.87	15.19	0.00	9.80	10.99
Standard Deviation								4.48	9.00	10.63	0.00	6.86	7.69
CV								4.96	10.73	12.68	0.0	7.67	8.85
Bartlett's X2								15.996	7.357	13.948	0.0	30.216	17.02
P(Bartlett's X2)								0.191	0.883	0.378	.	0.003*	0.198
Replicate F								3.270	1.857	0.031	0.000	3.107	2.174
Replicate Prob(F)								0.0297	0.1506	0.9925	1.0000	0.0357	0.1042
Treatment F								117.571	25.962	18.498	0.000	49.514	37.324
Treatment Prob(F)								0.0001	0.0001	0.0001	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

The Evaluation of Metolachlor Formulations in Sorghum

Trial ID: HGS-70110
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		IPOSS		PLANT C		AMAPA		ECHCG		IPOSS		PLANT C	
Pest Name		Morning glory		Palmer amaranth		Common barnyar>		Morning glory		Palmer amaranth		Common barnyar>	
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Date	5/27/2010	5/27/2010	5/27/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010
Rating Type	CONTROL	PHYGEN	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	PHYGEN
Rating Unit	%	%	%	%	%	%	%	%	%	%	%	%	%
Crop Stage Majority	2 If	2 If	2 If	4 If	4 If	4 If	4 If	4 If	4 If	4 If	4 If	4 If	4 If
Pest Stage Majority	2-12"	2-12"	2-12"	2-36"	2-36"	2-36"	2-36"	2-36"	2-36"	2-36"	2-36"	2-36"	2-36"
Tri-Eval Interval	28 DA-A	15 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	15 DA-A
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	7	8	9	10	11	12
1	UTC							0.0	0.0	0.0	0.0	0.0	0.0
2	Dual II Magnum	0.75 lb ai/a	12.6 oz/a		Pre	A	PRE	100.0	0.0	95.0	98.8	100.0	0.0
3	Me-Too-Lachlor	0.75 lb ai/a	12 oz/a		Pre	A	PRE	95.0	0.0	87.5	90.0	91.3	0.0
4	Cinch	0.75 lb ai/a	12.6 oz/a		Pre	A	PRE	92.5	0.0	93.8	83.8	88.8	0.0
5	Stalwart	0.75 lb ai/a	12 oz/a		Pre	A	PRE	92.5	0.0	100.0	91.3	88.8	0.0
6	Parrlay	0.75 lb ai/a	12 oz/a		Pre	A	PRE	98.8	0.0	93.8	90.0	96.3	0.0
7	Dual II Magnum	1 lb ai/a	16.8 oz/a		Pre	A	PRE	76.3	0.0	91.3	83.8	70.0	0.0
8	Me-Too-Lachlor	1 lb ai/a	16 oz/a		Pre	A	PRE	92.5	0.0	93.3	87.5	88.8	0.0
9	Cinch	1 lb ai/a	16.8 oz/a		Pre	A	PRE	98.8	0.0	100.0	88.8	97.5	0.0
10	Stalwart	1 lb ai/a	16 oz/a		Pre	A	PRE	75.0	0.0	82.5	83.8	67.5	0.0
11	Parrlay	1 lb ai/a	16 oz/a		Pre	A	PRE	91.3	0.0	90.0	81.3	86.3	0.0
12	Dual II Magnum	1.25 lb ai/a	21 oz/a		Pre	A	PRE	91.3	0.0	96.3	85.0	85.0	0.0
13	Me-Too-Lachlor	1.25 lb ai/a	20 oz/a		Pre	A	PRE	91.3	0.0	97.5	90.0	85.0	0.0
14	Cinch	1.25 lb ai/a	21 oz/a		Pre	A	PRE	88.8	0.0	90.0	83.8	82.5	0.0
15	Stalwart	1.25 lb ai/a	20 oz/a		Pre	A	PRE	88.8	0.0	85.0	87.5	80.0	0.0
16	Parrlay	1.25 lb ai/a	20 oz/a		Pre	A	PRE	93.8	0.0	95.0	92.0	91.3	0.0
LSD (P=.05)								14.30	0.00	12.81	12.02	18.37	0.00
Standard Deviation								10.01	0.00	8.96	8.41	12.85	0.00
CV								11.72	0.0	10.31	10.22	15.83	0.0
Bartlett's X2								22.836	0.0	22.196	16.402	14.564	0.0
P(Bartlett's X2)								0.044*	.	0.035*	0.289	0.335	.
Replicate F								2.792	0.000	4.077	1.000	2.165	0.000
Replicate Prob(F)								0.0511	1.0000	0.0121	0.4016	0.1053	1.0000
Treatment F								22.622	0.000	27.959	28.284	13.210	0.000
Treatment Prob(F)								0.0001	1.0000	0.0001	0.0001	0.0001	1.0000

University of Arkansas-Division of Agriculture

The Evaluation of Metolachlor Formulations in Sorghum

Trial ID: HGS-70110
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	AMAPA Palmer amaranth	ECHCG Common barnyar>	IPOSS Morning glory	PLANT C 6/14/2010 PHYGEN	PLANT - 8/23/2010 MOICON	PLANT - 8/23/2010 WEIDRY	PLANT - 8/23/2010 YIELD							
Pest Name	CONTROL	CONTROL	CONTROL	%	%	%	bu/ac							
Part Rated	5 lf	5 lf	5 lf	5 lf	Harvest	Harvest	Harvest							
Rating Date	12-24"	12-24"	12-24"											
Rating Type	21 DA-A	21 DA-A	28 DA-A	15 DA-A	102 DA-A	102 DA-A	102 DA-A							
Rating Unit														
Crop Stage Majority														
Pest Stage Majority														
Trt-Eval Interval														
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	13	14	15	16	17	18	19
1	UTC							0.0	0.0	0.0	0.0	13.60	15.45	66.82
2	Dual II Magnum	0.75 lb ai/a	12.6 oz/a		Pre	A	PRE	91.3	87.5	87.5	0.0	12.73	25.73	111.98
3	Me-Too-Lachlor	0.75 lb ai/a	12 oz/a		Pre	A	PRE	66.3	67.5	76.3	0.0	12.80	25.25	109.92
4	Cinch	0.75 lb ai/a	12.6 oz/a		Pre	A	PRE	91.3	76.3	81.3	0.0	12.85	25.70	111.82
5	Stalwart	0.75 lb ai/a	12 oz/a		Pre	A	PRE	95.0	76.3	81.3	0.0	12.40	28.28	123.54
6	Parrlay	0.75 lb ai/a	12 oz/a		Pre	A	PRE	83.8	76.3	78.8	0.0	12.85	25.83	112.21
7	Dual II Magnum	1 lb ai/a	16.8 oz/a		Pre	A	PRE	86.3	63.8	62.5	0.0	12.03	25.53	111.96
8	Me-Too-Lachlor	1 lb ai/a	16 oz/a		Pre	A	PRE	90.0	77.5	68.8	0.0	12.23	28.50	124.75
9	Cinch	1 lb ai/a	16.8 oz/a		Pre	A	PRE	93.8	78.8	73.8	0.0	12.18	25.73	112.68
10	Stalwart	1 lb ai/a	16 oz/a		Pre	A	PRE	77.5	62.5	61.3	0.0	14.30	23.55	100.83
11	Parrlay	1 lb ai/a	16 oz/a		Pre	A	PRE	72.5	65.0	73.8	0.0	12.53	20.85	90.97
12	Dual II Magnum	1.25 lb ai/a	21 oz/a		Pre	A	PRE	90.0	68.8	70.0	0.0	11.75	23.80	104.75
13	Me-Too-Lachlor	1.25 lb ai/a	20 oz/a		Pre	A	PRE	91.3	67.5	66.3	0.0	12.63	23.38	101.95
14	Cinch	1.25 lb ai/a	21 oz/a		Pre	A	PRE	87.5	76.3	62.5	0.0	11.78	22.30	98.15
15	Stalwart	1.25 lb ai/a	20 oz/a		Pre	A	PRE	73.8	63.8	61.3	0.0	12.75	20.70	90.29
16	Parrlay	1.25 lb ai/a	20 oz/a		Pre	A	PRE	86.3	68.8	66.3	0.0	12.38	21.53	94.16
LSD (P=.05)								15.28	18.18	22.86	0.00	1.447	4.899	21.571
Standard Deviation								10.69	12.72	16.00	0.00	1.012	3.428	15.095
CV								13.41	18.91	23.89	0.0	8.03	14.36	14.49
Bartlett's X2								31.111	11.575	1.63	0.0	44.971	17.885	16.064
P(Bartlett's X2)								0.003*	0.64	1.00	.	0.001*	0.269	0.378
Replicate F								3.201	6.818	0.478	0.000	5.325	10.986	11.479
Replicate Prob(F)								0.0321	0.0007	0.6993	1.0000	0.0032	0.0001	0.0001
Treatment F								18.264	9.145	5.992	0.000	1.624	3.583	3.585
Treatment Prob(F)								0.0001	0.0001	0.0001	1.0000	0.1051	0.0005	0.0005

University of Arkansas-Division of Agriculture

The Evaluation of Metolachlor Formulations in Sorghum

Trial ID: HGS-70110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
ECHCG, Echinochloa crus-galli, = US
IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury
MOICON = moisture content
WEIDRY = weight - dry / dry matter content
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
bu/ac = bushels per acre

ARM Action Codes

TY1 = 4.388722*18*(100-17)/88

University of Arkansas-Division of Agriculture

Sorghum Pre Vs. Early Post Weed Control Programs

Trial ID: HGS-70210
Location: Rohwer, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: SORBI Sorghum bicolor Grain Sorghum
Variety: Delta Pine 0949 B2RF
BBCH Scale: BCOT **Planting Date:** 5/11/2010
Planting Method: BEDDED bedded
Depth, Unit: 1 IN
Row Spacing, Unit: 38 IN
Emergence Date: 5/17/2010
Harvest Equipment: Massey #8
Harvested Width, Unit: 6.33 FT **Harvested Length, Unit:** 28 FT

Pest Description

Pest 1 Type: W **Code:** AMAPA **Amaranthus palmeri**
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOSS **Ipomoea sp.**
Common Name: Morning glory

Pest 3 Type: W **Code:** ECHCG **Echinochloa crus-galli**
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 29 FT
Plot Area, Unit: 354.48 FT²
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G
Soil Drainage: G good

Application Description

	A	B
Application Date:	5/13/2010	6/3/2010
Time of Day:	Morning	AM
Application Method:	Spray	SPRAY
Application Timing:	PRE	2-3 If If
Application Placement:	BROFOL	BROFOL
Applied By:	RD	RD
Air Temperature, Unit:	78.8 F	79.6 F
% Relative Humidity:	78.6	79.47
Wind Velocity, Unit:	3.85 MPH	2.50 MPH
Wind Direction:		E
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	75.6 F	81.0 F
Soil Moisture:	FAIR	NORMAL
Next Rain Occurred On:	5/16/2010	6/10/2010

Crop Stage At Each Application

	A	B
BCOT	BCOT	
Stage Scale Used:	BBCH	BBCH
Stage Majority, Percent:	PRE	2-3 LF

Pest Stage At Each Application

	A	B
Stage Majority, Percent:	PRE	1-6"
Stage Majority, Percent:	PRE	1-6"
Stage Majority, Percent:	PRE	1-6"

Application Equipment

	A	B
Appl. Equipment:	Multi-Boom	Multi-Boom
Operating Pressure, Unit:	55 PSI	55 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	CO2	CO2

University of Arkansas-Division of Agriculture

Sorghum Pre Vs. Early Post Weed Control Programs

Trial ID: HGS-70210
Location: Rohwer, AR

Investigator: Kenneth Smith

University of Arkansas-Division of Agriculture

Sorghum Pre Vs. Early Post Weed Control Programs

Trial ID: HGS-70210
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code	PLANT C	PLANT C	AMAPA	IPOSS	ECHCG	PLANT C	PLANT C
Pest Name	5/20/2010	5/20/2010	Palmer amaranth	Morning glory	Common barnyar	5/27/2010	5/27/2010
Part Rated	PHYBLE	PHYSTU	PLANT P	PLANT P	PLANT P	PHYBLE	PHYSTU
Rating Date	5/27/2010	5/27/2010	5/27/2010	5/27/2010	5/27/2010	5/27/2010	5/27/2010
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%	%	%	%	%
Crop Stage Majority	Cot-1 If	Cot-1 If	2 If	2 If	2 If	2 If	2 If
Pest Stage Majority	cotyl	cotyl	cotyl	cotyl	cotyl	cotyl	cotyl
Trt-Eval Interval	7 DA-A	7 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description
1	2	3	4	5	6	7	
1	UTC	0.0	0.0	0.0	0.0	0.0	0.0
2	Lexar	2.31 lb ai/a	80 oz/a	A	PRE	81.3	52.5
3	Lumax	2.46 lb ai/a	80 oz/a	A	PRE	71.3	50.0
4	Laudis	0.082 lb ai/a	3 oz/a	A	PRE	90.0	57.5
5	Callisto	0.094 lb ai/a	3 oz/a	A	PRE	12.5	17.5
6	Atrazine	2 lb ai/a	64 oz/a	A	PRE	0.0	18.8
7	Lexar COC	2.31 lb ai/a 1 % v/v	80 oz/a 1 % v/v	B	2-3lf B		
8	Lumax COC >Dual II Magnum >AAtrex >Callisto	2.46 lb ai/a 1 % v/v 1.65 lb ai/a 0.615 lb ai/a 0.16 lb ai/a	80 oz/a 1 % v/v 27.6 oz/a 19.7 oz/a 5.1 oz/a	B B B B B	2-3lf 2-3lf 2-3lf 2-3lf 2-3lf		
9	Laudis COC	0.082 lb ai/a 1 % v/v	3 oz/a 1 % v/v	B B	2-3lf 2-3lf		
10	Callisto COC	0.094 lb ai/a 1 % v/v	3 oz/a 1 % v/v	B B	2-3lf 2-3lf		
11	Atrazine COC	2 lb ai/a 1 % v/v	64 oz/a 1 % v/v	B B	2-3lf 2-3lf		
	LSD (P=.05)	22.52	14.42	1.54	1.54	10.26	1.54
	Standard Deviation	14.85	9.51	1.02	1.02	6.81	1.02
	CV	34.94	29.07	1.23	1.23	8.49	489.9
	Bartlett's X2	15.074	15.319	0.0	0.0	2.358	0.0
	P(Bartlett's X2)	0.001*	0.004*	.	.	0.308	0.167
	Replicate F	0.869	0.657	1.000	1.000	0.802	1.000
	Replicate Prob(F)	0.4802	0.5920	0.4199	0.4199	0.5119	0.4199
	Treatment F	32.999	24.790	6369.001	6369.001	134.145	1.000
	Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0001	0.4509

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Sorghum Pre Vs. Early Post Weed Control Programs

Trial ID: HGS-70210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	IPOSS	ECHCG						
Pest Name	Morning glory	Common barnyar						
Part Rated	PLANT P	PLANT P	PLANT C	PLANT C	PLANT -	PLANT -	PLANT -	
Rating Date	6/14/2010	6/14/2010	6/14/2010	6/14/2010	8/23/2010	8/23/2010	8/23/2010	
Rating Type	CONTROL	CONTROL	PHYBLE	PHYSTU	MOICON	WEIDRY	YIELD	
Rating Unit	%	%	%	%	%	lb/plot	bu/ac	
Crop Stage Majority	5 lf	5 lf	5 lf	5 lf	Harvest	Harvest	Harvest	
Pest Stage Majority	cotyl	cotyl	cotyl	cotyl				
Trt-Eval Interval	11 DA-B	11 DA-B	11 DA-B	11 DA-B	81 DA-B	81 DA-B	81 DA-B	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Code	Description	
1	UTC	0.0						14
2	Lexar	2.31 lb ai/a	80 oz/a		A	PRE		15
3	Lumax	2.46 lb ai/a	80 oz/a		A	PRE		16
4	Laudis	0.082 lb ai/a	3 oz/a		A	PRE		17
5	Callisto	0.094 lb ai/a	3 oz/a		A	PRE		18
6	Atrazine	2 lb ai/a	64 oz/a		A	PRE		19
7	Lexar COC	2.31 lb ai/a 1 % v/v	80 oz/a 1 % v/v		B	2-3lf B		20
8	Lumax COC >Dual II Magnum >AAtrex >Callisto	2.46 lb ai/a 1 % v/v 1.65 lb ai/a 0.615 lb ai/a 0.16 lb ai/a	80 oz/a 1 % v/v 27.6 oz/a 19.7 oz/a 5.1 oz/a		B	2-3lf B B B B		
9	Laudis COC	0.082 lb ai/a 1 % v/v	3 oz/a 1 % v/v		B	2-3lf B		
10	Callisto COC	0.094 lb ai/a 1 % v/v	3 oz/a 1 % v/v		B	2-3lf B		
11	Atrazine COC	2 lb ai/a 1 % v/v	64 oz/a 1 % v/v		B	2-3lf B		
	LSD (P=.05)	6.99		24.81				
	Standard Deviation	4.84		17.16				
	CV	5.77		26.77				
	Bartlett's X2	12.8		29.636				
	P(Bartlett's X2)	0.119		0.001*				
	Replicate F	1.496		1.374				
	Replicate Prob(F)	0.2364		0.2703				
	Treatment F	137.522		11.419				
	Treatment Prob(F)	0.0001		0.0001				

University of Arkansas-Division of Agriculture

Sorghum Pre Vs. Early Post Weed Control Programs

Trial ID: HGS-70210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US
ECHCG, Echinochloa crus-galli, = US

Part Rated

PLANT = plant
C = Crop is Part Rated
P = Pest is Part Rated

Rating Type

PHYBLE = phytotoxicity - bleaching
PHYSTU = phytotoxicity - stunting
MOICON = moisture content
WEIDRY = weight - dry / dry matter content
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
bu/ac = bushels per acre

ARM Action Codes

TY1 = 4.388722*19*(100-18)/88

University of Arkansas-Division of Agriculture

Spray Tip System Study 2010

Trial ID: HNC-90110
Location: Rohwer

Investigator: Kenneth Smith

Pest Description

Pest 1 Type: W **Code:** AMAPA **Amaranthus palmeri**
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** ECHCG **Echinochloa crus-galli**
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 177.24 FT²
Replications: 4

Study Design: FACTOR Factorial

Application Description

	A	B	C	D
Application Date:	8/17/2010	8/17/2010	8/17/2010	8/17/2010
Time of Day:	Morning	Morning	Morning	Morning
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	POSPOS	POSPOS	POSPOS	POSPOS
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	RD	RD	RD	RD
Air Temperature, Unit:	82.5	82.5	82.5	82.5
% Relative Humidity:	77.9	77.9	77.9	77.9
Wind Velocity, Unit:	5.8 MPH	5.8 MPH	5.8 MPH	5.8 MPH
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	89.5	89.5	89.5	89.5
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL
% Cloud Cover:	65	65	65	65
Next Rain Occurred On:	8/29/2010	8/29/2010	8/29/2010	8/29/2010

Application Equipment

	A	B	C	D
Appl. Equipment:	Multi-Boom	Multi-Boom	Multi-Boom	Multi-Boom
Operating Pressure, Unit:	55 PSI	55 PSI	55 PSI	55 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2	2
Boom Length, Unit:	6.33 FT	6.33 FT	6.33 FT	6.33 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA	12 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	3 Liters
Propellant:	CO2	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Spray Tip System Study 2010

Trial ID: HNC-90110
Location: Rohwer

Investigator: Kenneth Smith

Pest Code	AMAPA Palmer amaranth	AMAPA Palmer amaranth	ECHCG Common barnyar->	AMAPA Palmer amaranth	AMAPA Palmer amaranth	ECHCG Common barnyar->
Pest Name	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Part Rated	8/24/2010	8/24/2010	8/24/2010	9/3/2010	9/3/2010	9/3/2010
Rating Date	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Type	%	%	%	%	%	%
Rating Unit	12"	18"	12"	12"	18"	12"
Crop Stage Majority	7 DA-A	7 DA-A	7 DA-A	17 DA-A	17 DA-A	17 DA-A
Pest Stage Majority						
Trt-Eval Interval						
Trt No.	Treatment Name	Rate Rate Unit	Other Rate Unit	Other Rate Unit	Appl Code	
1	Green Leaf Air Mix 6 GPA Ignite 280	0.347 lb ai/a	19 oz/a	A		81.7
2	Green Leaf Air Mix 6 GPA Ignite 280	0.53 lb ai/a	29 oz/a	A		95.0
3	Green Leaf Air Mix 8 GPA Ignite 280	0.347 lb ai/a	19 oz/a	B		92.5
4	Green Leaf Air Mix 8 GPA Ignite 280	0.53 lb ai/a	29 oz/a	B		73.8
5	Green Leaf Air Mix 10 GPA Ignite 280	0.347 lb ai/a	19 oz/a	C		91.3
6	Green Leaf Air Mix 10 GPA Ignite 280	0.53 lb ai/a	29 oz/a	C		93.3
7	Green Leaf Air Mix 12 GPA Ignite 280	0.347 lb ai/a	19 oz/a	D		88.8
8	Green Leaf Air Mix 12 GPA Ignite 280	0.53 lb ai/a	29 oz/a	D		92.5
9	Green Leaf AI XR 6 GPA Ignite 280	0.347 lb ai/a	19 oz/a	A		85.0
10	Green Leaf AI XR 6 GPA Ignite 280	0.53 lb ai/a	29 oz/a	A		94.3
11	Green Leaf AI XR 8 GPA Ignite 280	0.347 lb ai/a	19 oz/a	B		86.3
12	Green Leaf AI XR 8 GPA Ignite 280	0.53 lb ai/a	29 oz/a	B		94.5
13	Green Leaf AI XR 10 GPA Ignite 280	0.347 lb ai/a	19 oz/a	C		92.5
14	Green Leaf AI XR 10 GPA Ignite 280	0.53 lb ai/a	29 oz/a	C		92.8
15	Green Leaf AI XR 12 GPA Ignite 280	0.347 lb ai/a	19 oz/a	D		86.3
16	Green Leaf AI XR 12 GPA Ignite 280	0.53 lb ai/a	29 oz/a	D		86.3
17	Tee Jet XR flat fan 6 GPA Ignite 280	0.347 lb ai/a	19 oz/a	A		88.3
18	Tee Jet XR flat fan 6 GPA Ignite 280	0.53 lb ai/a	29 oz/a	A		97.0
19	Tee Jet XR flat fan 8 GPA Ignite 280	0.347 lb ai/a	19 oz/a	B		89.5
20	Tee Jet XR flat fan 8 GPA Ignite 280	0.53 lb ai/a	29 oz/a	B		95.8
21	Tee Jet XR flat fan 10 GPA Ignite 280	0.347 lb ai/a	19 oz/a	C		81.3
22	Tee Jet XR flat fan 10 GPA Ignite 280	0.53 lb ai/a	29 oz/a	C		95.0
23	Tee Jet XR flat fan 12 GPA Ignite 280	0.347 lb ai/a	19 oz/a	D		91.3
24	Tee Jet XR flat fan 12 GPA Ignite 280	0.53 lb ai/a	29 oz/a	D		98.3
25	Tee Jet AI XR 6 GPA Ignite 280	0.347 lb ai/a	19 oz/a	A		66.3
26	Tee Jet AI XR 6 GPA Ignite 280	0.53 lb ai/a	29 oz/a	A		63.8

University of Arkansas-Division of Agriculture

Spray Tip System Study 2010

Trial ID: HNC-90110
Location: Rohwer

Investigator: Kenneth Smith

Pest Code	AMAPA Palmer amaranth	AMAPA Palmer amaranth	ECHCG Common barnyar->	AMAPA Palmer amaranth	AMAPA Palmer amaranth	ECHCG Common barnyar->	
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	
Rating Date	8/24/2010	8/24/2010	8/24/2010	9/3/2010	9/3/2010	9/3/2010	
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit	%	%	%	%	%	%	
Crop Stage Majority	12"	18"	12"	12"	18"	12"	
Pest Stage Majority	7 DA-A	7 DA-A	7 DA-A	17 DA-A	17 DA-A	17 DA-A	
Tri-Eval Interval							
Tri No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Code	
		1	2	3	4	5	6
27	Tee Jet AI XR 8 GPA Ignite 280	0.347 lb ai/a	19 oz/a		B		
		87.0	82.5	73.8	100.0	82.5	91.3
28	Tee Jet AI XR 8 GPA Ignite 280	0.53 lb ai/a	29 oz/a		B		
		93.8	86.3	80.0	100.0	75.0	96.3
29	Tee Jet AI XR 10 GPA Ignite 280	0.347 lb ai/a	19 oz/a		C		
		87.0	77.5	80.0	100.0	70.0	83.8
30	Tee Jet AI XR 10 GPA Ignite 280	0.53 lb ai/a	29 oz/a		C		
		93.8	83.8	88.8	100.0	78.8	100.0
31	Tee Jet AI XR 12 GPA Ignite 280	0.347 lb ai/a	19 oz/a		D		
		88.8	81.3	76.3	100.0	72.5	87.5
32	Tee Jet AI XR 12 GPA Ignite 280	0.53 lb ai/a	29 oz/a		D		
		92.0	85.0	87.5	100.0	77.5	97.5
33	UTC	0.0	0.0	0.0	0.0	0.0	0.0
LSD (P=.05)	21.25	18.48	22.94	13.89	28.07	19.16	
Standard Deviation	15.18	13.20	16.38	9.82	19.85	13.55	
CV	17.67	16.74	21.24	10.31	28.72	15.39	
Bartlett's X2	116.101	66.091	34.142	47.38	35.931	70.787	
P(Bartlett's X2)	0.001*	0.001*	0.275	0.001*	0.21	0.001*	
Replicate F	1.930	2.412	0.729	2.238	0.723	2.431	
Replicate Prob(F)	0.1303	0.0719	0.5376	0.0893	0.5411	0.0703	
Treatment F	5.217	6.065	4.082	13.135	2.294	6.879	
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0012	0.0001	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Spray Tip System Study 2010

Trial ID: HNC-90110
Location: Rohwer

Investigator: Kenneth Smith

Pest Code	AMAPA Palmer amaranth	AMAPA Palmer amaranth	ECHCG Common barnyar>	AMAPA Palmer amaranth	AMAPA Palmer amaranth	ECHCG Common barnyar>						
Pest Name	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P						
Part Rated	9/9/2010	9/9/2010	9/9/2010	9/14/2010	9/14/2010	9/14/2010						
Rating Date	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL						
Rating Type	%	%	%	%	%	%						
Rating Unit	12"	18"	12"	12"	18"	12"						
Crop Stage Majority	23 DA-A	23 DA-A	23 DA-A	28 DA-A	28 DA-A	28 DA-A						
Pest Stage Majority												
Trt-Eval Interval												
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Code	7	8	9	10	11	12
1	Green Leaf Air Mix 6 GPA Ignite 280	0.347 lb ai/a	19 oz/a		A		86.7	53.3	80.0	86.7	53.3	80.0
2	Green Leaf Air Mix 6 GPA Ignite 280	0.53 lb ai/a	29 oz/a		A		100.0	80.0	100.0	100.0	80.0	100.0
3	Green Leaf Air Mix 8 GPA Ignite 280	0.347 lb ai/a	19 oz/a		B		98.8	57.5	91.3	98.8	57.5	91.3
4	Green Leaf Air Mix 8 GPA Ignite 280	0.53 lb ai/a	29 oz/a		B		100.0	67.5	100.0	100.0	67.5	100.0
5	Green Leaf Air Mix 10 GPA Ignite 280	0.347 lb ai/a	19 oz/a		C		100.0	67.5	91.3	100.0	67.5	91.3
6	Green Leaf Air Mix 10 GPA Ignite 280	0.53 lb ai/a	29 oz/a		C		97.5	62.5	95.0	97.5	62.5	95.0
7	Green Leaf Air Mix 12 GPA Ignite 280	0.347 lb ai/a	19 oz/a		D		100.0	70.0	93.8	100.0	70.0	93.8
8	Green Leaf Air Mix 12 GPA Ignite 280	0.53 lb ai/a	29 oz/a		D		100.0	66.3	96.3	100.0	66.3	96.3
9	Green Leaf AI XR 6 GPA Ignite 280	0.347 lb ai/a	19 oz/a		A		100.0	60.0	100.0	100.0	60.0	100.0
10	Green Leaf AI XR 6 GPA Ignite 280	0.53 lb ai/a	29 oz/a		A		100.0	78.3	100.0	100.0	78.3	100.0
11	Green Leaf AI XR 8 GPA Ignite 280	0.347 lb ai/a	19 oz/a		B		100.0	68.8	88.8	100.0	68.8	88.8
12	Green Leaf AI XR 8 GPA Ignite 280	0.53 lb ai/a	29 oz/a		B		100.0	77.5	96.3	100.0	77.5	96.3
13	Green Leaf AI XR 10 GPA Ignite 280	0.347 lb ai/a	19 oz/a		C		100.0	66.3	92.5	100.0	66.3	92.5
14	Green Leaf AI XR 10 GPA Ignite 280	0.53 lb ai/a	29 oz/a		C		98.8	78.8	88.8	98.8	78.8	88.8
15	Green Leaf AI XR 12 GPA Ignite 280	0.347 lb ai/a	19 oz/a		D		100.0	68.8	82.5	100.0	68.8	82.5
16	Green Leaf AI XR 12 GPA Ignite 280	0.53 lb ai/a	29 oz/a		D		100.0	73.8	87.5	100.0	73.8	87.5
17	Tee Jet XR flat fan 6 GPA Ignite 280	0.347 lb ai/a	19 oz/a		A		96.3	67.5	83.8	96.3	67.5	83.8
18	Tee Jet XR flat fan 6 GPA Ignite 280	0.53 lb ai/a	29 oz/a		A		100.0	82.5	97.5	100.0	82.5	97.5
19	Tee Jet XR flat fan 8 GPA Ignite 280	0.347 lb ai/a	19 oz/a		B		100.0	82.5	86.3	100.0	82.5	86.3
20	Tee Jet XR flat fan 8 GPA Ignite 280	0.53 lb ai/a	29 oz/a		B		100.0	77.5	95.0	100.0	77.5	95.0
21	Tee Jet XR flat fan 10 GPA Ignite 280	0.347 lb ai/a	19 oz/a		C		98.8	75.0	90.0	98.8	75.0	90.0
22	Tee Jet XR flat fan 10 GPA Ignite 280	0.53 lb ai/a	29 oz/a		C		100.0	71.3	98.8	100.0	71.3	98.8
23	Tee Jet XR flat fan 12 GPA Ignite 280	0.347 lb ai/a	19 oz/a		D		100.0	82.5	78.8	100.0	82.5	78.8
24	Tee Jet XR flat fan 12 GPA Ignite 280	0.53 lb ai/a	29 oz/a		D		100.0	78.8	95.0	100.0	78.8	95.0
25	Tee Jet AI XR 6 GPA Ignite 280	0.347 lb ai/a	19 oz/a		A		93.8	56.3	73.8	93.8	56.3	73.8
26	Tee Jet AI XR 6 GPA Ignite 280	0.53 lb ai/a	29 oz/a		A		75.0	53.8	66.3	75.0	53.8	66.3

University of Arkansas-Division of Agriculture

Spray Tip System Study 2010

Trial ID: HNC-90110
Location: Rohwer

Investigator: Kenneth Smith

Pest Code	AMAPA Palmer amaranth	AMAPA Palmer amaranth	ECHCG Common barnyar->	AMAPA Palmer amaranth	AMAPA Palmer amaranth	ECHCG Common barnyar->
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Date	9/9/2010	9/9/2010	9/9/2010	9/14/2010	9/14/2010	9/14/2010
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%	%	%	%
Crop Stage Majority	12"	18"	12"	12"	18"	12"
Pest Stage Majority	23 DA-A	23 DA-A	23 DA-A	28 DA-A	28 DA-A	28 DA-A
Trt-Eval Interval						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	
27	Tee Jet AI XR 8 GPA Ignite 280	0.347 lb ai/a	19 oz/a		B	
28	Tee Jet AI XR 8 GPA Ignite 280	0.53 lb ai/a	29 oz/a		B	
29	Tee Jet AI XR 10 GPA Ignite 280	0.347 lb ai/a	19 oz/a		C	
30	Tee Jet AI XR 10 GPA Ignite 280	0.53 lb ai/a	29 oz/a		C	
31	Tee Jet AI XR 12 GPA Ignite 280	0.347 lb ai/a	19 oz/a		D	
32	Tee Jet AI XR 12 GPA Ignite 280	0.53 lb ai/a	29 oz/a		D	
33	UTC					
	LSD (P=.05)	13.89	28.07	19.16	13.89	28.07
	Standard Deviation	9.82	19.85	13.55	9.82	19.85
	CV	10.31	28.72	15.39	10.31	28.72
	Bartlett's X2	47.38	35.931	70.787	47.38	35.931
	P(Bartlett's X2)	0.001*	0.21	0.001*	0.001*	0.21
	Replicate F	2.238	0.723	2.431	2.238	0.723
	Replicate Prob(F)	0.0893	0.5411	0.0703	0.0893	0.5411
	Treatment F	13.135	2.294	6.879	13.135	2.294
	Treatment Prob(F)	0.0001	0.0012	0.0001	0.0001	0.0012

University of Arkansas-Division of Agriculture

Spray Tip System Study 2010

Trial ID: HNC-90110
Location: Rohwer

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
ECHCG, Echinochloa crus-galli, = US

Part Rated

PLANT = plant
P = Pest is Part Rated

Rating Unit

% = percent

University of Arkansas-Division of Agriculture

Efficacy of 2,4-D, Glufosinate, and Glyphosate on PW and MG

Trial ID: HNC-90210
Location:

Investigator: Kenneth Smith

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
Description: Pigweed
Artificial Population: X **Establishment Date:** 8/4/2010
Establishment Rate, Unit: 200 Seeds/FT2

Pest 2 Type: W **Code:** IPOSS *Ipomoea sp.*
Common Name: Morning glory
Artificial Population: X **Establishment Date:** 8/4/2010
Establishment Rate, Unit: 100 Seeds/FT2

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 177.24 FT2
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SILT
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G

Application Description

	A	B	C
Application Date:	8/20/2010	8/27/2010	9/2/2010
Time of Day:	Morning	Morning	Morning
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	2-4"	6-8"	10-12"
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RD	RD	RD
Air Temperature, Unit:	78.8 F	68.7 F	75.6
% Relative Humidity:	97	72.9	87.9
Wind Velocity, Unit:	1 MPH	0 MPH	0 MPH
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	87.8	84.6	80.9
Soil Moisture:	NORMAL	NORMAL	NORMAL

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W
Stage Majority, Percent:	2-4"	6-8"	10-12"
Pest 2 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W
Stage Majority, Percent:	2-4"	6-8"	10-12"

Application Equipment

	A	B	C
Appl. Equipment:	Multi-Boom	Multi-Boom	Multi-Boom
Operating Pressure, Unit:	55 PSI	55 PSI	55 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2
Boom Length, Unit:	6.33 FT	6.33 FT	6.33 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters
Propellant:	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Efficacy of 2,4-D, Glufosinate, and Glyphosate on PW and MG

Trial ID: HNC-90210
Location:

Investigator: Kenneth Smith

Pest Code	AMAPA	IPOSS	AMAPA	IPOSS	AMAPA	IPOSS						
Pest Name	Palmer amaranth	Morning glory	Palmer amaranth	Morning glory	Palmer amaranth	Morning glory						
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P						
Rating Date	8/27/2010	8/27/2010	9/3/2010	9/3/2010	9/3/2010	9/3/2010						
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL						
Rating Unit	%	%	%	%	%	%						
Crop Stage Majority	2-4"	2-4"	2-4"	2-4"	6-8"	6-8"						
Pest Stage Majority	7 DA-A	7 DA-A	14 DA-A	14 DA-A	7 DA-B	7 DA-B						
Tri-Eval Interval												
Tri No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	1	2	3	4	5	6
1		0.0					0.0	0.0	0.0	0.0		
2	Weedar 64	1 lb ae/a	33.7 oz/a		A	2-4" weeds	71.7	68.3	91.7	91.7		
3	Durango DMA	1 lb ae/a	32 oz/a		A	2-4" weeds	100.0	100.0	100.0	100.0		
4	Weedar 64	0.75 lb ae/a	25.3 oz/a		A	2-4" weeds	71.7	71.7	91.7	91.7		
5	Durango DMA	0.75 lb ae/a	24 oz/a		A	2-4" weeds	100.0	100.0	100.0	100.0		
6	Ignite 280	0.48 lb ai/a	26.3 oz/a		A	2-4" weeds	100.0	100.0	100.0	100.0		
7	Weedar 64	1 lb ae/a	33.7 oz/a		A	2-4" weeds	100.0	100.0	100.0	100.0		
	Durango DMA	1 lb ae/a	32 oz/a		A	2-4" weeds						
8	Weedar 64	1 lb ae/a	33.7 oz/a		A	2-4" weeds	75.0	75.0	100.0	100.0		
	Durango DMA	0.75 lb ae/a	24 oz/a		A	2-4" weeds						
9	Weedar 64	1 lb ae/a	33.7 oz/a		A	2-4" weeds	96.3	95.0	93.8	93.8		
	Ignite 280	0.48 lb ai/a	26.3 oz/a		A	2-4" weeds						
10	Weedar 64	1 lb ae/a	33.7 oz/a		B	6-8" weeds					72.5	72.5
11	Durango DMA	1 lb ae/a	32 oz/a		B	6-8" weeds					98.8	98.8
12	Weedar 64	0.75 lb ae/a	25.3 oz/a		B	6-8" weeds					67.5	67.5
13	Durango DMA	0.75 lb ae/a	24 oz/a		B	6-8" weeds					93.8	93.8
14	Ignite 280	0.48 lb ai/a	26.3 oz/a		B	6-8" weeds					96.3	96.3
15	Weedar 64	1 lb ae/a	33.7 oz/a		B	6-8" weeds					96.3	96.3
	Durango DMA	1 lb ae/a	32 oz/a		B	6-8" weeds						
16	Weedar 64	1 lb ae/a	33.7 oz/a		B	6-8" weeds					95.0	95.0
	Durango DMA	0.75 lb ae/a	24 oz/a		B	6-8" weeds						
17	Weedar 64	1 lb ae/a	33.7 oz/a		B	6-8" weeds					91.3	91.3
	Ignite 280	0.48 lb ai/a	26.3 oz/a		B	6-8" weeds						
18	Weedar 64	1 lb ae/a	33.7 oz/a		C	10-12" weeds						
19	Durango DMA	1 lb ae/a	32 oz/a		C	10-12" weeds						
20	Weedar 64	0.75 lb ae/a	25.3 oz/a		C	10-12" weeds						
21	Durango DMA	0.75 lb ae/a	24 oz/a		C	10-12" weeds						
22	Ignite 280	0.48 lb ai/a	26.3 oz/a		C	10-12" weeds						
23	Weedar 64	1 lb ae/a	33.7 oz/a		C	10-12" weeds						
	Durango DMA	1 lb ae/a	32 oz/a		C	10-12" weeds						
24	Weedar 64	1 lb ae/a	33.7 oz/a		C	10-12" weeds						
	Durango DMA	0.75 lb ae/a	24 oz/a		C	10-12" weeds						
25	Weedar 64	1 lb ae/a	33.7 oz/a		C	10-12" weeds						
	Ignite 280	0.48 lb ai/a	26.3 oz/a		C	10-12" weeds						
LSD (P=.05)		28.34					28.34	28.81	12.08	12.08	5.93	5.93
Standard Deviation		19.15					19.15	19.47	8.16	8.16	4.03	4.03
CV		24.12					24.12	24.67	9.45	9.45	4.54	4.54
Bartlett's X2		16.66					16.66	16.752	0.069	0.069	4.677	4.677
P(Bartlett's X2)		0.001*					0.001*	0.001*	0.966	0.966	0.699	0.699
Replicate F		0.761					0.761	0.646	0.183	0.183	2.098	2.098
Replicate Prob(F)		0.5300					0.5300	0.5952	0.9064	0.9064	0.1310	0.1310
Treatment F		11.490					11.490	11.143	63.805	63.805	35.087	35.087
Treatment Prob(F)		0.0001					0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Efficacy of 2,4-D, Glufosinate, and Glyphosate on PW and MG

Trial ID: HNC-90210
Location:

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		AMAPA		IPOSS		
Pest Name		Palmer amaranth		Morning glory		Palmer amaranth		Morning glory		
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		
Rating Date		9/14/2010		9/14/2010		9/20/2010		9/20/2010		
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		
Rating Unit		%		%		%		%		
Crop Stage Majority		10-12"		10-12"		10-12"		10-12"		
Pest Stage Majority		12 DA-C		12 DA-C		18 DA-C		18 DA-C		
Tri-Eval Interval										
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	7	8	9	10
1							0.0	0.0	0.0	0.0
2	Weedar 64	1 lb ae/a	33.7 oz/a		A	2-4" weeds	100.0	100.0	100.0	100.0
3	Durango DMA	1 lb ae/a	32 oz/a		A	2-4" weeds	100.0	100.0	100.0	100.0
4	Weedar 64	0.75 lb ae/a	25.3 oz/a		A	2-4" weeds	96.7	96.7	96.7	96.7
5	Durango DMA	0.75 lb ae/a	24 oz/a		A	2-4" weeds	100.0	100.0	100.0	100.0
6	Ignite 280	0.48 lb ai/a	26.3 oz/a		A	2-4" weeds	100.0	100.0	100.0	100.0
7	Weedar 64	1 lb ae/a	33.7 oz/a		A	2-4" weeds	100.0	100.0	100.0	100.0
	Durango DMA	1 lb ae/a	32 oz/a		A	2-4" weeds				
8	Weedar 64	1 lb ae/a	33.7 oz/a		A	2-4" weeds	95.0	95.0	95.0	95.0
	Durango DMA	0.75 lb ae/a	24 oz/a		A	2-4" weeds				
9	Weedar 64	1 lb ae/a	33.7 oz/a		A	2-4" weeds	100.0	100.0	100.0	100.0
	Ignite 280	0.48 lb ai/a	26.3 oz/a		A	2-4" weeds				
10	Weedar 64	1 lb ae/a	33.7 oz/a		B	6-8" weeds	91.3	91.3	92.5	91.3
11	Durango DMA	1 lb ae/a	32 oz/a		B	6-8" weeds	100.0	100.0	100.0	100.0
12	Weedar 64	0.75 lb ae/a	25.3 oz/a		B	6-8" weeds	88.8	90.0	90.0	91.3
13	Durango DMA	0.75 lb ae/a	24 oz/a		B	6-8" weeds	100.0	100.0	100.0	100.0
14	Ignite 280	0.48 lb ai/a	26.3 oz/a		B	6-8" weeds	98.8	100.0	98.8	100.0
15	Weedar 64	1 lb ae/a	33.7 oz/a		B	6-8" weeds	100.0	100.0	100.0	100.0
	Durango DMA	1 lb ae/a	32 oz/a		B	6-8" weeds				
16	Weedar 64	1 lb ae/a	33.7 oz/a		B	6-8" weeds	100.0	100.0	100.0	100.0
	Durango DMA	0.75 lb ae/a	24 oz/a		B	6-8" weeds				
17	Weedar 64	1 lb ae/a	33.7 oz/a		B	6-8" weeds	100.0	100.0	100.0	100.0
	Ignite 280	0.48 lb ai/a	26.3 oz/a		B	6-8" weeds				
18	Weedar 64	1 lb ae/a	33.7 oz/a		C	10-12" weeds	68.8	68.8	68.8	70.0
19	Durango DMA	1 lb ae/a	32 oz/a		C	10-12" weeds	100.0	100.0	100.0	100.0
20	Weedar 64	0.75 lb ae/a	25.3 oz/a		C	10-12" weeds	65.0	65.0	65.0	63.8
21	Durango DMA	0.75 lb ae/a	24 oz/a		C	10-12" weeds	98.8	100.0	98.8	100.0
22	Ignite 280	0.48 lb ai/a	26.3 oz/a		C	10-12" weeds	100.0	100.0	100.0	100.0
23	Weedar 64	1 lb ae/a	33.7 oz/a		C	10-12" weeds	100.0	100.0	100.0	100.0
	Durango DMA	1 lb ae/a	32 oz/a		C	10-12" weeds				
24	Weedar 64	1 lb ae/a	33.7 oz/a		C	10-12" weeds	98.8	98.8	98.8	98.8
	Durango DMA	0.75 lb ae/a	24 oz/a		C	10-12" weeds				
25	Weedar 64	1 lb ae/a	33.7 oz/a		C	10-12" weeds	98.8	100.0	98.8	100.0
	Ignite 280	0.48 lb ai/a	26.3 oz/a		C	10-12" weeds				
LSD (P=.05)							7.78	7.51	7.93	7.55
Standard Deviation							5.50	5.31	5.60	5.34
CV							5.97	5.76	6.08	5.78
Bartlett's X2							25.229	10.937	25.535	10.564
P(Bartlett's X2)							0.003*	0.09	0.002*	0.103
Replicate F							2.456	2.150	2.448	2.145
Replicate Prob(F)							0.0706	0.1021	0.0713	0.1028
Treatment F							59.845	64.377	57.546	63.837
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Efficacy of 2,4-D, Glufosinate, and Glyphosate on PW and MG

Trial ID: HNC-90210
Location:

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant
P = Pest is Part Rated

Rating Unit
% = percent

University of Arkansas-Division of Agriculture

Sharpen Fallow

Trial ID: HNC-90310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Description

Pest 1 Type: W **Code:** AMAPA **Amaranthus palmeri**
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** SEBEX **Sesbania exaltata**
Common Name: Coffeebean

Pest 3 Type: W **Code:** IPOSS **Ipomoea sp.**
Common Name: Morning glory

Pest 4 Type: W **Code:** ECHCG **Echinochloa crus-galli**
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 30 FT
Plot Area, Unit: 189.9 FT²
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Soil Description

Description Name: Silt Loam
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 67 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Clay: 17 **CEC:** 14 **Fert. Level:** G
Soil Drainage: G good

Application Description

	A
Application Date:	8/20/2010
Time of Day:	Morning
Application Method:	SPRAY
Application Placement:	BROFOL
Applied By:	RD
Air Temperature, Unit:	84.5 F
% Relative Humidity:	80.5
Wind Velocity, Unit:	0.95 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	88.4 F
Soil Moisture:	NORMAL
% Cloud Cover:	55
Next Rain Occurred On:	8/29/2010

Pest Stage At Each Application

	A
Stage Majority, Percent:	2-4"
Stage Majority, Percent:	2-4"
Stage Majority, Percent:	2-4"
Stage Majority, Percent:	2-4"

Application Equipment

	A
Appl. Equipment:	Multi-Boom
Operating Pressure, Unit:	55 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
Boom Length, Unit:	6.33 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.8 MPH
Carrier:	H2O
Spray Volume, Unit:	12 GPA
Mix Size, Unit:	3 Liters
Propellant:	CO2

University of Arkansas-Division of Agriculture

Sharpen Fallow

Trial ID: HNC-90310
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		SEBEX		ECHCG		AMAPA		IPOSS		
Pest Name		Palmer amaranth		Morning glory		Coffeebean		Common barnyar-		Palmer amaranth		Morning glory		
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		
Rating Date		8/27/2010		8/27/2010		8/27/2010		8/27/2010		9/3/2010		9/3/2010		
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		
Rating Unit		%		%		%		%		%		%		
Crop Stage Majority		2-4"		2-4"		2-4"		2-4"		4-12"		4-12"		
Pest Stage Majority		7 DA-A		7 DA-A		7 DA-A		7 DA-A		14 DA-A		14 DA-A		
Tri-Eval Interval														
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Unit	Appl Code	Description	1	2	3	4	5	6
1	Untreated Check								0.0	0.0	0.0	0.0	0.0	0.0
2	Roundup PowerMax AMS	0.77 lb ae/a 5 gal/100 gal	ae/a gal	22 oz/a 77 oz/a	oz/a oz/a	A	A	2-4 in weeds 2-4 in weeds	100.0	62.5	56.3	100.0	100.0	100.0
3	Sharpen Roundup PowerMax AMS	0.0223 lb ai/a 0.77 lb ae/a 5 gal/100 gal	ai/a ae/a gal	1 oz/a 22 oz/a 77 oz/a	oz/a oz/a oz/a	A	A	2-4 in weeds 2-4 in weeds 2-4 in weeds	100.0	100.0	100.0	100.0	100.0	100.0
4	Sharpen Roundup PowerMax AMS COC	0.0223 lb ai/a 0.77 lb ae/a 5 gal/100 gal 1 % v/v	ai/a ae/a gal v/v	1 oz/a 22 oz/a 77 oz/a 1 % v/v	oz/a oz/a oz/a v/v	A	A	2-4 in weeds 2-4 in weeds 2-4 in weeds 2-4 in weeds	100.0	100.0	100.0	100.0	100.0	100.0
5	Sharpen Roundup PowerMax AMS MSO	0.0223 lb ai/a 0.77 lb ae/a 5 gal/100 gal 1 % v/v	ai/a ae/a gal v/v	1 oz/a 22 oz/a 77 oz/a 1 % v/v	oz/a oz/a oz/a v/v	A	A	2-4 in weeds 2-4 in weeds 2-4 in weeds 2-4 in weeds	100.0	100.0	100.0	100.0	100.0	100.0
6	2,4-D Ester Roundup PowerMax AMS	0.5 lb ai/a 0.77 lb ae/a 5 gal/100 gal	ai/a ae/a gal	16 oz/a 22 oz/a 77 oz/a	oz/a oz/a oz/a	A	A	2-4 in weeds 2-4 in weeds 2-4 in weeds	100.0	100.0	100.0	100.0	100.0	100.0
7	Distinct Roundup PowerMax AMS	0.7 lb ae/a 0.77 lb ae/a 5 gal/100 gal	ae/a ae/a gal	16 oz/a 22 oz/a 77 oz/a	oz/a oz/a oz/a	A	A	2-4 in weeds 2-4 in weeds 2-4 in weeds	100.0	100.0	100.0	100.0	100.0	100.0
8	Flexstar GT AMS	1.24 lb ai/a 5 gal/100 gal	ai/a gal	48 oz/a 77 oz/a	oz/a oz/a	A	A	2-4 in weeds 2-4 in weeds	100.0	100.0	100.0	100.0	100.0	100.0
LSD (P=.05)									0.00	22.52	26.80	0.00	0.00	0.00
Standard Deviation									0.00	15.31	18.22	0.00	0.00	0.00
CV									0.0	18.49	22.21	0.0	0.0	0.0
Bartlett's X2									0.0	0.0	0.0	0.0	0.0	0.0
P(Bartlett's X2)									.	.	.	.	.	.
Replicate F									0.000	1.000	1.000	0.000	0.000	0.000
Replicate Prob(F)									1.0000	0.4123	0.4123	1.0000	1.0000	1.0000
Treatment F									0.000	22.048	16.059	0.000	0.000	0.000
Treatment Prob(F)									1.0000	0.0001	0.0001	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Sharpen Fallow

Trial ID: HNC-90310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		SEBEX		ECHCG					
Pest Name		Coffeebean		Common barnyar>					
Part Rated		PLANT P		PLANT P					
Rating Date		9/3/2010		9/3/2010					
Rating Type		CONTROL		CONTROL					
Rating Unit		%		%					
Crop Stage Majority		4-12"		4-12"					
Pest Stage Majority		14 DA-A		14 DA-A					
Tri-Eval Interval									
Tri No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	Appl Description	7	8
1	Untreated Check							0.0	0.0
2	Roundup PowerMax AMS	0.77 lb ae/a 5 gal/100 gal		22 oz/a 77 oz/a		A	2-4 in weeds 2-4 in weeds	100.0	100.0
3	Sharpen Roundup PowerMax AMS	0.0223 lb ai/a 0.77 lb ae/a 5 gal/100 gal		1 oz/a 22 oz/a 77 oz/a		A	2-4 in weeds 2-4 in weeds 2-4 in weeds	100.0	100.0
4	Sharpen Roundup PowerMax AMS COC	0.0223 lb ai/a 0.77 lb ae/a 5 gal/100 gal 1 % v/v		1 oz/a 22 oz/a 77 oz/a 1 % v/v		A	2-4 in weeds 2-4 in weeds 2-4 in weeds 2-4 in weeds	100.0	100.0
5	Sharpen Roundup PowerMax AMS MSO	0.0223 lb ai/a 0.77 lb ae/a 5 gal/100 gal 1 % v/v		1 oz/a 22 oz/a 77 oz/a 1 % v/v		A	2-4 in weeds 2-4 in weeds 2-4 in weeds 2-4 in weeds	100.0	100.0
6	2,4-D Ester Roundup PowerMax AMS	0.5 lb ai/a 0.77 lb ae/a 5 gal/100 gal		16 oz/a 22 oz/a 77 oz/a		A	2-4 in weeds 2-4 in weeds 2-4 in weeds	100.0	100.0
7	Distinct Roundup PowerMax AMS	0.7 lb ae/a 0.77 lb ae/a 5 gal/100 gal		16 oz/a 22 oz/a 77 oz/a		A	2-4 in weeds 2-4 in weeds 2-4 in weeds	100.0	100.0
8	Flexstar GT AMS	1.24 lb ai/a 5 gal/100 gal		48 oz/a 77 oz/a		A	2-4 in weeds 2-4 in weeds	100.0	100.0
LSD (P=.05)								0.00	0.00
Standard Deviation								0.00	0.00
CV								0.0	0.0
Bartlett's X2								0.0	0.0
P(Bartlett's X2)								.	.
Replicate F								0.000	0.000
Replicate Prob(F)								1.0000	1.0000
Treatment F								0.000	0.000
Treatment Prob(F)								1.0000	1.0000

University of Arkansas-Division of Agriculture

Sharpen Fallow

Trial ID: HNC-90310
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US
SEBEX, Sesbania exaltata, = US
ECHCG, Echinochloa crus-galli, = US

Part Rated

PLANT = plant
P = Pest is Part Rated

Rating Unit

% = percent

University of Arkansas-Division of Agriculture

Evaluation of Ignite 280 and Dicamba on MG Control

Trial ID: HNC-90410
Location: Rohwer, AR

Investigator: Kenneth Smith

Site and Design

Plot Width, Unit: 8 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 224 FT²
Replications: 4

Study Design: RACOB L Randomized Complete Block (RCB)

Application Description

	A	B	C	D
Application Date:	8/23/2010	8/27/2010	9/2/2010	9/9/2010
Time of Day:	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	3-6"	6-9"	9-12"	24-28"
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	RD	RD	RD	RD
Air Temperature, Unit:	87.5 F	74.4	80.2 F	77.2 F
% Relative Humidity:	68	59.8	76.8	90.2
Wind Velocity, Unit:	1.5 MPH	3.1 MPH	3.6 MPH	2.3 MPH
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	90.7 F	84.8	81.5 F	82.5 F
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL
% Cloud Cover:	60	60	65	80
Next Rain Occurred On:	8/29/2010	8/29/2010	9/8/2010	9/8/2010

Application Equipment

	A	B	C	D
Appl. Equipment:	Multi-Boom	Multi-Boom	Multi-Boom	Multi-Boom
Operating Pressure, Unit:	55 PSI	55 PSI	55 PSI	55 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2	2
Boom Length, Unit:	6.33 FT	6.33 FT	6.33 FT	6.33 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA	12 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	3 Liters
Propellant:	CO2	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Evaluation of Ignite 280 and Dicamba on MG Control

Trial ID: HNC-90410
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		IPOSS		IPOSS		IPOSS		IPOSS		IPOSS		IPOSS			
Pest Name		Morning glory		Morning glory		Morning glory		Morning glory		Morning glory		Morning glory			
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P			
Rating Date		8/27/2010		9/3/2010		9/3/2010		9/3/2010		9/14/2010		9/14/2010			
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL			
Rating Unit		%		%		%		%		%		%			
Crop Stage Majority		3-6"		3-6"		6"		9"		3-6"		6"			
Pest Stage Majority		4 DA-A		11 DA-A		7 DA-B		7 DA-B		22 DA-A		18 DA-B			
Tri-Eval Interval															
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Stage	Appl Code	Appl Description	1	2	3	4	5	6	7
1	UTC								0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Clarity	0.25 lb ai/a	8 oz/a		3-6 in	A		MG plant	62.5	80.0			88.8		
3	Clarity	0.5 lb ai/a	16 oz/a		3-6 in	A		MG plant	65.0	92.5			96.3		
4	Clarity	0.25 lb ai/a	8 oz/a		6-9 in	B		MG runner			73.8	71.3		90.0	86.3
5	Clarity	0.5 lb ai/a	16 oz/a		6-9 in	B		MG runner			92.5	83.8		91.3	86.3
6	Clarity	0.25 lb ai/a	8 oz/a		9-12 in	C		MG runner							
7	Clarity	0.5 lb ai/a	16 oz/a		9-12 in	C		MG runner							
8	Clarity	0.25 lb ai/a	8 oz/a		24-28 in	D		MG runner							
9	Clarity	0.5 lb ai/a	16 oz/a		24-28 in	D		MG runner							
10	Ignite 280	0.53 lb ai/a	29 oz/a		3-6 in	A		MG plant	73.8	99.5			81.3		
11	Ignite 280	0.73 lb ai/a	40 oz/a		3-6 in	A		MG plant	87.5	100.0			100.0		
12	Ignite 280	0.53 lb ai/a	29 oz/a		6-9 in	B		MG runner			97.5	92.5		100.0	100.0
13	Ignite 280	0.73 lb ai/a	40 oz/a		6-9 in	B		MG runner			100.0	98.8		100.0	97.5
14	Ignite 280	0.53 lb ai/a	29 oz/a		9-12 in	C		MG runner							
15	Ignite 280	0.73 lb ai/a	40 oz/a		9-12 in	C		MG runner							
16	Ignite 280	0.53 lb ai/a	29 oz/a		24-28 in	D		MG runner							
17	Ignite 280	0.73 lb ai/a	40 oz/a		24-28 in	D		MG runner							
LSD (P=.05)		15.44							15.44	15.13	14.10	14.87	26.66	8.61	9.57
Standard Deviation		10.02							10.02	9.82	9.15	9.65	17.30	5.59	6.21
CV		17.35							17.35	13.19	12.58	13.94	23.62	7.33	8.39
Bartlett's X2		0.967							0.967	14.136	8.615	6.777	14.954	0.163	1.448
P(Bartlett's X2)		0.809							0.809	0.001*	0.013*	0.079	0.001*	0.687	0.485
Replicate F		1.207							1.207	1.112	0.652	0.586	1.017	2.067	0.865
Replicate Prob(F)		0.3490							0.3490	0.3824	0.5970	0.6356	0.4191	0.1582	0.4859
Treatment F		45.324							45.324	74.504	84.045	68.946	23.096	235.400	181.735
Treatment Prob(F)		0.0001							0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluation of Ignite 280 and Dicamba on MG Control

Trial ID: HNC-90410
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		IPOSS		IPOSS		IPOSS		IPOSS		IPOSS		IPOSS		IPOSS	
Pest Name		Morning glory		Morning glory		Morning glory		Morning glory		Morning glory		Morning glory		Morning glory	
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P	
Rating Date		9/14/2010		9/14/2010		9/14/2010		9/14/2010		9/20/2010		9/20/2010		9/20/2010	
Rating Type		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL	
Rating Unit		%		%		%		%		%		%		%	
Crop Stage Majority		9"		12"		24"		28"		9"		12"		24"	
Pest Stage Majority		12 DA-C		12 DA-C		5 DA-D		5 DA-D		18 DA-C		18 DA-C		11 DA-D	
Tri-Eval Interval															
Tri No.	Treatment	Rate	Other Rate	Other Rate	Growth Unit	Appl Code	Appl Description	8	9	10	11	12	13	14	15
1	UTC	0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Clarity	0.25 lb ai/a	8 oz/a		3-6 in	A	MG plant								
3	Clarity	0.5 lb ai/a	16 oz/a		3-6 in	A	MG plant								
4	Clarity	0.25 lb ai/a	8 oz/a		6-9 in	B	MG runner								
5	Clarity	0.5 lb ai/a	16 oz/a		6-9 in	B	MG runner								
6	Clarity	0.25 lb ai/a	8 oz/a		9-12 in	C	MG runner	43.8	43.8			43.8	43.8		
7	Clarity	0.5 lb ai/a	16 oz/a		9-12 in	C	MG runner	72.5	70.0			71.3	68.8		
8	Clarity	0.25 lb ai/a	8 oz/a		24-28 in	D	MG runner			25.0	25.0			56.3	56.3
9	Clarity	0.5 lb ai/a	16 oz/a		24-28 in	D	MG runner			31.3	31.3			62.5	62.5
10	Ignite 280	0.53 lb ai/a	29 oz/a		3-6 in	A	MG plant								
11	Ignite 280	0.73 lb ai/a	40 oz/a		3-6 in	A	MG plant								
12	Ignite 280	0.53 lb ai/a	29 oz/a		6-9 in	B	MG runner								
13	Ignite 280	0.73 lb ai/a	40 oz/a		6-9 in	B	MG runner								
14	Ignite 280	0.53 lb ai/a	29 oz/a		9-12 in	C	MG runner	100.0	100.0			100.0	100.0		
15	Ignite 280	0.73 lb ai/a	40 oz/a		9-12 in	C	MG runner	100.0	100.0			100.0	100.0		
16	Ignite 280	0.53 lb ai/a	29 oz/a		24-28 in	D	MG runner			50.0	50.0			50.0	50.0
17	Ignite 280	0.73 lb ai/a	40 oz/a		24-28 in	D	MG runner			56.3	56.3			62.5	62.5
LSD (P=.05)		24.88	23.60		44.06		44.06	24.19	23.59	25.84	25.84				
Standard Deviation		16.15	15.32		28.60		28.60	15.70	15.31	16.77	16.77				
CV		25.53	24.41		87.99		87.99	24.92	24.49	36.26	36.26				
Bartlett's X2		1.368	1.9		0.541		0.541	1.665	2.236	1.543	1.543				
P(Bartlett's X2)		0.242	0.168		0.763		0.763	0.197	0.135	0.462	0.462				
Replicate F		0.720	1.000		1.478		1.478	0.852	0.889	1.000	1.000				
Replicate Prob(F)		0.5588	0.4262		0.2702		0.2702	0.4919	0.4747	0.4262	0.4262				
Treatment F		27.479	30.378		2.427		2.427	28.993	30.333	9.889	9.889				
Treatment Prob(F)		0.0001	0.0001		0.1051		0.1051	0.0001	0.0001	0.0009	0.0009				

University of Arkansas-Division of Agriculture

Evaluation of Igtnite 280 and Dicamba on MG Control

Trial ID: HNC-90410
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code
IPOSS, Ipomoea sp., = US
Part Rated
PLANT = plant
P = Pest is Part Rated
Rating Unit
% = percent

University of Arkansas-Division of Agriculture

Diamba and Ignite 280 efficacy on Palmer Amaranth

Trial ID: HNC-90510
Location: Rohwer, AR

Investigator: Kenneth Smith

Site and Design

Plot Width, Unit: 8 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 224 FT²
Replications: 4

Study Design: RACOB L Randomized Complete Block (RCB)

Application Description

	A	B	C	D
Application Date:	8/23/2010	8/27/2010	9/2/2010	9/9/2010
Time of Day:	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	3-6"	6-9"	9-12"	24-28"
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	RD	RD	RD	RD
Air Temperature, Unit:	87.5 F	74.4	80.2 F	77.2 F
% Relative Humidity:	68	59.8	76.8	90.2
Wind Velocity, Unit:	1.5 MPH	3.1 MPH	3.6 MPH	2.3 MPH
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	90.7 F	84.8	81.5 F	82.5 F
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL
% Cloud Cover:	60	60	65	80
Next Rain Occurred On:	8/29/2010	8/29/2010	9/8/2010	9/8/2010

Application Equipment

	A	B	C	D
Appl. Equipment:	Multi-Boom	Multi-Boom	Multi-Boom	Multi-Boom
Operating Pressure, Unit:	55 PSI	55 PSI	55 PSI	55 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2	2
Boom Length, Unit:	6.33 FT	6.33 FT	6.33 FT	6.33 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN
Ground Speed, Unit:	3.8 MPH	3.8 MPH	3.8 MPH	3.8 MPH
Carrier:	H2O	H2O	H2O	H2O
Spray Volume, Unit:	12 GPA	12 GPA	12 GPA	12 GPA
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	3 Liters
Propellant:	CO2	CO2	CO2	CO2

University of Arkansas-Division of Agriculture

Diamba and Ignite 280 efficacy on Palmer Amaranth

Trial ID: HNC-90510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

		AMAPA Palmer amaranth PLANT P 8/27/2010 CONTROL %	AMAPA Palmer amaranth PLANT P 9/3/2010 CONTROL %	AMAPA Palmer amaranth PLANT P 9/3/2010 CONTROL %	AMAPA Palmer amaranth PLANT P 9/3/2010 CONTROL %	AMAPA Palmer amaranth PLANT P 9/14/2010 CONTROL %						
		3-6" 4 DA-A	3-6" 11 DA-A	6" 7 DA-B	9" 7 DA-B	3-6" 22 DA-A						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	UTC							0.0	0.0	0.0	0.0	0.0
2	Clarity	0.25 lb ai/a	8 oz/a		3-6 in	A	PW	66.3	91.3			91.3
3	Clarity	0.5 lb ai/a	16 oz/a		3-6 in	A	PW	76.3	98.8			92.5
4	Clarity	0.25 lb ai/a	8 oz/a		6-9 in	B	PW			86.3	71.3	
5	Clarity	0.5 lb ai/a	16 oz/a		6-9 in	B	PW			95.0	86.3	
6	Clarity	0.25 lb ai/a	8 oz/a		9-12 in	C	PW					
7	Clarity	0.5 lb ai/a	16 oz/a		9-12 in	C	PW					
8	Clarity	0.25 lb ai/a	8 oz/a		24-28 in	D	PW					
9	Clarity	0.5 lb ai/a	16 oz/a		24-28 in	D	PW					
10	Ignite 280	0.53 lb ai/a	29 oz/a		3-6 in	A	PW	80.0	98.8			100.0
11	Ignite 280	0.73 lb ai/a	40 oz/a		3-6 in	A	PW	87.5	100.0			100.0
12	Ignite 280	0.53 lb ai/a	29 oz/a		6-9 in	B	PW			98.8	95.0	
13	Ignite 280	0.73 lb ai/a	40 oz/a		6-9 in	B	PW			100.0	97.5	
14	Ignite 280	0.53 lb ai/a	29 oz/a		9-12 in	C	PW					
15	Ignite 280	0.73 lb ai/a	40 oz/a		9-12 in	C	PW					
16	Ignite 280	0.53 lb ai/a	29 oz/a		24-28 in	D	PW					
17	Ignite 280	0.73 lb ai/a	40 oz/a		24-28 in	D	PW					
LSD (P=.05)								13.94	4.28	5.76	10.26	6.60
Standard Deviation								9.05	2.78	3.74	6.66	4.28
CV								14.59	3.57	4.92	9.52	5.58
Bartlett's X2								3.017	1.795	3.37	7.219	0.988
P(Bartlett's X2)								0.389	0.408	0.185	0.065	0.32
Replicate F								2.361	0.595	1.672	2.479	1.341
Replicate Prob(F)								0.1227	0.6305	0.2257	0.1111	0.3073
Treatment F								61.550	986.514	525.537	147.535	405.273
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Diamba and Ignite 280 efficacy on Palmer Amaranth

Trial ID: HNC-90510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

		AMAPA Palmer amaranth	AMAPA Palmer amaranth	AMAPA Palmer amaranth	AMAPA Palmer amaranth	AMAPA Palmer amaranth						
		PLANT P	PLANT P	PLANT P	PLANT P	PLANT P						
		9/14/2010	9/14/2010	9/14/2010	9/14/2010	9/14/2010						
		CONTROL	CONTROL	CONTROL	CONTROL	CONTROL						
		%	%	%	%	%						
		6"	9"	9"	12"	24"						
		18 DA-B	18 DA-B	12 DA-C	12 DA-C	5 DA-D						
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	6	7	8	9	10
1	UTC							0.0	0.0	0.0	0.0	0.0
2	Clarity	0.25 lb ai/a	8 oz/a		3-6 in	A	PW					
3	Clarity	0.5 lb ai/a	16 oz/a		3-6 in	A	PW					
4	Clarity	0.25 lb ai/a	8 oz/a		6-9 in	B	PW	86.3	81.3			
5	Clarity	0.5 lb ai/a	16 oz/a		6-9 in	B	PW	88.8	83.8			
6	Clarity	0.25 lb ai/a	8 oz/a		9-12 in	C	PW			48.8	42.5	
7	Clarity	0.5 lb ai/a	16 oz/a		9-12 in	C	PW			55.0	52.5	
8	Clarity	0.25 lb ai/a	8 oz/a		24-28 in	D	PW					15.0
9	Clarity	0.5 lb ai/a	16 oz/a		24-28 in	D	PW					45.0
10	Ignite 280	0.53 lb ai/a	29 oz/a		3-6 in	A	PW					
11	Ignite 280	0.73 lb ai/a	40 oz/a		3-6 in	A	PW					
12	Ignite 280	0.53 lb ai/a	29 oz/a		6-9 in	B	PW	100.0	96.3			
13	Ignite 280	0.73 lb ai/a	40 oz/a		6-9 in	B	PW	100.0	100.0			
14	Ignite 280	0.53 lb ai/a	29 oz/a		9-12 in	C	PW			93.8	91.3	
15	Ignite 280	0.73 lb ai/a	40 oz/a		9-12 in	C	PW			98.8	96.3	
16	Ignite 280	0.53 lb ai/a	29 oz/a		24-28 in	D	PW					61.3
17	Ignite 280	0.73 lb ai/a	40 oz/a		24-28 in	D	PW					50.0
LSD (P=.05)								6.71	7.34	28.07	25.60	18.95
Standard Deviation								4.35	4.77	18.22	16.61	12.30
CV								5.81	6.6	30.75	29.41	35.91
Bartlett's X2								0.944	5.305	18.309	10.349	1.251
P(Bartlett's X2)								0.331	0.07	0.001*	0.016*	0.535
Replicate F								1.055	1.963	1.581	1.358	0.229
Replicate Prob(F)								0.4042	0.1734	0.2455	0.3023	0.8747
Treatment F								379.286	298.541	19.252	22.431	17.430
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Diamba and Ignite 280 efficacy on Palmer Amaranth

Trial ID: HNC-90510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

							AMAPA Palmer amaranth PLANT P 9/14/2010 CONTROL %	AMAPA Palmer amaranth PLANT P 9/20/2010 CONTROL %	AMAPA Palmer amaranth PLANT P 9/20/2010 CONTROL %	AMAPA Palmer amaranth PLANT P 9/20/2010 CONTROL %	AMAPA Palmer amaranth PLANT P 9/20/2010 CONTROL %	
Pest Code							28"	9"	12"	24"	28"	
Pest Name							5 DA-D	18 DA-C	18 DA-C	11 DA-D	11 DA-D	
Part Rated												
Rating Date												
Rating Type												
Rating Unit												
Crop Stage Majority												
Pest Stage Majority												
Tri-Eval Interval												
Trt No.	Treatment Name	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	11	12	13	14	15
1	UTC							0.0	0.0	0.0	0.0	0.0
2	Clarity	0.25 lb ai/a	8 oz/a		3-6 in	A	PW					
3	Clarity	0.5 lb ai/a	16 oz/a		3-6 in	A	PW					
4	Clarity	0.25 lb ai/a	8 oz/a		6-9 in	B	PW					
5	Clarity	0.5 lb ai/a	16 oz/a		6-9 in	B	PW					
6	Clarity	0.25 lb ai/a	8 oz/a		9-12 in	C	PW		58.8	53.8		
7	Clarity	0.5 lb ai/a	16 oz/a		9-12 in	C	PW		75.0	71.3		
8	Clarity	0.25 lb ai/a	8 oz/a		24-28 in	D	PW	15.0			45.0	45.0
9	Clarity	0.5 lb ai/a	16 oz/a		24-28 in	D	PW	42.5			65.0	63.8
10	Ignite 280	0.53 lb ai/a	29 oz/a		3-6 in	A	PW					
11	Ignite 280	0.73 lb ai/a	40 oz/a		3-6 in	A	PW					
12	Ignite 280	0.53 lb ai/a	29 oz/a		6-9 in	B	PW					
13	Ignite 280	0.73 lb ai/a	40 oz/a		6-9 in	B	PW					
14	Ignite 280	0.53 lb ai/a	29 oz/a		9-12 in	C	PW		98.8	97.5		
15	Ignite 280	0.73 lb ai/a	40 oz/a		9-12 in	C	PW		100.0	100.0		
16	Ignite 280	0.53 lb ai/a	29 oz/a		24-28 in	D	PW	56.3			81.3	77.5
17	Ignite 280	0.73 lb ai/a	40 oz/a		24-28 in	D	PW	50.0			72.5	72.5
LSD (P=.05)							15.73	29.01	27.26	22.94	21.58	
Standard Deviation							10.21	18.82	17.70	14.89	14.01	
CV							31.16	28.31	27.43	28.22	27.07	
Bartlett's X2							5.499	17.462	11.422	12.415	14.557	
P(Bartlett's X2)							0.064	0.001*	0.003*	0.006*	0.002*	
Replicate F							0.300	0.927	0.750	1.103	1.297	
Replicate Prob(F)							0.8248	0.4577	0.5428	0.3857	0.3203	
Treatment F							22.392	18.954	21.303	18.925	20.185	
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001	

University of Arkansas-Division of Agriculture

Diamba and Ignite 280 efficacy on Palmer Amaranth

Trial ID: HNC-90510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code
AMAPA, Amaranthus palmeri, = US
Part Rated
PLANT = plant
P = Pest is Part Rated
Rating Unit
% = percent

University of Arkansas-Division of Agriculture

ET Efficacy on Palmer Amaranth

Trial ID: HNC-90610
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 177.24 FT²
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Soil Description

Description Name: Silt Loam **Texture:** SIL silt loam
% Sand: 16 **% OM:** 2.2 **Soil Name:** Herbert Silt Loam
% Silt: 67 **pH:** 7.1 **Fert. Level:** G
% Clay: 17 **CEC:** 14 **Soil Drainage:** G good

Application Description

	A
Application Date:	8/18/2010
Time of Day:	Morning
Application Method:	Spray
Application Timing:	V4-V6 weed
Application Placement:	BROFOL
Applied By:	RD
Air Temperature, Unit:	82.5 F
% Relative Humidity:	78
Wind Velocity, Unit:	5.8 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	89.5 F
Soil Moisture:	GOOD
% Cloud Cover:	75
Next Rain Occurred On:	8/29/2010

Pest Stage At Each Application

	A
Stage Majority, Percent:	V4-V6

Application Equipment

	A
Appl. Equipment:	Multi-Boom
Operating Pressure, Unit:	55 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
Boom Length, Unit:	6.33 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.8 MPH
Carrier:	H2O
Spray Volume, Unit:	12 GPA
Mix Size, Unit:	3 Liters
Propellant:	CO2

University of Arkansas-Division of Agriculture

ET Efficacy on Palmer Amaranth

Trial ID: HNC-90610
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	AMAPA Palmer amaranth	AMAPA Palmer amaranth	AMAPA Palmer amaranth	AMAPA Palmer amaranth	AMAPA Palmer amaranth	AMAPA Palmer amaranth							
Pest Name	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Part Rated	8/24/2010	8/24/2010	9/3/2010	9/3/2010	9/9/2010	9/9/2010							
Rating Date	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL							
Rating Type	%	%	%	%	%	%							
Rating Unit	12"	18"	12"	18"	12"	18"							
Crop Stage Majority	6 DA-A	6 DA-A	16 DA-A	16 DA-A	22 DA-A	22 DA-A							
Pest Stage Majority													
Trt-Eval Interval													
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	1	2	3	4	5	6
1	Check							0.0	0.0	0.0	0.0	0.0	0.0
2	Roundup WeatherMax NIS	1.13 lb ae/a 0.25 % v/v	ae/a v/v	32 oz/a 0.25 % v/v	oz/a v/v	V4-V6 V4-V6	A A	97.0	93.8	100.0	100.0	100.0	100.0
3	Roundup WeatherMax ET NIS	1.13 lb ae/a 0.00122 lb ae/a 0.25 % v/v	ae/a ae/a v/v	32 oz/a 0.75 oz/a 0.25 % v/v	oz/a oz/a v/v	V4-V6 V4-V6 V4-V6	A A A	93.3	90.0	100.0	100.0	100.0	100.0
4	Flexstar GT MSO	1.24 lb ae/a 1 % v/v	ae/a v/v	48 oz/a 1 % v/v	oz/a v/v	V4-V6 V4-V6	A A	77.5	73.8	92.5	87.5	92.5	86.3
5	ET Flexstar GT MSO	0.00081 lb ae/a 1.24 lb ae/a 1 % v/v	ae/a ae/a v/v	0.25 oz/a 48 oz/a 1 % v/v	oz/a oz/a v/v	V4-V6 V4-V6 V4-V6	A A A	81.3	76.3	80.0	75.0	80.0	75.0
6	Aim Flexstar GT MSO	0.0039 lb ae/a 1.24 lb ae/a 1 % v/v	ae/a ae/a v/v	0.25 oz/a 48 oz/a 1 % v/v	oz/a oz/a v/v	V4-V6 V4-V6 V4-V6	A A A	20.0	17.5	0.0	0.0	0.0	0.0
7	ET MSO	0.00081 lb ae/a 1 % v/v	ae/a v/v	0.5 oz/a 1 % v/v	oz/a v/v	V4-V6 V4-V6	A A	12.5	12.5	0.0	0.0	0.0	0.0
8	ET MSO	0.00122 lb ae/a 1 % v/v	ae/a v/v	0.75 oz/a 1 % v/v	oz/a v/v	V4-V6 V4-V6	A A	15.0	15.0	0.0	0.0	0.0	0.0
9	Aim MSO	0.0039 lb ae/a 1 % v/v	ae/a v/v	0.25 oz/a 1 % v/v	oz/a v/v	V4-V6 V4-V6	A A	12.5	12.5	0.0	0.0	0.0	0.0
10	Aim MSO	0.00594 lb ae/a 1 % v/v	ae/a v/v	0.38 oz/a 1 % v/v	oz/a v/v	V4-V6 V4-V6	A A	15.0	15.0	0.0	0.0	0.0	0.0
11	Aim MSO	0.0078 lb ae/a 1 % v/v	ae/a v/v	0.5 oz/a 1 % v/v	oz/a v/v	V4-V6 V4-V6	A A	20.0	17.5	0.0	0.0	0.0	0.0
LSD (P=.05)								9.73	10.47	3.23	4.39	3.23	5.35
Standard Deviation								6.74	7.25	2.24	3.04	2.24	3.71
CV								16.69	18.82	6.6	9.23	6.6	11.29
Bartlett's X2								7.736	7.969	0.061	1.928	0.061	1.178
P(Bartlett's X2)								0.561	0.537	0.805	0.165	0.805	0.278
Replicate F								2.185	1.452	1.667	1.721	1.667	1.364
Replicate Prob(F)								0.1104	0.2475	0.1952	0.1837	0.1952	0.2728
Treatment F								126.551	100.375	1787.364	923.361	1787.364	616.736
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
AMAPA, Amaranthus palmeri, = US
Part Rated
PLANT = plant
P = Pest is Part Rated
Rating Unit
% = percent

University of Arkansas-Division of Agriculture

Horseweed burndown with paraquat plus PSII inhibitors

Trial ID: HPB-10110
Location: Pickens, AR

Investigator: Kenneth Smith

Pest Description

Pest 1 Type: W **Code:** ERICA *Conyza canadensis*
Common Name: Canada horseweed

Pest 2 Type: W **Code:** POAAN *Poa annua*
Common Name: Annual bluegrass

Pest 3 Type: W **Code:** STEME *Stellaria media*
Common Name: Common chickweed

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 25 FT
Plot Area, Unit: 158.25 FT²
Replications: 4

Study Design: RACOB L Randomized Complete Block (RCB)

Application Description

	A
Application Date:	3/23/2010
Time of Day:	9:35 am
Application Method:	SPRAY
Application Timing:	PREPLA
Application Placement:	BROFOL
Applied By:	RD
Air Temperature, Unit:	54.1 F
% Relative Humidity:	83.1
Wind Velocity, Unit:	3.5 MPH
Wind Direction:	SSW
Dew Presence (Y/N):	Y yes
Soil Temperature, Unit:	49.1 F
Soil Moisture:	wet
% Cloud Cover:	5

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ERICA W
Stage Majority, Percent:	3-5 in
Height, Unit:	4
Pest 2 Code, Type, Scale:	POAAN W
Stage Majority, Percent:	4-6 in
Pest 3 Code, Type, Scale:	STEME W
Stage Majority, Percent:	4-6 in

Application Equipment

	A
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Horseweed burndown with paraquat plus PSII inhibitors

Trial ID: HPB-10110
Location: Pickens, AR

Investigator: Kenneth Smith

							ERICA Canada horsewee>	POAAN Annual bluegra>	STEME Common chickwe>	ERICA Canada horsewee>	POAAN Annual bluegra>
							PLADEA P 3/30/2010	PLADEA P 3/30/2010	PLADEA P 3/30/2010	PLADEA P 4/8/2010	PLADEA P 4/8/2010
							CONTRO percent	CONTRO percent	CONTRO percent	CONTRO percent	CONTRO percent
							4-6 in 7 DA-A	4-6 in 7 DA-A	4-8 in 7 DA-A	3-8 in 16 DA-A	mature 16 DA-A
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4	5
1	Untreated Check						0.0	0.0	0.0	0.0	0.0
2	Sencor 75DF COC	0.14 lb ai/a 1 % v/v		3 oz/a 15.4 oz/a	Burndown A Burndown A		0.0	0.0	0.0	6.3	56.3
3	Aatrex COC	1 lb ai/a 1 % v/v		2 pt/a 15.4 oz/a	Burndown A Burndown A		0.0	0.0	0.0	25.0	51.3
4	Direx COC	0.5 lb ai/a 1 % v/v		1 pt/a 15.4 oz/a	Burndown A Burndown A		0.0	0.0	0.0	18.8	43.8
5	Clarity COC	0.25 lb ai/a 1 % v/v		8 oz/a 15.4 oz/a	Burndown A Burndown A		50.0	6.3	18.8	75.0	50.0
6	Gramoxone Inteon COC	0.625 lb ai/a 1 % v/v		40 oz/a 15.4 oz/a	Burndown A Burndown A		68.8	60.0	57.5	50.0	90.0
7	Sencor 75DF Gramoxone Inteon COC	0.14 lb ai/a 0.625 lb ai/a 1 % v/v		3 oz/a 40 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		52.5	52.5	52.5	55.0	100.0
8	Aatrex Gramoxone Inteon COC	1 lb ai/a 0.625 lb ai/a 1 % v/v		2 pt/a 40 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		71.3	50.0	60.0	60.0	100.0
9	Direx Gramoxone Inteon COC	0.5 lb ai/a 0.625 lb ai/a 1 % v/v		1 pt/a 40 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		72.5	50.0	50.0	53.8	100.0
10	Clarity Gramoxone Inteon COC	8 oz/a 0.625 lb ai/a 1 % v/v		8 oz/a 40 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		75.0	50.0	50.0	82.5	98.8
11	Clarity Roundup PowerMax	0.25 lb ai/a 0.77 lb ae/a		8 oz/a 22 oz/a	Burndown A Burndown A		66.3	18.8	18.8	96.3	97.5
12	Roundup PowerMax	0.77 lb ae/a		22 oz/a	Burndown A		57.5	12.5	12.5	97.0	100.0
LSD (P=.05)							13.45	18.01	21.22	9.75	13.28
Standard Deviation							9.31	12.47	14.69	6.75	9.19
CV							21.76	49.89	55.1	13.08	12.43
Bartlett's X2							1.947	6.173	6.269	11.171	12.298
P(Bartlett's X2)							0.924	0.29	0.394	0.192	0.031*
Replicate F							0.646	0.438	0.212	1.934	0.633
Replicate Prob(F)							0.5908	0.7276	0.8872	0.1432	0.5993
Treatment F							48.792	16.137	11.770	96.987	51.296
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Horseweed burndown with paraquat plus PSII inhibitors

Trial ID: HPB-10110
Location: Pickens, AR

Investigator: Kenneth Smith

							STEME	ERICA	POAAN
							Common chickwe>	Canada horsewe>	Annual bluegra>
							PLADEA P	PLADEA P	PLADEA P
							4/8/2010	4/14/2010	4/14/2010
							CONTRO	CONTRO	CONTRO
							percent	percent	percent
							mature	4-12 in	3-6 in
							16 DA-A	22 DA-A	22 DA-A
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit Stage	Appl Code	6	7	8
1	Untreated Check						0.0	0.0	0.0
2	Sencor 75DF COC	0.14 lb ai/a 1 % v/v		3 oz/a 15.4 oz/a	Burndown A Burndown A		52.5	6.3	56.3
3	Aatrex COC	1 lb ai/a 1 % v/v		2 pt/a 15.4 oz/a	Burndown A Burndown A		76.3	25.0	95.0
4	Direx COC	0.5 lb ai/a 1 % v/v		1 pt/a 15.4 oz/a	Burndown A Burndown A		50.0	37.5	75.0
5	Clarity COC	0.25 lb ai/a 1 % v/v		8 oz/a 15.4 oz/a	Burndown A Burndown A		50.0	90.0	100.0
6	Gramoxone Inteon COC	0.625 lb ai/a 1 % v/v		40 oz/a 15.4 oz/a	Burndown A Burndown A		97.5	58.8	100.0
7	Sencor 75DF Gramoxone Inteon COC	0.14 lb ai/a 0.625 lb ai/a 1 % v/v		3 oz/a 40 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		100.0	66.3	100.0
8	Aatrex Gramoxone Inteon COC	1 lb ai/a 0.625 lb ai/a 1 % v/v		2 pt/a 40 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		100.0	75.0	100.0
9	Direx Gramoxone Inteon COC	0.5 lb ai/a 0.625 lb ai/a 1 % v/v		1 pt/a 40 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		100.0	70.0	100.0
10	Clarity Gramoxone Inteon COC	8 oz/a 0.625 lb ai/a 1 % v/v		8 oz/a 40 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		100.0	90.0	100.0
11	Clarity Roundup PowerMax	0.25 lb ai/a 0.77 lb ae/a		8 oz/a 22 oz/a	Burndown A Burndown A		100.0	100.0	100.0
12	Roundup PowerMax	0.77 lb ae/a		22 oz/a	Burndown A		100.0	100.0	100.0
LSD (P=.05)							24.73	19.76	27.96
Standard Deviation							17.13	13.68	19.36
CV							22.19	22.85	22.64
Bartlett's X2							9.183	19.492	5.71
P(Bartlett's X2)							0.027*	0.003*	0.058
Replicate F							0.840	2.673	0.798
Replicate Prob(F)							0.4818	0.0634	0.5039
Treatment F							14.358	26.382	9.747
Treatment Prob(F)							0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Horseweed burndown with paraquat plus PSII inhibitors

Trial ID: HPB-10110
Location: Pickens, AR

Investigator: Kenneth Smith

Pest Code

ERICA, Conyza canadensis, = US

POAAN, Poa annua, = US

STEME, Stellaria media, = US

Part Rated

PLADEA = plant - dead

P = Pest is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Henbit/Primrose Burndown

Trial ID: HPB-10210 Protocol ID: HPB-10210
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Description

Pest 1 Type: W **Code:** LAMAM Lamium amplexicaule
Common Name: Henbit

Pest 2 Type: W **Code:** POAAN Poa annua
Common Name: Annual bluegrass

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 25 FT
Plot Area, Unit: 158.25 FT²
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Application Description

	A
Application Date:	3/23/2010
Time of Day:	3:00 pm
Application Method:	SPRAY
Application Timing:	PREPLA
Application Placement:	BROFOL
Applied By:	JB
Air Temperature, Unit:	73.2 F
% Relative Humidity:	48.2
Wind Velocity, Unit:	8 MPH
Wind Direction:	SSW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	68.9 F
Soil Moisture:	AVG
% Cloud Cover:	20

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	LAMAM W
Stage Majority, Percent:	3-5 in
Pest 2 Code, Type, Scale:	POAAN W
Stage Majority, Percent:	4-6 in

Application Equipment

	A
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Henbit/Primrose Burndown

Trial ID: HPB-10210 Protocol ID: HPB-10210
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	LAMAM	POAAN	LAMAM	POAAN	LAMAM	POAAN						
Pest Name	Henbit	Annual bluegra>	Henbit	Annual bluegra>	Henbit	Annual bluegra>						
Part Rated	PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P						
Rating Date	3/30/2010	3/30/2010	4/8/2010	4/8/2010	4/14/2010	4/14/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent	percent	percent	percent						
Crop Stage Majority	4-6 in	4-6 in	4-12 in	2-8 in	4-12 in	2-8 in						
Pest Stage Majority	7 DA-A	7 DA-A	16 DA-A	16 DA-A	22 DA-A	22 DA-A						
Trt-Eval Interval												
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4	5	6
1	Untreated Check						0.0	0.0	0.0	0.0	0.0	0.0
2	Roundup PowerMax	0.77 lb ae/a		22 oz/a	Burndown A		86.8	83.5	86.0	92.3	90.5	95.0
3	Clarity COC	0.25 lb ai/a 1 % v/v		8 oz/a 15.4 oz/a	Burndown A		79.3	80.0	62.5	60.0	66.3	66.3
4	2,4-D Amine COC	1 lb ai/a 1 % v/v		32 oz/a 15.4 oz/a	Burndown A		77.3	75.0	62.5	62.5	68.8	68.8
5	Harmony COC	0.014 lb ai/a 1 % v/v		0.3 oz/a 15.4 oz/a	Burndown A		84.3	74.3	72.5	70.0	72.5	70.0
6	Gramoxone Inteon COC	0.625 lb ai/a 1 % v/v		40 oz/a 15.4 oz/a	Burndown A		94.3	94.8	88.0	86.3	81.3	81.3
7	Roundup PowerMax Clarity	0.77 lb ae/a 0.25 lb ai/a		22 oz/a 8 oz/a	Burndown A		85.3	84.3	82.5	85.3	85.5	88.8
8	Roundup PowerMax 2,4-D Amine	0.77 lb ae/a 1 lb ai/a		22 oz/a 32 oz/a	Burndown A		84.8	81.8	84.3	88.0	93.0	94.5
9	Roundup PowerMax Clarity Harmony	0.77 lb ae/a 0.25 lb ai/a 0.014 lb ai/a		22 oz/a 8 oz/a 0.3 oz/a	Burndown A		84.8	84.8	76.3	88.5	82.5	81.8
10	Roundup PowerMax 2,4-D Amine Harmony	0.77 lb ae/a 1 lb ai/a 0.014 lb ai/a		22 oz/a 32 oz/a 0.3 oz/a	Burndown A		88.8	84.3	79.3	76.8	94.3	95.5
11	Roundup PowerMax Clarity 2,4-D Amine	0.77 lb ae/a 0.25 lb ai/a 0.5 lb ai/a		22 oz/a 8 oz/a 1 pt/a	Burndown A		85.3	84.3	81.0	86.3	95.0	94.3
12	Gramoxone Inteon Clarity COC	0.625 lb ai/a 0.25 lb ai/a 1 % v/v		40 oz/a 8 oz/a 15.4 oz/a	Burndown A		94.3	93.0	83.0	87.3	79.3	81.0
13	Gramoxone Inteon 2,4-D Amine COC	0.625 lb ai/a 1 lb ai/a 1 % v/v		40 oz/a 32 oz/a 15.4 oz/a	Burndown A		94.8	93.0	84.3	86.3	86.8	87.5
LSD (P=.05)							5.28	6.73	9.38	9.57	12.14	11.59
Standard Deviation							3.69	4.71	6.56	6.70	8.50	8.11
CV							4.62	6.05	9.06	8.98	11.1	10.49
Bartlett's X2							13.56	16.936	7.439	16.857	18.237	24.935
P(Bartlett's X2)							0.258	0.11	0.763	0.078	0.076	0.009*
Replicate F							3.825	0.535	0.558	3.076	7.343	9.570
Replicate Prob(F)							0.0178	0.6614	0.6460	0.0398	0.0006	0.0001
Treatment F							177.872	105.907	50.272	54.401	34.209	39.228
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 LAMAM, Lamium amplexicaule, = US
 POAAN, Poa annua, = US
Part Rated
 PLADEA = plant - dead
 P = Pest is Part Rated
Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Sharpen Burndown Programs

Trial ID: HPB-10310 Protocol ID: HPB-10310
 Location: Pickens, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Description

Pest 1 Type: W **Code:** ERICA *Conyza canadensis*
Common Name: Canada horseweed

Pest 2 Type: W **Code:** POAAN *Poa annua*
Common Name: Annual bluegrass

Pest 3 Type: W **Code:** STEME *Stellaria media*
Common Name: Common chickweed

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 25 FT
Plot Area, Unit: 158.25 FT²
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Application Description

	A
Application Date:	3/23/2010
Time of Day:	9:40 am
Application Method:	SPRAY
Application Timing:	PREPLA
Application Placement:	BROFOL
Applied By:	JM
Air Temperature, Unit:	54.1 F
% Relative Humidity:	83.1
Wind Velocity, Unit:	3.4 MPH
Wind Direction:	SSW
Dew Presence (Y/N):	Y yes
Soil Temperature, Unit:	49.1 F
Soil Moisture:	NORMAL
% Cloud Cover:	5

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ERICA W
Stage Majority, Percent:	3-5 in
Pest 2 Code, Type, Scale:	POAAN W
Stage Majority, Percent:	4-6 in
Pest 3 Code, Type, Scale:	STEME W
Stage Majority, Percent:	4-6 in

Application Equipment

	A
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Sharpen Burndown Programs

Trial ID: HPB-10310 Protocol ID: HPB-10310
 Location: Pickens, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	ERICA Canada horsewe>	POAAN Annual bluegra>	STEME Common chickwe>	ERICA Canada horsewe>	POAAN Annual bluegra>
Pest Name	PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P
Part Rated	3/30/2010	3/30/2010	3/30/2010	4/8/2010	4/8/2010
Rating Date	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Type	percent	percent	percent	percent	percent
Rating Unit	4-6 in	3-6 in	4-8 in	4-12 in	4-6 in
Crop Stage Majority	7 DA-A	7 DA-A	7 DA-A	16 DA-A	16 DA-A
Pest Stage Majority					
Tri-Eval Interval					
Trt Treatment	Rate	Other Rate	Other Rate	Growth Unit	Appl Code
No. Name	Rate	Unit	Rate	Unit	Stage
1	2	3	4	5	
1 Untreated Check	0.0				Burndown A
2 Sharpen MSO	0.0223 lb ai/a 1 % v/v	1 oz/a	15.4 oz/a		Burndown A
3 Sharpen MSO	0.0334 lb ai/a 1 % v/v	1.5 oz/a	15.4 oz/a		Burndown A
4 Sharpen MSO	0.0445 lb ai/a 1 % v/v	2 oz/a	15.4 oz/a		Burndown A
5 Roundup PowerMax	0.77 lb ae/a	22 oz/a			Burndown A
6 Roundup PowerMax Sharpen	0.77 lb ae/a 0.0223 lb ai/a	22 oz/a 1 oz/a			Burndown A
7 Roundup PowerMax Sharpen	0.77 lb ae/a 0.0334 lb ai/a	22 oz/a 1.5 oz/a			Burndown A
8 Roundup PowerMax Sharpen	0.77 lb ae/a 0.0445 lb ai/a	22 oz/a 2 oz/a			Burndown A
9 Roundup PowerMax Clarity	0.77 lb ae/a 0.25 lb ai/a	22 oz/a 8 oz/a			Burndown A
10 Roundup PowerMax Clarity	0.77 lb ae/a 0.188 lb ai/a	22 oz/a 6 oz/a			Burndown A
11 Roundup PowerMax Clarity	0.77 lb ae/a 0.125 lb ai/a	22 oz/a 4 oz/a			Burndown A
12 Roundup PowerMax Sharpen Clarity	0.77 lb ae/a 0.0223 lb ai/a 0.125 lb ai/a	22 oz/a 1 oz/a 4 oz/a			Burndown A
13 Roundup PowerMax Sharpen Clarity	0.77 lb ae/a 0.0334 lb ai/a 0.125 lb ai/a	22 oz/a 1.5 oz/a 4 oz/a			Burndown A
14 Roundup PowerMax Sharpen Clarity	0.77 lb ae/a 0.0223 lb ai/a 0.188 lb ai/a	22 oz/a 1 oz/a 6 oz/a			Burndown A
15 Roundup PowerMax Sharpen Clarity	0.77 lb ae/a 0.0334 lb ai/a 0.188 lb ai/a	22 oz/a 1.5 oz/a 6 oz/a			Burndown A
16 Roundup PowerMax Sharpen 2,4-D Amine	0.77 lb ae/a 0.0223 lb ai/a 0.5 lb ai/a	22 oz/a 1 oz/a 1 pt/a			Burndown A
17 Roundup PowerMax Sharpen 2,4-D Amine	0.77 lb ae/a 0.0334 lb ai/a 0.5 lb ai/a	22 oz/a 1.5 oz/a 1 pt/a			Burndown A
18 Clarity MSO	0.25 lb ai/a 1 % v/v	8 oz/a 15.4 oz/a			Burndown A
19 Sharpen Clarity MSO	0.0223 lb ai/a 0.125 lb ai/a 1 % v/v	1 oz/a 4 oz/a 15.4 oz/a			Burndown A
20 Sharpen Clarity MSO	0.0334 lb ai/a 0.125 lb ai/a 1 % v/v	1.5 oz/a 4 oz/a 15.4 oz/a			Burndown A
21 Sharpen Clarity MSO	0.0223 lb ai/a 0.188 lb ai/a 1 % v/v	1 oz/a 6 oz/a 15.4 oz/a			Burndown A
22 Sharpen Clarity MSO	0.0334 lb ai/a 0.188 lb ai/a 1 % v/v	1.5 oz/a 6 oz/a 15.4 oz/a			Burndown A
LSD (P=.05)	8.00				
Standard Deviation	5.66				
CV	7.32				
Bartlett's X2	24.51				
P(Bartlett's X2)	0.221				
Replicate F	1.540				
Replicate Prob(F)	0.2129				
Treatment F	50.303				
Treatment Prob(F)	0.0001				
		8.00	13.61	11.86	8.56
		5.66	9.62	8.38	6.05
		7.32	12.82	10.86	7.31
		24.51	33.635	36.314	46.874
		0.221	0.029*	0.01*	0.001*
		1.540	1.836	1.200	0.973
		0.2129	0.1498	0.3169	0.4112
		50.303	23.337	32.764	80.063
		0.0001	0.0001	0.0001	0.0001
					18.10
					13.30
					18.09
					15.299
					0.032*
					0.058
					0.9816
					26.229
					0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Sharpen Burndown Programs

Trial ID: HPB-10310 Protocol ID: HPB-10310
 Location: Pickens, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	STEME	ERICA	ERICA	POAAN	STEME	ERICA
Pest Name	Common chickwe>	Canada horsewe>	Canada horsewe>	Annual bluegra>	Common chickwe>	Canada horsewe>
Part Rated	PLADEA P	PLALIV P	PLADEA P	PLADEA P	PLADEA P	PLALIV P
Rating Date	4/8/2010	4/8/2010	4/14/2010	4/14/2010	4/14/2010	4/14/2010
Rating Type	CONTRO	REGROWTH	CONTRO	CONTRO	CONTRO	REGROWTH
Rating Unit	percent	percent	percent	percent	percent	percent
Crop Stage Majority	4-6 in		4-12 in	heading	mature	
Pest Stage Majority	16 DA-A	16 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A
Tri-Eval Interval						
Trt Treatment	Rate	Other Rate	Other Rate	Growth Unit	Appl Code	
No. Name	Rate	Unit	Rate	Unit	Stage	
	6	7	8	9	10	11
1 Untreated Check	0.0		100.0		Burndown A	100.0
2 Sharpen MSO	0.0223 lb ai/a 1 % v/v	1 oz/a 15.4 oz/a	91.3	15.0	Burndown A	92.5
3 Sharpen MSO	0.0334 lb ai/a 1 % v/v	1.5 oz/a 15.4 oz/a	82.5	22.5	Burndown A	86.3
4 Sharpen MSO	0.0445 lb ai/a 1 % v/v	2 oz/a 15.4 oz/a	56.3	25.0	Burndown A	85.0
5 Roundup PowerMax	0.77 lb ae/a	22 oz/a	0.0	96.3	Burndown A	1.3
6 Roundup PowerMax Sharpen	0.77 lb ae/a 0.0223 lb ai/a	22 oz/a 1 oz/a	2.5	98.8	Burndown A	1.3
7 Roundup PowerMax Sharpen	0.77 lb ae/a 0.0334 lb ai/a	22 oz/a 1.5 oz/a	0.0	100.0	Burndown A	0.0
8 Roundup PowerMax Sharpen	0.77 lb ae/a 0.0445 lb ai/a	22 oz/a 2 oz/a	0.0	100.0	Burndown A	0.0
9 Roundup PowerMax Clarity	0.77 lb ae/a 0.25 lb ai/a	22 oz/a 8 oz/a	0.0	97.5	Burndown A	0.0
10 Roundup PowerMax Clarity	0.77 lb ae/a 0.188 lb ai/a	22 oz/a 6 oz/a	0.0	97.5	Burndown A	0.0
11 Roundup PowerMax Clarity	0.77 lb ae/a 0.125 lb ai/a	22 oz/a 4 oz/a	0.0	96.3	Burndown A	1.3
12 Roundup PowerMax Sharpen Clarity	0.77 lb ae/a 0.0223 lb ai/a 0.125 lb ai/a	22 oz/a 1 oz/a 4 oz/a	0.0	100.0	Burndown A	0.0
13 Roundup PowerMax Sharpen Clarity	0.77 lb ae/a 0.0334 lb ai/a 0.125 lb ai/a	22 oz/a 1.5 oz/a 4 oz/a	0.0	100.0	Burndown A	0.0
14 Roundup PowerMax Sharpen Clarity	0.77 lb ae/a 0.0223 lb ai/a 0.188 lb ai/a	22 oz/a 1 oz/a 6 oz/a	1.3	100.0	Burndown A	0.0
15 Roundup PowerMax Sharpen Clarity	0.77 lb ae/a 0.0334 lb ai/a 0.188 lb ai/a	22 oz/a 1.5 oz/a 6 oz/a	0.0	98.8	Burndown A	0.0
16 Roundup PowerMax Sharpen 2,4-D Amine	0.77 lb ae/a 0.0223 lb ai/a 0.5 lb ai/a	22 oz/a 1 oz/a 1 pt/a	0.0	100.0	Burndown A	0.0
17 Roundup PowerMax Sharpen 2,4-D Amine	0.77 lb ae/a 0.0334 lb ai/a 0.5 lb ai/a	22 oz/a 1.5 oz/a 1 pt/a	0.0	100.0	Burndown A	0.0
18 Clarity MSO	0.25 lb ai/a 1 % v/v	8 oz/a 15.4 oz/a	0.0	83.8	Burndown A	77.5
19 Sharpen Clarity MSO	0.0223 lb ai/a 0.125 lb ai/a 1 % v/v	1 oz/a 4 oz/a 15.4 oz/a	30.0	51.3	Burndown A	65.0
20 Sharpen Clarity MSO	0.0334 lb ai/a 0.125 lb ai/a 1 % v/v	1.5 oz/a 4 oz/a 15.4 oz/a	17.5	81.3	Burndown A	31.3
21 Sharpen Clarity MSO	0.0223 lb ai/a 0.188 lb ai/a 1 % v/v	1 oz/a 6 oz/a 15.4 oz/a	6.3	97.5	Burndown A	2.5
22 Sharpen Clarity MSO	0.0334 lb ai/a 0.188 lb ai/a 1 % v/v	1.5 oz/a 6 oz/a 15.4 oz/a	2.5	83.8	Burndown A	26.3
LSD (P=.05)	0.00		14.75	11.79	16.65	6.22
Standard Deviation	0.00		10.43	8.34	11.77	4.40
CV	0.0		58.82	10.51	14.51	4.65
Bartlett's X2	0.0		39.913	49.658	3.062	0.0
P(Bartlett's X2)	.		0.001*	0.001*	0.879	.
Replicate F	0.000		0.996	0.829	0.885	1.000
Replicate Prob(F)	1.0000		0.4005	0.4830	0.4536	0.3988
Treatment F	0.000		39.666	62.374	20.884	96.866
Treatment Prob(F)	1.0000		0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Sharpen Burndown Programs

Trial ID: HPB-10310 Protocol ID: HPB-10310
Location: Pickens, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

ERICA, Conyza canadensis, = US
POAAN, Poa annua, = US
STEME, Stellaria media, = US

Part Rated

PLADEA = plant - dead
PLALIV = plant - living
P = Pest is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Cool Season Burndown with Dicamba/2,4-D Mixtures.

Trial ID: HPB-10410 Protocol ID: HPB-10410
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Description

Pest 1 Type: W **Code:** LAMAM Lamium amplexicaule
Common Name: Henbit

Pest 2 Type: W **Code:** POAAN Poa annua
Common Name: Annual bluegrass

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 25 FT
Plot Area, Unit: 158.25 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Application Description

	A
Application Date:	3/23/2010
Time of Day:	3:30 pm
Application Method:	SPRAY
Application Timing:	PREPLA
Application Placement:	BROFOL
Applied By:	JB
Air Temperature, Unit:	73.2 F
% Relative Humidity:	48.2
Wind Velocity, Unit:	8 MPH
Wind Direction:	SSW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	68.9 F
Soil Moisture:	NORMAL
% Cloud Cover:	20

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	LAMAM W
Stage Majority, Percent:	3-5 in
Pest 2 Code, Type, Scale:	POAAN W
Stage Majority, Percent:	3-6 in

Application Equipment

	A
Appl. Equipment:	Tractor
Equipment Type:	SPTRMO
Operating Pressure, Unit:	50 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Cool Season Burndown with Dicamba/2,4-D Mixtures.

Trial ID: HPB-10410 Protocol ID: HPB-10410
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	LAMAM	POAAN	LAMAM	POAAN	LAMAM						
Pest Name	Henbit	Annual bluegra>	Henbit	Annual bluegra>	Henbit						
Part Rated	PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P						
Rating Date	3/30/2010	3/30/2010	4/8/2010	4/8/2010	4/14/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent	percent	percent						
Crop Stage Majority	4-6 in	4-6 in	4-10 in	mature	mature						
Pest Stage Majority	7 DA-A	7 DA-A	16 DA-A	16 DA-A	22 DA-A						
Trt-Eval Interval											
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	1	2	3	4	5
1	Untreated Check						0.0	0.0	0.0	0.0	0.0
2	Roundup PowerMax Clarity	0.77 lb ae/a 0.25 lb ai/a	22 oz/a 8 oz/a		Burndown A Burndown A		43.8	25.0	37.5	43.8	80.0
3	Roundup PowerMax Clarity	0.77 lb ae/a 0.313 lb ai/a	22 oz/a 10 oz/a		Burndown A Burndown A		31.3	12.5	50.0	50.0	60.0
4	Roundup PowerMax Clarity	0.77 lb ae/a 0.375 lb ai/a	22 oz/a 12 oz/a		Burndown A Burndown A		37.5	25.0	43.8	37.5	37.5
5	Roundup PowerMax Clarity 2,4-D Amine	0.77 lb ae/a 0.25 lb ai/a 0.5 lb ai/a	22 oz/a 8 oz/a 1 pt/a		Burndown A Burndown A Burndown A		31.3	31.3	31.3	31.3	70.0
6	Roundup PowerMax Clarity 2,4-D Amine	0.77 lb ae/a 0.188 lb ai/a 0.5 lb ai/a	22 oz/a 6 oz/a 1 pt/a		Burndown A Burndown A Burndown A		31.3	18.8	37.5	31.3	60.0
7	Roundup PowerMax Clarity 2,4-D Amine	0.77 lb ae/a 0.125 lb ai/a 0.5 lb ai/a	22 oz/a 4 oz/a 1 pt/a		Burndown A Burndown A Burndown A		31.3	25.0	43.8	37.5	56.3
8	Roundup PowerMax Clarity 2,4-D Amine	0.77 lb ae/a 0.125 lb ai/a 1 lb ai/a	22 oz/a 4 oz/a 2 pt/a		Burndown A Burndown A Burndown A		37.5	31.3	56.3	43.8	65.0
9	Roundup PowerMax Clarity 2,4-D Amine	0.77 lb ae/a 1 lb ai/a	22 oz/a 2 pt/a		Burndown A Burndown A		37.5	25.0	43.8	43.8	61.3
10	Roundup PowerMax Clarity Harmony	0.77 lb ae/a 0.25 lb ai/a 0.014 lb ai/a	22 oz/a 8 oz/a 0.3 oz/a		Burndown A Burndown A Burndown A		31.3	25.0	50.0	37.5	58.8
11	Roundup PowerMax Clarity Sharpen	0.77 lb ae/a 0.125 lb ai/a 0.0223 lb ai/a	22 oz/a 4 oz/a 1 oz/a		Burndown A Burndown A Burndown A		37.5	25.0	43.8	50.0	70.0
12	Roundup PowerMax Clarity Edition	0.77 lb ae/a 0.125 lb ai/a 0.0156 lb ai/a	22 oz/a 4 oz/a 0.5 oz/a		Burndown A Burndown A Burndown A		31.3	18.8	50.0	50.0	55.0
LSD (P=.05)							18.87	14.40	26.72	18.16	25.34
Standard Deviation							13.07	9.97	18.51	12.58	17.55
CV							41.14	45.58	45.55	33.08	31.26
Bartlett's X2							0.294	1.302	3.535	1.363	6.66
P(Bartlett's X2)							1.00	0.935	0.966	0.995	0.757
Replicate F							0.279	1.571	1.470	0.521	0.290
Replicate Prob(F)							0.8398	0.2148	0.2406	0.6707	0.8321
Treatment F							2.737	3.000	2.447	4.751	5.426
Treatment Prob(F)							0.0124	0.0071	0.0232	0.0002	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 LAMAM, Lamium amplexicaule, = US
 POAAN, Poa annua, = US
 Part Rated
 PLADEA = plant - dead
 P = Pest is Part Rated
 Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Ryegrass Burndown

Trial ID: HPB-10510
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Description

Pest 1 Type: W **Code:** LOLSS Lolium sp.
Common Name: Ryegrass

Site and Design

Plot Width, Unit: 7 FT
Plot Length, Unit: 25 FT
Plot Area, Unit: 175 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Application Description

	A
Application Date:	3/23/2010
Time of Day:	1:00 pm
Application Method:	SPRAY
Application Timing:	PREPLA
Application Placement:	BROFOL
Applied By:	JM
Air Temperature, Unit:	69.8 F
% Relative Humidity:	55
Wind Velocity, Unit:	7.5 MPH
Wind Direction:	SSW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	63.3 F
Soil Moisture:	ABONOR
% Cloud Cover:	20

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	LOLSS W
Stage Majority, Percent:	tiller

Application Equipment

	A
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Ryegrass Burndown

Trial ID: HPB-10510
Location: Rohwer, ARStudy Director:
Investigator: Kenneth Smith
Sponsor Contact:

							LOLSS	LOLSS	LOLSS	
							Ryegrass	Ryegrass	Ryegrass	
							PLADEA P	PLADEA P	PLADEA P	
							3/30/2010	4/8/2010	4/14/2010	
							CONTRO	CONTRO	CONTRO	
							percent	percent	percent	
							tiller	tiller	Heading	
							7 DA-A	16 DA-A	22 DA-A	
Trt	Treatment	Rate	Other	Other	Growth	Appl				
No.	Name	Rate	Unit	Rate	Unit	Stage	Code	1	2	3
1	Untreated Check							0.0	0.0	0.0
2	Roundup PowerMax	0.77 lb ae/a		22 oz/a		Burndown A		85.0	83.8	87.5
3	Roundup PowerMax	1.13 lb ae/a		32 oz/a		Burndown A		91.3	92.5	91.3
4	Gramoxone Inteon	0.5 lb ai/a		32 oz/a		Burndown A		78.8	63.8	42.5
	COC	1 % v/v		15.4 oz/a		Burndown A				
5	Gramoxone Inteon	0.625 lb ai/a		40 oz/a		Burndown A		83.8	75.0	47.5
	COC	1 % v/v		15.4 oz/a		Burndown A				
6	Gramoxone Inteon	0.5 lb ai/a		32 oz/a		Burndown A		78.8	78.8	55.0
	Sencor 75DF	0.14 lb ai/a		3 oz/a		Burndown A				
	COC	1 % v/v		15.4 oz/a		Burndown A				
7	Gramoxone Inteon	0.5 lb ai/a		32 oz/a		Burndown A		82.5	71.3	62.5
	Direx	0.5 lb ai/a		1 pt/a		Burndown A				
	COC	1 % v/v		15.4 oz/a		Burndown A				
8	Gramoxone Inteon	0.5 lb ai/a		32 oz/a		Burndown A		80.0	82.5	73.8
	AAtrex	1 lb ai/a		2 pt/a		Burndown A				
	COC	1 % v/v		15.4 oz/a		Burndown A				
9	Gramoxone Inteon	0.625 lb ai/a		40 oz/a		Burndown A		80.0	85.0	76.3
	Sencor 75DF	0.14 lb ai/a		3 oz/a		Burndown A				
	COC	1 % v/v		15.4 oz/a		Burndown A				
10	Gramoxone Inteon	0.625 lb ai/a		40 oz/a		Burndown A		77.5	88.8	78.8
	Direx	0.5 lb ai/a		1 pt/a		Burndown A				
	COC	1 % v/v		15.4 oz/a		Burndown A				
11	Gramoxone Inteon	0.625 lb ai/a		40 oz/a		Burndown A		82.5	88.8	80.0
	AAtrex	1 lb ai/a		2 pt/a		Burndown A				
	COC	1 % v/v		15.4 oz/a		Burndown A				
12	Select	0.091 lb ai/a		5.8 oz/a		Burndown A		22.5	35.0	40.0
	COC	1 % v/v		15.4 oz/a		Burndown A				
13	Select	0.121 lb ai/a		7.74 oz/a		Burndown A		22.5	32.5	40.0
	COC	1 % v/v		15.4 oz/a		Burndown A				
14	Roundup PowerMax	0.77 lb ae/a		22 oz/a		Burndown A		90.0	91.3	93.8
	Select	0.091 lb ai/a		5.8 oz/a		Burndown A				
15	Roundup PowerMax	0.77 lb ae/a		22 oz/a		Burndown A		77.5	82.5	85.0
	MSMA	0.75 lb ai/a		1 pt/a		Burndown A				
LSD (P=.05)							7.56	12.20	9.79	
Standard Deviation							5.29	8.54	6.85	
CV							7.69	12.18	10.78	
Bartlett's X2							12.478	43.536	15.73	
P(Bartlett's X2)							0.408	0.001*	0.151	
Replicate F							2.955	0.783	2.990	
Replicate Prob(F)							0.0433	0.5099	0.0416	
Treatment F							116.626	39.454	57.203	
Treatment Prob(F)							0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code

LOLSS, Lolium sp., = US

Part Rated

PLADEA = plant - dead

P = Pest is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Horseweed burndown with paraquat plus PSII inhibitors as influenced by night and day application.

Trial ID: HPB-10610 Protocol ID: HPB-10610
 Location: Pickens, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Description

Pest 1 Type: W **Code:** ERICA *Conyza canadensis*
Common Name: Canada horseweed

Pest 2 Type: W **Code:** POAAN *Poa annua*
Common Name: Annual bluegrass

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 25 FT
Plot Area, Unit: 158.25 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Application Description

	A	B
Application Date:	3/23/2010	3/24/2010
Time of Day:	8:00 pm	8:40 am
Application Method:	SPRAY	SPRAY
Application Timing:	PREPLA	PREPLA
Application Placement:	BROFOL	BROFOL
Applied By:	JM	JM
Air Temperature, Unit:	54.0 F	55.4 F
% Relative Humidity:	76	76.2
Wind Velocity, Unit:	1 MPH	5.2 MPH
Wind Direction:	SSW	SSW
Dew Presence (Y/N):	Y yes	Y yes
Soil Temperature, Unit:	50.0 F	51.0 F
Soil Moisture:	GOOD	GOOD
% Cloud Cover:	5	10

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:	3-5 in	3-5 in
Pest 2 Code, Type, Scale:	POAAN W	POAAN W
Stage Majority, Percent:	4-6 in	4-6 in

Application Equipment

	A	B
Appl. Equipment:	Hand Boom	Hand Boom
Equipment Type:	BACSPR	BACSPR
Operating Pressure, Unit:	45 PSI	45 PSI
Nozzle Type:	AM FF	AM FF
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Horseweed burndown with paraquat plus PSII inhibitors as influenced by night and day application.

Trial ID: HPB-10610 Protocol ID: HPB-10610
 Location: Pickens, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	ERICA Canada horsewe>	POAAN Annual bluegra>	ERICA Canada horsewe>	POAAN Annual bluegra>	ERICA Canada horsewe>	POAAN Annual bluegra>
Pest Name	PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P
Part Rated	3/30/2010	3/30/2010	4/8/2010	4/8/2010	4/14/2010	4/14/2010
Rating Date	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Type	percent	percent	percent	percent	percent	percent
Rating Unit						
Crop Stage Majority	4-6 in	4-6 in	2-10 in	2-6 in	4-14 in	4-10 in
Pest Stage Majority	7 DA-A	7 DA-A	16 DA-A	16 DA-A	22 DA-A	22 DA-A
Trt-Eval Interval						
Trt Treatment	Rate	Other	Other	Growth	Appl	Appl
No. Name	Rate	Unit	Rate	Rate Unit	Code	Description
	1	2	3	4	5	6
1 Untreated Check	0.0					
2 Gramoxone Inteon COC	0.625 lb ai/a 1 % v/v	40 oz/a 15.4 oz/a		Burndown A Burndown A	PM PM	90.8
3 Gramoxone Inteon Sencor 75DF COC	0.625 lb ai/a 0.14 lb ai/a 1 % v/v	40 oz/a 3 oz/a 15.4 oz/a		Burndown A Burndown A Burndown A	PM PM PM	89.0
4 Gramoxone Inteon AAtrex COC	0.625 lb ai/a 1 lb ai/a 1 % v/v	40 oz/a 2 pt/a 15.4 oz/a		Burndown A Burndown A Burndown A	PM PM PM	92.3
5 Gramoxone Inteon Direx COC	0.625 lb ai/a 0.5 lb ai/a 1 % v/v	40 oz/a 1 pt/a 15.4 oz/a		Burndown A Burndown A Burndown A	PM PM PM	94.0
6 Gramoxone Inteon Clarity COC	0.625 lb ai/a 0.25 lb ai/a 1 % v/v	40 oz/a 8 oz/a 15.4 oz/a		Burndown A Burndown A Burndown A	PM PM PM	92.8
7 Roundup PowerMax Clarity	0.77 lb ae/a 0.25 lb ai/a	22 oz/a 8 oz/a		Burndown A Burndown A	PM PM	83.5
8 Gramoxone Inteon COC	0.625 lb ai/a 1 % v/v	40 oz/a 15.4 oz/a		Burndown B Burndown B	AM AM	94.8
9 Gramoxone Inteon Sencor 75DF COC	0.625 lb ai/a 0.14 lb ai/a 1 % v/v	40 oz/a 3 oz/a 15.4 oz/a		Burndown B Burndown B Burndown B	AM AM AM	91.8
10 Gramoxone Inteon AAtrex COC	0.625 lb ai/a 1 lb ai/a 1 % v/v	40 oz/a 2 pt/a 15.4 oz/a		Burndown B Burndown B Burndown B	AM AM AM	92.3
11 Gramoxone Inteon Direx COC	0.625 lb ai/a 0.5 lb ai/a 1 % v/v	40 oz/a 1 pt/a 15.4 oz/a		Burndown B Burndown B Burndown B	AM AM AM	90.5
12 Gramoxone Inteon Clarity COC	0.625 lb ai/a 0.25 lb ai/a 1 % v/v	40 oz/a 8 oz/a 15.4 oz/a		Burndown B Burndown B Burndown B	AM AM AM	93.0
13 Roundup PowerMax Clarity	0.77 lb ae/a 0.25 lb ai/a	22 oz/a 8 oz/a		Burndown B Burndown B	AM AM	80.5
LSD (P=.05)	3.18	2.82	3.32	2.58	2.82	0.00
Standard Deviation	2.23	1.97	2.32	1.81	1.98	0.00
CV	2.67	2.28	2.93	2.13	2.49	0.0
Bartlett's X2	5.66	9.953	19.312	6.899	7.48	0.0
P(Bartlett's X2)	0.895	0.535	0.056	0.648	0.679	.
Replicate F	0.610	2.705	0.518	2.973	1.057	0.000
Replicate Prob(F)	0.6126	0.0597	0.6723	0.0445	0.3794	1.0000
Treatment F	521.022	712.169	429.882	798.449	606.276	0.000
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0001	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 ERICA, Conyza canadensis, = US
 POAAN, Poa annua, = US
Part Rated
 PLADEA = plant - dead
 P = Pest is Part Rated
Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Burndown with paraquat plus PSII inhibitors on larger Horseweed.

Trial ID: HPB-10710 Protocol ID: HPB-10710
 Location: Pickens, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Description

Pest 1 Type: W **Code:** ERICA *Conyza canadensis*
Common Name: Canada horseweed

Pest 2 Type: W **Code:** POAAN *Poa annua*
Common Name: Annual bluegrass

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 25 FT
Plot Area, Unit: 158.25 FT²
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Application Description

	A
Application Date:	3/30/2010
Time of Day:	9:25 am
Application Method:	SPRAY
Application Timing:	PREPLA
Application Placement:	BROFOL
Applied By:	JM
Air Temperature, Unit:	55.1 F
% Relative Humidity:	78.2
Wind Velocity, Unit:	4.6 MPH
Wind Direction:	SE
Dew Presence (Y/N):	Y yes
Soil Temperature, Unit:	51.2 F
Soil Moisture:	GOOD
% Cloud Cover:	5

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ERICA W
Stage Majority, Percent:	3-5 in
Pest 2 Code, Type, Scale:	POAAN W
Stage Majority, Percent:	4-6 in

Application Equipment

	A
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Burndown with paraquat plus PSII inhibitors on larger Horseweed.

Trial ID: HPB-10710 Protocol ID: HPB-10710
 Location: Pickens, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		ERICA		POAAN		ERICA		POAAN		
Pest Name		Canada horsewe>		Annual bluegra>		Canada horsewe>		Annual bluegra>		
Part Rated		PLADEA P		PLADEA P		PLADEA P		PLADEA P		
Rating Date		4/8/2010		4/8/2010		4/14/2010		4/14/2010		
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		
Rating Unit		percent		percent		percent		percent		
Crop Stage Majority		4-10 in		2-6 in		4-16 in		2-6 in		
Pest Stage Majority		9 DA-A		9 DA-A		15 DA-A		15 DA-A		
Tri-Eval Interval										
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Appl Code	1	2	3	4
1	Untreated Check						0.0	0.0	0.0	0.0
2	Sencor 75DF COC	0.14 lb ai/a 1 % v/v		3 oz/a 15.4 oz/a	Burndown A Burndown A		60.0	77.5	6.3	100.0
3	Aatrex COC	1 lb ai/a 1 % v/v		2 pt/a 15.4 oz/a	Burndown A Burndown A		65.0	71.8	41.3	100.0
4	Direx COC	0.5 lb ai/a 1 % v/v		1 pt/a 15.4 oz/a	Burndown A Burndown A		63.8	80.0	28.8	100.0
5	Clarity COC	0.25 lb ai/a 1 % v/v		8 oz/a 15.4 oz/a	Burndown A Burndown A		79.3	79.3	86.3	100.0
6	Gramoxone Inteon COC	0.625 lb ai/a 1 % v/v		40 oz/a 15.4 oz/a	Burndown A Burndown A		85.5	91.8	68.8	100.0
7	Sencor 75DF Gramoxone Inteon COC	0.14 lb ai/a 0.625 lb ai/a 1 % v/v		3 oz/a 40 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		86.8	93.0	80.0	100.0
8	Aatrex Gramoxone Inteon COC	1 lb ai/a 0.625 lb ai/a 1 % v/v		2 pt/a 40 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		86.0	90.0	80.0	100.0
9	Direx Gramoxone Inteon COC	0.5 lb ai/a 0.625 lb ai/a 1 % v/v		1 pt/a 40 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		85.8	91.0	78.8	100.0
10	Clarity Gramoxone Inteon COC	8 oz/a 0.625 lb ai/a 1 % v/v		8 oz/a 40 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		88.3	91.3	83.8	100.0
11	Clarity Roundup PowerMax	0.25 lb ai/a 0.77 lb ae/a		8 oz/a 22 oz/a	Burndown A Burndown A		87.5	91.8	97.5	77.5
12	Roundup PowerMax	0.77 lb ae/a		22 oz/a	Burndown A		88.5	92.3	98.8	100.0
13	Sharpen Roundup PowerMax	0.0223 lb ai/a 0.77 lb ae/a		1 oz/a 22 oz/a	Burndown A Burndown A		91.3	90.5	100.0	100.0
14	Sharpen Roundup PowerMax MSO	0.0223 lb ai/a 0.77 lb ae/a 1 % v/v		1 oz/a 22 oz/a 15.4 oz/a	Burndown A Burndown A Burndown A		94.8	94.3	100.0	100.0
15	Sharpen MSO	0.0223 lb ai/a 1 % v/v		1 oz/a 15.4 oz/a	Burndown A Burndown A		89.3	88.5	82.5	100.0
16	Sharpen COC	0.0223 lb ai/a 1 % v/v		1 oz/a 15.4 oz/a	Burndown A Burndown A		81.3	76.8	87.5	100.0
17	Sharpen NIS	0.0223 lb ai/a 1 % v/v		1 oz/a 15.4 oz/a	Burndown A Burndown A		86.3	78.5	83.8	100.0
LSD (P=.05)							7.50	7.93	14.57	15.60
Standard Deviation							5.25	5.55	10.20	10.91
CV							6.76	6.85	14.4	11.76
Bartlett's X2							33.988	41.199	39.507	0.0
P(Bartlett's X2)							0.002*	0.001*	0.001*	.
Replicate F							4.026	9.409	3.208	1.000
Replicate Prob(F)							0.0124	0.0001	0.0312	0.4010
Treatment F							72.645	63.228	39.049	20.198
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 ERICA, Conyza canadensis, = US
 POAAN, Poa annua, = US
 Part Rated
 PLADEA = plant - dead
 P = Pest is Part Rated
 Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Ryegrass Burndown with paraquat plus PSII inhibitors.

Trial ID: HPB-10810 Protocol ID: HPB-10810
 Location: Chicot, Co Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Description

Pest 1 Type: W **Code:** LOLSS Lolium sp.
Common Name: Ryegrass

Site and Design

Plot Width, Unit: 6.33 FT
Plot Length, Unit: 25 FT
Plot Area, Unit: 158.25 FT²
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Application Description	
	A
Application Date:	4/2/2010
Time of Day:	9:05 am
Application Method:	SPRAY
Application Timing:	PREPLA
Application Placement:	BROFOL
Applied By:	JM
Air Temperature, Unit:	57.4 F
% Relative Humidity:	72.0
Wind Velocity, Unit:	8.9 MPH
Wind Direction:	SSW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	61.9 F
Soil Moisture:	DRY
% Cloud Cover:	100

Pest Stage At Each Application	
	A
Pest 1 Code, Type, Scale:	LOLSS W
Stage Majority, Percent:	tiller
Stage Minimum, Percent:	headin

Application Equipment	
	A
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Ryegrass Burndown with paraquat plus PSII inhibitors.

Trial ID: HPB-10810 Protocol ID: HPB-10810
 Location: Chicot, Co Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

							LOLSS	LOLSS	LOLSS
							Ryegrass	Ryegrass	Ryegrass
							PLADEA P	PLADEA P	PLADEA P
							4/9/2010	4/16/2010	4/22/2010
							CONTRO	CONTRO	CONTRO
							percent	percent	percent
							heading	heading	heading
							7 DA-A	14 DA-A	20 DA-A
Trt	Treatment	Rate	Other	Other	Growth	Appl			
No.	Name	Rate	Unit	Rate	Unit	Code	1	2	3
1	Untreated Check						0.0	0.0	8.8
2	Roundup PowerMax	0.77 lb ae/a		22 oz/a	Burndown A		2.5	1.3	1.3
3	Roundup PowerMax	1.13 lb ae/a		32 oz/a	Burndown A		0.0	3.8	12.5
4	Gramoxone Inteon	0.5 lb ai/a		32 oz/a	Burndown A		61.3	65.0	66.3
	COC	1 % v/v		15.4 oz/a	Burndown A				
5	Gramoxone Inteon	0.625 lb ai/a		40 oz/a	Burndown A		65.0	72.5	65.0
	COC	1 % v/v		15.4 oz/a	Burndown A				
6	Gramoxone Inteon	0.5 lb ai/a		32 oz/a	Burndown A		51.3	60.0	63.8
	Sencor 75DF	0.14 lb ai/a		3 oz/a	Burndown A				
	COC	1 % v/v		15.4 oz/a	Burndown A				
7	Gramoxone Inteon	0.5 lb ai/a		32 oz/a	Burndown A		56.3	71.3	67.5
	Direx	0.5 lb ai/a		1 pt/a	Burndown A				
	COC	1 % v/v		15.4 oz/a	Burndown A				
8	Gramoxone Inteon	0.5 lb ai/a		32 oz/a	Burndown A		55.0	67.5	68.8
	AAtrex	1 lb ai/a		2 pt/a	Burndown A				
	COC	1 % v/v		15.4 oz/a	Burndown A				
9	Gramoxone Inteon	0.625 lb ai/a		40 oz/a	Burndown A		58.8	72.5	67.5
	Sencor 75DF	0.14 lb ai/a		3 oz/a	Burndown A				
	COC	1 % v/v		15.4 oz/a	Burndown A				
10	Gramoxone Inteon	0.625 lb ai/a		40 oz/a	Burndown A		60.0	70.0	68.8
	Direx	0.5 lb ai/a		1 pt/a	Burndown A				
	COC	1 % v/v		15.4 oz/a	Burndown A				
11	Gramoxone Inteon	0.625 lb ai/a		40 oz/a	Burndown A		62.5	72.5	63.8
	AAtrex	1 lb ai/a		2 pt/a	Burndown A				
	COC	1 % v/v		15.4 oz/a	Burndown A				
12	Select	0.091 lb ai/a		5.8 oz/a	Burndown A		20.0	55.0	85.0
	COC	1 % v/v		15.4 oz/a	Burndown A				
13	Select	0.121 lb ai/a		7.74 oz/a	Burndown A		20.0	55.0	82.5
	COC	1 % v/v		15.4 oz/a	Burndown A				
14	Roundup PowerMax	0.77 lb ae/a		22 oz/a	Burndown A		18.8	46.3	75.0
	Select	0.091 lb ai/a		5.8 oz/a	Burndown A				
15	Roundup PowerMax	0.77 lb ae/a		22 oz/a	Burndown A		3.8	3.8	1.3
	MSMA	0.75 lb ai/a		1 pt/a	Burndown A				
LSD (P=.05)							7.30	9.28	10.84
Standard Deviation							5.11	6.50	7.58
CV							14.32	13.6	14.26
Bartlett's X2							11.731	16.267	35.441
P(Bartlett's X2)							0.468	0.235	0.001*
Replicate F							0.852	8.856	0.493
Replicate Prob(F)							0.4736	0.0001	0.6892
Treatment F							107.756	82.219	63.600
Treatment Prob(F)							0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 LOLSS, Lolium sp., = US
Part Rated
 PLADEA = plant - dead
 P = Pest is Part Rated
Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Evaluation of metsulfuron and carfentrazone for weed control in pastures.

Trial ID: HPS-80110 Protocol ID: HPS-80110
 Location: Monticello, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Description

Pest 1 Type: W **Code:** CVNCP Croton capitatus
Common Name: Woolly croton

Pest 2 Type: W **Code:** POLPE Polygonum persicaria
Common Name: Ladysthumb

Site and Design

Plot Width, Unit: 10 FT **Site Type:** PASTUR pasture
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 280 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Application Description

	A
Application Date:	6/22/2010
Time of Day:	7:30 PM
Application Method:	SPRAY
Application Timing:	POST
Application Placement:	BROFOL
Applied By:	JM
Air Temperature, Unit:	86.2 F
% Relative Humidity:	71.6
Wind Velocity, Unit:	2 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	91.2 F
Soil Moisture:	NORMAL
% Cloud Cover:	0
Next Rain Occurred On:	6/28/2010

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	CVNCP W
Pest 2 Code, Type, Scale:	POLPE W

Application Equipment

	A
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	15 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Evaluation of metsulfuron and carfentrazone for weed control in pastures.

Trial ID: HPS-80110 Protocol ID: HPS-80110
 Location: Monticello, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	CVNCP	POLPE	CVNCP	POLPE	CVNCP	POLPE						
Pest Name	Woolly croton	Ladysthumb	Woolly croton	Ladysthumb	Woolly croton	Ladysthumb						
Part Rated												
Rating Date	6/30/2010	6/30/2010	7/7/2010	7/7/2010	7/13/2010	7/13/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent	percent	percent	percent						
Crop Stage Majority	4-12 in	6-24 in	4-12 in	6-24 in	4-12 in	6-24 in						
Pest Stage Majority	8 DA-A	8 DA-A	15 DA-A	15 DA-A	21 DA-A	21 DA-A						
Trt-Eval Interval												
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Appl Code	1	2	3	4	5	6
1	Untreated Check						0.0	0.0	0.0	0.0	0.0	0.0
2	F9071	0.025 lb ai/a	2 oz/a		POST	A	91.7	86.3	98.3	91.3	98.3	93.0
	ALLY	0.0187 lb ai/a	0.5 oz/a		POST	A						
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
3	F9071	0.0125 lb ai/a	1 oz/a		POST	A	95.0	77.5	100.0	93.8	100.0	95.5
	ALLY	0.0094 lb ai/a	0.25 oz/a		POST	A						
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
4	F9071	0.00625 lb ai/a	0.5 oz/a		POST	A	77.5	82.5	80.0	90.0	80.0	90.5
	ALLY	0.0047 lb ai/a	0.125 oz/a		POST	A						
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
5	F9071	0.00625 lb ai/a	0.5 oz/a		POST	A	75.0	77.5	46.7	41.3	40.0	30.0
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
6	ALLY	0.0047 lb ai/a	0.125 oz/a		POST	A	37.5	48.8	43.8	52.5	58.8	73.8
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
7	F9071	0.0125 lb ai/a	1 oz/a		POST	A	88.3	73.8	73.3	62.5	25.0	42.5
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
8	ALLY	0.0094 lb ai/a	0.25 oz/a		POST	A	36.7	55.0	55.0	70.0	85.0	87.5
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
9	F9071	0.0125 lb ai/a	1 oz/a		POST	A	93.3	91.3	98.8	93.8	100.0	96.5
	ALLY	0.0094 lb ai/a	0.25 oz/a		POST	A						
	2,4-D AMINE	0.356 lb ai/a	0.75 pt/a		POST	A						
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
10	F9071	0.0125 lb ai/a	1 oz/a		POST	A	95.0	81.3	85.0	63.8	50.0	42.5
	2,4-D AMINE	0.356 lb ai/a	0.75 pt/a		POST	A						
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
11	ALLY	0.0094 lb ai/a	0.25 oz/a		POST	A	82.5	86.3	92.5	90.0	97.5	94.5
	2,4-D AMINE	0.356 lb ai/a	0.75 pt/a		POST	A						
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
12	F9007	0.0437 lb ai/a	2 oz/a		POST	A	95.0	88.8	100.0	92.5	100.0	93.3
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
13	F9007	0.0219 lb ai/a	1 oz/a		POST	A	92.5	86.3	95.0	89.5	98.3	91.0
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
14	F9007	0.0219 lb ai/a	1 oz/a		POST	A	92.5	85.0	95.0	91.3	95.0	92.0
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
	2,4-D AMINE	0.356 lb ai/a	0.75 pt/a		POST	A						
15	F9007	0.0109 lb ai/a	0.5 oz/a		POST	A	93.8	80.0	96.3	85.0	96.3	86.3
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
16	ALLY	0.25 oz/a	0.25 oz/a		POST	A	90.0	88.8	100.0	96.3	100.0	98.3
	2,4-D AMINE	0.356 lb ai/a	0.75 pt/a		POST	A						
	BANVEL	0.125 lb ai/a	0.25 pt/a		POST	A						
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
17	F7275-2	0.219 lb ai/a	5 oz/a		POST	A	90.0	80.0	95.0	76.3	98.3	56.3
	NIS	0.25 % v/v	0.25 % v/v		POST	A						
LSD (P=.05)							13.21	10.55	22.37	10.35	16.35	12.72
Standard Deviation							9.10	7.38	15.49	7.24	11.29	8.90
CV							11.67	9.89	19.45	9.62	14.51	11.98
Bartlett's X2							20.474	26.769	27.048	37.279	22.33	41.125
P(Bartlett's X2)							0.059	0.031*	0.008*	0.001*	0.014*	0.001*
Replicate F							1.497	1.086	0.301	1.736	0.212	2.326
Replicate Prob(F)							0.2378	0.3640	0.8246	0.1725	0.8871	0.0865
Treatment F							35.631	36.663	13.018	49.232	30.838	43.018
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 CVNCP, Croton capitatus, = US
 POLPE, Polygonum persicaria, = US
 Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Selectivity and efficacy of Alert applied PRE in rice.

Trial ID: HRI-30110
 Location: Rohwer, AR
 Study Director: Kenneth Smith
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		ECHCG		ECHCG		ECHCG	
Pest Name		Common barnyar>		Common barnyar>		Common barnyar>	
Part Rated		PLADEA P	PLAEME C	PLADEA P	PLAEME C	PLADEA P	PLAEME C
Rating Date		5/11/2010	5/11/2010	5/18/2010	5/18/2010	5/27/2010	5/27/2010
Rating Type		CONTRO	PHYBLE	CONTRO	PHYBLE	CONTRO	PHYBLE
Rating Unit		percent	percent	percent	percent	percent	percent
Crop Stage Majority		1 leaf	1 leaf	2-3 leaf	2-3 leaf	4-5 leaf	4-5 leaf
Pest Stage Majority		1 leaf	1 leaf	2-3 leaf	2-3 leaf	1-2 till	4-5 leaf
Tri-Eval Interval		21 DA-A	21 DA-A	25 DA-B	25 DA-B	34 DA-B	34 DA-B
Trt No.	Treatment Name	Rate	Other	Other	Growth Stage	Appl Code	
		Rate Unit	Rate	Rate Unit			
1	Untreated Check						0.0
2	Alert	0.3 lb ai/a	12.8 oz/a		PRE	A	100.0
3	Alert	0.45 lb ai/a	19.2 oz/a		PRE	A	100.0
4	Alert	0.6 lb ai/a	25.6 oz/a		PRE	A	100.0
5	Alert	0.75 lb ai/a	32 oz/a		PRE	A	100.0
6	Alert	0.9 lb ai/a	38.4 oz/a		PRE	A	100.0
7	Alert	1.2 lb ai/a	51 oz/a		PRE	A	100.0
8	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	100.0
9	Command	0.45 lb ai/a	19.2 oz/a		PRE	A	100.0
10	Command	0.6 lb ai/a	25.6 oz/a		PRE	A	100.0
11	Command	0.75 lb ai/a	32 oz/a		PRE	A	100.0
12	Command	0.9 lb ai/a	38.4 oz/a		PRE	A	100.0
13	Command	1.2 lb ai/a	51 oz/a		PRE	A	100.0
14	Alert	0.4 lb ai/a	17 oz/a		Delay	PRE B	100.0
	Prowl H2O	1 lb ai/a	33.7 oz/a		Delay	PRE B	0.8
15	Command	0.4 lb ai/a	17 oz/a		Delay	PRE B	100.0
	Prowl H2O	1 lb ai/a	33.7 oz/a		Delay	PRE B	2.5
	LSD (P=.05)						0.00
	Standard Deviation						0.00
	CV						0.0
	Bartlett's X2						0.0
	P(Bartlett's X2)						.
	Replicate F						0.000
	Replicate Prob(F)						1.0000
	Treatment F						0.000
	Treatment Prob(F)						1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Selectivity and efficacy of Alert applied PRE in rice.

Trial ID: HRI-30110
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code						ECHCG	ECHCG				
Pest Name						Common barnyar>	Common barnyar>				
Part Rated						PLADEA P	PLADEA P				
Rating Date						6/3/2010	8/26/2010	9/3/2010	9/3/2010	9/3/2010	
Rating Type						CONTRO	CONTRO	WEIGHT	MOI	CON	
Rating Unit						percent	percent	lb/plot	percent	YIELD	
Crop Stage Majority						Preflood	Preharve			BU	
Pest Stage Majority						1-2 till	headed				
Tri-Eval Interval						41 DA-B	125 DA-B				
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	7	8	9	10	11
1	Untreated Check						0.0	0.0	2.13	9.20	13.5
2	Alert	0.3 lb ai/a	12.8 oz/a		PRE	A	45.0	21.3	8.18	11.28	50.5
3	Alert	0.45 lb ai/a	19.2 oz/a		PRE	A	56.3	22.5	12.15	11.43	75.0
4	Alert	0.6 lb ai/a	25.6 oz/a		PRE	A	83.3	75.0	21.50	10.65	133.9
5	Alert	0.75 lb ai/a	32 oz/a		PRE	A	78.8	60.0	20.85	10.30	130.1
6	Alert	0.9 lb ai/a	38.4 oz/a		PRE	A	90.0	97.5	25.93	11.33	160.3
7	Alert	1.2 lb ai/a	51 oz/a		PRE	A	78.8	63.8	19.03	10.30	118.8
8	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	62.5	32.5	12.55	10.45	78.5
9	Command	0.45 lb ai/a	19.2 oz/a		PRE	A	67.5	35.0	15.15	11.10	94.0
10	Command	0.6 lb ai/a	25.6 oz/a		PRE	A	90.8	83.8	22.25	11.85	136.9
11	Command	0.75 lb ai/a	32 oz/a		PRE	A	91.3	91.3	26.18	10.65	163.3
12	Command	0.9 lb ai/a	38.4 oz/a		PRE	A	87.5	88.8	26.63	10.55	166.3
13	Command	1.2 lb ai/a	51 oz/a		PRE	A	90.0	98.3	28.08	10.80	175.0
14	Alert	0.4 lb ai/a	17 oz/a		Delay	PRE B	75.0	41.3	15.73	10.73	98.1
	Prowl H2O	1 lb ai/a	33.7 oz/a		Delay	PRE B					
15	Command	0.4 lb ai/a	17 oz/a		Delay	PRE B	86.3	62.0	21.53	10.75	134.1
	Prowl H2O	1 lb ai/a	33.7 oz/a		Delay	PRE B					
LSD (P=.05)						16.66	33.55	7.157	2.073	43.58	
Standard Deviation						11.66	23.47	5.008	1.451	30.49	
CV						16.15	40.34	27.04	13.48	26.47	
Bartlett's X2						19.975	29.278	15.973	6.944	15.35	
P(Bartlett's X2)						0.096	0.006*	0.315	0.905	0.355	
Replicate F						0.383	0.871	1.945	0.338	2.016	
Replicate Prob(F)						0.7656	0.4639	0.1375	0.7981	0.1267	
Treatment F						17.479	7.089	8.872	0.727	9.274	
Treatment Prob(F)						0.0001	0.0001	0.0001	0.7350	0.0001	

University of Arkansas-Division of Agriculture

Selectivity and efficacy of Alert applied PRE in rice.

Trial ID: HRI-30110
Location: Rohwer, AR Study Director:
Investigator: Kenneth Smith
Sponsor Contact:

Pest Code
ECHCG, Echinochloa crus-galli, = US
Part Rated
PLADEA = plant - dead
PLAEME = plant - emerged
P = Pest is Part Rated
C = Crop is Part Rated
Rating Type
CONTRO = control / burndown or knockdown
PHYBLE = phytotoxicity - bleaching
WEIGHT = weight
MOICON = moisture content
YIELD = yield
Rating Unit
lb/plot = pounds per plot
BU = bushel
ARM Action Codes
TY1 = 6.146032*9*(100-@MVAVGREP(10))/88

University of Arkansas-Division of Agriculture

Selectivity and Efficacy of Alert applied early-post in rice.

Trial ID: HRI-30210
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Crop 1: Oryza sativa Common rice **Crop Description**
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
Depth, Unit: 1.25 IN
Row Spacing, Unit: 7.5 IN
Seed Bed: MEDIUM medium
Soil Moisture: DRY dry **Emergence Date:** 5/3/2010
Harvested Width, Unit: 5.625 FT **Harvested Length, Unit:** 28 FT

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli **Pest Description**
Common Name: Common barnyardgrass

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit	Tank Mix
1.	5/25/2010	Aim	1	OZ/A	
2.	6/1/2010	Ricestar HT	24	OZ/A	
3.	6/2/2010	Urea	225	LB/A	
4.	6/15/2010	Urea	225	LB/A	
5.	6/16/2010	Blazer	16	OZ/A	no
6.	6/16/2010	Clincher	17	OZ/A	no

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A	B
Application Date:	4/20/2010	5/19/2010
Time of Day:	AM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREMCR	EAPOCR
Application Placement:	BROSOI	BROFOL
Applied By:	JM	JM
Air Temperature, Unit:	62.5 F	69.2 F
% Relative Humidity:	50.40	63.97
Wind Velocity, Unit:	4.15 MPH	5.65 MPH
Wind Direction:	S	NNW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	63.8 F	71.6 F
Soil Moisture:	DRY	DRY

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC
Stage Scale Used:		3 leaf

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W
Stage Majority, Percent:		2-3 lf

University of Arkansas-Division of Agriculture

Selectivity and Efficacy of Alert applied early-post in rice.

Trial ID: HRI-30210
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Application Equipment		
	A	B
Appl. Equipment:	Hand Boom	Hand Boom
Equipment Type:	BACSPR	BACSPR
Operating Pressure, Unit:	45 PSI	45 PSI
Nozzle Type:	AM FF	AM FF
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Selectivity and Efficacy of Alert applied early-post in rice.

Trial ID: HRI-30210
 Location: Rohwer, AR
 Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	ECHCG Common barnyar>	PLAEME C 5/27/2010 PHYBLE percent 4-5 leaf 1-2 till 8 DA-B	ECHCG Common barnyar>	PLAEME P 5/27/2010 PHYBLE percent 4-5 leaf 1-2 till 15 DA-B	ECHCG Common barnyar>	PLAEME C 6/3/2010 PHYBLE percent Preflood 15 DA-B	9/3/2010 WEIGHT lb/plot	9/3/2010 MOICON percent	9/3/2010 YIELD BU				
Trt Treatment No. Name	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4	5	6	7
1 Untreated Check							0.0	0.0	0.0	0.0	18.20	9.53	115.2
2 Alert COC	0.3 lb ai/a 1 % v/v	12.8 oz/a 15.4 oz/a		E-Post E-Post	B B	2-3 LF Rice 2-3 LF Rice	40.0	0.0	5.0	0.0	22.55	9.85	142.0
3 Alert COC	0.4 lb ai/a 1 % v/v	17 oz/a 15.4 oz/a		E-Post E-Post	B B	2-3 LF Rice 2-3 LF Rice	47.5	0.0	5.0	0.0	21.80	9.00	138.6
4 Alert COC	0.8 lb ai/a 1 % v/v	34 oz/a 15.4 oz/a		E-Post E-Post	B B	2-3 LF Rice 2-3 LF Rice	50.0	0.0	25.0	0.0	21.73	9.90	136.7
5 Command COC	0.3 lb ai/a 1 % v/v	12.8 oz/a 15.4 oz/a		E-Post E-Post	B B	2-3 LF Rice 2-3 LF Rice	48.8	0.0	27.5	0.0	22.43	9.28	142.1
6 Command COC	0.4 lb ai/a 1 % v/v	17 oz/a 15.4 oz/a		E-Post E-Post	B B	2-3 LF Rice 2-3 LF Rice	50.0	2.5	38.8	0.0	21.40	10.25	134.0
7 Command COC	0.8 lb ai/a 1 % v/v	34 oz/a 15.4 oz/a		E-Post E-Post	B B	2-3 LF Rice 2-3 LF Rice	50.0	2.5	60.0	5.0	24.65	9.40	156.1
8 Alert Alert COC	0.4 lb ai/a 0.4 lb ai/a 1 % v/v	17 oz/a 17 oz/a 15.4 oz/a		PRE E-Post E-Post	A B B	Preemergence 2-3 LF Rice 2-3 LF Rice	78.8	3.8	68.8	10.0	24.08	10.23	151.0
9 Command Command COC	0.4 lb ai/a 0.4 lb ai/a 1 % v/v	17 oz/a 17 oz/a 15.4 oz/a		PRE E-Post E-Post	A B B	Preemergence 2-3 LF Rice 2-3 LF Rice	81.3	2.5	82.5	6.3	24.98	10.03	156.9
LSD (P=.05)							5.80	4.47	10.84	7.13	2.858	1.125	18.45
Standard Deviation							3.97	3.06	7.43	4.88	1.959	0.771	12.64
CV							8.02	244.95	21.39	206.8	8.73	7.94	8.94
Bartlett's X2							7.069	0.794	6.405	0.025	3.558	7.872	4.188
P(Bartlett's X2)							0.07	0.851	0.379	0.988	0.895	0.446	0.84
Replicate F							1.099	6.000	0.084	3.447	8.506	2.096	8.266
Replicate Prob(F)							0.3688	0.0034	0.9681	0.0325	0.0005	0.1274	0.0006
Treatment F							139.549	1.000	65.411	2.388	4.428	1.291	4.130
Treatment Prob(F)							0.0001	0.4613	0.0001	0.0473	0.0021	0.2945	0.0032

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 ECHCG, Echinochloa crus-galli, = US
Part Rated
 PLAEME = plant - emerged
 P = Pest is Part Rated
 C = Crop is Part Rated
Rating Type
 CONTRO = control / burndown or knockdown
 PHYBLE = phytotoxicity - bleaching
 WEIGHT = weight
 MOICON = moisture content
 YIELD = yield
Rating Unit
 lb/plot = pounds per plot
 BU = bushel
ARM Action Codes
 TY1 = 6.146032*5^(100-6)/88

University of Arkansas-Division of Agriculture

Evaluation of V-10142 in a split-application program.

Trial ID: HRI-30310
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
 Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
 Depth, Unit: 1.25 IN
 Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
 Soil Moisture: DRY dry

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
 Common Name: Hemp sesbania

Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A	B
Application Date:	4/20/2010	5/18/2010
Time of Day:	AM	PM
Application Method:	SPRAY	SPRAY
Application Timing:	PREMCR	EAPOCR
Application Placement:	BROSOL	BROFOL
Applied By:	JM	JM
Air Temperature, Unit:	62.5 F	77.6 F
% Relative Humidity:	50.40	48.81
Wind Velocity, Unit:	4.15 MPH	5.5 MPH
Wind Direction:	S	SSW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	63.8 F	76.9 F

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W
Stage Majority, Percent:		2-3 lf
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W
Stage Majority, Percent:		1-3 lf

Application Equipment

	A	B
Appl. Equipment:	Tractor	Hand Boom
Equipment Type:	SPTRMO	BACSPR
Operating Pressure, Unit:	50 PSI	45 PSI
Nozzle Type:	AM FF	AM FF
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Evaluation of V-10142 in a split-application program.

Trial ID: HRI-30310
 Location: Rohwer, AR
 Study Director: Kenneth Smith
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	SEBEX	ECHCG		SEBEX	ECHCG	SEBEX
Pest Name	Hemp sesbania	Common barnyar>	PLAEME C	Hemp sesbania	Common barnyar>	Hemp sesbania
Part Rated	PLADEA P	PLADEA P	PHYGEN	PLADEA P	PLADEA P	PLADEA P
Rating Date	5/11/2010	5/11/2010	5/11/2010	5/18/2010	5/18/2010	5/27/2010
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit	percent	percent	percent	percent	percent	percent
Crop Stage Majority	1 leaf	1 leaf	1 leaf	2-3 leaf	2-3 leaf	4-5 leaf
Pest Stage Majority	1 leaf	1 leaf		2-3 leaf	1-3 leaf	2-10 in
Trt-Eval Interval	21 DA-A	21 DA-A	21 DA-A	28 DA-A	28 DA-A	9 DA-B
Trt Treatment	Rate	Other	Other	Growth	Appl	
No. Name	Rate	Unit	Rate	Rate	Unit	Stage
1 Untreated Check				PRE	A	
2 Command	0.5 lb ai/a	1.33 pt/a		PRE	A	
3 V-10142	0.152 lb ai/a	3.25 oz/a		PRE	A	
Command	0.42 lb ai/a	1.125 pt/a		PRE	A	
V-10142	0.152 lb ai/a	3.25 oz/a		E-Post	B	
Regiment	0.005 lb ai/a	0.100 oz/a		E-Post	B	
Dyne-A-Pak	1 % v/v	15.4 oz/a		E-Post	B	
4 V-10142	0.152 lb ai/a	3.25 oz/a		PRE	A	
Command	0.42 lb ai/a	1.125 pt/a		PRE	A	
V-10142	0.101 lb ai/a	2.150 oz/a		E-Post	B	
Regiment	0.005 lb ai/a	0.100 oz/a		E-Post	B	
Dyne-A-Pak	1 % v/v	15.4 oz/a		E-Post	B	
5 Command	0.5 lb ai/a	1.33 pt/a		PRE	A	
V-10142	0.152 lb ai/a	3.25 oz/a		E-Post	B	
Dyne-A-Pak	1 % v/v	15.4 oz/a		E-Post	B	
6 V-10142	0.152 lb ai/a	3.25 oz/a		E-Post	B	
Regiment	0.005 lb ai/a	0.100 oz/a		E-Post	B	
Dyne-A-Pak	1 % v/v	15.4 oz/a		E-Post	B	
7 Command	0.5 lb ai/a	1.33 pt/a		PRE	A	
Regiment	0.005 lb ai/a	0.100 oz/a		E-Post	B	
Dyne-A-Pak	1 % v/v	15.4 oz/a		E-Post	B	
8 Command	0.5 lb ai/a	1.33 pt/a		PRE	A	
RiceBeaux	4 lb ai/a	85 oz/a		E-Post	B	
9 Command	0.5 lb ai/a	1.33 pt/a		PRE	A	
Broadhead	0.35 lb ai/a	8 oz/a		E-Post	B	
10 Command	0.5 lb ai/a	1.33 pt/a		E-Post	B	
Grasp	0.036 lb ai/a	2.3 oz/a		E-Post	B	
LSD (P=.05)	3.39	1.75	0.00	4.90	4.06	15.50
Standard Deviation	2.34	1.21	0.00	3.37	2.80	10.68
CV	32.24	1.84	0.0	46.55	4.64	14.32
Bartlett's X2	0.061	0.0	0.0	1.317	2.479	32.0
P(Bartlett's X2)	0.805	1.00	.	0.251	0.78	0.001*
Replicate F	1.678	21.000	0.000	1.976	3.478	0.579
Replicate Prob(F)	0.1952	0.0001	1.0000	0.1414	0.0296	0.6336
Treatment F	171.305	5625.001	0.000	82.171	886.735	45.937
Treatment Prob(F)	0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluation of V-10142 in a split-application program.

Trial ID: HRI-30310
 Location: Rohwer, AR
 Study Director: Kenneth Smith
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	ECHCG	SEBEX	ECHCG	SEBEX	ECHCG						
Pest Name	Common barnyar>	Hemp sesbania	Common barnyar>	Hemp sesbania	Common barnyar>						
Part Rated	PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P						
Rating Date	5/27/2010	6/3/2010	6/3/2010	6/11/2010	6/11/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent	percent	percent						
Crop Stage Majority	4-5 leaf	Preflood	Preflood	1 wk pf	1 wk pf						
Pest Stage Majority	1 tiller	3-12 in	2 tiller	6-24 in	6-24 in						
Trt-Eval Interval	9 DA-B	16 DA-B	16 DA-B	24 DA-B	24 DA-B						
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	7	8	9	10	11
1	Untreated Check						0.0	0.0	0.0	0.0	0.0
2	Command	0.5 lb ai/a	1.33 pt/a		PRE	A	77.5	20.0	87.5	20.0	67.5
3	V-10142	0.152 lb ai/a	3.25 oz/a		PRE	A	90.8	97.5	90.0	100.0	90.0
	Command	0.42 lb ai/a	1.125 pt/a		PRE	A					
	V-10142	0.152 lb ai/a	3.25 oz/a		E-Post	B					
	Regiment	0.005 lb ai/a	0.100 oz/a		E-Post	B					
	Dyne-A-Pak	1 % v/v	15.4 oz/a		E-Post	B					
4	V-10142	0.152 lb ai/a	3.25 oz/a		PRE	A	90.0	100.0	86.3	95.0	87.5
	Command	0.42 lb ai/a	1.125 pt/a		PRE	A					
	V-10142	0.101 lb ai/a	2.150 oz/a		E-Post	B					
	Regiment	0.005 lb ai/a	0.100 oz/a		E-Post	B					
	Dyne-A-Pak	1 % v/v	15.4 oz/a		E-Post	B					
5	Command	0.5 lb ai/a	1.33 pt/a		PRE	A	75.0	88.8	61.3	97.5	45.0
	V-10142	0.152 lb ai/a	3.25 oz/a		E-Post	B					
	Dyne-A-Pak	1 % v/v	15.4 oz/a		E-Post	B					
6	V-10142	0.152 lb ai/a	3.25 oz/a		E-Post	B	67.5	97.5	35.0	100.0	32.5
	Regiment	0.005 lb ai/a	0.100 oz/a		E-Post	B					
	Dyne-A-Pak	1 % v/v	15.4 oz/a		E-Post	B					
7	Command	0.5 lb ai/a	1.33 pt/a		PRE	A	90.0	71.3	92.5	73.8	78.8
	Regiment	0.005 lb ai/a	0.100 oz/a		E-Post	B					
	Dyne-A-Pak	1 % v/v	15.4 oz/a		E-Post	B					
8	Command	0.5 lb ai/a	1.33 pt/a		PRE	A	97.5	97.5	91.3	95.0	91.3
	RiceBeaux	4 lb ai/a	85 oz/a		E-Post	B					
9	Command	0.5 lb ai/a	1.33 pt/a		PRE	A	93.3	92.5	90.0	92.5	93.8
	Broadhead	0.35 lb ai/a	8 oz/a		E-Post	B					
10	Command	0.5 lb ai/a	1.33 pt/a		E-Post	B	62.5	72.5	83.8	70.0	81.3
	Grasp	0.036 lb ai/a	2.3 oz/a		E-Post	B					
LSD (P=.05)		9.59	22.09				12.16	19.53		28.10	
Standard Deviation		6.61	15.23				8.38	13.46		19.37	
CV		8.89	20.65				11.68	18.1		29.01	
Bartlett's X2		7.761	32.958				10.892	23.622		32.102	
P(Bartlett's X2)		0.354	0.001*				0.208	0.001*		0.001*	
Replicate F		2.314	1.226				1.553	2.073		1.664	
Replicate Prob(F)		0.0984	0.3195				0.2236	0.1273		0.1982	
Treatment F		75.019	21.649				54.945	28.296		10.376	
Treatment Prob(F)		0.0001	0.0001				0.0001	0.0001		0.0001	

University of Arkansas-Division of Agriculture

Evaluation of V-10142 in a split-application program.

Trial ID: HRI-30310
Location: Rohwer, AR Study Director:
Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US

Part Rated

PLADEA = plant - dead
PLAEME = plant - emerged
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown
PHYGEN = phytotoxicity - general / injury

University of Arkansas-Division of Agriculture

Evaluation of GWN 3404 for seedhead suppression of hemp sesbania.

Trial ID: HRI-30410
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Crop 1:		Crop Description
ORRYSA	Oryza sativa Common rice	
Variety: CL 131		
BBCH Scale: BRIC	Planting Date: 4/19/2010	
Planting Method: DRILLE drilled	Rate, Unit: 90 LB/A	
Depth, Unit: 1.25 IN		
Row Spacing, Unit: 7.5 IN		
Seed Bed: MEDIUM medium	Emergence Date: 5/3/2010	
Soil Moisture: DRY dry	Harvested Length, Unit: 28 FT	
Harvested Width, Unit: 3.75 FT		

Pest 1 Type: W	Pest Description
Code: SEBEX Sesbania exaltata	
Common Name: Hemp sesbania	

Plot Width, Unit: 6.33 FT		Site and Design
Plot Length, Unit: 28 FT	Site Type: FIELD field	
Plot Area, Unit: 177.24 FT2	Experimental Unit: 1 PLOT plot	
Replications: 4	Tillage Type: CONTIL conventional-till	
	Study Design: RACOB� Randomized Complete Block (RCB)	
	Untreated Arrangement: INCLUDED single control randomized in each block	

Maintenance				
No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	4/20/2010	Command	0.5	LB A/A
2.	5/25/2010	Ricestar HT	24	OZ/A
3.	6/2/2010	Urea	225	LB/A
4.	6/15/2010	Urea	225	LB/A

Description Name: Rohwer Clay Blocks		Soil Description
% Sand: 3.5	% OM: 1	Texture: CLAY
% Silt: 37.4	pH: 7.3	Soil Name: Sharkey Clay
% Clay: 59.1	CEC: 38	

Application Description		A
Application Date:	6/14/2010	
Time of Day:	9:30 AM	
Application Method:	SPRAY	
Application Timing:	RIPOFL	
Application Placement:	BROFOL	
Applied By:	JM	
Air Temperature, Unit:	79.4 F	
% Relative Humidity:	80.2	
Wind Velocity, Unit:	2.0 MPS	
Wind Direction:	SSE	
Dew Presence (Y/N):	N no	
Soil Temperature, Unit:	83.6 F	
Soil Moisture:	GOOD	

Crop Stage At Each Application		A
Crop 1 Code, BBCH Scale:	ORRYSA BRIC	

Pest Stage At Each Application		A
Pest 1 Code, Type, Scale:	SEBEX W	
Stage Majority, Percent:	6-48"	

Application Equipment		A
Appl. Equipment:	Hand Boom	
Equipment Type:	BACSPR	
Operating Pressure, Unit:	45 PSI	
Nozzle Type:	AM FF	
Nozzle Size:	110015	
Nozzle Spacing, Unit:	19 IN	
Carrier:	WATER	
Spray Volume, Unit:	12 gal/ac	
Mix Size, Unit:	3 liters	
Propellant:	COMCO2	
Tank Mix (Y/N):	Y yes	

University of Arkansas-Division of Agriculture

Evaluation of GWN 3404 for seedhead suppression of hemp sesbania.

Trial ID: HRI-30410
 Location: Rohwer, AR
 Study Director: Kenneth Smith
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		SEBEX		SEBEX		SEBEX		SEBEX		SEBEX			
Pest Name		Hemp sesbania		Hemp sesbania		Hemp sesbania		Hemp sesbania		Hemp sesbania			
Part Rated		PLAEME P		PLAEME P		PLAEME C		PLAEME P		PLAEME C			
Rating Date		6/24/2010		7/1/2010		7/1/2010		8/26/2010		9/14/2010			
Rating Type		CONTRO		CONTRO		PHYGEN		CONTRO		MOICON			
Rating Unit		percent		percent		percent		percent		percent			
Crop Stage Majority		3wk POFL		4wk POFL		4wk POFL		preharve		preharve			
Pest Stage Majority		6-60 in		6-60 in		6-60 in		6-60 in		6-60 in			
Trt-Eval Interval		10 DA-A		17 DA-A		17 DA-A		73 DA-A		73 DA-A			
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	1	2	3	4	5	6
1	Untreated Check							0.0	0.0	0.0	0.0	0.00	0.00
2	Permit COC	0.047 lb ai/a 1 % v/v	1 oz/a 15.4 oz/a		Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp	96.3	97.5	0.0	100.0	4.33	12.63
3	GWN-3404 COC	1.12 oz/a 1 % v/v	1.12 oz/a 15.4 oz/a		Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp	93.8	98.8	2.5	100.0	4.22	13.25
4	GWN-3404 COC	2.24 oz/a 1 % v/v	2.24 oz/a 15.4 oz/a		Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp	92.5	98.8	0.0	100.0	4.44	13.27
5	GWN-3404 Ultra Blazer COC	1.12 oz/a 0.25 lb ai/a 1 % v/v	1.12 oz/a 16 oz/a 15.4 oz/a		Postflood A Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp E-Bloom Hemp	100.0	100.0	6.3	100.0	4.72	13.60
6	GWN-3404 Grandstand COC	1.12 oz/a 0.258 lb ai/a 1 % v/v	1.12 oz/a 11 oz/a 15.4 oz/a		Postflood A Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp E-Bloom Hemp	86.3	100.0	17.5	100.0	3.54	13.03
7	GWN-3404 Aim COC	1.12 oz/a 0.0234 lb ai/a 1 % v/v	1.12 oz/a 1.5 oz/a 15.4 oz/a		Postflood A Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp E-Bloom Hemp	100.0	100.0	2.5	100.0	4.70	13.10
8	Ultra Blazer COC	0.25 lb ai/a 1 % v/v	16 oz/a 15.4 oz/a		Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp	100.0	98.8	3.8	98.3	4.41	12.70
9	Grandstand COC	0.258 lb ai/a 1 % v/v	11 oz/a 15.4 oz/a		Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp	73.8	82.5	32.5	91.3	3.44	13.08
10	Aim COC	0.0234 lb ai/a 1 % v/v	1.5 oz/a 15.4 oz/a		Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp	96.3	93.8	2.5	55.0	2.85	12.95
LSD (P=.05)								6.62	3.42	13.13	16.39	0.869	1.280
Standard Deviation								4.56	2.36	9.05	11.30	0.594	0.875
CV								5.44	2.71	134.03	13.38	16.2	7.44
Bartlett's X2								1.909	2.187	21.534	13.744	13.032	13.025
P(Bartlett's X2)								0.862	0.823	0.001*	0.001*	0.111	0.111
Replicate F								0.911	1.500	3.268	1.017	2.707	0.256
Replicate Prob(F)								0.4487	0.2370	0.0365	0.4007	0.0688	0.8562
Treatment F								179.429	693.300	5.314	33.730	23.019	89.566
Treatment Prob(F)								0.0001	0.0001	0.0003	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluation of GWN 3404 for seedhead suppression of hemp sesbania.

Trial ID: HRI-30410
 Location: Rohwer, AR
 Study Director: Kenneth Smith
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code							PLAEME C 9/14/2010 YIELD BU	SEBEX Hemp sesbania SEMAHA P 9/17/2010 # weed seed 1 cup
Pest Name								
Part Rated							17 DA-A	95 DA-A
Rating Date								
Rating Type								
Rating Unit								
Crop Stage Majority								
Pest Stage Majority								
Tri-Eval Interval								
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	
1	Untreated Check							0.0
2	Permit COC	0.047 lb ai/a 1 % v/v	1 oz/a 15.4 oz/a		Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp	87.3 0.3
3	GWN-3404 COC	1.12 oz/a 1 % v/v	1.12 oz/a 15.4 oz/a		Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp	84.4 0.3
4	GWN-3404 COC	2.24 oz/a 1 % v/v	2.24 oz/a 15.4 oz/a		Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp	89.0 0.5
5	GWN-3404 Ultra Blazer COC	1.12 oz/a 0.25 lb ai/a 1 % v/v	1.12 oz/a 16 oz/a 15.4 oz/a		Postflood A Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp E-Bloom Hemp	94.2 0.0
6	GWN-3404 Grandstand COC	1.12 oz/a 0.258 lb ai/a 1 % v/v	1.12 oz/a 11 oz/a 15.4 oz/a		Postflood A Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp E-Bloom Hemp	71.1 2.8
7	GWN-3404 Aim COC	1.12 oz/a 0.0234 lb ai/a 1 % v/v	1.12 oz/a 1.5 oz/a 15.4 oz/a		Postflood A Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp E-Bloom Hemp	94.4 0.0
8	Ultra Blazer COC	0.25 lb ai/a 1 % v/v	16 oz/a 15.4 oz/a		Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp	88.9 0.7
9	Grandstand COC	0.258 lb ai/a 1 % v/v	11 oz/a 15.4 oz/a		Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp	69.0 0.3
10	Aim COC	0.0234 lb ai/a 1 % v/v	1.5 oz/a 15.4 oz/a		Postflood A Postflood A		E-Bloom Hemp E-Bloom Hemp	57.3 4.5
LSD (P=.05)							17.02	3.54
Standard Deviation							11.64	2.41
CV							15.82	236.5
Bartlett's X2							12.727	29.982
P(Bartlett's X2)							0.122	0.001*
Replicate F							2.848	0.076
Replicate Prob(F)							0.0597	0.9725
Treatment F							24.104	1.668
Treatment Prob(F)							0.0001	0.1654

University of Arkansas-Division of Agriculture

Evaluation of GWN 3404 for seedhead suppression of hemp sesbania.

Trial ID: HRI-30410
Location: Rohwer, AR Study Director:
Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

SEBEX, Sesbania exaltata, = US

Part Rated

PLAEME = plant - emerged

SEMAHA = seed - machine-harvest

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

PHYGEN = phytotoxicity - general / injury

WEIGHT = weight

MOICON = moisture content

YIELD = yield

Rating Unit

kg/plot = kilograms per plot

BU = bushel

ARM Action Codes

TY1 = 20.32463*5*(100-@MVAVGREP(6))/88

University of Arkansas-Division of Agriculture

Comparison of Permit and Strada for broadleaf weed control.

Trial ID: HRI-30510 Protocol ID: HRI-30510
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
 Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
 Depth, Unit: 1.25 IN
 Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
 Soil Moisture: DRY dry **Emergence Date:** 5/3/2010

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
Common Name: Hemp sesbania

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT² **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A	B
Application Date:	5/5/2010	6/1/2010
Time of Day:	AM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	1 leaf	4 leaf
Application Placement:	BROFOL	BROFOL
Applied By:	JM	JM
Air Temperature, Unit:	77.4 F	84.4 F
% Relative Humidity:	51.45	67.61
Wind Velocity, Unit:	5.80 MPH	0.95 MPH
Wind Direction:	ENE	E
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	70.9 F	80.0 F

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W
Stage Majority, Percent:	1 lf	2-12"

Application Equipment

	A	B
Appl. Equipment:	Hand Boom	Hand Boom
Equipment Type:	BACSPR	BACSPR
Operating Pressure, Unit:	45 PSI	45 PSI
Nozzle Type:	AM FF	AM FF
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Comparison of Permit and Strada for broadleaf weed control.

Trial ID: HRI-30510 Protocol ID: HRI-30510
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

						SEBEX	SEBEX	SEBEX	
						Hemp sesbania	Hemp sesbania	Hemp sesbania	
						PLAEME P	PLAEME P	PLAEME P	
						6/11/2010	6/17/2010	6/24/2010	
						CONTRO	CONTRO	CONTRO	
						percent	percent	percent	
						1 wk pf	1 wk pf	1 wk pf	
						6-32 in	6-42 in	6-60 in	
						10 DA-B	16 DA-B	23 DA-B	
Trt	Treatment	Rate	Other	Other	Growth Appl				
No.	Name	Rate	Unit	Rate	Unit Stage	Code	1	2	3
1	Untreated Check						0.0	0.0	0.0
2	Newpath	0.0625	lb ai/a	4	oz/a	1 Leaf A	0.0	0.0	0.0
	COC	1	% v/v	15.4	oz/a	1 Leaf A			
	Newpath	0.0625	lb ai/a	4	oz/a	4 Leaf B			
	COC	1	% v/v	15.4	oz/a	4 Leaf B			
3	Newpath	0.0625	lb ai/a	4	oz/a	1 Leaf A	93.8	98.8	100.0
	COC	1	% v/v	15.4	oz/a	1 Leaf A			
	Newpath	0.0625	lb ai/a	4	oz/a	4 Leaf B			
	Permit	0.0234	lb ai/a	0.5	oz/a	4 Leaf B			
	COC	1	% v/v	15.4	oz/a	4 Leaf B			
4	Newpath	0.0625	lb ai/a	4	oz/a	1 Leaf A	92.5	98.8	100.0
	COC	1	% v/v	15.4	oz/a	1 Leaf A			
	Newpath	0.0625	lb ai/a	4	oz/a	4 Leaf B			
	Permit	0.031	lb ai/a	0.66	oz/a	4 Leaf B			
	COC	1	% v/v	15.4	oz/a	4 Leaf B			
5	Newpath	0.0625	lb ai/a	4	oz/a	1 Leaf A	95.0	100.0	100.0
	COC	1	% v/v	15.4	oz/a	1 Leaf A			
	Newpath	0.0625	lb ai/a	4	oz/a	4 Leaf B			
	Permit	0.047	lb ai/a	1	oz/a	4 Leaf B			
	COC	1	% v/v	15.4	oz/a	4 Leaf B			
6	Newpath	0.0625	lb ai/a	4	oz/a	1 Leaf A	76.3	85.0	88.8
	COC	1	% v/v	15.4	oz/a	1 Leaf A			
	Newpath	0.0625	lb ai/a	4	oz/a	4 Leaf B			
	Strada	0.0656	lb ai/a	2.1	oz/a	4 Leaf B			
	COC	1	% v/v	15.4	oz/a	4 Leaf B			
LSD (P=.05)						3.89	1.95	1.54	
Standard Deviation						2.58	1.29	1.02	
CV						4.33	2.03	1.58	
Bartlett's X2						1.408	0.0	0.0	
P(Bartlett's X2)						0.495	.	.	
Replicate F						0.625	2.500	1.000	
Replicate Prob(F)						0.6098	0.0991	0.4199	
Treatment F						1306.000	5925.001	9745.001	
Treatment Prob(F)						0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 SEBEX, Sesbania exaltata, = US
 Part Rated
 PLAEME = plant - emerged
 P = Pest is Part Rated
 Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Comparison of Broadhead to tank-mix partners.

Trial ID: HRI-30610 Protocol ID: HRI-30610
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
Depth, Unit: 1.25 IN
Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
Soil Moisture: DRY dry **Emergence Date:** 5/3/2010

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
 Common Name: Hemp sesbania

Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
 Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/1/2010	Ricestar HT + COC 1 %	24	OZ/A
2.	6/2/2010	Urea	225	LB/A
3.	6/15/2010	Urea	225	LB/A
4.	6/16/2010	Clincher + COC 1%	17	OZ/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

A	
Application Date:	5/25/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	MIPOCR
Application Placement:	BROFOL
Applied By:	JM
Air Temperature, Unit:	80.8 F
% Relative Humidity:	66.57
Wind Velocity, Unit:	1.95 MPH
Wind Direction:	SSW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	78.9 F

Crop Stage At Each Application

A	
Crop 1 Code, BBCH Scale:	ORYSA BRIC

Pest Stage At Each Application

A	
Pest 1 Code, Type, Scale:	SEBEX W
Stage Majority, Percent:	3-10*
Pest 2 Code, Type, Scale:	ECHCG W
Stage Majority, Percent:	1 till

Application Equipment

A	
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

Comparison of Broadhead to tank-mix partners.

Trial ID: HRI-30610 Protocol ID: HRI-30610
Location: Rohwer, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

University of Arkansas-Division of Agriculture

Comparison of Broadhead to tank-mix partners.

Trial ID: HRI-30610 Protocol ID: HRI-30610
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code							SEBEX	ECHCG	SEBEX	SEBEX
Pest Name							Hemp sesbania	Common barnyar>	Hemp sesbania	Hemp sesbania
Part Rated							PLAEME P	PLAEME P	PLAEME P	PLAEME P
Rating Date							6/3/2010	6/3/2010	6/11/2010	6/17/2010
Rating Type							CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit							percent	percent	percent	percent
Crop Stage Majority							Preflood	Preflood	1wk POFL	2wk POFL
Pest Stage Majority							2-12 in	2 tiller	6-24 in	6-32 in
Trt-Eval Interval							9 DA-A	9 DA-A	17 DA-A	23 DA-A
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Unit	Appl Code	1	2	3	4
1	Untreated Check						0.0	0.0	0.0	0.0
2	Broadhead COC	0.219 lb ai/a 1 % v/v	5 oz/a 15.4 oz/a		Mid-Post A Mid-Post A		100.0	75.0	100.0	100.0
3	Broadhead COC	0.263 lb ai/a 1 % v/v	6 oz/a 15.4 oz/a		Mid-Post A Mid-Post A		100.0	75.0	100.0	100.0
4	Broadhead COC	0.306 lb ai/a 1 % v/v	7 oz/a 15.4 oz/a		Mid-Post A Mid-Post A		100.0	76.3	77.5	77.5
5	Broadhead COC	0.35 lb ai/a 1 % v/v	8 oz/a 15.4 oz/a		Mid-Post A Mid-Post A		100.0	77.5	100.0	100.0
6	Broadhead COC	0.394 lb ai/a 1 % v/v	9 oz/a 15.4 oz/a		Mid-Post A Mid-Post A		100.0	76.3	100.0	100.0
7	Aim Facet COC	0.0122 lb ai/a 0.26 lb ai/a 1 % v/v	0.78 oz/a 6 oz/a 15.4 oz/a		Mid-Post A Mid-Post A Mid-Post A		100.0	75.0	100.0	100.0
8	Aim Facet COC	0.0147 lb ai/a 0.33 lb ai/a 1 % v/v	0.94 oz/a 7.04 oz/a 15.4 oz/a		Mid-Post A Mid-Post A Mid-Post A		100.0	76.3	100.0	100.0
9	Aim Facet COC	0.0172 lb ai/a 0.4 lb ai/a 1 % v/v	1.1 oz/a 8.5 oz/a 15.4 oz/a		Mid-Post A Mid-Post A Mid-Post A		100.0	75.0	100.0	100.0
10	Aim Facet COC	0.0195 lb ai/a 0.44 lb ai/a 1 % v/v	1.25 oz/a 9.4 oz/a 15.4 oz/a		Mid-Post A Mid-Post A Mid-Post A		100.0	76.3	100.0	100.0
11	Aim Facet COC	0.0219 lb ai/a 0.51 lb ai/a 1 % v/v	1.4 oz/a 10.9 oz/a 15.4 oz/a		Mid-Post A Mid-Post A Mid-Post A		100.0	76.3	100.0	100.0
12	Aim COC	0.0156 lb ai/a 1 % v/v	1 oz/a 15.4 oz/a		Mid-Post A Mid-Post A		100.0	0.0	100.0	100.0
13	Facet COC	0.5 lb ai/a 1 % v/v	10.9 oz/a 15.4 oz/a		Mid-Post A Mid-Post A		85.0	60.0	100.0	100.0
LSD (P=.05)							0.00	4.16	17.84	17.84
Standard Deviation							0.00	2.91	12.48	12.48
CV							0.0	4.63	13.78	13.78
Bartlett's X2							0.0	2.683	0.0	0.0
P(Bartlett's X2)							.	0.976	.	.
Replicate F							0.000	14.245	1.000	1.000
Replicate Prob(F)							1.0000	0.0001	0.4040	0.4040
Treatment F							0.000	377.189	20.012	20.012
Treatment Prob(F)							1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 SEBEX, Sesbania exaltata, = US
 ECHCG, Echinochloa crus-galli, = US
Part Rated
 PLAEME = plant - emerged
 P = Pest is Part Rated
Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Evaluation of rice plant-back following HM0335A applications preplant.

Trial ID: HRI-30710 Protocol ID: HRI-30710
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	SEBEX	ECHCG	PLAEME C	PLAEME C	PLAEME C	PLAEME C	PLAEME C	PLAEME C						
Pest Name	Hemp sesbania	Common barnyar>	PHYGEN	EMERGE	PHYGEN	EMERGE	DAMAGE	WEIGHT						
Part Rated	PLADEA P	PLADEA P	5/27/2010	5/27/2010	6/3/2010	6/3/2010	9/10/2010	9/14/2010						
Rating Date	5/18/2010	5/18/2010	5/27/2010	5/27/2010	6/3/2010	6/3/2010	9/10/2010	9/14/2010						
Rating Type	CONTR0	CONTR0	PHYGEN	EMERGE	PHYGEN	EMERGE	DAMAGE	WEIGHT						
Rating Unit	percent	percent	percent	percent	percent	percent	percent	kg/plot						
Crop Stage Majority	Preplant	Preplant	1 leaf	1 leaf	2-3 leaf	2-3 leaf	preharve							
Pest Stage Majority	2-3 leaf	2-3 leaf												
Tri-Eval Interval	0 DA-F	0 DA-F	9 DA-F	9 DA-F	16 DA-F	16 DA-F	115 DA-F	119 DA-F						
Trt No.	Treatment Name	Rate	Growth Unit	Appl Stage	Appl Code	Description	1	2	3	4	5	6	7	8
1	Untreated Check						0.0	0.0	0.0	97.0	0.0	100.0	0.0	4.21
2	HM0335	16 oz/a	7 DPP	E	7 D	PrePlant	95.0	27.5	0.0	82.5	0.0	100.0	0.0	4.08
3	HM0335	16 oz/a	14 DPP	D	14 D	PrePlant	97.5	45.0	0.0	88.8	0.0	100.0	0.0	4.54
4	HM0335	16 oz/a	21 DPP	C	21 D	PrePlant	95.0	63.8	0.0	98.3	0.0	100.0	0.0	4.06
5	HM0335	16 oz/a	28 DPP	B	28 D	PrePlant	7.5	0.0	0.0	98.8	0.0	100.0	0.0	3.47
6	HM0335	16 oz/a	35 DPP	A	35 D	PrePlant	35.0	5.0	0.0	96.3	0.0	98.8	0.0	4.45
7	HM0335	16 oz/a	EX	F	Extra		20.0	0.0	0.0	36.3	0.0	73.8	0.0	4.07
8	HM0335	32 oz/a	7 DPP	E	7 D	PrePlant	96.3	36.3	0.0	67.5	0.0	87.5	0.0	3.67
9	HM0335	32 oz/a	14 DPP	D	14 D	PrePlant	97.5	78.8	0.0	57.5	0.0	92.5	0.0	5.10
10	HM0335	32 oz/a	21 DPP	C	21 D	PrePlant	97.0	87.0	0.0	85.0	0.0	97.5	0.0	4.38
11	HM0335	32 oz/a	28 DPP	B	28 D	PrePlant	72.5	42.5	0.0	96.3	0.0	100.0	0.0	3.80
12	HM0335	32 oz/a	35 DPP	A	35 D	PrePlant	7.5	0.0	0.0	93.3	0.0	100.0	0.0	4.34
13	HM0335	32 oz/a	EX	F	Extra		0.0	0.0	0.0	5.0	0.0	23.8	0.0	0.20
14	HM2010	22 oz/a	7 DPP	E	7 D	PrePlant	92.5	32.5	0.0	95.0	0.0	100.0	0.0	4.16
15	HM2010	22 oz/a	14 DPP	D	14 D	PrePlant	96.3	46.3	0.0	92.5	0.0	98.8	0.0	4.26
LSD (P=.05)		23.68	27.69	0.00	19.67	0.00	18.51	0.00	1.147					
Standard Deviation		16.57	19.38	0.00	13.76	0.00	12.95	0.00	0.803					
CV		27.33	62.57	0.0	17.35	0.0	14.16	0.0	20.5					
Bartlett's X2		45.782	17.616	0.0	46.705	0.0	42.636	0.0	25.556					
P(Bartlett's X2)		0.001*	0.04*	.	0.001*	.	0.001*	.	0.029*					
Replicate F		0.145	5.693	0.000	0.215	0.000	1.394	0.000	3.388					
Replicate Prob(F)		0.9323	0.0023	1.0000	0.8856	1.0000	0.2580	1.0000	0.0274					
Treatment F		26.425	9.569	0.000	15.633	0.000	9.604	0.000	7.479					
Treatment Prob(F)		0.0001	0.0001	1.0000	0.0001	1.0000	0.0001	1.0000	0.0001					

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluation of rice plant-back following HM0335A applications preplant.

Trial ID: HRI-30710 Protocol ID: HRI-30710
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	PLAEME C	PLAEME C						
Pest Name	9/14/2010	9/14/2010						
Part Rated	MOICON	YIELD						
Rating Date	percent	bu/ac						
Rating Type								
Rating Unit								
Crop Stage Majority								
Pest Stage Majority								
Tri-Eval Interval	119 DA-F	119 DA-F						
Trt No.	Treatment Name	Rate	Growth Unit	Appl Stage	Appl Code	Appl Description	9	10
1	Untreated Check						17.23	74.9
2	HM0335	16 oz/a	7 DPP	E	7 D	PrePlant	17.88	71.8
3	HM0335	16 oz/a	14 DPP	D	14 D	PrePlant	17.18	81.0
4	HM0335	16 oz/a	21 DPP	C	21 D	PrePlant	17.45	71.7
5	HM0335	16 oz/a	28 DPP	B	28 D	PrePlant	17.08	61.7
6	HM0335	16 oz/a	35 DPP	A	35 D	PrePlant	18.45	78.1
7	HM0335	16 oz/a	EX	F		Extra	19.50	70.6
8	HM0335	32 oz/a	7 DPP	E	7 D	PrePlant	18.80	63.7
9	HM0335	32 oz/a	14 DPP	D	14 D	PrePlant	19.17	88.9
10	HM0335	32 oz/a	21 DPP	C	21 D	PrePlant	18.15	77.2
11	HM0335	32 oz/a	28 DPP	B	28 D	PrePlant	17.33	67.3
12	HM0335	32 oz/a	35 DPP	A	35 D	PrePlant	17.10	77.4
13	HM0335	32 oz/a	EX	F		Extra	16.77	3.5
14	HM2010	22 oz/a	7 DPP	E	7 D	PrePlant	16.73	74.5
15	HM2010	22 oz/a	14 DPP	D	14 D	PrePlant	17.70	75.1
LSD (P=.05)							2.406	19.29
Standard Deviation							1.683	13.50
CV							9.48	19.52
Bartlett's X2							9.101	24.435
P(Bartlett's X2)							0.825	0.041*
Replicate F							10.221	2.623
Replicate Prob(F)							0.0001	0.0641
Treatment F							1.070	8.227
Treatment Prob(F)							0.4122	0.0001

University of Arkansas-Division of Agriculture**Evaluation of rice plant-back following HM0335A applications preplant.**

Trial ID: HRI-30710 Protocol ID: HRI-30710
Location: Rohwer, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US

Part Rated

PLADEA = plant - dead
PLAEME = plant - emerged
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown
PHYGEN = phytotoxicity - general / injury
EMERGE = emergence
DAMAGE = damage
WEIGHT = weight
MOICON = moisture content
YIELD = yield

Rating Unit

kg/plot = kilograms per plot
bu/ac = bushels per acre

ARM Action Codes

TY1 = 18.96965*8*(100-9)/88

University of Arkansas-Division of Agriculture

Strada combinations for early season weed control.

Trial ID: HRI-30810 Protocol ID: HRI-30810
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
 Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
 Depth, Unit: 1.25 IN
 Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
 Soil Moisture: DRY dry

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
 Common Name: Hemp sesbania

Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT² **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A	B
Application Date:	4/20/2010	5/19/2010
Time of Day:	AM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREMCR	EAPOCR
Application Placement:	BROSOL	BROFOL
Applied By:	JM	JM
Air Temperature, Unit:	62.5 F	69.2 F
% Relative Humidity:	50.40	63.97
Wind Velocity, Unit:	4.15 MPH	5.65 MPH
Wind Direction:	S	NNW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	63.8 F	71.6 F

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC
Stage Scale Used:		2-3 lf

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W
Stage Majority, Percent:		2-3 lf
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W
Stage Majority, Percent:		2-3 lf

Application Equipment

	A	B
Appl. Equipment:	Tractor	Hand Boom
Equipment Type:	SPTROMO	BACSPR
Operating Pressure, Unit:	50 PSI	45 PSI
Nozzle Type:	AM FF	AM FF
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Strada combinations for early season weed control.

Trial ID: HRI-30810 Protocol ID: HRI-30810
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	SEBEX	ECHCG		SEBEX	ECHCG	SEBEX						
Pest Name	Hemp sesbania	Common barnyar>		Hemp sesbania	Common barnyar>	Hemp sesbania						
Part Rated	PLADEA P	PLADEA P	PLAEME C	PLADEA P	PLADEA P	PLADEA P						
Rating Date	5/11/2010	5/11/2010	5/11/2010	5/18/2010	5/18/2010	5/27/2010						
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent	percent	percent	percent						
Crop Stage Majority	1 leaf	1 leaf	1 leaf	2-3 leaf	2-3 leaf	4-5 leaf						
Pest Stage Majority	1 leaf	1 leaf	1 leaf	1-3 leaf	1-3 leaf	2-10 in						
Trt-Eval Interval	21 DA-A	21 DA-A	21 DA-A	28 DA-A	28 DA-A	8 DA-B						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4	5	6
1	Treated Check Command	0.3 lb ai/a	12.8 oz/a		PRE	A	0.0	93.8	0.0	0.0	82.5	0.0
2	IR5880 IR5878	0.225 lb ai/a 0.0625 lb ai/a	4.8 oz/a 2 oz/a		PRE	A	62.5	47.5	0.0	86.3	77.5	70.0
3	IR5880 IR5878	0.28 lb ai/a 0.047 lb ai/a	6 oz/a 1.5 oz/a		PRE	A	55.0	47.5	0.0	86.3	72.5	46.3
4	IR5880 IR5878	0.375 lb ai/a 0.0625 lb ai/a	8 oz/a 2 oz/a		PRE	A	75.0	73.8	0.0	85.0	86.3	73.8
5	IR5880	0.375 lb ai/a	8 oz/a		PRE	A	85.0	73.8	0.0	90.0	80.0	77.5
6	IR5880	0.5 lb ai/a	10.7 oz/a		PRE	A	88.8	85.0	0.0	90.0	88.8	83.8
7	IR5880 IR5878 Agri-Dex	0.247 lb ai/a 0.0413 lb ai/a 1 % v/v	5.27 oz/a 1.32 oz/a 15.4 oz/a		E-Post	B						82.5
8	IR5880 IR5878 Agri-Dex	0.28 lb ai/a 0.047 lb ai/a 1 % v/v	6 oz/a 1.5 oz/a 15.4 oz/a		E-Post	B						83.8
9	IR5880 IR5878 Agri-Dex	0.225 lb ai/a 0.0625 lb ai/a 1 % v/v	4.8 oz/a 2 oz/a 15.4 oz/a		E-Post	B						86.3
10	IR5880 IR5878 Agri-Dex	0.3 lb ai/a 0.05 lb ai/a 1 % v/v	6.4 oz/a 1.6 oz/a 15.4 oz/a		E-Post	B						83.8
11	IR5880 IR5878 Agri-Dex	0.375 lb ai/a 0.0625 lb ai/a 1 % v/v	8 oz/a 2 oz/a 15.4 oz/a		E-Post	B						83.8
12	IR5880 Agri-Dex	0.28 lb ai/a 1 % v/v	6 oz/a 15.4 oz/a		E-Post	B						82.5
13	IR5880 Agri-Dex	0.375 lb ai/a 1 % v/v	8 oz/a 15.4 oz/a		E-Post	B						80.0
14	Grasp Agri-Dex	0.036 lb ai/a 1 % v/v	2.3 oz/a 15.4 oz/a		E-Post	B						93.0
15	Regiment Dyne-A-Pak	0.02 lb ai/a 0.67 % v/v	0.4 oz/a 10.3 oz/a		E-Post	B						93.8
16	Broadhead Agri-Dex	0.35 lb ai/a 1 % v/v	8 oz/a 15.4 oz/a		E-Post	B						98.0
LSD (P=.05)							21.37	23.41	0.00	7.78	13.34	16.61
Standard Deviation							14.18	15.53	0.00	5.16	8.85	11.62
CV							23.23	22.13	0.0	7.08	10.89	15.26
Bartlett's X2							3.712	17.177	0.0	2.305	8.289	69.099
P(Bartlett's X2)							0.446	0.004*	.	0.316	0.141	0.001*
Replicate F							0.130	3.227	0.000	0.469	3.351	2.331
Replicate Prob(F)							0.9411	0.0526	1.0000	0.7085	0.0474	0.0869
Treatment F							21.095	6.065	0.000	192.063	1.787	16.263
Treatment Prob(F)							0.0001	0.0029	1.0000	0.0001	0.1761	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Strada combinations for early season weed control.

Trial ID: HRI-30810 Protocol ID: HRI-30810
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	ECHCG	SEBEX	ECHCG	SEBEX	LEFPA						
Pest Name	Common barnyar>	Hemp sesbania	Common barnyar>	Hemp sesbania	Tighthead spru>						
Part Rated	PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P						
Rating Date	5/27/2010	6/3/2010	6/3/2010	6/11/2010	6/11/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent	percent	percent						
Crop Stage Majority	4-5 leaf	Preflood	Preflood	Preflood	Preflood						
Pest Stage Majority	1 tiller	2-12 in	2 tiller	6-24 in	Preflood						
Trt-Eval Interval	8 DA-B	15 DA-B	15 DA-B	23 DA-B	23 DA-B						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	7	8	9	10	11
1	Treated Check Command	0.3 lb ai/a	12.8 oz/a		PRE	A	42.5	0.0	0.0	0.0	0.0
2	IR5880 IR5878	0.225 lb ai/a 0.0625 lb ai/a	4.8 oz/a 2 oz/a		PRE	A	12.5	37.5	10.0	82.5	0.0
3	IR5880 IR5878	0.28 lb ai/a 0.047 lb ai/a	6 oz/a 1.5 oz/a		PRE	A	10.0	32.5	11.3	78.8	10.0
4	IR5880 IR5878	0.375 lb ai/a 0.0625 lb ai/a	8 oz/a 2 oz/a		PRE	A	63.8	52.5	43.8	62.5	22.5
5	IR5880	0.375 lb ai/a	8 oz/a		PRE	A	52.5	56.3	36.3	83.8	17.5
6	IR5880	0.5 lb ai/a	10.7 oz/a		PRE	A	70.0	67.5	52.5	88.8	25.0
7	IR5880 IR5878 Agri-Dex	0.247 lb ai/a 0.0413 lb ai/a 1 % v/v	5.27 oz/a 1.32 oz/a 15.4 oz/a		E-Post	B	61.3	90.0	56.3	93.8	7.5
8	IR5880 IR5878 Agri-Dex	0.28 lb ai/a 0.047 lb ai/a 1 % v/v	6 oz/a 1.5 oz/a 15.4 oz/a		E-Post	B	67.5	88.8	65.0	93.8	11.3
9	IR5880 IR5878 Agri-Dex	0.225 lb ai/a 0.0625 lb ai/a 1 % v/v	4.8 oz/a 2 oz/a 15.4 oz/a		E-Post	B	52.5	90.0	57.5	96.3	5.0
10	IR5880 IR5878 Agri-Dex	0.3 lb ai/a 0.05 lb ai/a 1 % v/v	6.4 oz/a 1.6 oz/a 15.4 oz/a		E-Post	B	61.3	91.3	61.3	97.5	23.8
11	IR5880 IR5878 Agri-Dex	0.375 lb ai/a 0.0625 lb ai/a 1 % v/v	8 oz/a 2 oz/a 15.4 oz/a		E-Post	B	63.8	88.8	63.8	97.5	22.5
12	IR5880 Agri-Dex	0.28 lb ai/a 1 % v/v	6 oz/a 15.4 oz/a		E-Post	B	63.8	80.0	58.8	93.8	5.0
13	IR5880 Agri-Dex	0.375 lb ai/a 1 % v/v	8 oz/a 15.4 oz/a		E-Post	B	68.8	82.5	67.5	92.5	12.5
14	Grasp Agri-Dex	0.036 lb ai/a 1 % v/v	2.3 oz/a 15.4 oz/a		E-Post	B	86.3	96.3	87.5	100.0	87.5
15	Regiment Dyne-A-Pak	0.02 lb ai/a 0.67 % v/v	0.4 oz/a 10.3 oz/a		E-Post	B	81.3	90.0	87.5	88.8	83.8
16	Broadhead Agri-Dex	0.35 lb ai/a 1 % v/v	8 oz/a 15.4 oz/a		E-Post	B	85.0	97.5	77.5	96.3	62.5
LSD (P=.05)							22.42	13.83	20.25	15.89	27.71
Standard Deviation							15.69	9.68	14.17	11.12	19.39
CV							26.63	13.57	27.11	13.21	78.31
Bartlett's X2							59.206	41.682	46.506	60.589	16.905
P(Bartlett's X2)							0.001*	0.001*	0.001*	0.001*	0.204
Replicate F							1.424	6.867	3.650	2.245	1.824
Replicate Prob(F)							0.2481	0.0007	0.0194	0.0960	0.1564
Treatment F							7.802	33.861	13.738	19.141	8.339
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture**Strada combinations for early season weed control.**

Trial ID: HRI-30810 Protocol ID: HRI-30810
Location: Rohwer, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US
LEFPA, *Leptochloa panicoides*, = US

Part Rated

PLADEA = plant - dead
PLAEME = plant - emerged
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown
PHYGEN = phytotoxicity - general / injury

University of Arkansas-Division of Agriculture

Strada combinations applied early post and late post with Newpath and Beyond in Clearfield rice.

Trial ID: HRI-30910 Protocol ID: HRI-30910
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
Depth, Unit: 1.25 IN
Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
Soil Moisture: DRY dry **Emergence Date:** 5/3/2010

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
 Common Name: Hemp sesbania

Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT² **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Previous Crops	Year
1. Fallow	2009

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A	B	C
Application Date:	4/20/2010	6/1/2010	6/17/2010
Time of Day:	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	VEAPOCR	LAPOCR	2 wk POFL
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	JM	JM	JM
Air Temperature, Unit:	62.5 F	84.4 F	84.9 F
% Relative Humidity:	50.40	67.61	79.7
Wind Velocity, Unit:	4.15 MPH	0.95 MPH	1.7 MPH
Wind Direction:	S	E	ESE
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	63.8 F	80.0 F	85.1 F
Soil Moisture:	GOOD	GOOD	GOOD

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W	SEBEX W
Stage Majority, Percent:		2-10"	6-48"
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Stage Majority, Percent:		2till	headin

University of Arkansas-Division of Agriculture

Strada combinations applied early post and late post with Newpath and Beyond in Clearfield rice.

Trial ID: HRI-30910 Protocol ID: HRI-30910
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Application Equipment			
	A	B	C
Appl. Equipment:	Tractor		
Equipment Type:	SPTRMO		
Operating Pressure, Unit:	50 PSI		
Nozzle Type:	AM FF		
Nozzle Size:	110015		
Nozzle Spacing, Unit:	19 IN		
Carrier:	WATER		
Spray Volume, Unit:	12 gal/ac		
Mix Size, Unit:	3 liters		
Propellant:	COMCO2		
Tank Mix (Y/N):	Y yes		

University of Arkansas-Division of Agriculture

Strada combinations applied early post and late post with Newpath and Beyond in Clearfield rice.

Trial ID: HRI-30910 Protocol ID: HRI-30910
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		SEBEX		ECHCG		SEBEX		ECHCG		SEBEX		
Pest Name		Hemp sesbania		Common barnyar>		Hemp sesbania		Common barnyar>		Hemp sesbania		
Part Rated		PLADEA P		PLADEA P		PLADEA P		PLADEA P		PLADEA P		
Rating Date		5/11/2010		5/11/2010		5/18/2010		5/18/2010		5/27/2010		
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		
Rating Unit		percent		percent		percent		percent		percent		
Crop Stage Majority		1 leaf		1-2 leaf		2-3 leaf		2-3 leaf		4-5 leaf		
Pest Stage Majority		1 leaf		1 leaf		2-3 leaf		1-3 leaf		2-8 in		
Tri-Eval Interval		21 DA-A		21 DA-A		28 DA-A		28 DA-A		37 DA-A		
Trt No.	Treatment Name	Rate	Other Unit	Other Rate	Growth Unit	Stage	Appl Code	1	2	3	4	5
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A		0.0	90.0	0.0	83.8	0.0
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A						
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B						
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B						
3	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	50.0	90.0	83.8	92.0	87.5	
	IR5880	0.225	lb ai/a	4.8 oz/a	VEPost	A						
	IR5878	0.0625	lb ai/a	2 oz/a	VEPost	A						
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A						
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B						
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B						
4	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	50.0	90.0	88.8	95.8	87.0	
	IR5880	0.28	lb ai/a	6 oz/a	VEPost	A						
	IR5878	0.047	lb ai/a	1.5 oz/a	VEPost	A						
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A						
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B						
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B						
5	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	0.0	90.0	0.0	85.0	0.0	
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A						
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B						
	IR5880	0.225	lb ai/a	4.8 oz/a	LPost	B						
	IR5878	0.0625	lb ai/a	2 oz/a	LPost	B						
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B						
6	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	0.0	90.0	0.0	85.0	0.0	
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A						
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B						
	IR5880	0.28	lb ai/a	6 oz/a	LPost	B						
	IR5878	0.047	lb ai/a	1.5 oz/a	LPost	B						
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B						
7	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	52.5	90.0	87.5	94.8	84.3	
	IR5880	0.187	lb ai/a	4 oz/a	VEPost	A						
	IR5878	0.0313	lb ai/a	1 oz/a	VEPost	A						
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A						
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B						
	IR5880	0.187	lb ai/a	4 oz/a	LPost	B						
	IR5878	0.0313	lb ai/a	1 oz/a	LPost	B						
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B						
8	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	0.0	90.0	0.0	85.0	0.0	
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A						
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B						
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B						
	Beyond	0.039	lb ai/a	5 oz/a	2wk POFL	C						
	Agri-Dex	1	% v/v	15.4 oz/a	2wk POFL	C						
9	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	0.0	90.0	0.0	85.0	0.0	
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A						
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B						
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B						
	Beyond	0.039	lb ai/a	5 oz/a	2wk POFL	C						
	IR5880	0.187	lb ai/a	4 oz/a	2wk POFL	C						
	IR5878	0.0313	lb ai/a	1 oz/a	2wk POFL	C						
	Agri-Dex	1	% v/v	15.4 oz/a	2wk POFL	C						
10	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	0.0	90.0	0.0	85.0	0.0	
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A						
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B						
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B						
	Beyond	0.039	lb ai/a	5 oz/a	2wk POFL	C						
	IR5880	0.225	lb ai/a	4.8 oz/a	2wk POFL	C						
	IR5878	0.0625	lb ai/a	2 oz/a	2wk POFL	C						
	Agri-Dex	1	% v/v	15.4 oz/a	2wk POFL	C						
11	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	0.0	90.0	0.0	63.8	0.0	
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A						
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B						
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B						
	Beyond	0.039	lb ai/a	5 oz/a	2wk POFL	C						
	IR5880	0.28	lb ai/a	6 oz/a	2wk POFL	C						
	IR5878	0.047	lb ai/a	1.5 oz/a	2wk POFL	C						
	Agri-Dex	1	% v/v	15.4 oz/a	2wk POFL	C						

University of Arkansas-Division of Agriculture

Strada combinations applied early post and late post with Newpath and Beyond in Clearfield rice.

Trial ID: HRI-30910 Protocol ID: HRI-30910
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

							SEBEX	ECHCG	SEBEX	ECHCG	SEBEX	
							Hemp sesbania	Common barnyar>	Hemp sesbania	Common barnyar>	Hemp sesbania	
							PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P	
							5/11/2010	5/11/2010	5/18/2010	5/18/2010	5/27/2010	
							CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	
							percent	percent	percent	percent	percent	
							1 leaf	1-2 leaf	2-3 leaf	2-3 leaf	4-5 leaf	
							1 leaf	1 leaf	2-3 leaf	1-3 leaf	2-8 in	
							21 DA-A	21 DA-A	28 DA-A	28 DA-A	37 DA-A	
Trt	Treatment	Rate	Other	Other	Growth	Appl						
No.	Name	Rate	Unit	Rate	Unit	Stage	Code	1	2	3	4	5
12	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	A	0.0	90.0	0.0	85.0	0.0
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	A					
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	B					
	IR5880	0.187	lb ai/a	4	oz/a	LPost	B					
	IR5878	0.0313	lb ai/a	1	oz/a	LPost	B					
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	B					
	Beyond	0.039	lb ai/a	5	oz/a	2wk POFL	C					
	IR5880	0.187	lb ai/a	4	oz/a	2wk POFL	C					
	IR5878	0.0313	lb ai/a	1	oz/a	2wk POFL	C					
	Agri-Dex	1	% v/v	15.4	oz/a	2wk POFL	C					
	LSD (P=.05)							6.97	0.00	3.97	18.01	1.81
	Standard Deviation							4.83	0.00	2.75	12.47	1.26
	CV							37.98	0.0	12.7	15.92	5.82
	Bartlett's X2							0.352	0.0	0.766	38.373	0.333
	P(Bartlett's X2)							0.839	.	0.682	0.001*	0.847
	Replicate F							1.520	0.000	2.750	0.960	1.211
	Replicate Prob(F)							0.2275	1.0000	0.0583	0.4231	0.3209
	Treatment F							90.821	0.000	811.850	17.304	3862.456
	Treatment Prob(F)							0.0001	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Strada combinations applied early post and late post with Newpath and Beyond in Clearfield rice.

Trial ID: HRI-30910 Protocol ID: HRI-30910
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		ECHCG		SEBEX		ECHCG		SEBEX		ECHCG	
Pest Name		Common barnyar>		Hemp sesbania		Common barnyar>		Hemp sesbania		Common barnyar>	
Part Rated		PLADEA P		PLADEA P		PLADEA P		PLADEA P		PLADEA P	
Rating Date		5/27/2010		6/11/2010		6/11/2010		6/24/2010		6/24/2010	
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO	
Rating Unit		percent		percent		percent		percent		percent	
Crop Stage Majority		4-5 leaf		1 wk pr		1 wk pf		3wk POFL		3wk POFL	
Pest Stage Majority		1 tiller		6-36 in		heading		6-60 in		heading	
Tri-Eval Interval		37 DA-A		10 DA-B		10 DA-B		7 DA-C		7 DA-C	
Trt No.	Treatment Name	Rate	Other Unit	Other Rate	Growth Unit	Appl Code	6	7	8	9	10
1	Untreated Check						0.0	0.0	0.0	0.0	0.0
2	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	80.0	0.0	90.0	0.0	100.0
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A					
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B					
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B					
3	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	100.0	88.8	98.8	75.0	100.0
	IR5880	0.225	lb ai/a	4.8 oz/a	VEPost	A					
	IR5878	0.0625	lb ai/a	2 oz/a	VEPost	A					
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A					
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B					
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B					
4	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	99.5	92.5	100.0	85.0	100.0
	IR5880	0.28	lb ai/a	6 oz/a	VEPost	A					
	IR5878	0.047	lb ai/a	1.5 oz/a	VEPost	A					
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A					
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B					
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B					
5	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	82.5	82.5	100.0	100.0	100.0
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A					
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B					
	IR5880	0.225	lb ai/a	4.8 oz/a	LPost	B					
	IR5878	0.0625	lb ai/a	2 oz/a	LPost	B					
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B					
6	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	82.5	83.8	100.0	100.0	100.0
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A					
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B					
	IR5880	0.28	lb ai/a	6 oz/a	LPost	B					
	IR5878	0.047	lb ai/a	1.5 oz/a	LPost	B					
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B					
7	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	97.5	96.3	100.0	100.0	100.0
	IR5880	0.187	lb ai/a	4 oz/a	VEPost	A					
	IR5878	0.0313	lb ai/a	1 oz/a	VEPost	A					
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A					
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B					
	IR5880	0.187	lb ai/a	4 oz/a	LPost	B					
	IR5878	0.0313	lb ai/a	1 oz/a	LPost	B					
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B					
8	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	82.5	0.0	67.5	0.0	100.0
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A					
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B					
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B					
	Beyond	0.039	lb ai/a	5 oz/a	2wk POFL	C					
	Agri-Dex	1	% v/v	15.4 oz/a	2wk POFL	C					
9	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	82.5	0.0	67.5	62.5	100.0
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A					
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B					
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B					
	Beyond	0.039	lb ai/a	5 oz/a	2wk POFL	C					
	IR5880	0.187	lb ai/a	4 oz/a	2wk POFL	C					
	IR5878	0.0313	lb ai/a	1 oz/a	2wk POFL	C					
	Agri-Dex	1	% v/v	15.4 oz/a	2wk POFL	C					
10	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	80.0	0.0	67.5	67.5	100.0
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A					
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B					
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B					
	Beyond	0.039	lb ai/a	5 oz/a	2wk POFL	C					
	IR5880	0.225	lb ai/a	4.8 oz/a	2wk POFL	C					
	IR5878	0.0625	lb ai/a	2 oz/a	2wk POFL	C					
	Agri-Dex	1	% v/v	15.4 oz/a	2wk POFL	C					
11	Newpath	0.0625	lb ai/a	4 oz/a	VEPost	A	80.0	0.0	67.5	62.5	100.0
	Agri-Dex	1	% v/v	15.4 oz/a	VEPost	A					
	Newpath	0.0625	lb ai/a	4 oz/a	LPost	B					
	Agri-Dex	1	% v/v	15.4 oz/a	LPost	B					
	Beyond	0.039	lb ai/a	5 oz/a	2wk POFL	C					
	IR5880	0.28	lb ai/a	6 oz/a	2wk POFL	C					
	IR5878	0.047	lb ai/a	1.5 oz/a	2wk POFL	C					
	Agri-Dex	1	% v/v	15.4 oz/a	2wk POFL	C					

University of Arkansas-Division of Agriculture

Strada combinations applied early post and late post with Newpath and Beyond in Clearfield rice.

Trial ID: HRI-30910 Protocol ID: HRI-30910
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code							ECHCG	SEBEX	ECHCG	SEBEX	ECHCG
Pest Name							Common barnyar>	Hemp sesbania	Common barnyar>	Hemp sesbania	Common barnyar>
Part Rated							PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P
Rating Date							5/27/2010	6/11/2010	6/11/2010	6/24/2010	6/24/2010
Rating Type							CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit							percent	percent	percent	percent	percent
Crop Stage Majority							4-5 leaf	1 wk pr	1 wk pf	3wk POFL	3wk POFL
Pest Stage Majority							1 tiller	6-36 in	heading	6-60 in	heading
Trit-Eval Interval							37 DA-A	10 DA-B	10 DA-B	7 DA-C	7 DA-C
Trit No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	6	7	8	9	10
12	Newpath	0.0625 lb ai/a		4 oz/a	VEPost	A	80.0	81.3	100.0	100.0	100.0
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	A					
	Newpath	0.0625 lb ai/a		4 oz/a	LPost	B					
	IR5880	0.187 lb ai/a		4 oz/a	LPost	B					
	IR5878	0.0313 lb ai/a		1 oz/a	LPost	B					
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	B					
	Beyond	0.039 lb ai/a		5 oz/a	2wk POFL	C					
	IR5880	0.187 lb ai/a		4 oz/a	2wk POFL	C					
	IR5878	0.0313 lb ai/a		1 oz/a	2wk POFL	C					
	Agri-Dex	1 % v/v	15.4 oz/a		2wk POFL	C					
LSD (P=.05)							4.56	5.03	31.79	7.39	0.00
Standard Deviation							3.16	3.48	22.01	5.12	0.00
CV							4.0	7.96	27.55	8.16	0.0
Bartlett's X2							6.184	5.612	13.411	5.45	0.0
P(Bartlett's X2)							0.289	0.346	0.009*	0.244	.
Replicate F							1.638	2.063	5.727	0.133	0.000
Replicate Prob(F)							0.1993	0.1242	0.0029	0.9400	1.0000
Treatment F							273.462	694.500	7.111	250.258	0.000
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	1.0000

University of Arkansas-Division of Agriculture

Strada combinations applied early post and late post with Newpath and Beyond in Clearfield rice.

Trial ID: HRI-30910 Protocol ID: HRI-30910
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		LEFPA		SEBEX		ECHCG		LEFPA			
Pest Name		Tighthead spr>		Hemp sesbania		Common barnyar>		Tighthead spr>			
Part RATED		PLADEA P		PLADEA P		PLADEA P		PLADEA P			
Rating Date		6/24/2010		7/1/2010		7/1/2010		7/1/2010			
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO			
Rating Unit		percent		percent		percent		percent			
Crop Stage Majority		3wk POFL		4wk POFL		4wk POFL		4wk POFL			
Pest Stage Majority		heading		12-72 in		headed		headed			
Tri-Eval Interval		7 DA-C		14 DA-C		14 DA-C		14 DA-C			
Trt No.	Treatment Name	Rate	Other Unit	Other Rate	Growth Unit	Stage	Appl Code	11	12	13	14
1	Untreated Check							0.0	0.0	0.0	0.0
2	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	A	100.0	0.0	100.0	97.5
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	A				
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	B				
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	B				
3	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	A	87.5	81.3	92.5	95.0
	IR5880	0.225	lb ai/a	4.8	oz/a	VEPost	A				
	IR5878	0.0625	lb ai/a	2	oz/a	VEPost	A				
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	A				
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	B				
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	B				
4	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	A	91.3	86.3	96.3	93.8
	IR5880	0.28	lb ai/a	6	oz/a	VEPost	A				
	IR5878	0.047	lb ai/a	1.5	oz/a	VEPost	A				
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	A				
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	B				
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	B				
5	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	A	92.0	100.0	95.0	93.8
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	A				
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	B				
	IR5880	0.225	lb ai/a	4.8	oz/a	LPost	B				
	IR5878	0.0625	lb ai/a	2	oz/a	LPost	B				
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	B				
6	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	A	89.5	100.0	95.0	90.0
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	A				
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	B				
	IR5880	0.28	lb ai/a	6	oz/a	LPost	B				
	IR5878	0.047	lb ai/a	1.5	oz/a	LPost	B				
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	B				
7	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	A	91.3	100.0	98.8	92.5
	IR5880	0.187	lb ai/a	4	oz/a	VEPost	A				
	IR5878	0.0313	lb ai/a	1	oz/a	VEPost	A				
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	A				
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	B				
	IR5880	0.187	lb ai/a	4	oz/a	LPost	B				
	IR5878	0.0313	lb ai/a	1	oz/a	LPost	B				
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	B				
8	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	A	100.0	0.0	100.0	100.0
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	A				
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	B				
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	B				
	Beyond	0.039	lb ai/a	5	oz/a	2wk POFL	C				
	Agri-Dex	1	% v/v	15.4	oz/a	2wk POFL	C				
9	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	A	100.0	81.3	100.0	100.0
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	A				
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	B				
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	B				
	Beyond	0.039	lb ai/a	5	oz/a	2wk POFL	C				
	IR5880	0.187	lb ai/a	4	oz/a	2wk POFL	C				
	IR5878	0.0313	lb ai/a	1	oz/a	2wk POFL	C				
	Agri-Dex	1	% v/v	15.4	oz/a	2wk POFL	C				
10	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	A	100.0	81.3	100.0	100.0
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	A				
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	B				
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	B				
	Beyond	0.039	lb ai/a	5	oz/a	2wk POFL	C				
	IR5880	0.225	lb ai/a	4.8	oz/a	2wk POFL	C				
	IR5878	0.0625	lb ai/a	2	oz/a	2wk POFL	C				
	Agri-Dex	1	% v/v	15.4	oz/a	2wk POFL	C				
11	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	A	100.0	83.8	100.0	100.0
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	A				
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	B				
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	B				
	Beyond	0.039	lb ai/a	5	oz/a	2wk POFL	C				
	IR5880	0.28	lb ai/a	6	oz/a	2wk POFL	C				
	IR5878	0.047	lb ai/a	1.5	oz/a	2wk POFL	C				
	Agri-Dex	1	% v/v	15.4	oz/a	2wk POFL	C				

University of Arkansas-Division of Agriculture

Strada combinations applied early post and late post with Newpath and Beyond in Clearfield rice.

Trial ID: HRI-30910 Protocol ID: HRI-30910
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

							LEFPA	SEBEX	ECHCG	LEFPA	
							Tighthead spra>	Hemp sesbania	Common barnyar>	Tighthead spra>	
							PLADEA P	PLADEA P	PLADEA P	PLADEA P	
							6/24/2010	7/1/2010	7/1/2010	7/1/2010	
							CONTRO	CONTRO	CONTRO	CONTRO	
							percent	percent	percent	percent	
							3wk POFL	4wk POFL	4wk POFL	4wk POFL	
							heading	12-72 in	headed	headed	
							7 DA-C	14 DA-C	14 DA-C	14 DA-C	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Unit	Growth Stage	Appl Code	11	12	13	14
12	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	A	100.0	100.0	100.0	100.0
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	A				
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	B				
	IR5880	0.187	lb ai/a	4	oz/a	LPost	B				
	IR5878	0.0313	lb ai/a	1	oz/a	LPost	B				
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	B				
	Beyond	0.039	lb ai/a	5	oz/a	2wk POFL	C				
	IR5880	0.187	lb ai/a	4	oz/a	2wk POFL	C				
	IR5878	0.0313	lb ai/a	1	oz/a	2wk POFL	C				
	Agri-Dex	1	% v/v	15.4	oz/a	2wk POFL	C				
LSD (P=.05)							5.47	5.69	7.34	4.31	
Standard Deviation							3.79	3.94	5.08	2.98	
CV							4.32	5.81	5.66	3.37	
Bartlett's X2							1.619	10.541	9.368	2.416	
P(Bartlett's X2)							0.805	0.032*	0.053	0.66	
Replicate F							3.477	0.659	2.071	1.638	
Replicate Prob(F)							0.0268	0.5832	0.1230	0.1993	
Treatment F							219.000	446.190	124.936	355.000	
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	

University of Arkansas-Division of Agriculture

Strada combinations applied early post and late post with Newpath and Beyond in Clearfield rice.

Trial ID: HRI-30910 Protocol ID: HRI-30910
Location: Rohwer, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US
LEFPA, *Leptochloa panicoides*, = US

Part Rated

PLADEA = plant - dead
P = Pest is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Strada combinations for pre-flood weed control.

Trial ID: HRI-31010 Protocol ID: HRI-31010
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
Depth, Unit: 1.25 IN
Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
Soil Moisture: DRY dry **Emergence Date:** 5/3/2010

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
 Common Name: Hemp sesbania

Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Pest 3 Type: W **Code:** LEFPA Leptochloa panicoides
 Common Name: Tighthead sprangletop

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT² **Tillage Type:** CONTIL conventional-till
 Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
 Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A	B
Application Date:	4/20/2010	6/1/2010
Time of Day:	AM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREMCR	Preflood
Application Placement:	BROSOI	BROFOL
Applied By:	JM	JM
Air Temperature, Unit:	62.5 F	84.4 F
% Relative Humidity:	50.40	67.61
Wind Velocity, Unit:	4.15 MPH	0.95 MPH
Wind Direction:	S	E
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	63.8 F	80.0 F

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W
Stage Majority, Percent:		2-10"
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W
Stage Majority, Percent:		2 If
Pest 3 Code, Type, Scale:	LEFPA W	LEFPA W
Stage Majority, Percent:		2 If

University of Arkansas-Division of Agriculture

Strada combinations for pre-flood weed control.

Trial ID: HRI-31010 Protocol ID: HRI-31010
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Application Equipment		
	A	B
Appl. Equipment:	Tractor	Hand Boom
Equipment Type:	SPTRMO	BACSPR
Operating Pressure, Unit:	50 PSI	45 PSI
Nozzle Type:	AM FF	AM FF
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Strada combinations for pre-flood weed control.

Trial ID: HRI-31010 Protocol ID: HRI-31010
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	SEBEX	ECHCG	SEBEX	LEFPA	ECHCG	SEBEX						
Pest Name	Hemp sesbania	Common barnyard	Hemp sesbania	Tighthead sprang	Common barnyard	Hemp sesbania						
Part Rated	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P						
Rating Date	6/11/2010	6/11/2010	6/17/2010	6/17/2010	6/17/2010	6/24/2010						
Rating Type	CONTR0	CONTR0	CONTR0	CONTR0	CONTR0	CONTR0						
Rating Unit	percent	percent	percent	percent	percent	percent						
Crop Stage Majority	1wk POFL	1wk POFL	2wk POFL	2wk POFL	2wk POFL	3wk POFL						
Pest Stage Majority	6-24 in	heading	6-24 in	heading	16 DA-B	6-60 in						
Trt-Eval Interval	10 DA-B	10 DA-B	16 DA-B	16 DA-B	16 DA-B	23 DA-B						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4	5	6
1	Treated Check Command	0.3 lb ai/a	12.8 oz/a		PRE	A	0.0	32.5	0.0	40.0	60.0	0.0
2	Command IR5880	0.3 lb ai/a	12.8 oz/a		PRE	A	80.0	81.3	92.5	73.8	91.3	97.5
	IR5878	0.247 lb ai/a	5.27 oz/a		Preflood B							
	IR5878	0.0413 lb ai/a	1.32 oz/a		Preflood B							
	Agri-Dex	1 % v/v	15.4 oz/a		Preflood B							
3	Command IR5880	0.3 lb ai/a	12.8 oz/a		PRE	A	81.3	85.0	96.3	81.3	93.8	97.5
	IR5878	0.28 lb ai/a	6 oz/a		Preflood B							
	IR5878	0.047 lb ai/a	1.5 oz/a		Preflood B							
	Agri-Dex	1 % v/v	15.4 oz/a		Preflood B							
4	Command IR5880	0.3 lb ai/a	12.8 oz/a		PRE	A	81.3	82.5	93.8	81.3	92.5	97.5
	IR5878	0.225 lb ai/a	4.8 oz/a		Preflood B							
	IR5878	0.0625 lb ai/a	2 oz/a		Preflood B							
	Agri-Dex	1 % v/v	15.4 oz/a		Preflood B							
5	Command IR5880	0.3 lb ai/a	12.8 oz/a		PRE	A	82.5	83.8	92.5	80.0	93.8	97.5
	IR5878	0.3 lb ai/a	6.4 oz/a		Preflood B							
	IR5878	0.05 lb ai/a	1.6 oz/a		Preflood B							
	Agri-Dex	1 % v/v	15.4 oz/a		Preflood B							
6	Command IR5880	0.3 lb ai/a	12.8 oz/a		PRE	A	83.8	81.3	96.3	81.3	92.5	100.0
	IR5878	0.375 lb ai/a	8 oz/a		Preflood B							
	IR5878	0.0625 lb ai/a	2 oz/a		Preflood B							
	Agri-Dex	1 % v/v	15.4 oz/a		Preflood B							
7	Command IR5880	0.3 lb ai/a	12.8 oz/a		PRE	A	100.0	90.0	100.0	86.3	96.3	100.0
	IR5878	0.248 lb ai/a	5.3 oz/a		Preflood B							
	Stam M-4	3 lb ai/a	3 qt/a		Preflood B							
	Agri-Dex	1 % v/v	15.4 oz/a		Preflood B							
8	Command IR5880	0.3 lb ai/a	12.8 oz/a		PRE	A	100.0	91.3	100.0	87.5	97.5	100.0
	IR5878	0.247 lb ai/a	5.27 oz/a		Preflood B							
	IR5878	0.0413 lb ai/a	1.32 oz/a		Preflood B							
	Stam M-4	3 lb ai/a	3 qt/a		Preflood B							
	Agri-Dex	1 % v/v	15.4 oz/a		Preflood B							
9	Command IR5880	0.3 lb ai/a	12.8 oz/a		PRE	A	83.8	85.0	97.5	85.0	96.3	100.0
	IR5878	0.247 lb ai/a	5.27 oz/a		Preflood B							
	IR5878	0.0413 lb ai/a	1.32 oz/a		Preflood B							
	IR5890	0.0117 lb ai/a	0.25 oz/a		Preflood B							
	Agri-Dex	1 % v/v	15.4 oz/a		Preflood B							
10	Command IR5880	0.3 lb ai/a	12.8 oz/a		PRE	A	90.0	86.3	100.0	82.5	95.0	100.0
	IR5878	0.247 lb ai/a	5.27 oz/a		Preflood B							
	IR5878	0.0413 lb ai/a	1.32 oz/a		Preflood B							
	IR5890	0.0155 lb ai/a	0.33 oz/a		Preflood B							
	Agri-Dex	1 % v/v	15.4 oz/a		Preflood B							
11	Command Grasp	0.3 lb ai/a	12.8 oz/a		PRE	A	80.0	75.0	77.5	67.5	86.3	83.8
	IR5878	0.0438 lb ai/a	2.8 oz/a		Preflood B							
	Agri-Dex	1 % v/v	15.4 oz/a		Preflood B							
12	Command Regiment	0.3 lb ai/a	12.8 oz/a		PRE	A	97.0	90.0	100.0	83.8	95.0	100.0
	IR5878	0.025 lb ai/a	0.5 oz/a		Preflood B							
	Dyne-A-Pak	0.67 % v/v	10.3 oz/a		Preflood B							
13	Command Broadhead	0.3 lb ai/a	12.8 oz/a		PRE	A	96.3	83.8	100.0	72.5	87.5	100.0
	IR5878	0.35 lb ai/a	8 oz/a		Preflood B							
	Agri-Dex	1 % v/v	15.4 oz/a		Preflood B							
14	Command Broadhead	0.3 lb ai/a	12.8 oz/a		PRE	A	100.0	88.8	100.0	82.5	93.8	100.0
	IR5878	0.525 lb ai/a	12 oz/a		Preflood B							
	Agri-Dex	1 % v/v	15.4 oz/a		Preflood B							
LSD (P=.05)							3.74	5.30	6.12	7.26	8.06	3.67
Standard Deviation							2.62	3.71	4.28	5.08	5.64	2.57
CV							3.17	4.57	4.81	6.55	6.21	2.82
Bartlett's X2							5.545	9.243	1.98	17.351	29.36	0.009
P(Bartlett's X2)							0.594	0.599	0.921	0.098	0.006*	1.00
Replicate F							0.925	2.280	8.004	0.416	0.950	5.675
Replicate Prob(F)							0.4376	0.0945	0.0003	0.7427	0.4261	0.0025
Treatment F							367.548	62.387	150.979	22.865	11.142	427.769
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Strada combinations for pre-flood weed control.

Trial ID: HRI-31010 Protocol ID: HRI-31010
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

						LEFPA Tighthead spr> PLAEME P 6/24/2010 CONTRO percent 3wk POFL heading 23 DA-B	ECHCG Common barnyar> PLAEME P 6/24/2010 CONTRO percent 3wk POFL heading 23 DA-B	
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code		
1	Treated Check Command	0.3 lb ai/a	12.8 oz/a		PRE	A	0.0	0.0
2	Command IR5880 IR5878 Agri-Dex	0.3 lb ai/a 0.247 lb ai/a 0.0413 lb ai/a 1 % v/v	12.8 oz/a 5.27 oz/a 1.32 oz/a 15.4 oz/a		PRE Preflood B Preflood B Preflood B	A	78.8	73.8
3	Command IR5880 IR5878 Agri-Dex	0.3 lb ai/a 0.28 lb ai/a 0.047 lb ai/a 1 % v/v	12.8 oz/a 6 oz/a 1.5 oz/a 15.4 oz/a		PRE Preflood B Preflood B Preflood B	A	76.3	76.3
4	Command IR5880 IR5878 Agri-Dex	0.3 lb ai/a 0.225 lb ai/a 0.0625 lb ai/a 1 % v/v	12.8 oz/a 4.8 oz/a 2 oz/a 15.4 oz/a		PRE Preflood B Preflood B Preflood B	A	78.8	72.5
5	Command IR5880 IR5878 Agri-Dex	0.3 lb ai/a 0.3 lb ai/a 0.05 lb ai/a 1 % v/v	12.8 oz/a 6.4 oz/a 1.6 oz/a 15.4 oz/a		PRE Preflood B Preflood B Preflood B	A	81.3	76.3
6	Command IR5880 IR5878 Agri-Dex	0.3 lb ai/a 0.375 lb ai/a 0.0625 lb ai/a 1 % v/v	12.8 oz/a 8 oz/a 2 oz/a 15.4 oz/a		PRE Preflood B Preflood B Preflood B	A	78.8	71.3
7	Command IR5880 Stam M-4 Agri-Dex	0.3 lb ai/a 0.248 lb ai/a 3 lb ai/a 1 % v/v	12.8 oz/a 5.3 oz/a 3 qt/a 15.4 oz/a		PRE Preflood B Preflood B Preflood B	A	73.8	86.3
8	Command IR5880 IR5878 Stam M-4 Agri-Dex	0.3 lb ai/a 0.247 lb ai/a 0.0413 lb ai/a 3 lb ai/a 1 % v/v	12.8 oz/a 5.27 oz/a 1.32 oz/a 3 qt/a 15.4 oz/a		PRE Preflood B Preflood B Preflood B Preflood B	A	73.8	86.3
9	Command IR5880 IR5878 IR5890 Agri-Dex	0.3 lb ai/a 0.247 lb ai/a 0.0413 lb ai/a 0.0117 lb ai/a 1 % v/v	12.8 oz/a 5.27 oz/a 1.32 oz/a 0.25 oz/a 15.4 oz/a		PRE Preflood B Preflood B Preflood B Preflood B	A	80.0	76.3
10	Command IR5880 IR5878 IR5890 Agri-Dex	0.3 lb ai/a 0.247 lb ai/a 0.0413 lb ai/a 0.0155 lb ai/a 1 % v/v	12.8 oz/a 5.27 oz/a 1.32 oz/a 0.33 oz/a 15.4 oz/a		PRE Preflood B Preflood B Preflood B Preflood B	A	81.3	73.8
11	Command Grasp Agri-Dex	0.3 lb ai/a 0.0438 lb ai/a 1 % v/v	12.8 oz/a 2.8 oz/a 15.4 oz/a		PRE Preflood B Preflood B	A	70.0	70.0
12	Command Regiment Dyne-A-Pak	0.3 lb ai/a 0.025 lb ai/a 0.67 % v/v	12.8 oz/a 0.5 oz/a 10.3 oz/a		PRE Preflood B Preflood B	A	91.3	70.0
13	Command Broadhead Agri-Dex	0.3 lb ai/a 0.35 lb ai/a 1 % v/v	12.8 oz/a 8 oz/a 15.4 oz/a		PRE Preflood B Preflood B	A	81.3	70.0
14	Command Broadhead Agri-Dex	0.3 lb ai/a 0.525 lb ai/a 1 % v/v	12.8 oz/a 12 oz/a 15.4 oz/a		PRE Preflood B Preflood B	A	86.3	67.5
LSD (P=.05)							8.56	7.76
Standard Deviation							5.99	5.43
CV							8.13	7.84
Bartlett's X2							7.001	9.662
P(Bartlett's X2)							0.799	0.561
Replicate F							7.054	7.913
Replicate Prob(F)							0.0007	0.0003
Treatment F							53.267	58.230
Treatment Prob(F)							0.0001	0.0001

University of Arkansas-Division of Agriculture

Strada combinations for preflood weed control.

Trial ID: HRI-31010 Protocol ID: HRI-31010
Location: Rohwer, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

Pest Code
SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US
LEFPA, *Leptochloa panicoides*, = US
Part Rated
PLAEME = plant - emerged
P = Pest is Part Rated
Rating Type
CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

RiceBeaux application timings in Clearfield rice.

Trial ID: HRI-31210
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Crop 1:		Crop Description
ORYSA	Oryza sativa	Common rice
Variety: CL 131		
BBCH Scale: BRIC		Planting Date: 5/11/2010
Planting Method: DRILLE drilled		
Depth, Unit: 1.25 IN		
Row Spacing, Unit: 7.5 IN		
Seed Bed: MEDIUM medium		
Soil Moisture: GOOD good		Emergence Date: 5/19/2010

Pest 1 Type: W		Pest Description
Code: SEBEX	Sesbania exaltata	Common Name: Hemp sesbania
Pest 2 Type: W		
Code: ECHCG	Echinochloa crus-galli	Common Name: Common barnyardgrass
Pest 3 Type: W		
Code: ORYRU	Oryza rufipogon	Common Name: Wild red rice

Plot Width, Unit: 6.33 FT		Site and Design
Plot Length, Unit: 28 FT	Site Type: FIELD field	Experimental Unit: 1 PLOT plot
Plot Area, Unit: 177.24 FT2	Tillage Type: CONNIL conventional-till	Study Design: RACOB� Randomized Complete Block (RCB)
Replications: 4	Untreated Arrangement: INCLUDED	single control randomized in each block

Maintenance				
No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/15/2010	Urea	225	LB/A
2.	7/7/2010	Urea	225	LB/A

Description Name: Rohwer Clay Blocks		Soil Description
% Sand: 3.5	% OM: 1	Texture: CLAY
% Silt: 37.4	pH: 7.3	Soil Name: Sharkey Clay
% Clay: 59.1	CEC: 38	

Application Description				
	A	B	C	D
Application Date:	5/12/2010	5/25/2010	5/28/2010	6/11/2010
Time of Day:	AM	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PREMCR	VEAPOCR	EAPOCR	LAPOCR
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL
Applied By:	JM	JM	JM	JM
Air Temperature, Unit:	79.0 F	80.8 F	81.1 F	80.3 F
% Relative Humidity:	71.45	66.57	68.39	85.09
Wind Velocity, Unit:	10.3 MPH	1.95 MPH	2.75 MPH	5.24 MPH
Wind Direction:	NE	SW	SW	NE
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	73.7 F	78.9 F	78.2 F	80.6 F

Crop Stage At Each Application				
	A	B	C	D
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application				
	A	B	C	D
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W	SEBEX W	SEBEX W
Stage Majority, Percent:		1 lf	2 lf	2-6"
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W	ECHCG W
Stage Majority, Percent:		2 lf	2-3 lf	1 till
Pest 3 Code, Type, Scale:	ORYRU W	ORYRU W	ORYRU W	ORYRU W
Stage Majority, Percent:		1 lf	2 lf	1-4 lf

University of Arkansas-Division of Agriculture

RiceBeaux application timings in Clearfield rice.

Trial ID: HRI-31210
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Application Equipment				
	A	B	C	D
Appl. Equipment:	Tractor	Hand Boom	Hand Boom	Hand Boom
Equipment Type:	SPTRMO	BACSPR	BACSPR	BACSPR
Operating Pressure, Unit:	50 PSI	45 PSI	45 PSI	45 PSI
Nozzle Type:	AM FF	AM FF	AM FF	AM FF
Nozzle Size:	110015	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	19 IN
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters	3 liters	3 liters
Propellant:	COMCO2	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes	Y yes

University of Arkansas-Division of Agriculture

RiceBeaux application timings in Clearfield rice.

Trial ID: HRI-31210
 Location: Rohwer, AR
 Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		SEBEX		ECHCG		ORYRU		SEBEX		ECHCG		ORYRU	
Pest Name		Hemp sesbania		Common barnyar>		Wild red rice		Hemp sesbania		Common barnyar>		Wild red rice	
Part Rated		PLAEME P		PLAEME P		PLAEME P		PLAEME P		PLAEME P		PLAEME P	
Rating Date		6/3/2010		6/3/2010		6/3/2010		6/18/2010		6/18/2010		6/18/2010	
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO	
Rating Unit		percent		percent		percent		percent		percent		percent	
Crop Stage Majority		3-4 leaf		3-4 leaf		3-4 leaf		5-6 leaf		5-6 leaf		5-6 leaf	
Pest Stage Majority		2-3 leaf		2-3 leaf		2-3 leaf		2-12 in		1 tiller		1 tiller	
Trt-Eval Interval		6 DA-C		6 DA-C		6 DA-C		7 DA-D		7 DA-D		7 DA-D	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4	5	6	
1	Untreated Check						0.0	0.0	0.0	0.0	0.0	0.0	
2	Command	0.5 lb ai/a	21.3 oz/a		PRE	A	0.0	88.8	83.8	86.3	93.8	90.0	
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C							
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Clearpath	0.375 lb ai/a	8 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
3	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B	0.0	87.5	81.3	0.0	90.0	91.3	
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
4	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C	10.0	82.5	80.0	0.0	88.8	83.8	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
5	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B	78.8	92.5	90.0	90.0	98.8	92.5	
	RiceBeaux	4 lb ai/a	85 oz/a		VEPost	B							
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
6	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C	96.3	91.3	87.5	93.8	96.3	92.5	
	RiceBeaux	4 lb ai/a	85 oz/a		EPost	C							
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
7	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B	0.0	83.8	80.0	97.5	93.8	87.5	
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	RiceBeaux	4 lb ai/a	85 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
8	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C	0.0	83.8	78.8	96.3	92.5	86.3	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	RiceBeaux	4 lb ai/a	85 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
9	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	0.0	87.5	81.3	0.0	90.0	87.5	
	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B							
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
10	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	0.0	87.5	81.3	0.0	90.0	86.3	
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C							
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
11	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	95.0	91.3	86.3	95.0	95.0	88.8	
	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B							
	RiceBeaux	4 lb ai/a	85 oz/a		VEPost	B							
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
12	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	95.0	91.3	85.0	100.0	95.0	88.8	
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C							
	RiceBeaux	4 lb ai/a	85 oz/a		EPost	C							
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
13	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	0.0	92.5	83.8	100.0	96.3	92.5	
	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B							
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	RiceBeaux	4 lb ai/a	85 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
14	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	0.0	86.3	78.8	97.5	92.5	87.5	
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C							
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	RiceBeaux	4 lb ai/a	85 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
15	Command	0.5 lb ai/a	21.3 oz/a		PRE	A	22.5	87.5	80.0	0.0	92.5	90.0	
	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B							
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
16	Command	0.5 lb ai/a	21.3 oz/a		PRE	A	0.0	88.8	78.8	0.0	92.5	87.5	
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C							
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							

University of Arkansas-Division of Agriculture

RiceBeaux application timings in Clearfield rice.

Trial ID: HRI-31210
 Location: Rohwer, AR
 Study Director: Kenneth Smith
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	SEBEX	ECHCG	ORYRU	SEBEX	ECHCG	ORYRU				
Pest Name	Hemp sesbania	Common barnyar>	Wild red rice	Hemp sesbania	Common barnyar>	Wild red rice				
Part Rated	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P				
Rating Date	6/3/2010	6/3/2010	6/3/2010	6/18/2010	6/18/2010	6/18/2010				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	percent	percent	percent	percent	percent	percent				
Crop Stage Majority	3-4 leaf	3-4 leaf	3-4 leaf	5-6 leaf	5-6 leaf	5-6 leaf				
Pest Stage Majority	2-3 leaf	2-3 leaf	2-3 leaf	2-12 in	1 tiller	1 tiller				
Tri-Eval Interval	6 DA-C	6 DA-C	6 DA-C	7 DA-D	7 DA-D	7 DA-D				
Trt Treatment	Rate	Other	Other	Growth	Appl					
No. Name	Rate	Unit	Rate	Rate	Unit	Code				
				1	2	3				
				4	5	6				
17 Command	0.5 lb ai/a	21.3 oz/a		PRE A	82.5	92.5	86.3	93.8	96.3	91.3
Newpath	0.0625 lb ai/a	4 oz/a		VEPost B						
RiceBeaux	4 lb ai/a	85 oz/a		VEPost B						
Agri-Dex	1 % v/v	15.4 oz/a		VEPost B						
Newpath	0.0625 lb ai/a	4 oz/a		LPost D						
Agri-Dex	1 % v/v	15.4 oz/a		LPost D						
18 Command	0.5 lb ai/a	21.3 oz/a		PRE A	97.5	88.8	86.3	98.8	97.5	95.0
Newpath	0.0625 lb ai/a	4 oz/a		EPost C						
RiceBeaux	4 lb ai/a	85 oz/a		EPost C						
Agri-Dex	1 % v/v	15.4 oz/a		EPost C						
Newpath	0.0625 lb ai/a	4 oz/a		LPost D						
Agri-Dex	1 % v/v	15.4 oz/a		LPost D						
19 Command	0.3 lb ai/a	12.8 oz/a		PRE A	23.8	83.8	78.8	96.3	92.5	87.5
Newpath	0.0625 lb ai/a	4 oz/a		VEPost B						
Agri-Dex	1 % v/v	15.4 oz/a		VEPost B						
Newpath	0.0625 lb ai/a	4 oz/a		LPost D						
RiceBeaux	4 lb ai/a	85 oz/a		LPost D						
Agri-Dex	1 % v/v	15.4 oz/a		LPost D						
20 Command	0.5 lb ai/a	21.3 oz/a		PRE A	15.0	86.3	80.0	95.0	95.0	92.5
Newpath	0.0625 lb ai/a	4 oz/a		EPost C						
Agri-Dex	1 % v/v	15.4 oz/a		EPost C						
Newpath	0.0625 lb ai/a	4 oz/a		LPost D						
RiceBeaux	4 lb ai/a	85 oz/a		LPost D						
Agri-Dex	1 % v/v	15.4 oz/a		LPost D						
LSD (P=.05)		26.51			6.44	7.47		7.72	5.30	6.83
Standard Deviation		18.74			4.56	5.28		5.46	3.75	4.83
CV		60.83			5.44	6.74		8.8	4.21	5.69
Bartlett's X2		25.849			9.853	18.416		15.254	6.464	19.293
P(Bartlett's X2)		0.001*			0.937	0.363		0.123	0.982	0.254
Replicate F		1.142			1.983	9.702		1.847	0.734	1.085
Replicate Prob(F)		0.3401			0.1268	0.0001		0.1490	0.5358	0.3630
Treatment F		19.314			76.676	50.490		293.934	126.901	69.837
Treatment Prob(F)		0.0001			0.0001	0.0001		0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

RiceBeaux application timings in Clearfield rice.

Trial ID: HRI-31210
 Location: Rohwer, AR
 Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		SEBEX		ECHCG		ORYRU		SEBEX		ECHCG		ORYRU	
Pest Name		Hemp sesbania		Common barnyar>		Wild red rice		Hemp sesbania		Common barnyar>		Wild red rice	
Part Rated		PLAEME P		PLAEME P		PLAEME P		PLAEME P		PLAEME P		PLAEME P	
Rating Date		6/24/2010		6/24/2010		6/24/2010		7/1/2010		7/1/2010		7/1/2010	
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO	
Rating Unit		percent		percent		percent		percent		percent		percent	
Crop Stage Majority		1wk POFL		1wk POFL		1wk POFL		2wk POFL		2wk POFL		2wk POFL	
Pest Stage Majority		6-36 in		2 tiller		2 tiller		6-48 in		Boot		PI	
Tri-Eval Interval		13 DA-D		13 DA-D		13 DA-D		20 DA-D		20 DA-D		20 DA-D	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	7	8	9	10	11	12	
1	Untreated Check						0.0	0.0	0.0	0.0	0.0	0.0	
2	Command	0.5 lb ai/a	21.3 oz/a		PRE	A	96.3	100.0	98.8	98.3	100.0	100.0	
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C							
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Clearpath	0.375 lb ai/a	8 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
3	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B	0.0	100.0	97.8	7.5	100.0	100.0	
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
4	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C	0.0	100.0	97.8	0.0	100.0	100.0	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
5	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B	83.8	100.0	97.5	71.3	100.0	100.0	
	RiceBeaux	4 lb ai/a	85 oz/a		VEPost	B							
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
6	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C	94.5	100.0	99.5	95.0	100.0	100.0	
	RiceBeaux	4 lb ai/a	85 oz/a		EPost	C							
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
7	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B	98.8	100.0	100.0	99.8	100.0	100.0	
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	RiceBeaux	4 lb ai/a	85 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
8	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C	100.0	100.0	97.0	100.0	100.0	100.0	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	RiceBeaux	4 lb ai/a	85 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
9	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	0.0	100.0	97.8	12.5	100.0	100.0	
	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B							
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
10	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	0.0	100.0	97.8	0.0	100.0	100.0	
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C							
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
11	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	87.5	100.0	98.3	70.0	100.0	100.0	
	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B							
	RiceBeaux	4 lb ai/a	85 oz/a		VEPost	B							
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
12	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	98.8	100.0	97.0	98.3	100.0	100.0	
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C							
	RiceBeaux	4 lb ai/a	85 oz/a		EPost	C							
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
13	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	100.0	100.0	99.5	100.0	100.0	100.0	
	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B							
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	RiceBeaux	4 lb ai/a	85 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
14	Command	0.3 lb ai/a	12.8 oz/a		PRE	A	100.0	100.0	97.0	100.0	100.0	100.0	
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C							
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	RiceBeaux	4 lb ai/a	85 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
15	Command	0.5 lb ai/a	21.3 oz/a		PRE	A	0.0	100.0	95.3	10.0	100.0	100.0	
	Newpath	0.0625 lb ai/a	4 oz/a		VEPost	B							
	Agri-Dex	1 % v/v	15.4 oz/a		VEPost	B							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							
16	Command	0.5 lb ai/a	21.3 oz/a		PRE	A	0.0	100.0	96.5	0.0	100.0	100.0	
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	C							
	Agri-Dex	1 % v/v	15.4 oz/a		EPost	C							
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	D							
	Agri-Dex	1 % v/v	15.4 oz/a		LPost	D							

University of Arkansas-Division of Agriculture

RiceBeaux application timings in Clearfield rice.

Trial ID: HRI-31210
 Location: Rohwer, AR
 Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

						SEBEX	ECHCG	ORYRU	SEBEX	ECHCG	ORYRU		
						Hemp sesbania	Common barnyar>	Wild red rice	Hemp sesbania	Common barnyar>	Wild red rice		
						PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P		
						6/24/2010	6/24/2010	6/24/2010	7/1/2010	7/1/2010	7/1/2010		
						CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
						percent	percent	percent	percent	percent	percent		
						1wk POFL	1wk POFL	1wk POFL	2wk POFL	2wk POFL	2wk POFL		
						6-36 in	2 tiller	2 tiller	6-48 in	Boot	PI		
						13 DA-D	13 DA-D	13 DA-D	20 DA-D	20 DA-D	20 DA-D		
Trt	Treatment	Rate	Other	Other	Growth	Appl							
No.	Name	Rate	Unit	Rate	Unit	Stage	Code	7	8	9	10	11	12
17	Command	0.5	lb ai/a	21.3	oz/a	PRE	A	85.0	100.0	96.3	78.8	100.0	100.0
	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	B						
	RiceBeaux	4	lb ai/a	85	oz/a	VEPost	B						
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	B						
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	D						
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	D						
18	Command	0.5	lb ai/a	21.3	oz/a	PRE	A	97.5	100.0	96.5	94.5	100.0	100.0
	Newpath	0.0625	lb ai/a	4	oz/a	EPost	C						
	RiceBeaux	4	lb ai/a	85	oz/a	EPost	C						
	Agri-Dex	1	% v/v	15.4	oz/a	EPost	C						
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	D						
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	D						
19	Command	0.3	lb ai/a	12.8	oz/a	PRE	A	99.5	100.0	99.5	98.8	100.0	100.0
	Newpath	0.0625	lb ai/a	4	oz/a	VEPost	B						
	Agri-Dex	1	% v/v	15.4	oz/a	VEPost	B						
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	D						
	RiceBeaux	4	lb ai/a	85	oz/a	LPost	D						
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	D						
20	Command	0.5	lb ai/a	21.3	oz/a	PRE	A	100.0	100.0	97.0	99.5	100.0	100.0
	Newpath	0.0625	lb ai/a	4	oz/a	EPost	C						
	Agri-Dex	1	% v/v	15.4	oz/a	EPost	C						
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	D						
	RiceBeaux	4	lb ai/a	85	oz/a	LPost	D						
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	D						
LSD (P=.05)						12.92	0.00	3.79	22.74	0.00	0.00		
Standard Deviation						9.14	0.00	2.68	16.08	0.00	0.00		
CV						14.72	0.0	2.89	26.06	0.0	0.0		
Bartlett's X2						43.697	0.0	22.104	77.08	0.0	0.0		
P(Bartlett's X2)						0.001*	.	0.181	0.001*	.	.		
Replicate F						1.203	0.000	2.876	0.441	0.000	0.000		
Replicate Prob(F)						0.3168	1.0000	0.0439	0.7245	1.0000	1.0000		
Treatment F						105.724	0.000	266.356	30.310	0.000	0.000		
Treatment Prob(F)						0.0001	1.0000	0.0001	0.0001	1.0000	1.0000		

University of Arkansas-Division of Agriculture

RiceBeaux application timings in Clearfield rice.

Trial ID: HRI-31210
Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code
SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US
ORYRU, *Oryza rufipogon*, = US
Part Rated
PLAEME = plant - emerged
P = Pest is Part Rated
Rating Type
CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Newpath plus different propanil formulations and surfactants.

Trial ID: HRI-31310 Protocol ID: HRI-31310
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
 Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
 Depth, Unit: 1.25 IN
 Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
 Soil Moisture: DRY dry **Emergence Date:** 5/3/2010

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
 Common Name: Hemp sesbania

Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
 Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A
Application Date:	5/25/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	MIPOCR
Application Placement:	BROFOL
Applied By:	JM
Air Temperature, Unit:	80.8 F
% Relative Humidity:	66.57
Wind Velocity, Unit:	1.95 MPH
Wind Direction:	SW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	78.9 F

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ORYSA BRIC

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SEBEX W
Stage Majority, Percent:	2-8 in
Pest 2 Code, Type, Scale:	ECHCG W
Stage Majority, Percent:	1-3 lf

Application Equipment

	A
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Newpath plus different propanil formulations and surfactants.

Trial ID: HRI-31310 Protocol ID: HRI-31310
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	SEBEX	ECHCG	SEBEX	SEBEX	ECHCG	LEFPA						
Pest Name	Hemp sesbania	Common barnyar>	Hemp sesbania	Hemp sesbania	Common barnyar>	Tighthead spr>						
Part Rated	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P						
Rating Date	6/3/2010	6/3/2010	6/11/2010	6/17/2010	6/17/2010	6/17/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent	percent	percent	percent						
Crop Stage Majority	Preflood	Preflood	1wk POFL	2wk POFL	2wk POFL	2wk POFL						
Pest Stage Majority	2-14 in	2-14 in	6-36 in	6-42 in	6-42 in	6-42 in						
Trt-Eval Interval	9 DA-A	9 DA-A	17 DA-A	23 DA-A	23 DA-A	23 DA-A						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4	5	6
1	Untreated Check						0.0	0.0	0.0	0.0	0.0	0.0
2	Newpath	0.0625 lb ai/a		4 oz/a	MPost A		0.0	15.0	0.0	0.0	0.0	0.0
3	Newpath Agri-Dex	0.0625 lb ai/a 1 % v/v		4 oz/a 15.4 oz/a	MPost A MPost A		0.0	15.0	0.0	0.0	0.0	0.0
4	Newpath Soy-Surf MSO	0.0625 lb ai/a 1 % v/v		4 oz/a 15.4 oz/a	MPost A MPost A		0.0	20.0	0.0	0.0	0.0	0.0
5	Newpath SuperWham	0.0625 lb ai/a 3 lb ai/a		4 oz/a 3 qt/a	MPost A MPost A		100.0	68.8	98.8	97.5	0.0	0.0
6	Newpath SuperWham Agri-Dex	0.0625 lb ai/a 3 lb ai/a 1 % v/v		4 oz/a 3 qt/a 15.4 oz/a	MPost A MPost A MPost A		100.0	75.0	100.0	100.0	0.0	0.0
7	Newpath SuperWham Soy-Surf MSO	0.0625 lb ai/a 3 lb ai/a 1 % v/v		4 oz/a 3 qt/a 15.4 oz/a	MPost A MPost A MPost A		100.0	75.0	100.0	100.0	0.0	0.0
8	Newpath RiceShot	0.0625 lb ai/a 3 lb ai/a		4 oz/a 3 qt/a	MPost A MPost A		100.0	73.8	100.0	100.0	0.0	0.0
9	Newpath RiceShot Agri-Dex	0.0625 lb ai/a 3 lb ai/a 1 % v/v		4 oz/a 3 qt/a 15.4 oz/a	MPost A MPost A MPost A		100.0	77.5	100.0	100.0	0.0	0.0
10	Newpath RiceShot Soy-Surf MSO	0.0625 lb ai/a 3 lb ai/a 1 % v/v		4 oz/a 3 qt/a 15.4 oz/a	MPost A MPost A MPost A		100.0	76.3	100.0	100.0	0.0	0.0
11	Newpath RiceBeaux	0.0625 lb ai/a 3 lb ai/a		4 oz/a 2 qt/a	MPost A MPost A		100.0	73.8	100.0	100.0	0.0	0.0
12	Newpath RiceBeaux Agri-Dex	0.0625 lb ai/a 3 lb ai/a 1 % v/v		4 oz/a 2 qt/a 15.4 oz/a	MPost A MPost A MPost A		100.0	72.5	100.0	100.0	0.0	0.0
13	Newpath RiceBeaux Soy-Surf MSO	0.0625 lb ai/a 3 lb ai/a 1 % v/v		4 oz/a 2 qt/a 15.4 oz/a	MPost A MPost A MPost A		100.0	72.5	100.0	100.0	0.0	0.0
LSD (P=.05)							0.00	6.79	0.99	1.98	0.00	0.00
Standard Deviation							0.00	4.75	0.69	1.39	0.00	0.00
CV							0.0	8.63	1.0	2.01	0.0	0.0
Bartlett's X2							0.0	12.351	0.0	0.0	0.0	0.0
P(Bartlett's X2)							.	0.262	.	.	.	.
Replicate F							0.000	4.265	1.000	1.000	0.000	0.000
Replicate Prob(F)							1.0000	0.0112	0.4040	0.4040	1.0000	1.0000
Treatment F							0.000	158.403	19147.668	4774.334	0.000	0.000
Treatment Prob(F)							1.0000	0.0001	0.0001	0.0001	1.0000	1.0000

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 SEBEX, Sesbania exaltata, = US
 ECHCG, Echinochloa crus-galli, = US
 LEFPA, Leptochloa panicoides, = US
Part Rated
 PLAEME = plant - emerged
 P = Pest is Part Rated
Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Comparison of propanil premixes in second Newpath application.

Trial ID: HRI-31410
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Crop 1:		Crop Description
ORYZA	Oryza sativa	Common rice
Variety: CL 131		
BBCH Scale:	BRIC	Planting Date: 4/19/2010
Planting Method:	DRILLE drilled	Rate, Unit: 90 LB/A
Depth, Unit:	1.25 IN	
Row Spacing, Unit:	7.5 IN	
Seed Bed:	MEDIUM medium	
Soil Moisture:	DRY dry	Emergence Date: 5/3/2010

Pest 1 Type: W		Pest Description
Code:	SEBEX	Sesbania exaltata
Common Name:		Hemp sesbania
Pest 2 Type: W	Code: ECHCG	Echinochloa crus-galli
Common Name:		Common barnyardgrass
Pest 3 Type: W	Code: LEFPA	Leptochloa panicoides
Common Name:		Tighthead sprangletop

Plot Width, Unit: 6.33 FT		Site and Design
Plot Length, Unit: 28 FT	Site Type: FIELD	field
Plot Area, Unit: 177.24 FT ²	Experimental Unit: 1	PLOT plot
Replications: 4	Tillage Type: CONTIL	conventional-till
	Study Design: RACOBL	Randomized Complete Block (RCB)
	Untreated Arrangement: INCLUDED	single control randomized in each block

Maintenance				
No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A

Description Name: Rohwer Clay Blocks		Soil Description
% Sand: 3.5	% OM: 1	Texture: CLAY
% Silt: 37.4	pH: 7.3	Soil Name: Sharkey Clay
% Clay: 59.1	CEC: 38	

Application Description		
	A	B
Application Date:	5/18/2010	6/1/2010
Time of Day:	Noon	AM
Application Method:	SPRAY	SPRAY
Application Timing:	EAPOCR	LAPOCR
Application Placement:	BROFOL	BROFOL
Applied By:	JM	JM
Air Temperature, Unit:	68.9 F	84.4 F
% Relative Humidity:	72.80	67.61
Wind Velocity, Unit:	4.60 MPH	0.95 MPH
Wind Direction:	WSW	E
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	72.1 F	80.0 F

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application		
	A	B
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W
Stage Majority, Percent:	2-3 lf	2-10"
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W
Stage Majority, Percent:	1-2 lf	2 till
Pest 3 Code, Type, Scale:	LEFPA W	LEFPA W
Stage Majority, Percent:	1-2 lf	2 till

University of Arkansas-Division of Agriculture

Comparison of propanil premixes in second Newpath application.

Trial ID: HRI-31410
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Application Equipment		
	A	B
Appl. Equipment:	Hand Boom	Hand Boom
Equipment Type:	BACSPR	BACSPR
Operating Pressure, Unit:	45 PSI	45 PSI
Nozzle Type:	AM FF	AM FF
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Comparison of propanil premixes in second Newpath application.

Trial ID: HRI-31410
 Location: Rohwer, AR
 Study Director: Kenneth Smith
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		SEBEX		ECHCG		SEBEX		ECHCG		LEFPA		SEBEX	
Pest Name		Hemp sesbania		Common barnyar>		Hemp sesbania		Common barnyar>		Tighthead spr>		Hemp sesbania	
Part Rated		PLAEME P		PLAEME P		PLAEME P		PLAEME P		PLAEME P		PLAEME P	
Rating Date		6/11/2010		6/11/2010		6/17/2010		6/17/2010		6/17/2010		6/24/2010	
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO	
Rating Unit		percent		percent		percent		percent		percent		percent	
Crop Stage Majority		1wk POFL		1wk POFL		2wk POFL		2wk POFL		2wk POFL		3wk POFL	
Pest Stage Majority		6-36 in		10 DA-B		6-42 in		16 DA-B		16 DA-B		6-60 in	
Tri-Eval Interval		10 DA-B		10 DA-B		16 DA-B		16 DA-B		16 DA-B		23 DA-B	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4	5	6	
1	Untreated Check						0.0	0.0	0.0	0.0	0.0	0.0	
2	Newpath	0.0625 lb ai/a	4 oz/a		EPost A		0.0	100.0	0.0	90.0	82.5	0.0	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost A								
	Newpath	0.0625 lb ai/a	4 oz/a		LPost B								
	Agri-Dex	1 % v/v	15.4 oz/a		LPost B								
3	Newpath	0.0625 lb ai/a	4 oz/a		EPost A		98.8	100.0	100.0	97.5	93.8	97.5	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost A								
	Newpath	0.0625 lb ai/a	4 oz/a		LPost B								
	Duet	1.51 lb ai/a	1.5 qt/a		LPost B								
	Agri-Dex	1 % v/v	15.4 oz/a		LPost B								
4	Newpath	0.0625 lb ai/a	4 oz/a		EPost A		100.0	100.0	100.0	100.0	95.0	100.0	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost A								
	Newpath	0.0625 lb ai/a	4 oz/a		LPost B								
	Duet	3.02 lb ai/a	3 qt/a		LPost B								
	Agri-Dex	1 % v/v	15.4 oz/a		LPost B								
5	Newpath	0.0625 lb ai/a	4 oz/a		EPost A		98.8	100.0	100.0	100.0	96.3	100.0	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost A								
	Newpath	0.0625 lb ai/a	4 oz/a		LPost B								
	RicePro	1.5 lb ai/a	1.5 qt/a		LPost B								
	Agri-Dex	1 % v/v	15.4 oz/a		LPost B								
6	Newpath	0.0625 lb ai/a	4 oz/a		EPost A		100.0	100.0	100.0	100.0	97.5	100.0	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost A								
	Newpath	0.0625 lb ai/a	4 oz/a		LPost B								
	RicePro	3 lb ai/a	3 qt/a		LPost B								
	Agri-Dex	1 % v/v	15.4 oz/a		LPost B								
7	Newpath	0.0625 lb ai/a	4 oz/a		EPost A		87.5	100.0	82.5	97.5	95.0	75.0	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost A								
	Newpath	0.0625 lb ai/a	4 oz/a		LPost B								
	RiceBeaux	2.25 lb ai/a	1.5 qt/a		LPost B								
	Agri-Dex	1 % v/v	15.4 oz/a		LPost B								
8	Newpath	0.0625 lb ai/a	4 oz/a		EPost A		100.0	100.0	100.0	100.0	97.5	98.8	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost A								
	Newpath	0.0625 lb ai/a	4 oz/a		LPost B								
	RiceBeaux	4.5 lb ai/a	3 qt/a		LPost B								
	Agri-Dex	1 % v/v	15.4 oz/a		LPost B								
9	Newpath	0.0625 lb ai/a	4 oz/a		EPost A		93.8	100.0	95.0	97.5	92.5	97.5	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost A								
	Newpath	0.0625 lb ai/a	4 oz/a		LPost B								
	RiceEdge	1.51 lb ai/a	1.5 qt/a		LPost B								
	Agri-Dex	1 % v/v	15.4 oz/a		LPost B								
10	Newpath	0.0625 lb ai/a	4 oz/a		EPost A		98.8	100.0	100.0	100.0	97.5	100.0	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost A								
	Newpath	0.0625 lb ai/a	4 oz/a		LPost B								
	RiceEdge	3.02 lb ai/a	3 qt/a		LPost B								
	Agri-Dex	1 % v/v	15.4 oz/a		LPost B								
11	Newpath	0.0625 lb ai/a	4 oz/a		EPost A		90.0	100.0	100.0	97.5	92.5	98.8	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost A								
	Newpath	0.0625 lb ai/a	4 oz/a		LPost B								
	Broadhead	0.263 lb ai/a	6 oz/a		LPost B								
	Agri-Dex	1 % v/v	15.4 oz/a		LPost B								
12	Newpath	0.0625 lb ai/a	4 oz/a		EPost A		100.0	100.0	100.0	100.0	95.0	100.0	
	Agri-Dex	1 % v/v	15.4 oz/a		EPost A								
	Newpath	0.0625 lb ai/a	4 oz/a		LPost B								
	Broadhead	0.394 lb ai/a	9 oz/a		LPost B								
	Agri-Dex	1 % v/v	15.4 oz/a		LPost B								
LSD (P=.05)							5.51	0.00	7.41	4.23	8.69	5.29	
Standard Deviation							3.82	0.00	5.13	2.93	6.02	3.67	
CV							4.74	0.0	6.3	3.26	6.98	4.55	
Bartlett's X2							8.784	0.0	2.956	0.0	4.995	10.463	
P(Bartlett's X2)							0.118	.	0.086	.	0.891	0.033*	
Replicate F							0.429	0.000	1.345	0.647	2.683	1.085	
Replicate Prob(F)							0.7339	1.0000	0.2765	0.5904	0.0627	0.3692	
Treatment F							393.857	0.000	223.849	378.000	83.258	436.352	
Treatment Prob(F)							0.0001	1.0000	0.0001	0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 SEBEX, Sesbania exaltata, = US
 ECHCG, Echinochloa crus-galli, = US
 LEFPA, Leptochloa panicoides, = US
Part Rated
 PLAEME = plant - emerged
 P = Pest is Part Rated
Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Comparison of RiceEdge to SuperWham and Permit.

Trial ID: HRI-31510
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
Depth, Unit: 1.25 IN
Row Spacing, Unit: 7.5 IN
Seed Bed: MEDIUM medium
Soil Moisture: DRY dry **Emergence Date:** 5/3/2010

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
Common Name: Hemp sesbania

Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	4/20/2010	Command	0.5	LB A/A
2.	6/2/2010	Urea	225	LB/A
3.	6/15/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A
Application Date:	5/25/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	MIPOCR
Application Placement:	BROFOL
Applied By:	JM
Air Temperature, Unit:	80.8 F
% Relative Humidity:	66.57
Wind Velocity, Unit:	1.95 MPH
Wind Direction:	SW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	78.9 F

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ORYSA BRIC

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SEBEX W
Stage Majority, Percent:	2-8"
Pest 2 Code, Type, Scale:	ECHCG W
Stage Majority, Percent:	1-2 lf

Application Equipment

	A
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Comparison of RiceEdge to SuperWham and Permit.

Trial ID: HRI-31510
Location: Rohwer, ARStudy Director:
Investigator: Kenneth Smith
Sponsor Contact:

Pest Code	SEBEX	SEBEX	ECHCG	SEBEX						
Pest Name	Hemp sesbania	Hemp sesbania	Common barnyar>	Hemp sesbania						
Part Rated	PLAEME P	PLAEME P	PLAEME P	PLAEME P						
Rating Date	6/3/2010	6/11/2010	6/11/2010	6/17/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent	percent						
Crop Stage Majority	Pre flood	1wk POFL	1wk POFL	2wk POFL						
Pest Stage Majority	2-12 in	6-32 in	2 tiller	6-38 in						
Trt-Eval Interval	9 DA-A	17 DA-A	17 DA-A	23 DA-A						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Appl Code	1	2	3	4
1	Untreated Check						0.0	22.5	87.5	0.0
2	Broadhead Agri-Dex	0.394 lb ai/a 1 % v/v	9 oz/a 15.4 oz/a		MPost MPost	A A	88.8	100.0	96.3	100.0
3	RiceEdge Agri-Dex	2.015 lb ai/a 1 % v/v	64 oz/a 15.4 oz/a		MPost MPost	A A	97.5	97.5	95.0	98.8
4	SuperWham Agri-Dex	2 lb ai/a 1 % v/v	64 oz/a 15.4 oz/a		MPost MPost	A A	92.5	83.8	95.0	77.5
5	Permit Agri-Dex	0.015 lb ai/a 1 % v/v	0.32 oz/a 15.4 oz/a		MPost MPost	A A	60.0	86.3	95.0	81.3
6	SuperWham Permit Agri-Dex	2 lb ai/a 0.015 lb ai/a 1 % v/v	64 oz/a 0.32 oz/a 15.4 oz/a		MPost MPost MPost	A A A	98.8	100.0	97.5	98.8
7	RiceEdge Agri-Dex	3.023 lb ai/a 1 % v/v	96 oz/a 15.4 oz/a		MPost MPost	A A	100.0	100.0	98.8	100.0
8	SuperWham Agri-Dex	3 lb ai/a 1 % v/v	96 oz/a 15.4 oz/a		MPost MPost	A A	97.5	93.8	95.0	88.8
9	Permit Agri-Dex	0.023 lb ai/a 1 % v/v	0.49 oz/a 15.4 oz/a		MPost MPost	A A	60.0	85.0	93.8	87.5
10	SuperWham Permit Agri-Dex	3 lb ai/a 0.023 lb ai/a 1 % v/v	96 oz/a 0.49 oz/a 15.4 oz/a		MPost MPost MPost	A A A	98.8	100.0	96.3	100.0
11	RiceEdge Agri-Dex	4.031 lb ai/a 1 % v/v	128 oz/a 15.4 oz/a		MPost MPost	A A	100.0	100.0	98.8	100.0
12	SuperWham Agri-Dex	4 lb ai/a 1 % v/v	128 oz/a 15.4 oz/a		MPost MPost	A A	100.0	97.5	97.5	98.8
13	Permit Agri-Dex	0.031 lb ai/a 1 % v/v	0.66 oz/a 15.4 oz/a		MPost MPost	A A	66.3	83.8	93.8	91.3
14	SuperWham Permit Agri-Dex	4 lb ai/a 0.031 lb ai/a 1 % v/v	128 oz/a 0.66 oz/a 15.4 oz/a		MPost MPost MPost	A A A	100.0	96.3	96.3	100.0
LSD (P=.05)							6.46	18.62	3.83	10.06
Standard Deviation							4.52	13.03	2.68	7.04
CV							5.45	14.63	2.81	8.06
Bartlett's X2							18.867	47.045	4.152	19.261
P(Bartlett's X2)							0.004*	0.001*	0.989	0.007*
Replicate F							1.691	1.574	24.445	0.541
Replicate Prob(F)							0.1848	0.2110	0.0001	0.6573
Treatment F							157.049	9.657	4.368	55.719
Treatment Prob(F)							0.0001	0.0001	0.0002	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code

SEBEX, Sesbania exaltata, = US

ECHCG, Echinochloa crus-galli, = US

Part Rated

PLAEME = plant - emerged

P = Pest is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Strada tankmixes in Clearfield rice for improved broadleaf and grass control.

Trial ID: HRI-31610
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC Planting Date: 4/19/2010
 Planting Method: DRILLE drilled Rate, Unit: 90 LB/A
 Depth, Unit: 1.25 IN
 Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
 Soil Moisture: DRY dry Emergence Date: 5/3/2010

Pest Description

Pest 1 Type: W Code: SEBEX Sesbania exaltata
 Common Name: Hemp sesbania

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A
3.	6/16/2010	Clincher	17	OZ/A
4.	7/1/2010	Newpath	8	OZ/A

Soil Description

Description Name: Rohwer Clay Blocks
 % Sand: 3.5 % OM: 1 **Texture:** CLAY
 % Silt: 37.4 pH: 7.3 **Soil Name:** Sharkey Clay
 % Clay: 59.1 **CEC:** 38

Application Description

	A
Application Date:	6/1/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	LAPOCR
Application Placement:	BROFOL
Applied By:	JM
Air Temperature, Unit:	84.4 F
% Relative Humidity:	67.61
Wind Velocity, Unit:	0.95 MPH
Wind Direction:	E
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	80.0 F

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ORYSA BRIC

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SEBEX W
Stage Majority, Percent:	2-12"

Application Equipment

	A
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Strada tankmixes in Clearfield rice for improved broadleaf and grass control.

Trial ID: HRI-31610
Location: Rohwer, AR

Study Director:
Investigator: Kenneth Smith
Sponsor Contact:

Pest Code							SEBEX	SEBEX	
Pest Name							Hemp sesbania	Hemp sesbania	
Part Rated							PLAEME P	PLAEME P	
Rating Date							6/11/2010	6/24/2010	
Rating Type							CONTRO	CONTRO	
Rating Unit							percent	percent	
Crop Stage Majority							1wk POFL	3wk POFL	
Pest Stage Majority							6-30 in	6-60 in	
Tri-Eval Interval							10 DA-A	23 DA-A	
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	1	2
1	Untreated Check							0.0	0.0
2	Strada	0.0547	lb ai/a	1.75	oz/a	LPost	A	81.3	100.0
	Clearpath	0.5	lb ai/a	10.7	oz/a	LPost	A		
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	A		
3	Strada	0.0406	lb ai/a	1.3	oz/a	LPost	A	86.3	100.0
	Clearpath	0.5	lb ai/a	10.7	oz/a	LPost	A		
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	A		
4	Strada	0.0547	lb ai/a	1.75	oz/a	LPost	A	81.3	100.0
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	A		
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	A		
5	Strada	0.0406	lb ai/a	1.3	oz/a	LPost	A	80.0	100.0
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	A		
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	A		
6	Strada	0.0547	lb ai/a	1.75	oz/a	LPost	A	88.8	100.0
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	A		
	Aim	0.0117	lb ai/a	0.75	oz/a	LPost	A		
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	A		
7	Newpath	0.0625	lb ai/a	4	oz/a	LPost	A	0.0	0.0
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	A		
8	Newpath	0.0625	lb ai/a	4	oz/a	LPost	A	85.0	88.8
	Aim	0.0117	lb ai/a	0.75	oz/a	LPost	A		
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	A		
9	Permit	0.035	lb ai/a	0.75	oz/a	LPost	A	95.0	100.0
	Clearpath	0.5	lb ai/a	10.7	oz/a	LPost	A		
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	A		
10	Permit	0.035	lb ai/a	0.75	oz/a	LPost	A	97.5	100.0
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	A		
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	A		
11	Permit	0.035	lb ai/a	0.75	oz/a	LPost	A	96.3	100.0
	Newpath	0.0625	lb ai/a	4	oz/a	LPost	A		
	Aim	0.0117	lb ai/a	0.75	oz/a	LPost	A		
	Agri-Dex	1	% v/v	15.4	oz/a	LPost	A		
LSD (P=.05)							6.95	3.72	
Standard Deviation							4.81	2.57	
CV							6.69	3.19	
Bartlett's X2							7.759	0.0	
P(Bartlett's X2)							0.457	.	
Replicate F							0.352	1.000	
Replicate Prob(F)							0.7881	0.4064	
Treatment F							225.079	969.686	
Treatment Prob(F)							0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
SEBEX, Sesbania exaltata, = US
Part Rated
PLAEME = plant - emerged
P = Pest is Part Rated
Rating Type
CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Strada tankmixes for improved efficacy on hard-to-kill broadleaf weeds.

Trial ID: HRI-31710
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description	
Crop 1: ORYSA Oryza sativa Common rice BBCH Scale: BRIC Planting Method: DRILLE drilled Depth, Unit: 1.25 IN Row Spacing, Unit: 7.5 IN Seed Bed: MEDIUM medium Soil Moisture: DRY dry	Planting Date: 4/19/2010 Rate, Unit: 90 LB/A Emergence Date: 5/3/2010

Pest Description
Pest 1 Type: W Code: SEBEX <i>Sesbania exaltata</i> Common Name: Hemp sesbania

Site and Design	
Plot Width, Unit: 6.33 FT Plot Length, Unit: 28 FT Plot Area, Unit: 177.24 FT2 Replications: 4	Site Type: FIELD field Experimental Unit: 1 PLOT plot Tillage Type: CONTIL conventional-till Study Design: RACOB Randomized Complete Block (RCB) Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance				
No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	4/20/2010	Command	0.5	LB A/A
2.	6/2/2010	Urea	225	LB/A
3.	6/15/2010	Urea	225	LB/A

Soil Description
Description Name: Rohwer Clay Blocks % Sand: 3.5 % OM: 1 Texture: CLAY % Silt: 37.4 pH: 7.3 Soil Name: Sharkey Clay % Clay: 59.1 CEC: 38

Application Description	
	A
Application Date:	5/19/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	3 in weed
Application Placement:	BROFOL
Applied By:	JM
Air Temperature, Unit:	69.2 F
% Relative Humidity:	63.97
Wind Velocity, Unit:	5.65 MPH
Wind Direction:	NNW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	71.6 F

Crop Stage At Each Application	
	A
Crop 1 Code, BBCH Scale:	ORYSA BRIC

Pest Stage At Each Application	
	A
Pest 1 Code, Type, Scale:	SEBEX W
Stage Majority, Percent:	2-3 lf

Application Equipment	
	A
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Strada tankmixes for improved efficacy on hard-to-kill broadleaf weeds.

Trial ID: HRI-31710
 Location: Rohwer, AR
 Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	1	2	3
	1 Untreated Check							0.0	0.0	0.0
2	Strada COC	0.0547 1 % v/v	lb ai/a v/v	1.75 15.4	oz/a oz/a	3" 3"	Weeds A Weeds A	93.3	96.3	97.5
3	Strada Aim COC	0.0547 0.0156 1 % v/v	lb ai/a lb ai/a v/v	1.75 1 15.4	oz/a oz/a oz/a	3" 3" 3"	Weeds A Weeds A Weeds A	100.0	98.8	97.5
4	Strada Aim COC	0.0547 0.0078 1 % v/v	lb ai/a lb ai/a v/v	1.75 0.5 15.4	oz/a oz/a oz/a	3" 3" 3"	Weeds A Weeds A Weeds A	95.5	97.0	91.3
5	Strada COC	0.0313 1 % v/v	lb ai/a v/v	1 15.4	oz/a oz/a	3" 3"	Weeds A Weeds A	87.8	93.8	95.0
6	Strada Aim COC	0.0313 0.0156 1 % v/v	lb ai/a lb ai/a v/v	1 1 15.4	oz/a oz/a oz/a	3" 3" 3"	Weeds A Weeds A Weeds A	99.0	98.8	97.5
7	Strada Aim COC	0.0313 0.0078 1 % v/v	lb ai/a lb ai/a v/v	1 0.5 15.4	oz/a oz/a oz/a	3" 3" 3"	Weeds A Weeds A Weeds A	93.8	97.5	97.5
8	Strada Aim Facet COC	0.0547 0.0156 0.285 1 % v/v	lb ai/a lb ai/a lb ai/a v/v	1.75 1 0.38 15.4	oz/a oz/a lb/a oz/a	3" 3" 3" 3"	Weeds A Weeds A Weeds A Weeds A	99.5	100.0	100.0
9	Strada Aim Facet COC	0.0547 0.0078 0.285 1 % v/v	lb ai/a lb ai/a lb ai/a v/v	1.75 0.5 0.38 15.4	oz/a oz/a lb/a oz/a	3" 3" 3" 3"	Weeds A Weeds A Weeds A Weeds A	92.5	95.0	97.5
10	Strada Aim Facet COC	0.0313 0.0156 0.285 1 % v/v	lb ai/a lb ai/a lb ai/a v/v	1 1 0.38 15.4	oz/a oz/a lb/a oz/a	3" 3" 3" 3"	Weeds A Weeds A Weeds A Weeds A	98.8	98.8	98.8
11	Strada Aim Facet COC	0.0313 0.0078 0.285 1 % v/v	lb ai/a lb ai/a lb ai/a v/v	1 0.5 0.38 15.4	oz/a oz/a lb/a oz/a	3" 3" 3" 3"	Weeds A Weeds A Weeds A Weeds A	93.8	96.3	98.8
12	Aim COC	0.0078 1 % v/v	lb ai/a v/v	0.5 15.4	oz/a oz/a	3" 3"	Weeds A Weeds A	96.8	95.0	87.5
13	Aim COC	0.0156 1 % v/v	lb ai/a v/v	1 15.4	oz/a oz/a	3" 3"	Weeds A Weeds A	100.0	97.5	88.8
14	Facet COC	0.285 1 % v/v	lb ai/a v/v	0.38 15.4	lb/a oz/a	3" 3"	Weeds A Weeds A	83.8	85.0	83.8
	LSD (P=.05)							5.16	3.72	6.70
	Standard Deviation							3.61	2.60	4.69
	CV							4.09	2.91	5.33
	Bartlett's X2							19.411	4.532	15.246
	P(Bartlett's X2)							0.035*	0.92	0.172
	Replicate F							0.824	5.747	2.080
	Replicate Prob(F)							0.4887	0.0023	0.1186
	Treatment F							204.671	397.965	121.146
	Treatment Prob(F)							0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 SEBEX, Sesbania exaltata, = US
 Part Rated
 PLAEME = plant - emerged
 P = Pest is Part Rated
 Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Strada plus Facet combinations for broadleaf weed control in rice.

Trial ID: HRI-31810 Protocol ID: HRI-31810
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
Depth, Unit: 1.25 IN
Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
Soil Moisture: DRY dry **Emergence Date:** 5/3/2010

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
Common Name: Hemp sesbania

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	4/20/2010	Command	0.5	LB A/A
2.	6/2/2010	Urea	225	LB/A
3.	6/15/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A	B
Application Date:	5/18/2010	6/1/2010
Time of Day:	PM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	3 in weed	10in weed
Application Placement:	BROFOL	BROFOL
Applied By:	JM	JM
Air Temperature, Unit:	68.9 F	84.4 F
% Relative Humidity:	72.80	67.61
Wind Velocity, Unit:	4.60 MPH	0.95 MPH
Wind Direction:	WSW	E
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	72.1 F	80.0 F

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W
Stage Majority, Percent:	2-3 lf	2-12"

Application Equipment

	A	B
Appl. Equipment:	Hand Boom	Hand Boom
Equipment Type:	BACSPR	BACSPR
Operating Pressure, Unit:	45 PSI	45 PSI
Nozzle Type:	AM FF	AM FF
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Strada plus Facet combinations for broadleaf weed control in rice.

Trial ID: HRI-31810 Protocol ID: HRI-31810
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		SEBEX		SEBEX		SEBEX		SEBEX		SEBEX		
Pest Name		Hemp sesbania		Hemp sesbania		Hemp sesbania		Hemp sesbania		Hemp sesbania		
Part Rated		PLAEME P		PLAEME P		PLAEME P		PLAEME P		PLAEME P		
Rating Date		5/27/2010		6/3/2010		6/11/2010		6/17/2010		6/24/2010		
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		
Rating Unit		percent		percent		percent		percent		percent		
Crop Stage Majority		4-5 leaf		Preflood		1wk POFL		2wk POFL		3wk POFL		
Pest Stage Majority		2-10 in		2-10 in		6-24 in		6-42 in		6-60 in		
Trt-Eval Interval		9 DA-A		16 DA-A		10 DA-B		16 DA-B		23 DA-B		
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	Strada COC	0.0547 1 % v/v	1.75 oz/a 15.4 oz/a		3" Weed 3" Weed	A A		85.3	83.8	91.3	91.3	85.0
3	Strada COC	0.0547 1 % v/v	1.75 oz/a 15.4 oz/a		10" Weed 10" Weed	B B	Preflood Preflood	0.0	0.0	82.5	86.3	100.0
4	Strada Facet COC	0.0547 0.188 1 % v/v	1.75 oz/a lb ai/a 15.4 oz/a	0.25 lb/a	3" Weed 3" Weed 3" Weed	A A A		86.3	86.3	93.8	95.0	95.0
5	Strada Facet COC	0.0547 0.188 1 % v/v	1.75 oz/a lb ai/a 15.4 oz/a	0.25 lb/a	10" Weed 10" Weed 10" Weed	B B B	Preflood Preflood Preflood	0.0	0.0	83.8	88.8	100.0
6	Strada Facet COC	0.0547 0.285 1 % v/v	1.75 oz/a lb ai/a 15.4 oz/a	0.38 lb/a	3" Weed 3" Weed 3" Weed	A A A		87.0	85.0	93.8	97.5	96.3
7	Strada Facet COC	0.0547 0.285 1 % v/v	1.75 oz/a lb ai/a 15.4 oz/a	0.38 lb/a	10" Weed 10" Weed 10" Weed	B B B	Preflood Preflood Preflood	0.0	0.0	85.0	92.5	100.0
8	Facet COC	0.188 1 % v/v	1.75 oz/a 15.4 oz/a	0.25 lb/a	3" Weed 3" Weed	A A		68.5	62.5	41.3	47.5	30.0
9	Facet COC	0.188 1 % v/v	0.25 lb/a 15.4 oz/a		10" Weed 10" Weed	B B	Preflood Preflood	0.0	0.0	80.0	82.5	91.3
10	Facet COC	0.285 1 % v/v	0.38 lb/a 15.4 oz/a		3" Weed 3" Weed	A A		81.3	78.8	72.5	60.0	60.0
11	Facet COC	0.285 1 % v/v	0.38 lb/a 15.4 oz/a		10" Weed 10" Weed	B B	Preflood Preflood	0.0	0.0	81.3	82.5	95.0
LSD (P=.05)								8.76	3.71	6.81	11.50	11.42
Standard Deviation								6.07	2.57	4.72	7.96	7.91
CV								16.35	7.13	6.44	10.63	10.2
Bartlett's X2								39.928	2.426	16.092	24.132	10.714
P(Bartlett's X2)								0.001*	0.658	0.024*	0.004*	0.098
Replicate F								1.003	1.695	1.431	0.415	0.594
Replicate Prob(F)								0.4050	0.1891	0.2532	0.7433	0.6241
Treatment F								200.111	1062.793	143.882	53.688	72.256
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 SEBEX, Sesbania exaltata, = US
 Part Rated
 PLAEME = plant - emerged
 P = Pest is Part Rated
 Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Evaluation of quinclorac as a tank-mix partner with Strada.

Trial ID: HRI-31910 Protocol ID: HRI-31910
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
 Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
 Depth, Unit: 1.25 IN
 Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
 Soil Moisture: DRY dry **Emergence Date:** 5/3/2010

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
Common Name: Hemp sesbania

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	4/20/2010	Command	0.5	LB A/A
2.	6/2/2010	Urea	225	LB/A
3.	6/15/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A
Application Date:	5/19/2010
Time of Day:	AM
Application Method:	SPRAY
Application Timing:	3 in weed
Application Placement:	BROFOL
Applied By:	JM
Air Temperature, Unit:	69.2 F
% Relative Humidity:	63.97
Wind Velocity, Unit:	5.65 MPH
Wind Direction:	NNW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	71.6 F

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ORYSA BRIC

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SEBEX W
Stage Majority, Percent:	2-3 lf

Application Equipment

	A
Appl. Equipment:	Hand Boom
Equipment Type:	BACSPR
Operating Pressure, Unit:	45 PSI
Nozzle Type:	AM FF
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Evaluation of quinclorac as a tank-mix partner with Strada.

Trial ID: HRI-31910 Protocol ID: HRI-31910
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

							SEBEX	SEBEX	SEBEX	
							Hemp sesbania	Hemp sesbania	Hemp sesbania	
							PLAEME P	PLAEME P	PLAEME P	
							5/27/2010	6/3/2010	6/11/2010	
							CONTRO	CONTRO	CONTRO	
							percent	percent	percent	
							4-5 leaf	Pre/food	1 wk pf	
							2-10 in	2-12 in	6-32 in	
							8 DA-A	15 DA-A	23 DA-A	
Trt	Treatment	Rate	Other	Other	Growth	Appl				
No.	Name	Rate	Unit	Rate	Unit	Stage	Code	1	2	3
1	Untreated Check							20.0	0.0	15.0
2	Strada	0.0272	lb ai/a	0.87	oz/a	3" Weeds A		84.3	80.0	91.3
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
3	Strada	0.041	lb ai/a	1.31	oz/a	3" Weeds A		86.8	83.8	95.0
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
4	Strada	0.0547	lb ai/a	1.75	oz/a	3" Weeds A		86.5	83.8	95.0
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
5	Strada	0.0272	lb ai/a	0.87	oz/a	3" Weeds A		82.3	87.5	96.3
	Facet	0.285	lb ai/a	0.38	lb/a	3" Weeds A				
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
6	Strada	0.0272	lb ai/a	0.87	oz/a	3" Weeds A		83.3	86.3	97.5
	Facet	0.188	lb ai/a	0.25	lb/a	3" Weeds A				
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
7	Strada	0.0272	lb ai/a	0.87	oz/a	3" Weeds A		81.8	82.5	93.8
	Facet	0.131	lb ai/a	0.175	lb/a	3" Weeds A				
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
8	Strada	0.041	lb ai/a	1.31	oz/a	3" Weeds A		84.0	90.0	98.8
	Facet	0.285	lb ai/a	0.38	lb/a	3" Weeds A				
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
9	Strada	0.041	lb ai/a	1.31	oz/a	3" Weeds A		85.5	88.8	96.3
	Facet	0.188	lb ai/a	0.25	lb/a	3" Weeds A				
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
10	Strada	0.041	lb ai/a	1.31	oz/a	3" Weeds A		85.0	92.0	98.8
	Facet	0.131	lb ai/a	0.175	lb/a	3" Weeds A				
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
11	Strada	0.0547	lb ai/a	1.75	oz/a	3" Weeds A		82.8	86.3	98.8
	Facet	0.285	lb ai/a	0.38	lb/a	3" Weeds A				
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
12	Strada	0.0547	lb ai/a	1.75	oz/a	3" Weeds A		84.8	88.8	98.8
	Facet	0.188	lb ai/a	0.25	lb/a	3" Weeds A				
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
13	Strada	0.0547	lb ai/a	1.75	oz/a	3" Weeds A		85.0	93.3	100.0
	Facet	0.131	lb ai/a	0.175	lb/a	3" Weeds A				
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
14	Facet	0.285	lb ai/a	0.38	lb/a	3" Weeds A		80.8	72.5	82.5
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
15	Facet	0.188	lb ai/a	0.25	lb/a	3" Weeds A		82.5	70.0	71.3
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
16	Facet	0.131	lb ai/a	0.175	lb/a	3" Weeds A		82.0	72.5	63.8
	COC	1	% v/v	15.4	oz/a	3" Weeds A				
LSD (P=.05)							15.07	8.75	15.50	
Standard Deviation							10.54	6.12	10.84	
CV							13.21	7.78	12.46	
Bartlett's X2							108.89	14.777	62.338	
P(Bartlett's X2)							0.001*	0.394	0.001*	
Replicate F							0.598	1.531	0.554	
Replicate Prob(F)							0.6199	0.2193	0.6484	
Treatment F							9.264	52.146	16.297	
Treatment Prob(F)							0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 SEBEX, Sesbania exaltata, = US
Part Rated
 PLAEME = plant - emerged
 P = Pest is Part Rated
Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Evaluation of liquid Facet alone and in combination with Newpath.

Trial ID: HRI-32010 Protocol ID: HRI-32010
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC Planting Date: 4/19/2010
 Planting Method: DRILLE drilled Rate, Unit: 90 LB/A
 Depth, Unit: 1.25 IN
 Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
 Soil Moisture: DRY dry Emergence Date: 5/3/2010
 Harvested Width, Unit: 5.625 FT Harvested Length, Unit: 28 FT

Pest Description

Pest 1 Type: W Code: SEBEX Sesbania exaltata
 Common Name: Hemp sesbania
Pest 2 Type: W Code: ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT Site Type: FIELD field
 Plot Length, Unit: 28 FT Experimental Unit: 1 PLOT plot
 Plot Area, Unit: 177.24 FT2 Tillage Type: CONTIL conventional-till
 Replications: 4 Study Design: RACOB L Randomized Complete Block (RCB)
 Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
 % Sand: 3.5 % OM: 1 Texture: CLAY
 % Silt: 37.4 pH: 7.3 Soil Name: Sharkey Clay
 % Clay: 59.1 CEC: 38

Application Description

	A	B
Application Date:	4/20/2010	5/19/2010
Time of Day:	AM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREMCR	EAPOCR
Application Placement:	BROSOI	BROFOL
Applied By:	JM	JM
Air Temperature, Unit:	62.5 F	69.2 F
% Relative Humidity:	50.40	63.97
Wind Velocity, Unit:	4.15 MPH	5.65 MPH
Wind Direction:	S	NNW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	63.8 F	71.6 F

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W
Stage Majority, Percent:		2-3 lf
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W
Stage Majority, Percent:		1-3 lf

Application Equipment

	A	B
Appl. Equipment:	Tractor	Hand Boom
Equipment Type:	SPTRMO	BACSPR
Operating Pressure, Unit:	50 PSI	45 PSI
Nozzle Type:	AM FF	AM FF
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

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							SEBEX Hemp sesbania PLAEME P 5/27/2010 CONTRO percent 4-5 leaf 2-10 in 8 DA-B	PLAEME C 5/27/2010 PHYNEC percent 4-5 leaf 8 DA-B	SEBEX Hemp sesbania PLAEME P 6/3/2010 CONTRO percent Preflood 2-12 in 15 DA-B	ECHCG Common barnyar> PLAEME P 6/3/2010 CONTRO percent Preflood 1-3 leaf 15 DA-B	PLAEME C 6/3/2010 PHYNEC percent Preflood 15 DA-B	SEBEX Hemp sesbania PLAEME P 6/11/2010 CONTRO percent 1 wk pf 6-32 in 23 DA-B
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	1	2	3	4	5	6
1	Untreated Check						0.0	0.0	0.0	0.0	0.0	0.0
2	Facet COC	0.4 lb ai/a 2.08 % v/v	8.5 oz/a 1 qt/a		E-MPost B E-MPost B		87.8	0.0	91.3	100.0	0.0	98.8
3	XLR-8 COC	0.4 lb ai/a 2.08 % v/v	12.8 oz/a 1 qt/a		E-MPost B E-MPost B		89.5	0.0	87.5	100.0	0.0	97.5
4	Quinstar Liquid COC	0.4 lb ai/a 2.08 % v/v	12.8 oz/a 1 qt/a		E-MPost B E-MPost B		88.5	0.0	93.8	100.0	0.0	99.5
5	Clearpath COC	0.375 lb ai/a 2.08 % v/v	8 oz/a 1 qt/a		E-MPost B E-MPost B		87.0	0.0	90.0	100.0	0.0	99.5
6	XLR-8 Newpath COC	0.4 lb ai/a 0.0625 lb ai/a 2.08 % v/v	12.8 oz/a 4 oz/a 1 qt/a		E-MPost B E-MPost B E-MPost B		87.0	0.0	87.5	100.0	0.0	98.8
7	Aim Facet COC	0.0156 lb ai/a 0.4 lb ai/a 2.08 % v/v	1 oz/a 8.5 oz/a 1 qt/a		E-MPost B E-MPost B E-MPost B		100.0	26.3	100.0	100.0	0.0	100.0
8	Sharpen Facet COC	0.0223 lb ai/a 0.4 lb ai/a 2.08 % v/v	1 oz/a 8.5 oz/a 1 qt/a		E-MPost B E-MPost B E-MPost B		100.0	36.3	100.0	100.0	0.0	100.0
9	Command Aim Facet COC	0.5 lb ai/a 0.0156 lb ai/a 0.4 lb ai/a 2.08 % v/v	21.3 oz/a 1 oz/a 8.5 oz/a 1 qt/a		PRE A E-MPost B E-MPost B E-MPost B		100.0	30.0	98.8	100.0	0.0	100.0
10	Command Sharpen Facet COC	0.5 lb ai/a 0.0223 lb ai/a 0.4 lb ai/a 2.08 % v/v	21.3 oz/a 1 oz/a 8.5 oz/a 1 qt/a		PRE A E-MPost B E-MPost B E-MPost B		100.0	37.5	100.0	100.0	0.0	100.0
11	Command XLR-8 Aim COC	0.5 lb ai/a 0.4 lb ai/a 0.0156 lb ai/a 2.08 % v/v	21.3 oz/a 12.8 oz/a 1 oz/a 1 qt/a		PRE A E-MPost B E-MPost B E-MPost B		100.0	31.3	98.8	100.0	0.0	100.0
12	Command XLR-8 Sharpen COC	0.5 lb ai/a 0.4 lb ai/a 0.0223 lb ai/a 2.08 % v/v	21.3 oz/a 12.8 oz/a 1 oz/a 1 qt/a		PRE A E-MPost B E-MPost B E-MPost B		100.0	42.5	100.0	100.0	0.0	100.0
LSD (P=.05)							2.39	9.32	4.22	0.00	0.00	1.95
Standard Deviation							1.66	6.46	2.92	0.00	0.00	1.35
CV							1.91	38.02	3.34	0.0	0.0	1.48
Bartlett's X2							4.342	7.32	4.369	0.0	0.0	5.195
P(Bartlett's X2)							0.362	0.198	0.627	.	.	0.268
Replicate F							1.000	2.645	3.667	0.000	0.000	1.558
Replicate Prob(F)							0.4051	0.0654	0.0220	1.0000	1.0000	0.2180
Treatment F							1138.817	31.691	366.644	0.000	0.000	1814.709
Treatment Prob(F)							0.0001	0.0001	0.0001	1.0000	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Evaluation of liquid Facet alone and in combination with Newpath.

Trial ID: HRI-32010 Protocol ID: HRI-32010
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		ECHCG		SEBEX		ECHCG					
Pest Name		Common barnyar>		Hemp sesbania		Common barnyar>					
Part Rated		PLAEME P		PLAEME P		PLAEME P					
Rating Date		6/11/2010		8/26/2010		8/26/2010		9/4/2010		9/4/2010	
Rating Type		CONTRO		CONTRO		CONTRO		WEIGHT		MOICON	
Rating Unit		percent		percent		percent		lb/plot		percent	
Crop Stage Majority		1wk pf		preharve		pre					
Pest Stage Majority		2 tiller		mature		mature					
Trt-Eval Interval		23 DA-B		99 DA-B		99 DA-B				9/4/2010	
Trt Treatment		Rate		Other		Other		Growth		Appl	
No. Name		Rate		Unit		Rate		Unit		Code	
		7		8		9		10		11	
		12									
1 Untreated Check		0.0		0.0		0.0		5.35		2.80	
2 Facet		0.4 lb ai/a		8.5 oz/a		E-MPost B					
COC		2.08 % v/v		1 qt/a		E-MPost B		100.0		98.3	
3 XLR-8		0.4 lb ai/a		12.8 oz/a		E-MPost B		100.0		85.0	
COC		2.08 % v/v		1 qt/a		E-MPost B		100.0		25.55	
4 Quinstar Liquid		0.4 lb ai/a		12.8 oz/a		E-MPost B		100.0		98.3	
COC		2.08 % v/v		1 qt/a		E-MPost B		100.0		28.80	
5 Clearpath		0.375 lb ai/a		8 oz/a		E-MPost B		100.0		93.8	
COC		2.08 % v/v		1 qt/a		E-MPost B		100.0		28.48	
6 XLR-8		0.4 lb ai/a		12.8 oz/a		E-MPost B		100.0		90.0	
Newpath		0.0625 lb ai/a		4 oz/a		E-MPost B		100.0		28.33	
COC		2.08 % v/v		1 qt/a		E-MPost B		100.0		10.65	
7 Aim		0.0156 lb ai/a		1 oz/a		E-MPost B		100.0		100.0	
Facet		0.4 lb ai/a		8.5 oz/a		E-MPost B		100.0		30.38	
COC		2.08 % v/v		1 qt/a		E-MPost B		100.0		11.53	
8 Sharpen		0.0223 lb ai/a		1 oz/a		E-MPost B		100.0		100.0	
Facet		0.4 lb ai/a		8.5 oz/a		E-MPost B		100.0		29.33	
COC		2.08 % v/v		1 qt/a		E-MPost B		100.0		11.20	
9 Command		0.5 lb ai/a		21.3 oz/a		PRE A		100.0		100.0	
Aim		0.0156 lb ai/a		1 oz/a		E-MPost B		100.0		29.63	
Facet		0.4 lb ai/a		8.5 oz/a		E-MPost B		100.0		12.25	
COC		2.08 % v/v		1 qt/a		E-MPost B		100.0		12.25	
10 Command		0.5 lb ai/a		21.3 oz/a		PRE A		100.0		100.0	
Sharpen		0.0223 lb ai/a		1 oz/a		E-MPost B		100.0		29.28	
Facet		0.4 lb ai/a		8.5 oz/a		E-MPost B		100.0		11.28	
COC		2.08 % v/v		1 qt/a		E-MPost B		100.0		11.28	
11 Command		0.5 lb ai/a		21.3 oz/a		PRE A		100.0		97.0	
XLR-8		0.4 lb ai/a		12.8 oz/a		E-MPost B		100.0		27.65	
Aim		0.0156 lb ai/a		1 oz/a		E-MPost B		100.0		10.83	
COC		2.08 % v/v		1 qt/a		E-MPost B		100.0		10.83	
12 Command		0.5 lb ai/a		21.3 oz/a		PRE A		100.0		100.0	
XLR-8		0.4 lb ai/a		12.8 oz/a		E-MPost B		100.0		27.20	
Sharpen		0.0223 lb ai/a		1 oz/a		E-MPost B		100.0		10.55	
COC		2.08 % v/v		1 qt/a		E-MPost B		100.0		10.55	
LSD (P=.05)		0.00		6.26		0.00		5.769		2.517	
Standard Deviation		0.00		4.34		0.00		3.995		1.743	
CV		0.0		4.9		0.0		15.17		16.53	
Bartlett's X2		0.0		8.373		0.0		31.603		50.875	
P(Bartlett's X2)		.		0.137		.		0.001*		0.001*	
Replicate F		0.000		0.882		0.000		0.972		1.950	
Replicate Prob(F)		1.0000		0.4607		1.0000		0.4181		0.1414	
Treatment F		0.000		170.140		0.000		11.457		8.101	
Treatment Prob(F)		1.0000		0.0001		1.0000		0.0001		0.0001	

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Trial ID: HRI-32010 Protocol ID: HRI-32010
Location: Rohwer, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US

Part Rated

PLAEME = plant - emerged
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown
PHYNEC = phytotoxicity - necrosis /burn
WEIGHT = weight
MOICON = moisture content
YIELD = yield

Rating Unit

lb/plot = pounds per plot
BU = bushel

ARM Action Codes

TY1 = 6.146032*10*(100-@MVAVGREP(11))/88

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Postflood weed control programs with Grasp and Clincher.

Trial ID: HRI-32110 Protocol ID: HRI-32110
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
Depth, Unit: 1.25 IN
Row Spacing, Unit: 7.5 IN
Seed Bed: MEDIUM medium
Soil Moisture: DRY dry **Emergence Date:** 5/3/2010
Harvested Width, Unit: 5.625 FT **Harvested Length, Unit:** 28 FT

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
Common Name: Hemp sesbania

Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Pest 3 Type: W **Code:** LEFPA Leptochloa panicoides
Common Name: Tighthead sprangletop

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT² **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A
3.	7/1/2010	Newpath	8	OZ/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A	B
Application Date:	5/18/2010	6/11/2010
Time of Day:	Afternoon	AM
Application Method:	SPRAY	SPRAY
Application Timing:	EAPOCR	1 wk POFL
Application Placement:	BROFOL	BROFOL
Applied By:	JM	JM
Air Temperature, Unit:	68.9 F	80.3 F
% Relative Humidity:	72.80	85.09
Wind Velocity, Unit:	4.60 MPH	5.24 MPH
Wind Direction:	WSW	NE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	72.1 F	80.6 F

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W
Stage Majority, Percent:	2-3 lf	1-3 lf
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W
Stage Majority, Percent:	1-2 lf	1-3 lf
Pest 3 Code, Type, Scale:	LEFPA W	LEFPA W
Stage Majority, Percent:	1-2 lf	1-3 lf

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Postflood weed control programs with Grasp and Clincher.

Trial ID: HRI-32110 Protocol ID: HRI-32110
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Application Equipment

	A	B
Appl. Equipment:	Hand Boom	Hand Boom
Equipment Type:	BACSPR	BACSPR
Operating Pressure, Unit:	45 PSI	45 PSI
Nozzle Type:	AM FF	AM FF
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

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Postflood weed control programs with Grasp and Clincher.

Trial ID: HRI-32110 Protocol ID: HRI-32110
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	SEBEX	ECHCG	LEFPA	SEBEX	ECHCG	LEFPA						
Pest Name	Hemp sesbania	Common barnyar>	Tighthead spr>	Hemp sesbania	Common barnyar>	Tighthead spr>						
Part Rated	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P						
Rating Date	6/18/2010	6/18/2010	6/18/2010	6/24/2010	6/24/2010	6/24/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent	percent	percent	percent						
Crop Stage Majority	2wk POFL	2wk POFL	2wk POFL	3wk POFL	3wk POFL	3wk POFL						
Pest Stage Majority	6-42 in	heading	heading	6-60 in	heading	heading						
Trt-Eval Interval	7 DA-B	7 DA-B	7 DA-B	13 DA-B	13 DA-B	13 DA-B						
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	1	2	3	4	5	6
1	Untreated Check						0.0	0.0	0.0	0.0	0.0	0.0
2	SuperWham COC	3 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a		EPost EPost	A A	98.8	57.5	45.0	100.0	36.3	43.8
3	SuperWham COC Grasp MSO	3 lb ai/a 2.08 % v/v 0.039 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a 2.5 oz/a 1 qt/a		EPost EPost 1wk POFL 1wk POFL	A A B B	100.0	93.8	86.3	100.0	80.0	85.0
4	SuperWham COC Grasp Xtra MSO	3 lb ai/a 2.08 % v/v 0.36 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a 20 oz/a 1 qt/a		EPost EPost 1wk POFL 1wk POFL	A A B B	100.0	90.0	80.0	100.0	81.3	81.3
5	SuperWham COC Grasp Xtra Permit MSO	3 lb ai/a 2.08 % v/v 0.36 lb ai/a 0.0234 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a 20 oz/a 0.5 oz/a 1 qt/a		EPost EPost 1wk POFL 1wk POFL 1wk POFL	A A B B B	100.0	91.3	82.5	100.0	78.8	81.3
6	SuperWham COC Rebel EX MSO	3 lb ai/a 2.08 % v/v 0.317 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a 20 oz/a 1 qt/a		EPost EPost 1wk POFL 1wk POFL	A A B B	100.0	88.8	87.5	100.0	61.3	66.3
7	SuperWham COC Rebel EX Permit MSO	3 lb ai/a 2.08 % v/v 0.317 lb ai/a 0.0234 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a 20 oz/a 0.5 oz/a 1 qt/a		EPost EPost 1wk POFL 1wk POFL 1wk POFL	A A B B B	100.0	92.5	90.0	100.0	89.5	90.8
8	SuperWham COC Clincher MSO	3 lb ai/a 2.08 % v/v 0.0223 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a 15 oz/a 1 qt/a		EPost EPost 1wk POFL 1wk POFL	A A B B	100.0	93.8	90.0	97.5	87.5	91.3
LSD (P=.05)							1.30	4.36	4.79	2.60	34.73	38.19
Standard Deviation							0.88	2.96	3.26	1.77	23.61	25.97
CV							1.01	3.9	4.64	2.03	36.71	38.51
Bartlett's X2							0.0	3.352	2.071	0.0	27.051	25.07
P(Bartlett's X2)							.	0.764	0.723	.	0.001*	0.001*
Replicate F							1.000	3.441	1.449	1.000	0.183	0.504
Replicate Prob(F)							0.4123	0.0353	0.2570	0.4123	0.9065	0.6838
Treatment F							6378.144	495.407	385.421	1589.572	7.018	5.856
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0002	0.0007

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Postflood weed control programs with Grasp and Clincher.

Trial ID: HRI-32110 Protocol ID: HRI-32110
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code							SEBEX	ECHCG	LEFPA	PLAEME C	9/4/2010	9/4/2010	9/4/2010	
Pest Name							Hemp sesbania	Common barnyar>	Tighthead spr>	PLAEME C	WEIGHT	MOICON	YIELD	
Part Rated							PLAEME P	PLAEME P	PLAEME P	PHYSTU	lb/plot	percent	BU	
Rating Date							6/24/2010	7/1/2010	7/1/2010	7/1/2010				
Rating Type							PHYSTU	CONTRO	CONTRO	PHYSTU				
Rating Unit							percent	percent	percent	percent				
Crop Stage Majority							3wk POFL	4wk POFL	4wk POFL	4wk POFL				
Pest Stage Majority							13 DA-B	6-60 in	headed	headed				
Trt-Eval Interval								20 DA-B	20 DA-B	20 DA-B				
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	7	8	9	10	11	12	13	14
1	Untreated Check						0.0	0.0	0.0	0.0	0.0	2.60	4.83	16.4
2	SuperWham COC	3 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a		EPost EPost	A A	0.0	100.0	0.0	0.0	0.0	11.03	9.53	69.7
3	SuperWham COC Grasp MSO	3 lb ai/a 2.08 % v/v 0.039 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a 2.5 oz/a 1 qt/a		EPost EPost 1wk POFL 1wk POFL	A A B B	0.0	100.0	85.0	67.5	0.0	20.18	8.65	129.1
4	SuperWham COC Grasp Xtra MSO	3 lb ai/a 2.08 % v/v 0.36 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a 20 oz/a 1 qt/a		EPost EPost 1wk POFL 1wk POFL	A A B B	45.0	100.0	86.3	85.0	60.0	18.85	7.65	121.6
5	SuperWham COC Grasp Xtra Permit MSO	3 lb ai/a 2.08 % v/v 0.36 lb ai/a 0.0234 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a 20 oz/a 0.5 oz/a 1 qt/a		EPost EPost 1wk POFL 1wk POFL 1wk POFL	A A B B B	45.0	100.0	82.0	87.5	57.5	20.83	7.93	133.9
6	SuperWham COC Rebel EX MSO	3 lb ai/a 2.08 % v/v 0.317 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a 20 oz/a 1 qt/a		EPost EPost 1wk POFL 1wk POFL	A A B B	0.0	100.0	78.8	93.8	0.0	20.13	8.35	129.1
7	SuperWham COC Rebel EX Permit MSO	3 lb ai/a 2.08 % v/v 0.317 lb ai/a 0.0234 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a 20 oz/a 0.5 oz/a 1 qt/a		EPost EPost 1wk POFL 1wk POFL 1wk POFL	A A B B B	15.0	100.0	81.3	96.3	0.0	21.70	8.05	139.3
8	SuperWham COC Clincher MSO	3 lb ai/a 2.08 % v/v 0.0223 lb ai/a 2.08 % v/v	3 qt/a 1 qt/a 15 oz/a 1 qt/a		EPost EPost 1wk POFL 1wk POFL	A A B B	15.0	97.5	77.5	92.5	0.0	19.15	7.85	123.2
LSD (P=.05)							33.35	2.60	10.63	23.05	6.78	4.996	3.469	32.56
Standard Deviation							22.68	1.77	7.23	15.67	4.61	3.397	2.359	22.14
CV							151.19	2.03	11.78	24.0	31.41	20.21	30.04	20.54
Bartlett's X2							0.0	0.0	4.752	36.449	0.763	13.051	24.144	13.766
P(Bartlett's X2)							.	.	0.447	0.001*	0.382	0.071	0.001*	0.055
Replicate F							0.000	1.000	6.968	2.718	2.007	2.718	0.658	2.616
Replicate Prob(F)							1.0000	0.4123	0.0020	0.0705	0.1438	0.0704	0.5868	0.0779
Treatment F							3.000	1589.572	110.391	27.727	139.112	15.223	1.328	14.940
Treatment Prob(F)							0.0239	0.0001	0.0001	0.0001	0.0001	0.0001	0.2861	0.0001

University of Arkansas-Division of Agriculture

Postflood weed control programs with Grasp and Clincher.

Trial ID: HRI-32110 Protocol ID: HRI-32110
Location: Rohwer, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US
LEFPA, *Leptochloa panicoides*, = US

Part Rated

PLAEME = plant - emerged
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown
PHYSTU = phytotoxicity - stunting
WEIGHT = weight
MOICON = moisture content
YIELD = yield

Rating Unit

lb/plot = pounds per plot
BU = bushel

ARM Action Codes

TY1 = 6.146032*12*(100-13)/88

University of Arkansas-Division of Agriculture

Preflood weed control programs with Grasp and Clincher.

Trial ID: HRI-32210 Protocol ID: HRI-32210
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
 Planting Method: DRILLE drilled
 Depth, Unit: 1.25 IN
 Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
 Soil Moisture: DRY dry **Emergence Date:** 5/3/2010
 Harvested Width, Unit: 5.625 FT **Harvested Length, Unit:** 28 FT

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
 Common Name: Hemp sesbania
Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT² **Tillage Type:** CONTIL conventional-till
 Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A
3.	7/1/2010	Newpath	8	OZ/A

Soil Description

Description Name: Rohwer Clay Blocks
 % Sand: 3.5 % OM: 1 **Texture:** CLAY
 % Silt: 37.4 pH: 7.3 **Soil Name:** Sharkey Clay
 % Clay: 59.1 **CEC:** 38

Application Description

	A	B	C
Application Date:	4/20/2010	5/6/2010	6/1/2010
Time of Day:	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PREMCR	1 lf Rice	4 lf Rice
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	JM	JM	JM
Air Temperature, Unit:	62.5 F	76.8 F	84.4 F
% Relative Humidity:	50.40	54.84	67.61
Wind Velocity, Unit:	4.15 MPH	4.50 MPH	0.95 MPH
Wind Direction:	S	NE	E
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	63.8 F	72.6 F	80.0 F

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W	SEBEX W
Stage Majority, Percent:		cotyle	2-10"
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Stage Majority, Percent:		1 lf	2 till

Application Equipment

	A	B	C
Appl. Equipment:	Tractor	Hand Boom	
Equipment Type:	SPTRMO	BACSPR	
Operating Pressure, Unit:	50 PSI	45 PSI	
Nozzle Type:	AM FF	AM FF	
Nozzle Size:	110015	110015	
Nozzle Spacing, Unit:	19 IN	19 IN	
Carrier:	WATER	WATER	
Spray Volume, Unit:	12 gal/ac	12 gal/ac	
Mix Size, Unit:	3 liters	3 liters	
Propellant:	COMCO2	COMCO2	
Tank Mix (Y/N):	Y yes	Y yes	

University of Arkansas-Division of Agriculture

Preflood weed control programs with Grasp and Clincher.

Trial ID: HRI-32210 Protocol ID: HRI-32210
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	SEBEX	ECHCG	SEBEX	ECHCG	SEBEX	ECHCG						
Pest Name	Hemp sesbania	Common barnyar>	Hemp sesbania	Common barnyar>	Hemp sesbania	Common barnyar>						
Part Rated	PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P						
Rating Date	5/11/2010	5/11/2010	5/18/2010	5/18/2010	6/11/2010	6/11/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent	percent	percent	percent						
Crop Stage Majority	1 leaf	1 leaf	2-3 leaf	2-3 leaf	1wk POFL	1wk POFL						
Pest Stage Majority	1 leaf	1-2 leaf	2-3 leaf	2-3 leaf	2-30 in	2-30 in						
Trt-Eval Interval	21 DA-A	21 DA-A	12 DA-B	12 DA-B	10 DA-C	10 DA-C						
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	1	2	3	4	5	6
1	Untreated Check						0.0	0.0	0.0	0.0	0.0	0.0
2	Command	0.5 lb ai/a	21.3 oz/a		PRE	A	0.0	100.0	10.0	97.5	0.0	88.8
3	Command Grasp MSO	0.5 lb ai/a 0.036 lb ai/a 2.08 % v/v	21.3 oz/a 2.3 oz/a 1 qt/a		PRE	A 4lf Rice C 4lf Rice C	0.0	100.0	15.0	93.8	100.0	91.3
4	Command Grasp Xtra MSO	0.5 lb ai/a 0.325 lb ai/a 2.08 % v/v	21.3 oz/a 18 oz/a 1 qt/a		PRE	A 4lf Rice C 4lf Rice C	0.0	100.0	0.0	92.5	100.0	91.3
5	Command Rebel EX MSO	0.5 lb ai/a 0.285 lb ai/a 2.08 % v/v	21.3 oz/a 18 oz/a 1 qt/a		PRE	A 4lf Rice C 4lf Rice C	0.0	100.0	10.0	93.8	100.0	90.0
6	Command Grasp Facet MSO	0.5 lb ai/a 0.036 lb ai/a 0.375 lb ai/a 2.08 % v/v	21.3 oz/a 2.3 oz/a 0.5 lb/a 1 qt/a		PRE	A 4lf Rice C 4lf Rice C 4lf Rice C	0.0	100.0	0.0	91.3	100.0	85.0
7	Command Grasp Xtra Facet MSO	0.5 lb ai/a 0.325 lb ai/a 0.375 lb ai/a 2.08 % v/v	21.3 oz/a 18 oz/a 0.5 lb/a 1 qt/a		PRE	A 4lf Rice C 4lf Rice C 4lf Rice C	0.0	100.0	17.5	96.3	100.0	92.5
8	Prowl H2O MSO	1 lb ai/a 2.08 % v/v	2.1 pt/a 1 qt/a		1f Rice B	1f Rice B	0.0	75.0	10.0	88.8	0.0	76.3
9	Prowl H2O Grasp MSO	1 lb ai/a 0.036 lb ai/a 2.08 % v/v	2.1 pt/a 2.3 oz/a 1 qt/a		1f Rice B	1f Rice B 1f Rice B	90.0	90.0	100.0	96.3	96.3	97.5
10	Prowl H2O Grasp MSO Grandstand Permit MSO	1 lb ai/a 0.036 lb ai/a 2.08 % v/v 0.21 lb ai/a 0.0234 lb ai/a 2.08 % v/v	2.1 pt/a 2.3 oz/a 1 qt/a 9 oz/a 0.5 oz/a 1 qt/a		1f Rice B	1f Rice B 1f Rice B 1f Rice B 4lf Rice C 4lf Rice C 4lf Rice C	90.0	90.0	100.0	97.5	100.0	93.8
11	Prowl H2O Rebel EX MSO	1 lb ai/a 0.285 lb ai/a 2.08 % v/v	2.1 pt/a 18 oz/a 1 qt/a		1f Rice B	1f Rice B 1f Rice B	96.3	97.5	98.8	97.0	97.5	96.3
12	Prowl H2O Rebel EX MSO Grandstand Permit MSO	1 lb ai/a 0.285 lb ai/a 2.08 % v/v 0.21 lb ai/a 0.0234 lb ai/a 2.08 % v/v	2.1 pt/a 18 oz/a 1 qt/a 9 oz/a 0.5 oz/a 1 qt/a		1f Rice B	1f Rice B 1f Rice B 1f Rice B 4lf Rice C 4lf Rice C 4lf Rice C	96.3	97.5	100.0	98.8	100.0	98.8
13	Prowl H2O Clincher MSO Grandstand Permit MSO	1 lb ai/a 0.0179 lb ai/a 2.08 % v/v 0.21 lb ai/a 0.0234 lb ai/a 2.08 % v/v	2.1 pt/a 12 oz/a 1 qt/a 9 oz/a 0.5 oz/a 1 qt/a		1f Rice B	1f Rice B 1f Rice B 1f Rice B 4lf Rice C 4lf Rice C 4lf Rice C	0.0	41.3	43.8	91.3	100.0	92.5
14	Prowl H2O Clincher MSO Grasp Xtra MSO	1 lb ai/a 0.0179 lb ai/a 2.08 % v/v 0.325 lb ai/a 2.08 % v/v	2.1 pt/a 12 oz/a 1 qt/a 18 oz/a 1 qt/a		1f Rice B	1f Rice B 1f Rice B 1f Rice B 4lf Rice C 4lf Rice C	0.0	41.3	20.0	93.8	100.0	96.3
15	Prowl H2O Facet MSO Grasp Xtra MSO	1 lb ai/a 0.375 lb ai/a 2.08 % v/v 0.325 lb ai/a 2.08 % v/v	2.1 pt/a 0.5 lb/a 1 qt/a 18 oz/a 1 qt/a		1f Rice B	1f Rice B 1f Rice B 1f Rice B 4lf Rice C 4lf Rice C	92.5	92.5	100.0	99.3	100.0	96.3
LSD (P=.05)		2.30	18.54				22.16	7.42	2.47			10.68
Standard Deviation		1.61	12.97				15.51	5.20	1.73			7.47
CV		5.2	15.88				37.22	5.87	2.17			8.72
Bartlett's X2		1.449	49.962				12.617	20.422	0.006			23.752
P(Bartlett's X2)		0.485	0.001*				0.077	0.085	0.94			0.033*
Replicate F		0.427	1.182				2.583	12.113	1.993			11.028
Replicate Prob(F)		0.7343	0.3280				0.0660	0.0001	0.1296			0.0001
Treatment F		3173.428	21.662				31.910	90.200	2266.590			42.583
Treatment Prob(F)		0.0001	0.0001				0.0001	0.0001	0.0001			0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Preflood weed control programs with Grasp and Clincher.

Trial ID: HRI-32210 Protocol ID: HRI-32210
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code						LEFPA	PLAEME C	PLAEME C	PLAEME C	
Pest Name						Tighthead sprae>	9/16/2010	9/16/2010	9/16/2010	
Part Rated						PLADEA P	WEIGHT	MOICON	YIELD	
Rating Date						6/24/2010	lb/plot	percent	BU	
Rating Type						CONTRO				
Rating Unit						percent				
Crop Stage Majority						3wk POFL				
Pest Stage Majority						heading				
Trt-Eval Interval						23 DA-C	107 DA-C	107 DA-C	107 DA-C	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	13	14	15	16
1	Untreated Check						0.0	0.00	0.00	0.0
2	Command	0.5 lb ai/a	21.3 oz/a		PRE	A	50.0	0.00	0.00	0.0
3	Command Grasp MSO	0.5 lb ai/a 0.036 lb ai/a 2.08 % v/v	21.3 oz/a 2.3 oz/a 1 qt/a		PRE	A 4lf Rice C 4lf Rice C	63.8	14.97	7.80	96.3
4	Command Grasp Xtra MSO	0.5 lb ai/a 0.325 lb ai/a 2.08 % v/v	21.3 oz/a 18 oz/a 1 qt/a		PRE	A 4lf Rice C 4lf Rice C	52.5	15.27	6.40	99.5
5	Command Rebel EX MSO	0.5 lb ai/a 0.285 lb ai/a 2.08 % v/v	21.3 oz/a 18 oz/a 1 qt/a		PRE	A 4lf Rice C 4lf Rice C	78.8	17.17	8.03	110.3
6	Command Grasp Facet MSO	0.5 lb ai/a 0.036 lb ai/a 0.375 lb ai/a 2.08 % v/v	21.3 oz/a 2.3 oz/a 0.5 lb/a 1 qt/a		PRE	A 4lf Rice C 4lf Rice C 4lf Rice C	50.0	6.33	7.57	40.9
7	Command Grasp Xtra Facet MSO	0.5 lb ai/a 0.325 lb ai/a 0.375 lb ai/a 2.08 % v/v	21.3 oz/a 18 oz/a 0.5 lb/a 1 qt/a		PRE	A 4lf Rice C 4lf Rice C 4lf Rice C	65.0	13.38	9.30	84.6
8	Prowl H2O MSO	1 lb ai/a 2.08 % v/v	2.1 pt/a 1 qt/a		1f Rice B	1f Rice B	40.0	0.00	0.00	0.0
9	Prowl H2O Grasp MSO	1 lb ai/a 0.036 lb ai/a 2.08 % v/v	2.1 pt/a 2.3 oz/a 1 qt/a		1f Rice B	1f Rice B	92.5	12.95	8.80	82.4
10	Prowl H2O Grasp MSO Grandstand Permit MSO	1 lb ai/a 0.036 lb ai/a 2.08 % v/v 0.21 lb ai/a 0.0234 lb ai/a 2.08 % v/v	2.1 pt/a 2.3 oz/a 1 qt/a 9 oz/a 0.5 oz/a 1 qt/a		1f Rice B	1f Rice B	93.8	17.10	6.73	111.3
11	Prowl H2O Rebel EX MSO	1 lb ai/a 0.285 lb ai/a 2.08 % v/v	2.1 pt/a 18 oz/a 1 qt/a		1f Rice B	1f Rice B	92.5	16.00	5.40	105.8
12	Prowl H2O Rebel EX MSO Grandstand Permit MSO	1 lb ai/a 0.285 lb ai/a 2.08 % v/v 0.21 lb ai/a 0.0234 lb ai/a 2.08 % v/v	2.1 pt/a 18 oz/a 1 qt/a 9 oz/a 0.5 oz/a 1 qt/a		1f Rice B	1f Rice B	94.5	18.27	8.65	116.6
13	Prowl H2O Clincher MSO Grandstand Permit MSO	1 lb ai/a 0.0179 lb ai/a 2.08 % v/v 0.21 lb ai/a 0.0234 lb ai/a 2.08 % v/v	2.1 pt/a 12 oz/a 1 qt/a 9 oz/a 0.5 oz/a 1 qt/a		1f Rice B	1f Rice B	91.3	16.63	6.90	108.1
14	Prowl H2O Clincher MSO Grasp Xtra MSO	1 lb ai/a 0.0179 lb ai/a 2.08 % v/v 0.325 lb ai/a 2.08 % v/v	2.1 pt/a 12 oz/a 1 qt/a 18 oz/a 1 qt/a		1f Rice B	1f Rice B	92.5	16.75	6.23	109.9
15	Prowl H2O Facet MSO Grasp Xtra MSO	1 lb ai/a 0.375 lb ai/a 2.08 % v/v 0.325 lb ai/a 2.08 % v/v	2.1 pt/a 0.5 lb/a 1 qt/a 18 oz/a 1 qt/a		1f Rice B	1f Rice B	92.5	19.73	9.67	124.1
LSD (P=.05)							18.44	3.634	2.837	22.98
Standard Deviation							12.90	2.517	1.965	15.91
CV							18.44	20.46	32.22	20.07
Bartlett's X2							42.524	11.676	16.72	12.541
P(Bartlett's X2)							0.001*	0.388	0.116	0.324
Replicate F							3.890	1.587	0.838	1.600
Replicate Prob(F)							0.0153	0.2123	0.4836	0.2093
Treatment F							18.346	31.432	11.754	32.627
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Preflood weed control programs with Grasp and Clincher.

Trial ID: HRI-32210 Protocol ID: HRI-32210
Location: Rohwer, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US
LEFPA, *Leptochloa panicoides*, = US

Part Rated

PLADEA = plant - dead
PLAEME = plant - emerged
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown
WEIGHT = weight
MOICON = moisture content
YIELD = yield

Rating Unit

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 6.146032*14*(100-@MVAVGREP(15))/88

University of Arkansas-Division of Agriculture

Weed control programs in Clearfield rice with Grasp and Clincher.

Trial ID: HRI-32310 Protocol ID: HRI-32310
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description	
Crop 1: ORYSA Oryza sativa Common rice Variety: CL 131 BBCH Scale: BRIC Planting Date: 4/19/2010 Planting Method: DRILLE drilled Rate, Unit: 90 LB/A Depth, Unit: 1.25 IN Row Spacing, Unit: 7.5 IN Seed Bed: MEDIUM medium Soil Moisture: DRY dry Emergence Date: 5/3/2010	

Pest Description	
Pest 1 Type: W Code: SEBEX Sesbania exaltata Common Name: Hemp sesbania	
Pest 2 Type: W Code: ECHCG Echinochloa crus-galli Common Name: Common barnyardgrass	
Pest 3 Type: W Code: LEFPA Leptochloa panicoides Common Name: Tighthead sprangletop	

Site and Design	
Plot Width, Unit: 6.33 FT Plot Length, Unit: 28 FT Plot Area, Unit: 177.24 FT ² Replications: 4	Site Type: FIELD field Experimental Unit: 1 PLOT plot Tillage Type: CONTIL conventional-till Study Design: RACOBL Randomized Complete Block (RCB) Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance				
No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A

Soil Description	
Description Name: Rohwer Clay Blocks % Sand: 3.5 % OM: 1 Texture: CLAY % Silt: 37.4 pH: 7.3 Soil Name: Sharkey Clay % Clay: 59.1 CEC: 38	

Application Description			
	A	B	C
Application Date:	5/18/2010	6/1/2010	6/11/2010
Time of Day:	PM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	EAPOCR	LAPOCR	1 wk POFL
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	JM	JM	JM
Air Temperature, Unit:	68.9 F	84.4 F	80.3 F
% Relative Humidity:	72.80	67.61	85.09
Wind Velocity, Unit:	4.60 MPH	0.95 MPH	5.24 MPH
Wind Direction:	WSW	E	NE
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	72.1 F	80.0 F	80.6 F

Crop Stage At Each Application			
	A	B	C
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W	SEBEX W
Stage Majority, Percent:	2-3 lf	2-12"	6-24"
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Stage Majority, Percent:	1-2 lf	1 till	headin
Pest 3 Code, Type, Scale:	LEFPA W	LEFPA W	LEFPA W
Stage Majority, Percent:	1-2 lf	1 till	headin

University of Arkansas-Division of Agriculture

Weed control programs in Clearfield rice with Grasp and Clincher.

Trial ID: HRI-32310 Protocol ID: HRI-32310
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Application Equipment			
	A	B	C
Appl. Equipment:	Hand Boom	Hand Boom	
Equipment Type:	BACSPR	BACSPR	
Operating Pressure, Unit:	45 PSI	45 PSI	
Nozzle Type:	AM FF	AM FF	
Nozzle Size:	110015	110015	
Nozzle Spacing, Unit:	19 IN	19 IN	
Carrier:	WATER	WATER	
Spray Volume, Unit:	12 gal/ac	12 gal/ac	
Mix Size, Unit:	3 liters	3 liters	
Propellant:	COMCO2	COMCO2	
Tank Mix (Y/N):	Y yes	Y yes	

University of Arkansas-Division of Agriculture

Weed control programs in Clearfield rice with Grasp and Clincher.

Trial ID: HRI-32310 Protocol ID: HRI-32310
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		SEBEX		ECHCG		SEBEX		ECHCG		SEBEX	
Pest Name		Hemp sesbania		Common barnyar>		Hemp sesbania		Common barnyar>		Hemp sesbania	
Part Rated		PLAEME P		PLAEME P		PLAEME P		PLAEME P		PLAEME P	
Rating Date		5/27/2010		5/27/2010		6/3/2010		6/3/2010		6/11/2010	
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO	
Rating Unit		percent		percent		percent		percent		percent	
Crop Stage Majority		4-5 leaf		4-5 leaf		Preflood		Preflood		1wk POFL	
Pest Stage Majority		2-5 inch		1 tiller		2-12 in		2 tiller		2-24 in	
Tri-Eval Interval		9 DA-A		9 DA-A		16 DA-A		16 DA-A		10 DA-B	
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	1	2	3	4	5
1	Untreated Check						0.0	0.0	0.0	67.5	0.0
2	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	85.0	0.0	90.0	0.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
3	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	99.5	92.5	100.0	99.0	98.8
	Rebel EX	0.285 lb ai/a	18 oz/a		EPost	A					
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
4	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	99.5	94.0	100.0	98.3	97.5
	Grasp Xtra	0.285 lb ai/a	16 oz/a		EPost	A					
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
5	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	85.0	0.0	90.0	97.5
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	Grasp Xtra	0.325 lb ai/a	18 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
6	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	85.0	0.0	90.0	100.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	Rebel EX	0.285 lb ai/a	18 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
7	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	85.0	0.0	90.0	0.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
8	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	85.0	0.0	90.0	0.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Grasp Xtra	0.325 lb ai/a	18 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
9	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	85.0	0.0	90.0	0.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Grasp Xtra	0.36 lb ai/a	20 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
10	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	85.0	0.0	90.0	0.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Rebel EX	0.317 lb ai/a	20 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
11	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	85.0	0.0	90.0	0.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Clincher	0.0223 lb ai/a	15 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
12	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	85.0	0.0	90.0	0.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Grasp	0.039 lb ai/a	2.5 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
LSD (P=.05)							0.56	2.27	0.00	18.86	2.86
Standard Deviation							0.39	1.57	0.00	13.06	1.98
CV							2.35	1.98	0.0	14.58	6.04
Bartlett's X2							0.0	0.631	0.0	29.083	1.532
P(Bartlett's X2)							.	0.427	.	0.001*	0.465
Replicate F							2.200	1.000	0.000	0.911	3.313
Replicate Prob(F)							0.1066	0.4051	1.0000	0.4463	0.0318
Treatment F							39601.004	1025.390	0.000	1.392	2391.362
Treatment Prob(F)							0.0001	0.0001	1.0000	0.2227	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Weed control programs in Clearfield rice with Grasp and Clincher.

Trial ID: HRI-32310 Protocol ID: HRI-32310
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	ECHCG	LEFPA	SEBEX	ECHCG	LEFPA						
Pest Name	Common barnyar>	Tighthead spr>	Hemp sesbania	Common barnyar>	Tighthead spr>						
Part Rated	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P						
Rating Date	6/11/2010	6/11/2010	6/17/2010	6/17/2010	6/17/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent	percent	percent						
Crop Stage Majority	1wk POFL	1wk POFL	2wk POFL	2wk POFL	2wk POFL						
Pest Stage Majority	heading	heading	6-36 in	heading	heading						
Trt-Eval Interval	10 DA-B	10 DA-B	6 DA-C	6 DA-C	6 DA-C						
Trt No.	Treatment Name	Rate	Other Unit	Other Rate	Growth Stage	Appl Code	6	7	8	9	10
1	Untreated Check						0.0	0.0	0.0	0.0	0.0
2	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	100.0	100.0	0.0	100.0	98.8
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
3	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	100.0	100.0	97.5	98.8	98.8
	Rebel EX	0.285 lb ai/a	18 oz/a		EPost	A					
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
4	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	100.0	100.0	96.3	100.0	100.0
	Grasp Xtra	0.285 lb ai/a	16 oz/a		EPost	A					
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
5	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	100.0	100.0	100.0	97.5	93.8
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	Grasp Xtra	0.325 lb ai/a	18 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
6	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	100.0	100.0	100.0	100.0	93.8
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	Rebel EX	0.285 lb ai/a	18 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
7	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	0.0	0.0	100.0	100.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
8	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	0.0	80.0	100.0	100.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Grasp Xtra	0.325 lb ai/a	18 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
9	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	0.0	81.3	100.0	100.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Grasp Xtra	0.36 lb ai/a	20 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
10	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	0.0	90.0	100.0	100.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Rebel EX	0.317 lb ai/a	20 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
11	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	0.0	0.0	100.0	100.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Clincher	0.0223 lb ai/a	15 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
12	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	0.0	95.0	100.0	100.0
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Grasp	0.039 lb ai/a	2.5 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
LSD (P=.05)							0.00	0.00	3.91	2.36	4.04
Standard Deviation							0.00	0.00	2.71	1.63	2.80
CV							0.0	0.0	4.39	1.79	3.09
Bartlett's X2							0.0	0.0	1.439	1.321	4.931
P(Bartlett's X2)							.	.	0.837	0.25	0.177
Replicate F							0.000	0.000	0.948	0.716	0.710
Replicate Prob(F)							1.0000	1.0000	0.4286	0.5495	0.5532
Treatment F							0.000	0.000	1155.155	1242.089	417.097
Treatment Prob(F)							1.0000	1.0000	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Weed control programs in Clearfield rice with Grasp and Clincher.

Trial ID: HRI-32310 Protocol ID: HRI-32310
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		SEBEX		ECHCG		LEFPA		PLAEME C			
Pest Name		Hemp sesbania		Common barnyar>		Tighthead spr>		PLAEME C			
Part Rated		PLAEME P		PLAEME P		PLAEME P		PHYSTU			
Rating Date		6/24/2010		6/24/2010		6/24/2010		6/24/2010			
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO			
Rating Unit		percent		percent		percent		percent			
Crop Stage Majority		3wk POFL		3wk POFL		3wk POFL		3wk POFL			
Pest Stage Majority		6-60 in		heading		heading		heading			
Trt-Eval Interval		13 DA-C		13 DA-C		13 DA-C		13 DA-C			
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	11	12	13	14	
1	Untreated Check						0.0	0.0	0.0	0.0	
2	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	98.8	97.5	0.0	
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
3	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	92.5	100.0	99.5	0.0	
	Rebel EX	0.285 lb ai/a	18 oz/a		EPost	A					
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
4	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	93.8	97.5	98.8	0.0	
	Grasp Xtra	0.285 lb ai/a	16 oz/a		EPost	A					
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
5	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	100.0	92.5	92.5	0.0	
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	Grasp Xtra	0.325 lb ai/a	18 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
6	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	100.0	92.5	86.3	0.0	
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	Rebel EX	0.285 lb ai/a	18 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
7	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	100.0	100.0	0.0	
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
8	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	100.0	100.0	100.0	60.0	
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Grasp Xtra	0.325 lb ai/a	18 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
9	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	100.0	100.0	100.0	60.0	
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Grasp Xtra	0.36 lb ai/a	20 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
10	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	100.0	100.0	100.0	0.0	
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Rebel EX	0.317 lb ai/a	20 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
11	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	0.0	100.0	100.0	0.0	
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Clincher	0.0223 lb ai/a	15 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
12	Newpath	0.0625 lb ai/a	4 oz/a		EPost	A	100.0	100.0	100.0	0.0	
	MSO	2.08 % v/v	1 qt/a		EPost	A					
	Newpath	0.0625 lb ai/a	4 oz/a		LPost	B					
	MSO	2.08 % v/v	1 qt/a		LPost	B					
	Beyond	0.039 lb ai/a	5 oz/a		1wk POFL	C					
	Grasp	0.039 lb ai/a	2.5 oz/a		1wk POFL	C					
	MSO	2.08 % v/v	1 qt/a		1wk POFL	C					
LSD (P=.05)											
Standard Deviation											
CV											
Bartlett's X2											
P(Bartlett's X2)											
Replicate F											
Replicate Prob(F)											
Treatment F											
Treatment Prob(F)											

University of Arkansas-Division of Agriculture**Weed control programs in Clearfield rice with Grasp and Clincher.**

Trial ID: HRI-32310 Protocol ID: HRI-32310
Location: Rohwer, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US
LEFPA, *Leptochloa panicoides*, = US

Part Rated

PLAEME = plant - emerged
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown
PHYSTU = phytotoxicity - stunting

University of Arkansas-Division of Agriculture

Broadhead timing study.

Trial ID: HRI-32410 Protocol ID: HRI-32410
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
 Planting Method: DRILLE drilled
 Depth, Unit: 1.25 IN
 Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
 Soil Moisture: DRY dry **Emergence Date:** 5/3/2010

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
 Common Name: Hemp sesbania

Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
 Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	4/20/2010	Command	0.5	LB A/A
2.	6/2/2010	Urea	225	LB/A
3.	6/15/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A	B	C	D
Application Date:	4/20/2010	5/18/2010	5/25/2010	6/1/2010
Time of Day:	AM	PM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PREMCR	EAPOCR	MIPOCR	LAPOCR
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL
Applied By:	JM	JM	JM	JM
Air Temperature, Unit:	62.5 F	77.6 F	80.8 F	84.4 F
% Relative Humidity:	50.40	48.81	66.57	67.61
Wind Velocity, Unit:	4.15 MPH	5.5 MPH	1.95 MPH	0.95 MPH
Wind Direction:	S	SSW	SW	E
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	63.8 F	76.9 F	78.9 F	80.0 F

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W	SEBEX W	SEBEX W
Stage Majority, Percent:		2-3 lf	2-8"	2-12"
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W	ECHCG W
Stage Majority, Percent:		1-3 lf	1 till	2 till

Application Equipment

	A	B	C	D
Appl. Equipment:	Tractor	Hand Boom	Hand Boom	Hand Boom
Equipment Type:	SPTRMO	BACSPR	BACSPR	BACSPR
Operating Pressure, Unit:	50 PSI	45 PSI	45 PSI	45 PSI
Nozzle Type:	AM FF	AM FF	AM FF	AM FF
Nozzle Size:	110015	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	19 IN
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters	3 liters	3 liters
Propellant:	COMCO2	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes	Y yes

University of Arkansas-Division of Agriculture

Broadhead timing study.

Trial ID: HRI-32410 Protocol ID: HRI-32410
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		SEBEX		ECHCG		SEBEX		ECHCG		LEFPA		SEBEX	
Pest Name		Hemp sesbania		Common barnyar>		Hemp sesbania		Common barnyar>		Tighthead spr>		Hemp sesbania	
Part Rated		PLAEME P		PLAEME P		PLAEME P		PLAEME P		PLAEME P		PLAEME P	
Rating Date		5/27/2010		5/27/2010		6/3/2010		6/3/2010		6/3/2010		6/11/2010	
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO	
Rating Unit		percent		percent		percent		percent		percent		percent	
Crop Stage Majority		4-5 leaf		4-5 leaf		Preflood		Preflood		Preflood		1wk POFL	
Pest Stage Majority		2-6 in		1 tiller		2-10 in		2 tiller		2 tiller		2-24 in	
Trt-Eval Interval		9 DA-B		9 DA-B		9 DA-C		9 DA-C		9 DA-C		10 DA-D	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4	5	6	
1	Treated Check Command	0.5 lb ai/a	21.3 oz/a		PRE	A	0.0	20.0	0.0	90.0	80.0	0.0	
2	Command Broadhead COC	0.5 lb ai/a 0.263 lb ai/a 1 % v/v	21.3 oz/a 6 oz/a 15.4 oz/a		PRE 1-2 lf 1-2 lf	A B B	100.0	94.5	93.8	91.3	83.8	100.0	
3	Command Broadhead COC	0.5 lb ai/a 0.35 lb ai/a 1 % v/v	21.3 oz/a 8 oz/a 15.4 oz/a		PRE 1-2 lf 1-2 lf	A B B	100.0	91.3	96.3	93.8	87.5	100.0	
4	Command Broadhead COC	0.5 lb ai/a 0.438 lb ai/a 1 % v/v	21.3 oz/a 10 oz/a 15.4 oz/a		PRE 1-2 lf 1-2 lf	A B B	100.0	93.3	100.0	95.8	92.0	100.0	
5	Command Broadhead COC	0.5 lb ai/a 0.525 lb ai/a 1 % v/v	21.3 oz/a 12 oz/a 15.4 oz/a		PRE 1-2 lf 1-2 lf	A B B	100.0	95.8	96.3	92.5	88.8	100.0	
6	Command Aim COC	0.5 lb ai/a 0.0156 lb ai/a 1 % v/v	21.3 oz/a 1 oz/a 15.4 oz/a		PRE 1-2 lf 1-2 lf	A B B	100.0	83.8	92.5	90.0	77.5	92.5	
7	Command Broadhead COC	0.5 lb ai/a 0.263 lb ai/a 1 % v/v	21.3 oz/a 6 oz/a 15.4 oz/a		PRE 3-4 lf 3-4 lf	A C C	0.0	0.0	93.8	88.8	80.0	98.8	
8	Command Broadhead COC	0.5 lb ai/a 0.35 lb ai/a 1 % v/v	21.3 oz/a 8 oz/a 15.4 oz/a		PRE 3-4 lf 3-4 lf	A C C	0.0	0.0	96.3	92.5	85.0	100.0	
9	Command Broadhead COC	0.5 lb ai/a 0.438 lb ai/a 1 % v/v	21.3 oz/a 10 oz/a 15.4 oz/a		PRE 3-4 lf 3-4 lf	A C C	0.0	0.0	95.0	90.0	85.0	100.0	
10	Command Broadhead COC	0.5 lb ai/a 0.525 lb ai/a 1 % v/v	21.3 oz/a 12 oz/a 15.4 oz/a		PRE 3-4 lf 3-4 lf	A C C	0.0	0.0	98.8	88.8	77.5	100.0	
11	Command Aim COC	0.5 lb ai/a 0.0156 lb ai/a 1 % v/v	21.3 oz/a 1 oz/a 15.4 oz/a		PRE 3-4 lf 3-4 lf	A C C	0.0	0.0	97.5	87.5	73.8	90.0	
12	Command Broadhead COC	0.5 lb ai/a 0.263 lb ai/a 1 % v/v	21.3 oz/a 6 oz/a 15.4 oz/a		PRE 5-6 lf 5-6 lf	A D D	0.0	0.0	0.0	0.0	0.0	85.0	
13	Command Broadhead COC	0.5 lb ai/a 0.35 lb ai/a 1 % v/v	21.3 oz/a 8 oz/a 15.4 oz/a		PRE 5-6 lf 5-6 lf	A D D	0.0	0.0	0.0	0.0	0.0	96.3	
14	Command Broadhead COC	0.5 lb ai/a 0.438 lb ai/a 1 % v/v	21.3 oz/a 10 oz/a 15.4 oz/a		PRE 5-6 lf 5-6 lf	A D D	0.0	0.0	0.0	0.0	0.0	97.5	
15	Command Broadhead COC	0.5 lb ai/a 0.525 lb ai/a 1 % v/v	21.3 oz/a 12 oz/a 15.4 oz/a		PRE 5-6 lf 5-6 lf	A D D	0.0	0.0	0.0	0.0	0.0	98.8	
16	Command Aim COC	0.5 lb ai/a 0.0156 lb ai/a 1 % v/v	21.3 oz/a 1 oz/a 15.4 oz/a		PRE 5-6 lf 5-6 lf	A D D	0.0	0.0	0.0	0.0	0.0	96.3	
LSD (P=.05)							0.00	14.77	4.67	4.29	7.11	8.34	
Standard Deviation							0.00	10.33	3.27	3.00	4.97	5.84	
CV							0.0	34.55	5.45	4.8	8.74	6.42	
Bartlett's X2							0.0	34.954	6.747	9.463	4.557	23.18	
P(Bartlett's X2)							.	0.001*	0.564	0.305	0.871	0.001*	
Replicate F							0.000	0.844	0.974	1.913	2.247	1.375	
Replicate Prob(F)							1.0000	0.4772	0.4134	0.1410	0.0958	0.2626	
Treatment F							0.000	70.505	862.987	844.631	257.465	71.206	
Treatment Prob(F)							1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Broadhead timing study.

Trial ID: HRI-32410 Protocol ID: HRI-32410
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	ECHCG	LEFPA	SEBEX	ECHCG	LEFPA						
Pest Name	Common barnyar>	Tighthhead spra>	Hemp sesbania	Common barnyar>	Tighthhead spra>						
Part Rated	PLAEME P	PLAEME P	PLAEME P	PLAEME P	PLAEME P						
Rating Date	6/11/2010	6/11/2010	6/17/2010	6/17/2010	6/17/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent	percent	percent						
Crop Stage Majority	1wk POFL	1wk POFL	2wk POFL	2wk POFL	2wk POFL						
Pest Stage Majority	heading	heading	2-24 in	heading	heading						
Trt-Eval Interval	10 DA-D	10 DA-D	16 DA-D	16 DA-D	16 DA-D						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	7	8	9	10	11
1	Treated Check Command	0.5 lb ai/a	21.3 oz/a		PRE	A	22.5	20.0	0.0	25.0	10.0
2	Command Broadhead COC	0.5 lb ai/a 0.263 lb ai/a 1 % v/v	21.3 oz/a 6 oz/a 15.4 oz/a		1-2 lf	A B B	98.8	90.0	100.0	90.0	72.5
3	Command Broadhead COC	0.5 lb ai/a 0.35 lb ai/a 1 % v/v	21.3 oz/a 8 oz/a 15.4 oz/a		1-2 lf	A B B	100.0	91.3	100.0	90.0	80.0
4	Command Broadhead COC	0.5 lb ai/a 0.438 lb ai/a 1 % v/v	21.3 oz/a 10 oz/a 15.4 oz/a		1-2 lf	A B B	98.8	95.0	100.0	92.5	81.3
5	Command Broadhead COC	0.5 lb ai/a 0.525 lb ai/a 1 % v/v	21.3 oz/a 12 oz/a 15.4 oz/a		1-2 lf	A B B	98.8	90.0	100.0	90.0	80.0
6	Command Aim COC	0.5 lb ai/a 0.0156 lb ai/a 1 % v/v	21.3 oz/a 1 oz/a 15.4 oz/a		1-2 lf	A B B	83.8	75.0	92.5	62.5	32.5
7	Command Broadhead COC	0.5 lb ai/a 0.263 lb ai/a 1 % v/v	21.3 oz/a 6 oz/a 15.4 oz/a		3-4 lf	A C C	95.0	81.3	100.0	87.5	62.5
8	Command Broadhead COC	0.5 lb ai/a 0.35 lb ai/a 1 % v/v	21.3 oz/a 8 oz/a 15.4 oz/a		3-4 lf	A C C	93.8	82.5	100.0	87.5	70.0
9	Command Broadhead COC	0.5 lb ai/a 0.438 lb ai/a 1 % v/v	21.3 oz/a 10 oz/a 15.4 oz/a		3-4 lf	A C C	96.3	87.5	100.0	90.0	73.8
10	Command Broadhead COC	0.5 lb ai/a 0.525 lb ai/a 1 % v/v	21.3 oz/a 12 oz/a 15.4 oz/a		3-4 lf	A C C	92.5	83.8	100.0	82.5	71.3
11	Command Aim COC	0.5 lb ai/a 0.0156 lb ai/a 1 % v/v	21.3 oz/a 1 oz/a 15.4 oz/a		3-4 lf	A C C	83.8	73.8	96.3	77.5	55.0
12	Command Broadhead COC	0.5 lb ai/a 0.263 lb ai/a 1 % v/v	21.3 oz/a 6 oz/a 15.4 oz/a		5-6 lf	A D D	86.3	76.3	96.3	85.0	70.0
13	Command Broadhead COC	0.5 lb ai/a 0.35 lb ai/a 1 % v/v	21.3 oz/a 8 oz/a 15.4 oz/a		5-6 lf	A D D	90.0	82.5	96.3	85.0	71.3
14	Command Broadhead COC	0.5 lb ai/a 0.438 lb ai/a 1 % v/v	21.3 oz/a 10 oz/a 15.4 oz/a		5-6 lf	A D D	87.5	81.3	97.5	80.0	63.8
15	Command Broadhead COC	0.5 lb ai/a 0.525 lb ai/a 1 % v/v	21.3 oz/a 12 oz/a 15.4 oz/a		5-6 lf	A D D	91.3	85.0	100.0	87.5	75.0
16	Command Aim COC	0.5 lb ai/a 0.0156 lb ai/a 1 % v/v	21.3 oz/a 1 oz/a 15.4 oz/a		5-6 lf	A D D	76.3	67.5	90.0	0.0	0.0
LSD (P=.05)							16.79	16.95	4.48	22.94	16.78
Standard Deviation							11.75	11.86	3.14	16.05	11.74
CV							13.48	15.03	3.42	21.18	19.39
Bartlett's X2							70.109	58.808	0.998	53.412	16.792
P(Bartlett's X2)							0.001*	0.001*	0.91	0.001*	0.267
Replicate F							2.897	0.670	0.463	6.248	6.692
Replicate Prob(F)							0.0453	0.5748	0.7093	0.0012	0.0008
Treatment F							9.914	8.489	247.496	10.591	17.746
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Broadhead timing study.

Trial ID: HRI-32410 Protocol ID: HRI-32410
Location: Rohwer, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US
LEFPA, *Leptochloa panicoides*, = US

Part Rated

PLAEME = plant - emerged
P = Pest is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Management options for shattered CL Rice Volunteers-Year 1

Trial ID: HRI-32510
 Location: Rohwer, AR
 Study Director: Kenneth Smith
 Investigator: Kenneth Smith
 Sponsor Contact:

Crop 1:		Crop Description
ORYSA	Oryza sativa Common rice	
Variety:	CL131	
BBCH Scale:	BRIC	Planting Date: 5/11/2010
Planting Method:	DRILLE drilled	Rate, Unit: 90 LB/A
Depth, Unit:	1 IN	
Row Spacing, Unit:	7.5 IN	
Seed Bed:	MEDIUM medium	Emergence Date: 5/18/2010
Soil Moisture:	GOOD good	
Harvest Date:	9/6/2010	
Harvested Width, Unit:	6.33 FT	Harvested Length, Unit: 22 FT

Site and Design	
Plot Width, Unit: 6.33 FT	Site Type: FIELD field
Plot Length, Unit: 25 FT	Experimental Unit: 1 PLOT plot
Plot Area, Unit: 158.25 FT ²	Tillage Type: CONTIL conventional-till
Replications: 4	Study Design: RACOB� Randomized Complete Block (RCB)
	Untreated Arrangement: INCLUDED single control randomized in each block

Previous Crops	Year
1. Clearfield Rice	2009

Maintenance					
No.	Date	Maintenance Treatment Name	Rate	Rate Unit	Tank Mix
1.	6/14/2010	Ricestar HT	24	OZ/A	yes
2.	6/14/2010	Aim	2	OZ/A	yes
3.	6/14/2010	COC	1	% V/V	yes
4.	6/15/2010	Urea	225	LB/A	
5.	7/7/2010	Urea	225	LB/A	
6.	7/13/2010	Roundup	22	OZ/A	yes
7.	7/13/2010	Blazer	1	PT/A	yes
8.	7/13/2010	Ignite	22	OZ/A	yes
9.	7/13/2010	Blazer	1	PT/A	yes

Soil Description	
Description Name: Rohwer Clay Blocks	
% Sand: 3.5	% OM: 1 Texture: CLAY
% Silt: 37.4	pH: 7.3 Soil Name: Sharkey Clay
% Clay: 59.1	CEC: 38

Application Description				
	A	B	C	D
Application Date:	5/12/2010	5/28/2010	6/14/2010	
Time of Day:	AM	AM	pm	
Application Method:	SPRAY	SPRAY	SPRAY	
Application Placement:	BROFOL	BROFOL	BROFOL	

Crop Stage At Each Application				
	A	B	C	D
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC	ORYSA BRIC	ORYSA BRIC

Application Equipment				
	A	B	C	D
Appl. Equipment:	Hand Boom	Hand Boom	Hand Boom	
Equipment Type:	BACSPR	BACSPR	BACSPR	
Operating Pressure, Unit:	45 PSI	45 PSI	45 PSI	
Nozzle Type:	AM FF	AM FF	AM FF	
Nozzle Size:	110015	110015	110015	
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	
Carrier:	WATER	WATER	WATER	
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac	
Mix Size, Unit:	3 liters	3 liters	3 liters	
Propellant:	COMCO2	COMCO2	COMCO2	
Tank Mix (Y/N):	Y yes	Y yes	Y yes	

University of Arkansas-Division of Agriculture

Management options for shattered CL Rice Volunteers-Year 1

Trial ID: HRI-32510
 Location: Rohwer, AR
 Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code		ORYSS		ORYSS		ORYSS		ORYSS		
Pest Name		Rice		Rice		Rice		Rice		
Part Rated		PLAEME P		PLAMAT C		PLAMAT C		PLAMAT C		
Rating Date		8/26/2010		9/6/2010		9/6/2010		9/6/2010		
Rating Type		CONTRO		WEIGHT		MOICON		YIELD		
Rating Unit		percent		lb/plot		percent		BU		
Crop Stage Majority		Heading		Heading		Heading		Heading		
Pest Stage Majority		Heading		Heading		Heading		Heading		
Trt-Eval Interval										
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	1	2	3	4
1	CL161 CL Rice Newpath Newpath Strada NIS	0.0625 lb ai/a 0.0625 lb ai/a 0.0656 lb ai/a 0.25 % v/v	4 oz/a 4 oz/a 2.1 oz/a 3.84 oz/a		14-21DAP B 14 DAB C 14 DAB C 14 DAB C		17.5	5.68	13.48	34.3
2	CL161 Delay Plant CL Rice Newpath Newpath Strada NIS	0.0625 lb ai/a 0.0625 lb ai/a 0.0656 lb ai/a 0.25 % v/v	4 oz/a 4 oz/a 2.1 oz/a 3.84 oz/a		14-21DAP B 14 DAB C 14 DAB C 14 DAB C		76.3	6.63	13.45	39.6
3	CL161 Fallow Command Broadhead COC	0.5 lb ai/a 0.438 lb ai/a 1 % v/v	21.3 oz/a 10 oz/a 15.4 oz/a		PRE A MPost D MPost D		0.0	7.10	14.85	42.3
4	CL161 Volunteer Rice Newpath Newpath Strada NIS	0.0625 lb ai/a 0.0625 lb ai/a 0.0656 lb ai/a 0.25 % v/v	4 oz/a 4 oz/a 2.1 oz/a 3.84 oz/a		14-21DAP B 14 DAB C 14 DAB C 14 DAB C		0.0	6.13	12.13	37.0
5	CL161 Chemical Fallow (As Needed) Roundup PowerMax Roundup PowerMax	0.77 lb ae/a 0.77 lb ae/a	22 oz/a 22 oz/a		14-21DAP B 14 DAB C		100.0	0.00	0.00	0.0
6	CL161 Fallow (Tillage + Roundup) Roundup PowerMax	0.77 lb ae/a	22 oz/a		14 DAB C		97.5	0.00	0.00	0.0
7	CL161 LL Soybean Ignite 280 Outlook Ignite 280	0.48 lb ai/a 0.75 lb ai/a 0.48 lb ai/a	22 oz/a 16 oz/a 22 oz/a		14-21DAP B 14-21DAP B 14 DAB C		95.0	0.00	0.00	0.0
8	CL161 RR Soybean Roundup PowerMax Outlook Roundup PowerMax	0.77 lb ae/a 0.75 lb ai/a 0.77 lb ae/a	22 oz/a 16 oz/a 22 oz/a		14-21DAP B 14-21DAP B 14 DAB C		97.5	0.00	0.00	0.0
9	CL745 CL Rice Newpath Newpath Strada NIS	0.0625 lb ai/a 0.0625 lb ai/a 0.0656 lb ai/a 0.25 % v/v	4 oz/a 4 oz/a 2.1 oz/a 3.84 oz/a		14-21DAP B 14 DAB C 14 DAB C 14 DAB C		22.5	7.83	7.18	50.5
10	CL745 Delay Plant CL Rice Newpath Newpath Strada NIS	0.0625 lb ai/a 0.0625 lb ai/a 0.0656 lb ai/a 0.25 % v/v	4 oz/a 4 oz/a 2.1 oz/a 3.84 oz/a		14-21DAP B 14 DAB C 14 DAB C 14 DAB C		70.0	6.75	9.83	42.4
11	CL745 Fallow Command Broadhead COC	0.5 lb ai/a 0.438 lb ai/a 1 % v/v	21.3 oz/a 10 oz/a 15.4 oz/a		PRE A MPost D MPost D		0.0	10.60	7.38	68.2
12	CL745 Volunteer Rice Newpath Newpath Strada NIS	0.0625 lb ai/a 0.0625 lb ai/a 0.0656 lb ai/a 0.25 % v/v	4 oz/a 4 oz/a 2.1 oz/a 3.84 oz/a		14-21DAP B 14 DAB C 14 DAB C 14 DAB C		0.0	9.95	7.35	64.0
13	CL745 Chemical Fallow (As Needed) Roundup PowerMax Roundup PowerMax	0.77 lb ae/a 0.77 lb ae/a	22 oz/a 22 oz/a		14-21DAP B 14 DAB C		100.0	0.00	0.00	0.0
14	CL745 Fallow (Tillage + Roundup) Roundup PowerMax	0.77 lb ae/a	22 oz/a		14 DAB C		95.0	0.00	0.00	0.0
15	CL745 LL Soybean Ignite 280 Outlook Ignite 280	0.48 lb ai/a 0.75 lb ai/a 0.48 lb ai/a	22 oz/a 16 oz/a 22 oz/a		14-21DAP B 14-21DAP B 14 DAB C		82.5	0.00	0.00	0.0
16	CL745 RR Soybean Roundup PowerMax Outlook Roundup PowerMax	0.77 lb ae/a 0.75 lb ai/a 0.77 lb ae/a	22 oz/a 16 oz/a 22 oz/a		14-21DAP B 14-21DAP B 14 DAB C		98.8	0.00	0.00	0.0

University of Arkansas-Division of Agriculture

Management options for shattered CL Rice Volunteers-Year 1

Trial ID: HRI-32510
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	ORYSS	ORYSS	ORYSS	ORYSS						
Pest Name	Rice	Rice	Rice	Rice						
Part Rated	PLAEME P	PLAMAT C	PLAMAT C	PLAMAT C						
Rating Date	8/26/2010	9/6/2010	9/6/2010	9/6/2010						
Rating Type	CONTRO	WEIGHT	MOICON	YIELD						
Rating Unit	percent	lb/plot	percent	BU						
Crop Stage Majority	Heading	Heading	Heading	Heading						
Pest Stage Majority	Heading	Heading	Heading	Heading						
Trt-Eval Interval										
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4
17	CL729 CL Rice						7.5	8.00	6.90	51.8
	Newpath	0.0625 lb ai/a	4 oz/a		14-21DAP B					
	Newpath	0.0625 lb ai/a	4 oz/a		14 DAB C					
	Strada	0.0656 lb ai/a	2.1 oz/a		14 DAB C					
	NIS	0.25 % v/v	3.84 oz/a		14 DAB C					
18	CL729 Delay Plant CL Rice						62.5	7.08	9.38	44.7
	Newpath	0.0625 lb ai/a	4 oz/a		14-21DAP B					
	Newpath	0.0625 lb ai/a	4 oz/a		14 DAB C					
	Strada	0.0656 lb ai/a	2.1 oz/a		14 DAB C					
	NIS	0.25 % v/v	3.84 oz/a		14 DAB C					
19	CL729 Fallow						0.0	10.60	6.75	68.7
	Command	0.5 lb ai/a	21.3 oz/a		PRE A					
	Broadhead	0.438 lb ai/a	10 oz/a		MPost D					
	COC	1 % v/v	15.4 oz/a		MPost D					
20	CL729 Volunteer Rice						0.0	11.50	7.80	73.7
	Newpath	0.0625 lb ai/a	4 oz/a		14-21DAP B					
	Newpath	0.0625 lb ai/a	4 oz/a		14 DAB C					
	Strada	0.0656 lb ai/a	2.1 oz/a		14 DAB C					
	NIS	0.25 % v/v	3.84 oz/a		14 DAB C					
21	CL729 Chemical Fallow (As Needed)						97.5	0.00	0.00	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		14-21DAP B					
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		14 DAB C					
22	CL729 Fallow (Tillage + Roundup)						95.0	0.00	0.00	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		14 DAB C					
23	CL729 LL Soybean						70.0	0.00	0.00	0.0
	Ignite 280	0.48 lb ai/a	22 oz/a		14-21DAP B					
	Outlook	0.75 lb ai/a	16 oz/a		14-21DAP B					
	Ignite 280	0.48 lb ai/a	22 oz/a		14 DAB C					
24	CL745 RR Soybean						97.5	0.00	0.00	0.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		14-21DAP B					
	Outlook	0.75 lb ai/a	16 oz/a		14-21DAP B					
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		14 DAB C					
LSD (P=.05)							17.12	2.332	1.718	14.74
Standard Deviation							12.10	1.649	1.215	10.42
CV							21.01	40.46	25.04	40.53
Bartlett's X2							51.015	6.825	21.21	6.861
P(Bartlett's X2)							0.001*	0.813	0.031*	0.81
Replicate F							3.761	12.884	0.424	12.847
Replicate Prob(F)							0.0146	0.0001	0.7366	0.0001
Treatment F							50.340	28.269	78.126	28.749
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 ORYSS, Oryza sp., = US
Part Rated
 PLAEME = plant - emerged
 PLAMAT = plant - mature
 P = Pest is Part Rated
 C = Crop is Part Rated
Rating Type
 CONTRO = control / burndown or knockdown
 WEIGHT = weight
 MOICON = moisture content
 YIELD = yield
Rating Unit
 lb/plot = pounds per plot
 BU = bushel
ARM Action Codes
 TY1 = 6.116904*2*(100-@MVAVGREP(3))/88

University of Arkansas-Division of Agriculture

Evaluation of F7436-13 in rice

Trial ID: HRI-32610 Protocol ID: HRI-32610
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 4/19/2010
Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
 Depth, Unit: 1.25 IN
Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
 Soil Moisture: DRY dry **Emergence Date:** 5/3/2010

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
 Common Name: Hemp sesbania

Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Pest 3 Type: W **Code:** LEFPA Leptochloa panicoides
 Common Name: Tighthead sprangletop

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT² **Tillage Type:** CONTIL conventional-till
 Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/2/2010	Urea	225	LB/A
2.	6/15/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
 % Sand: 3.5 % OM: 1 **Texture:** CLAY
 % Silt: 37.4 pH: 7.3 **Soil Name:** Sharkey Clay
 % Clay: 59.1 CEC: 38

Application Description

	A	B	C
Application Date:	4/20/2010	5/18/2010	5/25/2010
Time of Day:	AM	PM	AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PREMCR	EAPOCR	MIPOCR
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	JM	JM	JM
Air Temperature, Unit:	62.5 F	77.6 F	80.8 F
% Relative Humidity:	50.40	48.81	66.57
Wind Velocity, Unit:	4.15 MPH	5.5 MPH	1.95 MPH
Wind Direction:	S	SSW	SW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	63.8 F	76.9 F	78.9 F

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W	SEBEX W
Stage Majority, Percent:		2-3 lf	3-8"
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Stage Majority, Percent:		1-2 lf	1 till
Pest 3 Code, Type, Scale:	LEFPA W	LEFPA W	LEFPA W
Stage Majority, Percent:		1-2 lf	1 till

University of Arkansas-Division of Agriculture

Evaluation of F7436-13 in rice

Trial ID: HRI-32610 Protocol ID: HRI-32610
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Application Equipment			
	A	B	C
Appl. Equipment:	Tractor		
Equipment Type:	SPTRMO		
Operating Pressure, Unit:	50 PSI		
Nozzle Type:	AM FF		
Nozzle Size:	110015		
Nozzle Spacing, Unit:	19 IN		
Carrier:	WATER		
Spray Volume, Unit:	12 gal/ac		
Mix Size, Unit:	3 liters		
Propellant:	COMCO2		
Tank Mix (Y/N):	Y yes		

University of Arkansas-Division of Agriculture

Evaluation of F7436-13 in rice

Trial ID: HRI-32610 Protocol ID: HRI-32610
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	SEBEX	ECHCG	SEBEX	ECHCG	SEBEX	ECHCG					
Pest Name	Hemp sesbania	Common barnyar>	Hemp sesbania	Common barnyar>	Hemp sesbania	Common barnyar>					
Part Rated	PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P	PLADEA P					
Rating Date	5/11/2010	5/11/2010	5/18/2010	5/18/2010	5/27/2010	5/27/2010					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	percent	percent	percent	percent	percent	percent					
Crop Stage Majority	1 leaf	1 leaf	2-3 leaf	2-3 leaf	4-5 leaf	4-5 leaf					
Pest Stage Majority	1 leaf	1-2 leaf	2-3 leaf	1-3 leaf	2-8 in	1 tiller					
Trt-Eval Interval	21 DA-A	21 DA-A	28 DA-A	28 DA-A	9 DA-B	9 DA-B					
Trt Treatment No. Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code						
	Rate	Unit	Rate	Unit	Code						
						1					
						2					
						3					
						4					
						5					
						6					
1 Untreated Check						0.0	0.0	0.0	0.0	0.0	90.0
2 Command	0.4 lb ai/a	17 oz/a			PRE A	0.0	90.0	0.0	90.0	0.0	90.0
Newpath	0.0625 lb ai/a	4 oz/a			EPost B						
COC	1 % v/v	15.4 oz/a			EPost B						
Newpath	0.0625 lb ai/a	4 oz/a			MPost C						
F7436-13	0.75 lb ai/a	40 oz/a			MPost C						
COC	1 % v/v	15.4 oz/a			MPost C						
3 Command	0.4 lb ai/a	17 oz/a			PRE A	0.0	90.0	0.0	90.0	0.0	90.0
Newpath	0.0625 lb ai/a	4 oz/a			MPost C						
F7436-13	0.75 lb ai/a	40 oz/a			MPost C						
COC	1 % v/v	15.4 oz/a			MPost C						
4 Command	0.4 lb ai/a	17 oz/a			PRE A	0.0	90.0	0.0	90.0	0.0	90.0
Newpath	0.0625 lb ai/a	4 oz/a			EPost B						
COC	1 % v/v	15.4 oz/a			EPost B						
Newpath	0.0625 lb ai/a	4 oz/a			MPost C						
Broadhead	0.39 lb ai/a	8.9 oz/a			MPost C						
Command	0.3 lb ai/a	12.8 oz/a			MPost C						
COC	1 % v/v	15.4 oz/a			MPost C						
5 Command	0.4 lb ai/a	17 oz/a			PRE A	0.0	90.0	0.0	90.0	0.0	90.0
Newpath	0.0625 lb ai/a	4 oz/a			MPost C						
Broadhead	0.39 lb ai/a	8.9 oz/a			MPost C						
Command	0.4 lb ai/a	17 oz/a			MPost C						
COC	1 % v/v	15.4 oz/a			MPost C						
6 Command	0.4 lb ai/a	17 oz/a			PRE A	0.0	90.0	0.0	90.0	0.0	90.0
Newpath	0.0625 lb ai/a	4 oz/a			EPost B						
COC	1 % v/v	15.4 oz/a			EPost B						
Newpath	0.0625 lb ai/a	4 oz/a			MPost C						
Aim	0.0156 lb ai/a	1 oz/a			MPost C						
COC	1 % v/v	15.4 oz/a			MPost C						
7 Command	0.5 lb ai/a	21.3 oz/a			PRE A	0.0	90.0	0.0	90.0	0.0	90.0
Newpath	0.0625 lb ai/a	4 oz/a			EPost B						
COC	1 % v/v	15.4 oz/a			EPost B						
Newpath	0.0625 lb ai/a	4 oz/a			MPost C						
Aim	0.0156 lb ai/a	1 oz/a			MPost C						
COC	1 % v/v	15.4 oz/a			MPost C						
8 Command	0.5 lb ai/a	21.3 oz/a			PRE A	0.0	90.0	0.0	90.0	0.0	90.0
Broadhead	0.39 lb ai/a	8.9 oz/a			MPost C						
COC	1 % v/v	15.4 oz/a			MPost C						
9 Command	0.5 lb ai/a	21.3 oz/a			PRE A	0.0	90.0	0.0	90.0	0.0	90.0
Newpath	0.0625 lb ai/a	4 oz/a			EPost B						
COC	1 % v/v	15.4 oz/a			EPost B						
Newpath	0.0625 lb ai/a	4 oz/a			MPost C						
Broadhead	0.39 lb ai/a	8.9 oz/a			MPost C						
COC	1 % v/v	15.4 oz/a			MPost C						
10 Command	0.4 lb ai/a	17 oz/a			PRE A	0.0	90.0	0.0	90.0	0.0	90.0
F7436-13	0.75 lb ai/a	40 oz/a			EPost B						
COC	1 % v/v	15.4 oz/a			EPost B						
11 Command	0.4 lb ai/a	17 oz/a			PRE A	0.0	90.0	0.0	90.0	100.0	97.3
Broadhead	0.39 lb ai/a	8.9 oz/a			EPost B						
Command	0.4 lb ai/a	17 oz/a			EPost B						
COC	1 % v/v	15.4 oz/a			EPost B						
12 F7436-13	0.75 lb ai/a	40 oz/a			PRE A	86.3	93.8	77.5	93.8	100.0	97.3
Broadhead	0.39 lb ai/a	8.9 oz/a			EPost B						
Command	0.4 lb ai/a	17 oz/a			EPost B						
COC	1 % v/v	15.4 oz/a			EPost B						
13 F7436-13	1 lb ai/a	53.3 oz/a			PRE A	86.3	95.0	77.5	93.8	93.0	94.3
Aim	0.0156 lb ai/a	1 oz/a			MPost C						
COC	1 % v/v	15.4 oz/a			MPost C						
14 F7436-13	0.5 lb ai/a	26.7 oz/a			PRE A	63.8	87.5	71.3	93.8	95.0	93.5
F7436-13	0.5 lb ai/a	26.7 oz/a			EPost B						
COC	1 % v/v	15.4 oz/a			EPost B						
Aim	0.0156 lb ai/a	1 oz/a			MPost C						
COC	1 % v/v	15.4 oz/a			MPost C						
LSD (P=.05)						9.79	5.50	9.75	1.70	2.57	2.18
Standard Deviation						6.85	3.85	6.82	1.19	1.80	1.53
CV						40.59	4.58	42.2	1.41	6.49	1.67
Bartlett's X2						5.927	6.357	1.192	0.0	0.742	3.673
P(Bartlett's X2)						0.052	0.042*	0.551	.	0.389	0.299
Replicate F						1.253	0.351	1.469	0.317	1.000	0.314
Replicate Prob(F)						0.3039	0.7884	0.2380	0.8129	0.4031	0.8154
Treatment F						98.073	158.671	88.868	1682.561	2558.091	13.189
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Evaluation of F7436-13 in rice

Trial ID: HRI-32610 Protocol ID: HRI-32610
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	SEBEX	ECHCG	LEFPA						
Pest Name	Hemp sesbania	Common barnyar>	Tighthead spr>						
Part Rated	PLADEA P	PLADEA P	PLADEA P						
Rating Date	6/17/2010	6/17/2010	6/17/2010						
Rating Type	CONTRO	CONTRO	CONTRO						
Rating Unit	percent	percent	percent						
Crop Stage Majority	2wk POFL	2wk POFL	2wk POFL						
Pest Stage Majority	6-42 in	heading	heading						
Trt-Eval Interval	23 DA-C	23 DA-C	23 DA-C						
Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	13	14	15
1	Untreated Check						0.0	0.0	0.0
2	Command	0.4 lb ai/a	17 oz/a		PRE	A	97.5	100.0	100.0
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	B			
	COC	1 % v/v	15.4 oz/a		EPost	B			
	Newpath	0.0625 lb ai/a	4 oz/a		MPost	C			
	F7436-13	0.75 lb ai/a	40 oz/a		MPost	C			
	COC	1 % v/v	15.4 oz/a		MPost	C			
3	Command	0.4 lb ai/a	17 oz/a		PRE	A	97.5	92.5	80.0
	Newpath	0.0625 lb ai/a	4 oz/a		MPost	C			
	F7436-13	0.75 lb ai/a	40 oz/a		MPost	C			
	COC	1 % v/v	15.4 oz/a		MPost	C			
4	Command	0.4 lb ai/a	17 oz/a		PRE	A	100.0	100.0	100.0
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	B			
	COC	1 % v/v	15.4 oz/a		EPost	B			
	Newpath	0.0625 lb ai/a	4 oz/a		MPost	C			
	Broadhead	0.39 lb ai/a	8.9 oz/a		MPost	C			
	Command	0.3 lb ai/a	12.8 oz/a		MPost	C			
	COC	1 % v/v	15.4 oz/a		MPost	C			
5	Command	0.4 lb ai/a	17 oz/a		PRE	A	100.0	88.8	81.3
	Newpath	0.0625 lb ai/a	4 oz/a		MPost	C			
	Broadhead	0.39 lb ai/a	8.9 oz/a		MPost	C			
	Command	0.4 lb ai/a	17 oz/a		MPost	C			
	COC	1 % v/v	15.4 oz/a		MPost	C			
6	Command	0.4 lb ai/a	17 oz/a		PRE	A	98.8	100.0	97.5
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	B			
	COC	1 % v/v	15.4 oz/a		EPost	B			
	Newpath	0.0625 lb ai/a	4 oz/a		MPost	C			
	Aim	0.0156 lb ai/a	1 oz/a		MPost	C			
	COC	1 % v/v	15.4 oz/a		MPost	C			
7	Command	0.5 lb ai/a	21.3 oz/a		PRE	A	98.8	97.5	96.3
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	B			
	COC	1 % v/v	15.4 oz/a		EPost	B			
	Newpath	0.0625 lb ai/a	4 oz/a		MPost	C			
	Aim	0.0156 lb ai/a	1 oz/a		MPost	C			
	COC	1 % v/v	15.4 oz/a		MPost	C			
8	Command	0.5 lb ai/a	21.3 oz/a		PRE	A	100.0	90.0	85.0
	Broadhead	0.39 lb ai/a	8.9 oz/a		MPost	C			
	COC	1 % v/v	15.4 oz/a		MPost	C			
9	Command	0.5 lb ai/a	21.3 oz/a		PRE	A	100.0	100.0	100.0
	Newpath	0.0625 lb ai/a	4 oz/a		EPost	B			
	COC	1 % v/v	15.4 oz/a		EPost	B			
	Newpath	0.0625 lb ai/a	4 oz/a		MPost	C			
	Broadhead	0.39 lb ai/a	8.9 oz/a		MPost	C			
	COC	1 % v/v	15.4 oz/a		MPost	C			
10	Command	0.4 lb ai/a	17 oz/a		PRE	A	100.0	100.0	100.0
	F7436-13	0.75 lb ai/a	40 oz/a		EPost	B			
	COC	1 % v/v	15.4 oz/a		EPost	B			
11	Command	0.4 lb ai/a	17 oz/a		PRE	A	100.0	97.5	95.0
	Broadhead	0.39 lb ai/a	8.9 oz/a		EPost	B			
	Command	0.4 lb ai/a	17 oz/a		EPost	B			
	COC	1 % v/v	15.4 oz/a		EPost	B			
12	F7436-13	0.75 lb ai/a	40 oz/a		PRE	A	100.0	100.0	100.0
	Broadhead	0.39 lb ai/a	8.9 oz/a		EPost	B			
	Command	0.4 lb ai/a	17 oz/a		EPost	B			
	COC	1 % v/v	15.4 oz/a		EPost	B			
13	F7436-13	1 lb ai/a	53.3 oz/a		PRE	A	100.0	92.5	88.8
	Aim	0.0156 lb ai/a	1 oz/a		MPost	C			
	COC	1 % v/v	15.4 oz/a		MPost	C			
14	F7436-13	0.5 lb ai/a	26.7 oz/a		PRE	A	100.0	95.0	90.0
	F7436-13	0.5 lb ai/a	26.7 oz/a		EPost	B			
	COC	1 % v/v	15.4 oz/a		EPost	B			
	Aim	0.0156 lb ai/a	1 oz/a		MPost	C			
	COC	1 % v/v	15.4 oz/a		MPost	C			
LSD (P=.05)							2.87	7.56	15.20
Standard Deviation							2.01	5.29	10.64
CV							2.17	5.91	12.27
Bartlett's X2							2.6	3.329	8.076
P(Bartlett's X2)							0.457	0.767	0.326
Replicate F							2.511	0.313	0.204
Replicate Prob(F)							0.0727	0.8155	0.8931
Treatment F							701.796	97.203	23.855
Treatment Prob(F)							0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Evaluation of F7436-13 in rice

Trial ID: HRI-32610 Protocol ID: HRI-32610
Location: Rohwer, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US
LEFPA, *Leptochloa panicoides*, = US

Part Rated

PLADEA = plant - dead
P = Pest is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Storm plus Stam vs. Duet and Newpath plus Ultra Blazer for weed control in Clearfield rice.

Trial ID: HRI-32710 Protocol ID: HRI-32710
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: ORYSA Oryza sativa Common rice
 Variety: CL 131
 BBCH Scale: BRIC **Planting Date:** 5/11/2010
Planting Method: DRILLE drilled **Rate, Unit:** 90 LB/A
Depth, Unit: 1.25 IN
Row Spacing, Unit: 7.5 IN
 Seed Bed: MEDIUM medium
Soil Moisture: FAIR fair **Emergence Date:** 5/19/2010

Pest Description

Pest 1 Type: W **Code:** SEBEX Sesbania exaltata
 Common Name: Hemp sesbania

Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 25 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 158.25 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
 Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/15/2010	Urea	225	LB/A
2.	7/7/2010	Urea	225	LB/A

Soil Description

Description Name: BW4 B
 % Sand: 3.5 % OM: 1 **Texture:** CLAY
 % Silt: 37.4 pH: 7.3 **Soil Name:** Sharkey Clay
 % Clay: 59.1 **CEC:** 38

Application Description

	A	B
Application Date:	5/12/2010	6/14/2010
Time of Day:	AM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREMCR	RIPRFL
Application Placement:	BROSOI	BROFOL
Applied By:	JM	JM
Air Temperature, Unit:	79.0 F	79.4 F
% Relative Humidity:	71.45	80.2
Wind Velocity, Unit:	10.3 MPH	2.0 MPS
Wind Direction:	NE	SSE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	73.7 F	83.6 F
Soil Moisture:	GOOD	GOOD

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ORYSA BRIC	ORYSA BRIC

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SEBEX W	SEBEX W
Stage Majority, Percent:		2-10"
Pest 2 Code, Type, Scale:	ECHCG W	ECHCG W
Stage Majority, Percent:		1-4 lf

Application Equipment

	A	B
Appl. Equipment:	Hand Boom	Hand Boom
Equipment Type:	BACSPR	BACSPR
Operating Pressure, Unit:	45 PSI	45 PSI
Nozzle Type:	AM FF	AM FF
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Storm plus Stam vs. Duet and Newpath plus Ultra Blazer for weed control in Clearfield rice.

Trial ID: HRI-32710 Protocol ID: HRI-32710
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

						SEBEX	ECHCG	SEBEX	ECHCG		
						Hemp sesbania	Common barnyar>	Hemp sesbania	Common barnyar>		
						PLAEME P	PLAEME P	PLAEME P	PLAEME P		
						6/22/2010	6/22/2010	7/1/2010	7/1/2010		
						CONTRO	CONTRO	CONTRO	CONTRO		
						percent	percent	percent	percent		
						1wk POFL	1wk POFL	2wk POFL	2wk POFL		
						2-24 in	2 tiller	2-36 in	2 tiller		
						8 DA-B	8 DA-B	17 DA-B	17 DA-B		
Trt	Treatment	Rate	Other	Other	Growth	Appl					
No.	Name	Rate	Unit	Rate	Unit	Stage	Code	1	2	3	4
1	Untreated Check							0.0	0.0	0.0	0.0
2	Newpath	0.0625	lb ai/a	4 fl oz/a	PRE	A		100.0	81.3	95.0	46.3
	Storm	0.25	lb ai/a	8 fl oz/a	preflood	B					
	STAM	2	lb ai/a	2 qt/a	preflood	B					
	Londax	0.0188	lb ai/a	0.5 oz wt/a	preflood	B					
	COC	1	% v/v	15.4 oz/a	preflood	B					
3	Newpath	0.094	lb ai/a	6 fl oz/a	PRE	A		100.0	65.0	97.5	37.5
	Storm	0.25	lb ai/a	8 fl oz/a	preflood	B					
	STAM	2	lb ai/a	2 qt/a	preflood	B					
	Londax	0.0188	lb ai/a	0.5 oz wt/a	preflood	B					
	COC	1	% v/v	15.4 oz/a	preflood	B					
4	Newpath	0.0625	lb ai/a	4 fl oz/a	PRE	A		100.0	65.0	98.8	31.3
	Storm	0.25	lb ai/a	8 fl oz/a	preflood	B					
	STAM	3	lb ai/a	3 qt/a	preflood	B					
	Londax	0.0188	lb ai/a	0.5 oz wt/a	preflood	B					
	COC	1	% v/v	15.4 oz/a	preflood	B					
5	Newpath	0.094	lb ai/a	6 fl oz/a	PRE	A		100.0	81.3	100.0	55.0
	Storm	0.25	lb ai/a	8 fl oz/a	preflood	B					
	STAM	3	lb ai/a	3 qt/a	preflood	B					
	Londax	0.0188	lb ai/a	0.5 oz wt/a	preflood	B					
	COC	1	% v/v	15.4 oz/a	preflood	B					
6	Newpath	0.0625	lb ai/a	4 fl oz/a	PRE	A		100.0	68.8	98.8	18.8
	Duet	2	lb ai/a	2 qt/a	preflood	B					
	COC	1	lb ai/a	15.3 oz/a	preflood	B					
7	Newpath	0.0625	lb ai/a	4 fl oz/a	PRE	A		100.0	56.3	97.5	20.0
	Duet	3	lb ai/a	3 qt/a	preflood	B					
	COC	1	% v/v	15.4 oz/a	preflood	B					
8	Newpath	0.0625	lb ai/a	4 fl oz/a	PRE	A		100.0	37.5	98.8	0.0
	STAM	2	lb ai/a	2 qt/a	preflood	B					
	Bolero	1.5	lb ai/a	1.5 pt/a	preflood	B					
	COC	1	% v/v	15.4 oz/a	preflood	B					
9	Newpath	0.0625	lb ai/a	4 fl oz/a	PRE	A		100.0	71.3	98.8	47.5
	STAM	3	lb ai/a	3 qt/a	preflood	B					
	Bolero	2.25	lb ai/a	2.25 pt/a	preflood	B					
	COC	1	% v/v	15.4 oz/a	preflood	B					
10	Newpath	0.0625	lb ai/a	4 fl oz/a	PRE	A		100.0	57.5	98.8	30.0
	RiceBeaux	3	lb ai/a	2 qt/a	preflood	B					
11	Newpath	0.0625	lb ai/a	4 fl oz/a	PRE	A		100.0	67.5	97.5	37.5
	RiceBeaux	4.5	lb ai/a	3 qt/a	preflood	B					
12	Newpath	0.0625	lb ai/a	4 fl oz/a	PRE	A		100.0	57.5	98.8	25.0
	STAM	2	lb ai/a	2 qt/a	preflood	B					
	Londax	0.015	lb ai/a	0.4 oz wt/a	preflood	B					
	COC	1	% v/v	15.4 oz/a	preflood	B					
13	Newpath	0.0625	lb ai/a	4 fl oz/a	PRE	A		100.0	67.5	98.8	45.0
	STAM	3	lb ai/a	3 qt/a	preflood	B					
	Londax	0.0225	lb ai/a	0.6 oz wt/a	preflood	B					
	COC	1	% v/v	15.4 oz/a	preflood	B					
14	Newpath	0.125	lb ai/a	8 fl oz/a	PRE	A		100.0	83.8	98.8	71.3
	Storm	0.5	lb ai/a	16 fl oz/a	preflood	B					
	STAM	6	lb ai/a	6 qt/a	preflood	B					
	Londax	0.0375	lb ai/a	1 oz wt/a	preflood	B					
	COC	2	% v/v	30.7 oz/a	preflood	B					
15	Newpath	0.125	lb ai/a	8 fl oz/a	PRE	A		100.0	73.8	100.0	68.8
	STAM	6	lb ai/a	6 qt/a	preflood	B					
	Londax	0.045	lb ai/a	1.2 oz wt/a	preflood	B					
	COC	2	% v/v	30.7 oz/a	preflood	B					
16	Newpath	0.0625	lb ai/a	4 fl oz/a	preflood	B		100.0	82.5	98.8	50.0
	Ultra Blazer	0.125	lb ai/a	8 fl oz/a	preflood	B					
	COC	1	% v/v	15.4 oz/a	preflood	B					
17	Newpath	0.0625	lb ai/a	4 fl oz/a	preflood	B		100.0	82.5	98.8	53.8
	Ultra Blazer	0.25	lb ai/a	16 fl oz/a	preflood	B					
	COC	1	% v/v	15.4 oz/a	preflood	B					
18	Newpath	0.0625	lb ai/a	4 fl oz/a	preflood	B		0.0	68.8	0.0	43.8
	COC	1	% v/v	15.4 oz/a	preflood	B					
19	Newpath	0.125	lb ai/a	8 fl oz/a	preflood	B		100.0	90.8	100.0	82.5
	Ultra Blazer	0.5	lb ai/a	32 fl oz/a	preflood	B					
	COC	2	% v/v	30.7 oz/a	preflood	B					
LSD (P=.05)						0.00	21.08	3.50	32.75		
Standard Deviation						0.00	14.90	2.48	23.16		
CV						0.0	22.51	2.81	57.61		
Bartlett's X2						0.0	19.483	11.726	14.964		
P(Bartlett's X2)						.	0.302	0.55	0.527		
Replicate F						0.000	4.528	9.877	5.455		
Replicate Prob(F)						1.0000	0.0066	0.0001	0.0024		
Treatment F						0.000	7.457	630.781	3.615		
Treatment Prob(F)						1.0000	0.0001	0.0001	0.0001		

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Storm plus Stam vs. Duet and Newpath plus Ultra Blazer for weed control in Clearfield rice.

Trial ID: HRI-32710 Protocol ID: HRI-32710
Location: Rohwer, AR Study Director:
Project ID: Investigator: Kenneth Smith
Sponsor Contact:

Pest Code
SEBEX, *Sesbania exaltata*, = US
ECHCG, *Echinochloa crus-galli*, = US
Part Rated
PLAEME = plant - emerged
P = Pest is Part Rated
Rating Type
CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Comparison of clomazone formulations preemergence and early-post emergence.

Trial ID: HRI-32810 Protocol ID: HRI-32810
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Site and Design

Plot Width, Unit: 6.33 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 177.24 FT² **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	6/14/2010	Aim	1.5	OZ/A
2.	6/15/2010	Urea	225	LB/A
3.	7/7/2010	Urea	225	LB/A

Soil Description

Description Name: Rohwer Clay Blocks
% Sand: 3.5 **% OM:** 1 **Texture:** CLAY
% Silt: 37.4 **pH:** 7.3 **Soil Name:** Sharkey Clay
% Clay: 59.1 **CEC:** 38

Application Description

	A	B
Application Date:	6/2/2010	6/7/2010
Time of Day:	AM	AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREMCR	EAPOWE
Application Placement:	BROSOI	BROFOL
Applied By:	JM	JM
Air Temperature, Unit:	81.9 F	80.2 F
% Relative Humidity:	72.82	54.37
Wind Velocity, Unit:	3.35 MPH	3.50 MPH
Wind Direction:	ENE	WSW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	80.5 F	80.6 F
Soil Moisture:	DRY	DRY

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W
Stage Majority, Percent:		1 lf

Application Equipment

	A	B
Appl. Equipment:	Hand Boom	Hand Boom
Equipment Type:	BACSPR	BACSPR
Operating Pressure, Unit:	45 PSI	45 PSI
Nozzle Type:	AM FF	AM FF
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 liters	3 liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Comparison of clomazone formulations preemergence and early-post emergence.

Trial ID: HRI-32810 Protocol ID: HRI-32810
 Location: Rohwer, AR Study Director:
 Project ID: Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	ECHCG	ECHCG	ECHCG	ECHCG
Pest Name	Common barnyar>	Common barnyar>	Common barnyar>	Common barnyar>
Part Rated	PLAEME P	PLAEME P	PLAEME P	PLAEME P
Rating Date	6/16/2010	6/22/2010	7/1/2010	7/13/2010
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	percent	percent	percent	percent
Crop Stage Majority	1 leaf	1-3 leaf	3-5 leaf	2-3 till
Pest Stage Majority	9 DA-B	15 DA-B	24 DA-B	36 DA-B
Trt-Eval Interval				
Trt Treatment	Rate	Other	Other	Growth Appl
No. Name	Rate Unit	Rate	Rate Unit	Stage Code
1 Untreated Check				
2 Alert	0.3 lb ai/a	12.8 oz/a	PRE	A
3 Alert	0.3 lb ai/a	12.8 oz/a	EPost	B
	1 % v/v	15.4 oz/a	EPost	B
4 Alert	0.4 lb ai/a	17 oz/a	PRE	A
5 Alert	0.4 lb ai/a	17 oz/a	EPost	B
	1 % v/v	15.4 oz/a	EPost	B
6 Alert	0.8 lb ai/a	34 oz/a	PRE	A
7 Alert	0.8 lb ai/a	34 oz/a	EPost	B
	1 % v/v	15.4 oz/a	EPost	B
8 Command	0.3 lb ai/a	12.8 oz/a	PRE	A
9 Command	0.3 lb ai/a	12.8 oz/a	EPost	B
	1 % v/v	15.4 oz/a	EPost	B
10 Command	0.4 lb ai/a	17 oz/a	PRE	A
11 Command	0.4 lb ai/a	17 oz/a	EPost	B
	1 % v/v	15.4 oz/a	EPost	B
12 Command	0.8 lb ai/a	34 oz/a	PRE	A
13 Command	0.8 lb ai/a	34 oz/a	EPost	B
	1 % v/v	15.4 oz/a	EPost	B
LSD (P=.05)	0.99	0.00	0.00	15.72
Standard Deviation	0.69	0.00	0.00	11.00
CV	0.75	0.0	0.0	13.58
Bartlett's X2	0.0	0.0	0.0	17.1
P(Bartlett's X2)	.	.	.	0.105
Replicate F	1.000	0.000	0.000	0.570
Replicate Prob(F)	0.4040	1.0000	1.0000	0.6384
Treatment F	6387.667	0.000	0.000	20.607
Treatment Prob(F)	0.0001	1.0000	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Code
 ECHCG, Echinochloa crus-galli, = US
 Part Rated
 PLAEME = plant - emerged
 P = Pest is Part Rated
 Rating Type
 CONTRO = control / burndown or knockdown

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop 1: GLXMA Glycine max Soybean		Crop Description	
Variety: Progeny 5115		Description: RR / Cruiser + Maxim + Apron	
BBCH Scale: BSOY		Planting Date: 5/28/2010	
Planting Method: PLANTD planted		Rate, Unit: 145000 S/A	
Depth, Unit: 1.25 IN		Spacing Within Row, Unit: 1.1 IN	
Row Spacing, Unit: 38 IN		Soil Temperature, Unit: 76.7 F	
Seed Bed: ROU TRA rough/trashy		Emergence Date: 6/4/2010	
Soil Moisture: GOOD good		Harvest Equipment: Almaco	
Harvest Date: 10/5/2010		Harvested Length, Unit: 28 FT	
Harvested Width, Unit: 6.33 FT		Moisture Meter: Almaco	
% Standard Moisture: 13.0			
Weighing Equipment: Almaco			

Pest 1 Type: W Code: ECHCG Echinochloa crus-galli
 Common Name: Common barnyardgrass

Pest 2 Type: W Code: AMAPA Amaranthus palmeri
 Common Name: Palmer amaranth

Pest 3 Type: W Code: IPOSS Ipomoea sp.
 Common Name: Morning glory

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
 Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CON TIL conventional-till
Study Design: RAC OBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	4/12/2010	Potassium				90	LB/A
2.	7/20/2010	Barrage	4.7	LB A/GA	SL	5	OZ/A
3.	8/19/2010	Intrepid	2	LB A/GA	SL	5	OZ/A

Soil Description

Description Name: 2010 Soybean
 % Sand: 16 % OM: 2.2 Texture: SIL silt loam
 % Silt: 65 pH: 6.7 Soil Name: Sharkey & Desha Silt Loam
 % Clay: 19 CEC: 13 Fert. Level: G good
 Soil Drainage: G good

Application Description

	A	B	C	D
Application Date:	4/23/2010	5/11/2010	5/28/2010	6/17/2010
Time of Day:	AM	AM	PM	AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	EARPRE	EARPRE	PREPRE	POSPOS
Application Placement:	BROS OI	BROS OI	BROS OI	BROS OI
Applied By:	RD	JB	JB	JB
Air Temperature, Unit:	71.1 F	75.7 F	81.1 F	85.6 F
% Relative Humidity:	79.38	76.16	68.39	68.71
Wind Velocity, Unit:	7.15 MPH	12.7 MPH	2.75 MPH	3.71 MPH
Wind Direction:	SSE	NE	SW	SW
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	70.0 F	69.0 F	78.2 F	85.6 F
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL
% Cloud Cover:	70	50	40	50
Next Rain Occurred On:	5/1/2010	5/16/2010	6/10/2010	6/29/2010

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	V0	V0	V0	V3
Height, Unit:	0 IN	0 IN	0 IN	4 IN

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W	ECHCG W
Height, Unit:	0 IN	2 IN	4 IN	5 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W	AMAPA W
Height, Unit:	0 IN	1 IN	3 IN	4 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W	IPOSS W
Height, Unit:	0 IN	0 IN	0.5 IN	1 IN

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
 Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment				
	A	B	C	D
Appl. Equipment:	Multi Boom	Hand Boom	Multi Boom	Multi Boom
Equipment Type:	SPTRMO	SPRBAC	SPTRMO	SPTRMO
Operating Pressure, Unit:	50 PSI	45 PSI	50 PSI	50 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2	2
% Coverage:	100	100	100	100
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes	Y yes

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code							PLANT C 5/19/2010 COUPLA 5 FT/Row V2 26 DA-A	ECHCG Common barnyar> PLANT P 5/27/2010 CONTRO % PrePlant 3-6" 16 DA-B	AMAPA Palmer amaranth PLANT P 5/27/2010 CONTRO % PrePlant 4-8" 16 DA-B	IPOSS Morning glory PLANT P 5/27/2010 CONTRO % PrePlant 2-3" 16 DA-B		
Pest Name												
Part Rated												
Rating Date												
Rating Type												
Rating Unit												
Crop Stage Majority												
Pest Stage Majority												
Tri-Eval Interval												
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4
1	Untreated Check								21.8	0.0	0.0	0.0
2	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	34.8	91.8	89.3	99.8
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a	EARPRE A		30-45 DPP				
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0052	lb ai/a	0.333	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.0156	lb ai/a	0.5	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	34.0	85.0	89.7	96.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a	EARPRE A		30-45 DPP				
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	39.0	92.3	93.5	99.3
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A		30-45 DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
5	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	38.3	94.8	93.0	98.8
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
6	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	40.3	98.8	98.0	100.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0234	lb ai/a	1.5	oz/a	EARPRE A		30-45 DPP				
	Rimsulfuron (Resolve DF)	0.0234	lb ai/a	1.5	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a	PREPLA B		21 DPP	15.0	99.3	100.0	100.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	PREPLA B		21 DPP				
	Thifensulfuron (Harmony SG)	0.0094	lb ai/a	0.3	oz/a	PREPLA B		21 DPP				
	Tribenuron (Express SG)	0.0094	lb ai/a	0.3	oz/a	PREPLA B		21 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
8	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	35.0	93.5	88.5	77.5
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A		30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
9	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	39.0	93.0	91.5	100.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A		30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Sequence	1.64	lb ai/a	40	oz/a	EAPOCR D		7-14 DAE				
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a	EAPOCR D		7-14 DAE				

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
 Location: Rohwer, AR
 Investigator: Kenneth Smith

								PLANT C	ECHCG	AMAPA	IPOSS	
								5/19/2010	Common barnyar>	Palmer amaranth	Morning glory	
								COUPLA	PLANT P	PLANT P	PLANT P	
								5 FT/Row	5/27/2010	5/27/2010	5/27/2010	
								V2	CONTRO	CONTRO	CONTRO	
									%	%	%	
								26 DA-A	PrePlant	PrePlant	PrePlant	
									3-6"	4-8"	2-3"	
									16 DA-B	16 DA-B	16 DA-B	
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	30-45	DPP	39.3	91.8	93.5	96.8
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	30-45	DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	30-45	DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	30-45	DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D	7-14	DAE				
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	30-45	DPP	42.3	91.8	90.3	99.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	30-45	DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	30-45	DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	30-45	DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Sequence	1.64	lb ai/a	40	oz/a	EAPOCR D	7-14	DAE				
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a	EAPOCR D	7-14	DAE				
12	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	22.5	30.7	26.7	30.0
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
13	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	26.3	32.5	22.5	32.5
	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
14	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	26.3	22.5	22.5	30.0
	Boundary	1.63	lb ai/a	32	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
LSD (P=.05)								14.22	11.43	6.80	19.52	
Standard Deviation								9.95	8.00	4.76	13.66	
CV								30.72	11.01	6.67	18.05	
Bartlett's X2								23.384	39.298	7.121	68.232	
P(Bartlett's X2)								0.037*	0.001*	0.789	0.001*	
Replicate F								1.765	4.925	8.431	0.428	
Replicate Prob(F)								0.1699	0.0055	0.0002	0.7342	
Treatment F								2.895	74.653	224.901	27.388	
Treatment Prob(F)								0.0051	0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code							ECHCG	AMAPA	IPOSS	PLANT C		
Pest Name							Common barnyar>	Palmer amaranth	Morning glory	PLANT P	PLANT C	
Part Rated							PLANT P	PLANT P	PLANT P	PLANT P	PLANT C	
Rating Date							6/18/2010	6/18/2010	6/18/2010	6/18/2010	6/18/2010	
Rating Type							CONTRO	CONTRO	CONTRO	CONTRO	PHYSTU	
Rating Unit							%	%	%	%	%	
Crop Stage Majority							V3 3-4"	V3 3-4"	V3 3-4"	V3 3-4"	V3 3-4"	
Pest Stage Majority							1-3"	1-2"	1-2"	1-2"	1-2"	
Tri-Eval Interval							21 DA-C	21 DA-C	21 DA-C	21 DA-C	21 DA-C	
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	5	6	7	8
1	Untreated Check								0.0	0.0	0.0	1.3
2	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	92.8	100.0	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a	EARPRE A		30-45 DPP				
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0052	lb ai/a	0.333	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.0156	lb ai/a	0.5	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	92.0	100.0	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a	EARPRE A		30-45 DPP				
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	92.8	100.0	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A		30-45 DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
5	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	94.0	100.0	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
6	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	91.3	100.0	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0234	lb ai/a	1.5	oz/a	EARPRE A		30-45 DPP				
	Rimsulfuron (Resolve DF)	0.0234	lb ai/a	1.5	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a	PREPLA B		21 DPP	90.8	98.8	100.0	15.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	PREPLA B		21 DPP				
	Thifensulfuron (Harmony SG)	0.0094	lb ai/a	0.3	oz/a	PREPLA B		21 DPP				
	Tribenuron (Express SG)	0.0094	lb ai/a	0.3	oz/a	PREPLA B		21 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
8	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	91.5	98.8	99.3	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A		30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
9	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	89.0	98.8	100.0	1.3
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A		30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Sequence	1.64	lb ai/a	40	oz/a	EAPOCR D		7-14 DAE				
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a	EAPOCR D		7-14 DAE				

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code				ECHCG	AMAPA	IPOSS						
Pest Name				Common barnyar>	Palmer amaranth	Morning glory						
Part Rated				PLANT P	PLANT P	PLANT P	PLANT C					
Rating Date				6/18/2010	6/18/2010	6/18/2010	6/18/2010					
Rating Type				CONTRO	CONTRO	CONTRO	PHYSTU					
Rating Unit				%	%	%	%					
Crop Stage Majority				V3 3-4"	V3 3-4"	V3 3-4"	V3 3-4"					
Pest Stage Majority				1-3"	1-2"	1-2"						
Trt-Eval Interval				21 DA-C	21 DA-C	21 DA-C	21 DA-C					
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	5	6	7	8
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	30-45	DPP	91.8	100.0	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	30-45	DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	30-45	DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	30-45	DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D	7-14	DAE				
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	30-45	DPP	90.0	100.0	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	30-45	DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	30-45	DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	30-45	DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Sequence	1.64	lb ai/a	40	oz/a	EAPOCR D	7-14	DAE				
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a	EAPOCR D	7-14	DAE				
12	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	99.0	100.0	98.8	3.8
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
13	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	95.5	100.0	100.0	3.8
	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
14	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	100.0	100.0	100.0	7.5
	Boundary	1.63	lb ai/a	32	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
LSD (P=.05)									4.75	1.64	1.13	5.03
Standard Deviation									3.32	1.15	0.79	3.52
CV									3.84	1.24	0.85	151.74
Bartlett's X2									7.977	0.0	0.742	7.7
P(Bartlett's X2)									0.715	.	0.389	0.103
Replicate F									11.647	1.243	0.690	1.775
Replicate Prob(F)									0.0001	0.3071	0.5635	0.1679
Treatment F									228.082	2158.774	4588.522	5.878
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
Location: Rohwer, AR

Investigator: Kenneth Smith

								ECHCG Common barnyard	AMAPA Palmer amaranth	IPOSS Morning glory	PLANT C 6/24/2010 PHYSTU	
Pest Code	Pest Name	Part Rated	Rating Date	Rating Type	Rating Unit	Crop Stage Majority	Pest Stage Majority	7 DA-D	7 DA-D	7 DA-D	7 DA-D	
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	9	10	11	12
1	Untreated Check								0.0	0.0	0.0	0.0
2	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	99.3	100.0	100.0	2.5
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a	EARPRE A		30-45 DPP				
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0052	lb ai/a	0.333	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.0156	lb ai/a	0.5	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	98.8	100.0	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a	EARPRE A		30-45 DPP				
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	100.0	100.0	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A		30-45 DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
5	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	99.3	100.0	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
6	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	100.0	100.0	100.0	2.5
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0234	lb ai/a	1.5	oz/a	EARPRE A		30-45 DPP				
	Rimsulfuron (Resolve DF)	0.0234	lb ai/a	1.5	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a	PREPLA B		21 DPP	100.0	100.0	100.0	17.5
	2,4-D Ester	0.75	lb ai/a	24	oz/a	PREPLA B		21 DPP				
	Thifensulfuron (Harmony SG)	0.0094	lb ai/a	0.3	oz/a	PREPLA B		21 DPP				
	Tribenuron (Express SG)	0.0094	lb ai/a	0.3	oz/a	PREPLA B		21 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
8	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	100.0	100.0	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A		30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE				
9	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	98.8	97.5	100.0	7.5
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A		30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Sequence	1.64	lb ai/a	40	oz/a	EAPOCR D		7-14 DAE				
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a	EAPOCR D		7-14 DAE				

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
 Location: Rohwer, AR
 Investigator: Kenneth Smith

				ECHCG Common barnyard	AMAPA Palmer amaranth	IPOSS Morning glory	PLANT C 6/24/2010					
Pest Code	Pest Name	Rate	Unit	PLANT P 6/24/2010	PLANT P 6/24/2010	PLANT P 6/24/2010	PLANT C 6/24/2010					
Part Rated	Rating Date	Rating Type	Rating Unit	CONTRO	CONTRO	CONTRO	PHYSTU					
Crop Stage Majority	Pest Stage Majority	Trt-Eval Interval		% V4 5-6" 2-6" 7 DA-D	% V4 5-6" 2-8" 7 DA-D	% V4 5-6" 1-2" 7 DA-D	% V4 5-6" 7 DA-D					
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	9	10	11	12
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	30-45 DPP		100.0	100.0	100.0	3.8
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	30-45 DPP					
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	30-45 DPP					
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	30-45 DPP					
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C	PRE					
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C	PRE					
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C	PRE					
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C	PRE					
	COC	0.83	lb ai/a	1	% v/v	PREPRE C	PRE					
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D	7-14 DAE					
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	30-45 DPP		98.8	100.0	100.0	1.3
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	30-45 DPP					
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	30-45 DPP					
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	30-45 DPP					
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C	PRE					
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C	PRE					
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C	PRE					
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C	PRE					
	COC	0.83	lb ai/a	1	% v/v	PREPRE C	PRE					
	Sequence	1.64	lb ai/a	40	oz/a	EAPOCR D	7-14 DAE					
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a	EAPOCR D	7-14 DAE					
12	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C	PRE		100.0	100.0	100.0	10.0
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE C	PRE					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14 DAE					
13	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C	PRE		100.0	100.0	100.0	10.0
	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE C	PRE					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14 DAE					
14	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C	PRE		100.0	100.0	100.0	10.0
	Boundary	1.63	lb ai/a	32	oz/a	PREPRE C	PRE					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14 DAE					
LSD (P=.05)								1.74	1.91	0.00	9.09	
Standard Deviation								1.21	1.34	0.00	6.36	
CV								1.31	1.44	0.0	136.95	
Bartlett's X2								1.632	0.0	0.0	14.315	
P(Bartlett's X2)								0.803	.	.	0.074	
Replicate F								2.755	1.000	0.000	1.325	
Replicate Prob(F)								0.0553	0.4031	1.0000	0.2801	
Treatment F								1921.248	1594.846	0.000	2.959	
Treatment Prob(F)								0.0001	0.0001	1.0000	0.0044	

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
Location: Rohwer, AR

Investigator: Kenneth Smith

								ECHCG Common barnyar> PLANT P 7/2/2010 CONTRO	AMAPA Palmer amaranth PLANT P 7/2/2010 CONTRO	IPOSS Morning glory PLANT P 7/2/2010 CONTRO	PLANT C 7/2/2010 PHYSTU		
								% V9 11" 4-12" 15 DA-D	% V9 11" 4-20" 15 DA-D	% V9 11" 1-4" 15 DA-D	% V9 11" 15 DA-D		
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate	Growth Unit	Stage	Appl Code	Appl Description	13	14	15	16
1	Untreated Check									0.0	0.0	0.0	0.0
2	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A		30-45 DPP	97.8	99.8	99.5	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a		EARPRE A		30-45 DPP				
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a		EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0052	lb ai/a	0.333	oz/a		PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.0156	lb ai/a	0.5	oz/a		PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D		7-14 DAE				
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A		30-45 DPP	95.3	100.0	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a		EARPRE A		30-45 DPP				
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a		EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D		7-14 DAE				
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A		30-45 DPP	97.3	98.8	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a		EARPRE A		30-45 DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a		EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D		7-14 DAE				
5	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A		30-45 DPP	99.0	100.0	99.3	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A		30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a		EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D		7-14 DAE				
6	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A		30-45 DPP	94.3	99.3	99.3	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A		30-45 DPP				
	Chlorimuron (Classic WDG)	0.0234	lb ai/a	1.5	oz/a		EARPRE A		30-45 DPP				
	Rimsulfuron (Resolve DF)	0.0234	lb ai/a	1.5	oz/a		EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D		7-14 DAE				
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a		PREPLA B		21 DPP	94.5	95.5	100.0	28.8
	2,4-D Ester	0.75	lb ai/a	24	oz/a		PREPLA B		21 DPP				
	Thifensulfuron (Harmony SG)	0.0094	lb ai/a	0.3	oz/a		PREPLA B		21 DPP				
	Tribenuron (Express SG)	0.0094	lb ai/a	0.3	oz/a		PREPLA B		21 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D		7-14 DAE				
8	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A		30-45 DPP	97.3	98.8	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a		EARPRE A		30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a		EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D		7-14 DAE				
9	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A		30-45 DPP	98.0	100.0	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a		EARPRE A		30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a		EARPRE A		30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C		PRE				
	Sequence	1.64	lb ai/a	40	oz/a		EAPOCR D		7-14 DAE				
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a		EAPOCR D		7-14 DAE				

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code				ECHCG		AMAPA		IPOSS		PLANT C		
Pest Name				Common barnyar>		Palmer amaranth		Morning glory		7/2/2010		
Part Rated				PLANT P		PLANT P		PLANT P		PHYSTU		
Rating Date				7/2/2010		7/2/2010		7/2/2010		7/2/2010		
Rating Type				CONTRO		CONTRO		CONTRO		CONTRO		
Rating Unit				%		%		%		%		
Crop Stage Majority				V9 11"		V9 11"		V9 11"		V9 11"		
Pest Stage Majority				4-12"		4-20"		1-4"		15 DA-D		
Trt-Eval Interval				15 DA-D		15 DA-D		15 DA-D		15 DA-D		
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	13	14	15	16
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	30-45	DPP	96.5	100.0	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	30-45	DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	30-45	DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	30-45	DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D	7-14	DAE				
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	30-45	DPP	97.8	100.0	98.8	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	30-45	DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	30-45	DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	30-45	DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Sequence	1.64	lb ai/a	40	oz/a	EAPOCR D	7-14	DAE				
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a	EAPOCR D	7-14	DAE				
12	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	97.0	98.3	98.8	10.0
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
13	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	93.5	100.0	100.0	21.3
	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
14	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	93.8	96.8	97.5	12.5
	Boundary	1.63	lb ai/a	32	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
LSD (P=.05)									4.96	2.63	1.94	11.91
Standard Deviation									3.47	1.84	1.36	8.33
CV									3.88	2.0	1.47	160.88
Bartlett's X2									13.88	13.078	4.207	8.502
P(Bartlett's X2)									0.308	0.042*	0.52	0.037*
Replicate F									7.902	5.911	1.264	1.947
Replicate Prob(F)									0.0003	0.0020	0.3001	0.1380
Treatment F									220.662	831.847	1532.161	5.137
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
Location: Rohwer, AR

Investigator: Kenneth Smith

								ECHCG Common barnyar> PLANT P 7/12/2010 CONTRO %	AMAPA Palmer amaranth PLANT P 7/12/2010 CONTRO %	IPOSS Morning glory PLANT P 7/12/2010 CONTRO %	PLANT C 7/12/2010 PHYSTU %	
Pest Code	Pest Name	Rate	Unit	Other Rate	Other Rate	Growth Unit	Appl Code	Appl Description	17	18	19	20
1 Untreated Check												
2	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	95.0	97.5	99.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A	30-45 DPP				
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a		EARPRE A	30-45 DPP				
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0052	lb ai/a	0.333	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.0156	lb ai/a	0.5	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	88.5	98.8	100.0	1.3
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A	30-45 DPP				
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a		EARPRE A	30-45 DPP				
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	93.3	100.0	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A	30-45 DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a		EARPRE A	30-45 DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
5	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	95.3	100.0	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A	30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
6	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	92.0	100.0	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A	30-45 DPP				
	Chlorimuron (Classic WDG)	0.0234	lb ai/a	1.5	oz/a		EARPRE A	30-45 DPP				
	Rimsulfuron (Resolve DF)	0.0234	lb ai/a	1.5	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a		PREPLA B	21 DPP	87.0	98.8	100.0	13.8
	2,4-D Ester	0.75	lb ai/a	24	oz/a		PREPLA B	21 DPP				
	Thifensulfuron (Harmony SG)	0.0094	lb ai/a	0.3	oz/a		PREPLA B	21 DPP				
	Tribenuron (Express SG)	0.0094	lb ai/a	0.3	oz/a		PREPLA B	21 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
8	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	92.5	98.8	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a		EARPRE A	30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
9	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	95.8	100.0	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a		EARPRE A	30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Sequence	1.64	lb ai/a	40	oz/a		EAPOCR D	7-14 DAE				
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a		EAPOCR D	7-14 DAE				

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		PLANT C				
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		7/12/2010				
Part Rated		PLANT P		PLANT P		PLANT P		PHYSTU				
Rating Date		7/12/2010		7/12/2010		7/12/2010		7/12/2010				
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO				
Rating Unit		%		%		%		%				
Crop Stage Majority		R1 13"		R1 13"		R1 13"		R1 13"				
Pest Stage Majority		4-18"		6-36"		2-8"		2-8"				
Trt-Eval Interval		25 DA-D		25 DA-D		25 DA-D		25 DA-D				
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	17	18	19	20
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	30-45	DPP	94.3	100.0	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	30-45	DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	30-45	DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	30-45	DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D	7-14	DAE				
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	30-45	DPP	95.5	100.0	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	30-45	DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	30-45	DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	30-45	DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Sequence	1.64	lb ai/a	40	oz/a	EAPOCR D	7-14	DAE				
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a	EAPOCR D	7-14	DAE				
12	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	85.0	95.0	98.0	10.0
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
13	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	77.8	90.3	98.8	10.5
	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
14	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	82.5	96.3	96.8	10.0
	Boundary	1.63	lb ai/a	32	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
LSD (P=.05)		7.42		4.95		2.42		13.45				
Standard Deviation		5.19		3.46		1.69		9.41				
CV		6.19		3.8		1.84		289.5				
Bartlett's X2		9.915		9.726		2.752		8.554				
P(Bartlett's X2)		0.623		0.137		0.432		0.073				
Replicate F		2.143		0.637		0.406		0.934				
Replicate Prob(F)		0.1103		0.5959		0.7493		0.4334				
Treatment F		90.913		231.707		984.823		1.227				
Treatment Prob(F)		0.0001		0.0001		0.0001		0.2980				

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
Location: Rohwer, AR

Investigator: Kenneth Smith

								ECHCG Common barnyar> PLANT P 7/23/2010 CONTRO	AMAPA Palmer amaranth PLANT P 7/23/2010 CONTRO	IPOSS Morning glory PLANT P 7/23/2010 CONTRO	PLANT C 7/23/2010 PHYSTU	
								% R2 23" 12-28" 36 DA-D	% R2 23" 14-40" 36 DA-D	% R2 23" 2-12" 36 DA-D	% R2 23" 36 DA-D	
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate	Growth Unit	Appl Code	Appl Description	21	22	23	24
1	Untreated Check								0.0	0.0	0.0	0.0
2	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	90.5	96.8	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A	30-45 DPP				
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a		EARPRE A	30-45 DPP				
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0052	lb ai/a	0.333	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.0156	lb ai/a	0.5	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	82.5	94.8	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A	30-45 DPP				
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a		EARPRE A	30-45 DPP				
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	95.0	96.8	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A	30-45 DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a		EARPRE A	30-45 DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
5	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	90.5	97.5	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A	30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
6	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	87.0	96.3	100.0	0.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a		EARPRE A	30-45 DPP				
	Chlorimuron (Classic WDG)	0.0234	lb ai/a	1.5	oz/a		EARPRE A	30-45 DPP				
	Rimsulfuron (Resolve DF)	0.0234	lb ai/a	1.5	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a		PREPLA B	21 DPP	73.5	82.3	97.5	8.8
	2,4-D Ester	0.75	lb ai/a	24	oz/a		PREPLA B	21 DPP				
	Thifensulfuron (Harmony SG)	0.0094	lb ai/a	0.3	oz/a		PREPLA B	21 DPP				
	Tribenuron (Express SG)	0.0094	lb ai/a	0.3	oz/a		PREPLA B	21 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
8	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	91.3	95.0	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a		EARPRE A	30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a		EAPOCR D	7-14 DAE				
9	Roundup PowerMax	0.77	lb ae/a	22	oz/a		EARPRE A	30-45 DPP	91.3	100.0	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a		EARPRE A	30-45 DPP				
	Basis	0.0313	lb ai/a	0.67	oz/a		EARPRE A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a		PREPRE C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a		PREPRE C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a		PREPRE C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a		PREPRE C	PRE				
	COC	0.83	lb ai/a	1	% v/v		PREPRE C	PRE				
	Sequence	1.64	lb ai/a	40	oz/a		EAPOCR D	7-14 DAE				
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a		EAPOCR D	7-14 DAE				

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code				ECHCG		AMAPA		IPOSS		PLANT C		
Pest Name				Common barnyar>		Palmer amaranth		Morning glory		7/23/2010		
Part Rated				PLANT P		PLANT P		PLANT P		PHYSTU		
Rating Date				7/23/2010		7/23/2010		7/23/2010		R2 23*		
Rating Type				CONTRO		CONTRO		CONTRO		R2 23*		
Rating Unit				%		%		%		R2 23*		
Crop Stage Majority				R2 23*		R2 23*		R2 23*		R2 23*		
Pest Stage Majority				12-28*		14-40*		2-12*		R2 23*		
Trt-Eval Interval				36 DA-D		36 DA-D		36 DA-D		36 DA-D		
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	21	22	23	24
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	A	30-45 DPP	91.3	97.3	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	A	30-45 DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	A	30-45 DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C	C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C	C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C	C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C	C	PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C	C	PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D	D	7-14 DAE				
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	A	30-45 DPP	92.5	100.0	100.0	0.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	A	30-45 DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	A	30-45 DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	A	30-45 DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C	C	PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C	C	PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C	C	PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C	C	PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C	C	PRE				
	Sequence	1.64	lb ai/a	40	oz/a	EAPOCR D	D	7-14 DAE				
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a	EAPOCR D	D	7-14 DAE				
12	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C	C	PRE	72.5	92.5	97.5	7.5
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE C	C	PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	D	7-14 DAE				
13	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C	C	PRE	66.0	82.5	97.5	7.5
	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE C	C	PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	D	7-14 DAE				
14	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C	C	PRE	72.5	90.0	97.5	8.8
	Boundary	1.63	lb ai/a	32	oz/a	PREPRE C	C	PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	D	7-14 DAE				
LSD (P=.05)									11.27	9.81	3.77	7.83
Standard Deviation									7.88	6.87	2.64	5.48
CV									10.07	7.87	2.86	236.09
Bartlett's X2									17.314	9.264	0.0	0.179
P(Bartlett's X2)									0.138	0.507	.	0.981
Replicate F									0.875	2.788	1.368	1.288
Replicate Prob(F)									0.4622	0.0533	0.2667	0.2920
Treatment F									38.351	56.134	405.000	1.948
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0542

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG	
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>	
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P	
Rating Date		8/2/2010		8/2/2010		8/2/2010		10/4/2010	
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO	
Rating Unit		%		%		%		%	
Crop Stage Majority		R2 32.5"		R2 32.5"		R2 32.5"		37.5"	
Pest Stage Majority		20-40"		30-60"		10-20"		10-40"	
Tri-Eval Interval		46 DA-D		46 DA-D		46 DA-D		46 DA-D	
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	
1	Untreated Check								0.0
2	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	88.8
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP	92.5
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a	EARPRE A		30-45 DPP	100.0
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a	EARPRE A		30-45 DPP	88.8
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	
	Chlorimuron (Classic WDG)	0.0052	lb ai/a	0.333	oz/a	PREPRE C		PRE	
	Thifensulfuron (Harmony SG)	0.0156	lb ai/a	0.5	oz/a	PREPRE C		PRE	
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE	
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE	
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE	
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	82.5
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP	93.0
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a	EARPRE A		30-45 DPP	97.5
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a	EARPRE A		30-45 DPP	76.3
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE	
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE	
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE	
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE	
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE	
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	92.5
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP	95.0
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A		30-45 DPP	97.5
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A		30-45 DPP	96.3
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE	
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE	
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE	
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE	
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE	
5	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	88.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP	94.3
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP	97.5
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	84.5
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE	
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE	
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE	
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE	
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE	
6	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	88.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP	95.0
	Chlorimuron (Classic WDG)	0.0234	lb ai/a	1.5	oz/a	EARPRE A		30-45 DPP	100.0
	Rimsulfuron (Resolve DF)	0.0234	lb ai/a	1.5	oz/a	EARPRE A		30-45 DPP	80.0
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE	
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE	
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE	
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE	
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE	
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a	PREPLA B		21 DPP	75.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	PREPLA B		21 DPP	82.5
	Thifensulfuron (Harmony SG)	0.0094	lb ai/a	0.3	oz/a	PREPLA B		21 DPP	97.5
	Tribenuron (Express SG)	0.0094	lb ai/a	0.3	oz/a	PREPLA B		21 DPP	63.8
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE	
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE	
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE	
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE	
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE	
8	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	87.5
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A		30-45 DPP	95.0
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP	100.0
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	91.3
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE	
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE	
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE	
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE	
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE	
9	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	91.3
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A		30-45 DPP	100.0
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP	100.0
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	88.8
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE	
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE	
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE	
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE	
	Sequence	1.64	lb ai/a	40	oz/a	EAPOCR D		7-14 DAE	
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a	EAPOCR D		7-14 DAE	

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG				
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>				
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P				
Rating Date		8/2/2010		8/2/2010		8/2/2010		10/4/2010				
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO				
Rating Unit		%		%		%		%				
Crop Stage Majority		R2 32.5"		R2 32.5"		R2 32.5"		37.5"				
Pest Stage Majority		20-40"		30-60"		10-20"		10-40"				
Trt-Eval Interval		46 DA-D		46 DA-D		46 DA-D		46 DA-D				
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	25	26	27	28
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	30-45	DPP	86.0	92.5	97.5	83.8
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	30-45	DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	30-45	DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	30-45	DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D	7-14	DAE				
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A	30-45	DPP	95.0	100.0	100.0	85.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A	30-45	DPP				
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A	30-45	DPP				
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A	30-45	DPP				
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE				
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE				
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE				
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE				
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE				
	Sequence	1.64	lb ai/a	40	oz/a	EAPOCR D	7-14	DAE				
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a	EAPOCR D	7-14	DAE				
12	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	77.5	88.0	95.0	70.5
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
13	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	68.8	80.0	92.5	66.3
	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
14	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE	72.5	90.0	95.0	68.8
	Boundary	1.63	lb ai/a	32	oz/a	PREPRE C		PRE				
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EAPOCR D	7-14	DAE				
LSD (P=.05)									13.20	11.78	5.77	13.76
Standard Deviation									9.24	8.24	4.04	9.63
CV									11.83	9.63	4.45	12.91
Bartlett's X2									4.316	5.791	0.183	8.286
P(Bartlett's X2)									0.977	0.761	1.00	0.762
Replicate F									0.704	1.611	0.292	3.243
Replicate Prob(F)									0.5556	0.2024	0.8308	0.0322
Treatment F									26.580	37.584	168.573	24.149
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
Location: Rohwer, AR

Investigator: Kenneth Smith

								AMAPA Palmer amaranth PLANT P 10/4/2010 CONTRO	IPOSS Morning glory PLANT P 10/4/2010 CONTRO	PLANT C 10/4/2010 LOGGIN	PLANT P 10/5/2010 MOICON	PLANT P 10/5/2010 WEIDRY	PLANT P 10/5/2010 YIELD	
								37.5" 12-50" 46 DA-D	37.5" 5-35" 46 DA-D	37.5" Harvest	% Harvest	% lb/plot Harvest	BU Harvest	
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	29	30	31	32	33	34
1	Untreated Check								0.0	0.0	0.0	10.10	1.613	6.8
2	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	91.3	97.5	0.0	11.45	5.038	21.0
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP						
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a	EARPRE A		30-45 DPP						
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a	EARPRE A		30-45 DPP						
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE						
	Chlorimuron (Classic WDG)	0.0052	lb ai/a	0.333	oz/a	PREPRE C		PRE						
	Thifensulfuron (Harmony SG)	0.0156	lb ai/a	0.5	oz/a	PREPRE C		PRE						
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE						
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE						
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE						
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	83.8	88.8	0.0	10.03	4.830	20.5
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP						
	Chlorimuron (Classic WDG)	0.0142	lb ai/a	0.91	oz/a	EARPRE A		30-45 DPP						
	Tribenuron (Express SG)	0.00425	lb ai/a	0.136	oz/a	EARPRE A		30-45 DPP						
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE						
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE						
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE						
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE						
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE						
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE						
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	98.0	98.8	0.0	11.57	5.980	24.9
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP						
	Chlorimuron (Classic WDG)	0.0284	lb ai/a	1.82	oz/a	EARPRE A		30-45 DPP						
	Tribenuron (Express SG)	0.0085	lb ai/a	0.272	oz/a	EARPRE A		30-45 DPP						
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE						
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE						
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE						
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE						
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE						
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE						
5	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	88.8	91.3	0.0	9.33	6.580	27.7
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP						
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP						
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE						
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE						
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE						
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE						
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE						
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE						
6	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	83.8	90.0	0.0	8.47	4.420	19.1
	2,4-D Ester	0.75	lb ai/a	24	oz/a	EARPRE A		30-45 DPP						
	Chlorimuron (Classic WDG)	0.0234	lb ai/a	1.5	oz/a	EARPRE A		30-45 DPP						
	Rimsulfuron (Resolve DF)	0.0234	lb ai/a	1.5	oz/a	EARPRE A		30-45 DPP						
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE						
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE						
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE						
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE						
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE						
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE						
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a	PREPLA B		21 DPP	80.5	82.5	0.0	10.17	3.865	16.3
	2,4-D Ester	0.75	lb ai/a	24	oz/a	PREPLA B		21 DPP						
	Thifensulfuron (Harmony SG)	0.0094	lb ai/a	0.3	oz/a	PREPLA B		21 DPP						
	Tribenuron (Express SG)	0.0094	lb ai/a	0.3	oz/a	PREPLA B		21 DPP						
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE						
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE						
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE						
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE						
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE						
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE						
8	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	97.5	100.0	0.0	9.48	5.588	23.8
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A		30-45 DPP						
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP						
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE						
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE						
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE						
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE						
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE						
	Flexstar GT	1.24	lb ai/a	48	oz/a	EAPOCR D		7-14 DAE						
9	Roundup PowerMax	0.77	lb ae/a	22	oz/a	EARPRE A		30-45 DPP	97.5	97.5	0.0	9.33	4.670	20.0
	2,4-D Ester	1	lb ai/a	32	oz/a	EARPRE A		30-45 DPP						
	Basis	0.0313	lb ai/a	0.67	oz/a	EARPRE A		30-45 DPP						
	Gramoxone Inteon	0.625	lb ai/a	40	oz/a	PREPRE C		PRE						
	Chlorimuron (Classic WDG)	0.0201	lb ai/a	1.29	oz/a	PREPRE C		PRE						
	Thifensulfuron (Harmony SG)	0.00625	lb ai/a	0.2	oz/a	PREPRE C		PRE						
	Flumioxazin (Valor SX)	0.0625	lb ai/a	1.96	oz/a	PREPRE C		PRE						
	COC	0.83	lb ai/a	1	% v/v	PREPRE C		PRE						
	Sequence	1.64	lb ai/a	40	oz/a	EAPOCR D		7-14 DAE						
	Chlorimuron (Classic WDG)	0.00516	lb ai/a	0.33	oz/a	EAPOCR D		7-14 DAE						

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code				AMAPA	IPOSS								
Pest Name				Palmer amaranth	Morning glory								
Part Rated				PLANT P	PLANT P	PLANT C	PLANT P	PLANT P	PLANT P				
Rating Date				10/4/2010	10/4/2010	10/4/2010	10/5/2010	10/5/2010	10/5/2010				
Rating Type				CONTRO	CONTRO	LODGIN	MOICON	WEIDRY	YIELD				
Rating Unit				%	%	%	%	lb/plot	BU				
Crop Stage Majority				37.5*	37.5*	37.5*	Harvest	Harvest	Harvest				
Pest Stage Majority				12-50*	5-35*								
Trt-Eval Interval				46 DA-D	46 DA-D	36 DA-D	165 DA-A	165 DA-A	165 DA-A				
Trt No.	Treatment Name	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	29	30	31	32	33	34
10	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EARPRE A	30-45 DPP		91.3	96.3	0.0	7.07	5.225	22.8
	2,4-D Ester	1 lb ai/a	32 oz/a		EARPRE A	30-45 DPP							
	Chlorimuron (Classic WDG)	0.0284 lb ai/a	1.82 oz/a		EARPRE A	30-45 DPP							
	Tribenuron (Express SG)	0.0085 lb ai/a	0.272 oz/a		EARPRE A	30-45 DPP							
	Gramoxone Inteon	0.625 lb ai/a	40 oz/a		PREPRE C	PRE							
	Chlorimuron (Classic WDG)	0.0201 lb ai/a	1.29 oz/a		PREPRE C	PRE							
	Thifensulfuron (Harmony SG)	0.00625 lb ai/a	0.2 oz/a		PREPRE C	PRE							
	Flumioxazin (Valor SX)	0.0625 lb ai/a	1.96 oz/a		PREPRE C	PRE							
	COC	0.83 lb ai/a	1 % v/v		PREPRE C	PRE							
	Flexstar GT	1.24 lb ai/a	48 oz/a		EAPOCR D	7-14 DAE							
11	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EARPRE A	30-45 DPP		91.3	97.5	0.0	7.80	5.075	22.0
	2,4-D Ester	1 lb ai/a	32 oz/a		EARPRE A	30-45 DPP							
	Chlorimuron (Classic WDG)	0.0284 lb ai/a	1.82 oz/a		EARPRE A	30-45 DPP							
	Tribenuron (Express SG)	0.0085 lb ai/a	0.272 oz/a		EARPRE A	30-45 DPP							
	Gramoxone Inteon	0.625 lb ai/a	40 oz/a		PREPRE C	PRE							
	Chlorimuron (Classic WDG)	0.0201 lb ai/a	1.29 oz/a		PREPRE C	PRE							
	Thifensulfuron (Harmony SG)	0.00625 lb ai/a	0.2 oz/a		PREPRE C	PRE							
	Flumioxazin (Valor SX)	0.0625 lb ai/a	1.96 oz/a		PREPRE C	PRE							
	COC	0.83 lb ai/a	1 % v/v		PREPRE C	PRE							
	Sequence	1.64 lb ai/a	40 oz/a		EAPOCR D	7-14 DAE							
	Chlorimuron (Classic WDG)	0.00516 lb ai/a	0.33 oz/a		EAPOCR D	7-14 DAE							
12	Gramoxone Inteon	0.625 lb ai/a	40 oz/a		PREPRE C	PRE		80.0	80.0	0.0	8.90	4.283	18.4
	Prefix	1.32 lb ai/a	32 oz/a		PREPRE C	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EAPOCR D	7-14 DAE							
13	Gramoxone Inteon	0.625 lb ai/a	40 oz/a		PREPRE C	PRE		75.0	83.8	0.0	10.83	4.328	18.1
	Authority MTZ	0.28 lb ai/a	10 oz/a		PREPRE C	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EAPOCR D	7-14 DAE							
14	Gramoxone Inteon	0.625 lb ai/a	40 oz/a		PREPRE C	PRE		78.8	82.5	0.0	10.30	4.823	20.4
	Boundary	1.63 lb ai/a	32 oz/a		PREPRE C	PRE							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EAPOCR D	7-14 DAE							
LSD (P=.05)								12.15	9.72	0.00	3.505	1.9911	8.10
Standard Deviation								8.50	6.80	0.00	2.396	1.3933	5.67
CV								10.47	8.03	0.0	24.88	29.41	28.17
Bartlett's X2								14.554	18.693	0.0	38.715	15.604	13.155
P(Bartlett's X2)								0.267	0.044*	.	0.001*	0.271	0.436
Replicate F								2.174	2.325	0.000	0.222	1.713	1.884
Replicate Prob(F)								0.1065	0.0898	1.0000	0.8802	0.1802	0.1482
Treatment F								33.319	55.543	0.000	1.160	2.714	2.918
Treatment Prob(F)								0.0001	0.0001	1.0000	0.3647	0.0080	0.0048

University of Arkansas-Division of Agriculture

Canopy EX, Enlite, Envive, Basis, Traverese,, & Firstshot with Flexstar GT

Trial ID: HSB-50110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

COUPLA = count - plant / emergence - objective

CONTRO = control / burndown or knockdown

PHYSTU = phytotoxicity - stunting

LODGIN = lodging

MOICON = moisture content

WEIDRY = weight - dry / dry matter content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.096141*33*(100-@MVAVGREP(32))/87

University of Arkansas-Division of Agriculture

Soybean Plant Back Trial with HM0335A

Trial ID: HSB-50210
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Progeny 5115
BBCH Scale: BSOY
Planting Method: PLANTD planted
Depth, Unit: 1.0 IN
Row Spacing, Unit: 38 IN
Seed Bed: ROUTRA rough/trashy
Soil Moisture: GOOD good
Harvest Date: 10/5/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 13.0
Weighing Equipment: Massey Ferguson 8

Description: RR / Cruiser + Maxim + Apron
Planting Date: 5/28/2010
Rate, Unit: 145000 S/A
Spacing Within Row, Unit: 1.1 IN
Soil Temperature, Unit: 76.7 F
Emergence Date: 6/4/2010
Harvest Equipment: Massey Ferguson 8
Harvested Length, Unit: 28 FT
Moisture Meter: Massey Ferguson 8

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: REDTIL reduced-till
Study Design: RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	6/18/2010	Roundup PowerMax	4.5	LBAE/GA	SL	22	OZ/A
2.	7/9/2010	Roundup PowerMax	4.5	LBAE/GA	SL	22	OZ/A
3.	7/20/2010	Barrage	4.7	LB A/GA	SL	5	OZ/A
4.	8/19/2010	Intrepid	2	LB A/GA	SL	5	OZ/A
5.	4/12/2010	Potassium				90	LB/A

Soil Description

Description Name: 2010 Soybean
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C	D
Application Date:	4/23/2010	4/30/2010	5/7/2010	5/14/2010
Time of Day:	AM	AM	AM	PM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	EARPRE	EARPRE	EARPRE	EARPRE
Application Placement:	BROSOI	BROSOI	BROSOI	BROSOI
Applied By:	RD	JB	JB	JM
Air Temperature, Unit:	71.1 F	70.4 F	75.4 F	80.1 F
% Relative Humidity:	79.38	88.61	66.85	75.31
Wind Velocity, Unit:	7.15 MPH	7.05 MPH	9.1 MPH	2.45 MPH
Wind Direction:	SSE	SSE	NE	ENE
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	70.0 F	69.1 F	74.2 F	75.7 F
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL
% Cloud Cover:	60	90	30	45
Next Rain Occurred On:	4/24/2010	5/1/2010	5/10/2010	5/16/2010

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Height, Unit:	0 IN	0 IN	0 IN	0 IN

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W	ECHCG W
Height, Unit:	0 IN	0 IN	0 IN	0 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W	AMAPA W
Height, Unit:	0 IN	0 IN	0 IN	0 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W	IPOSS W
Height, Unit:	0 IN	0 IN	0 IN	0 IN

University of Arkansas-Division of Agriculture

Soybean Plant Back Trial with HM0335A

Trial ID: HSB-50210
 Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment				
	A	B	C	D
Appl. Equipment:	Multi Boom	Hand Boom	Hand Boom	Hand Boom
Equipment Type:	SPTRMO	SPRBAC	SPRBAC	SPRBAC
Operating Pressure, Unit:	50 PSI	45 PSI	45 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2	2
% Coverage:	100	100	100	100
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes	Y yes

University of Arkansas-Division of Agriculture

Soybean Plant Back Trial with HM0335A

Trial ID: HSB-50210
 Location: Rohwer, AR
 Investigator: Kenneth Smith

							PLANT C	ECHCG Common barnyar>	AMAPA Palmer amaranth	ECHCG Common barnyar>	AMAPA Palmer amaranth	
							5/19/2010	5/27/2010	5/27/2010	6/7/2010	6/7/2010	
							COUPLA	CONTRO	CONTRO	CONTRO	CONTRO	
							5 FT/Row	%	%	%	%	
							V2	PrePlant	PrePlant	PrePlant	PrePlant	
							26 DA-A	2-6"	3-6"	3-6"	4-6"	
							13 DA-D	13 DA-D	13 DA-D	24 DA-D	24 DA-D	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description					
								1	2	3	4	5
1	Untreated Check							20.8	0.0	0.0	0.0	0.0
2	HM 03351	16 oz/a	16 oz/a		EARPRE A	35	DPP	19.5	47.5	86.8	63.8	77.5
3	HM 03351	16 oz/a	16 oz/a		EARPRE B	28	DPP	11.3	74.8	100.0	70.0	85.0
4	HM 03351	16 oz/a	16 oz/a		EARPRE C	21	DPP	6.8	60.5	100.0	67.5	90.0
5	HM 03351	16 oz/a	16 oz/a		EARPRE D	14	DPP	10.8	62.5	100.0	65.0	72.5
6	HM 03351	32 oz/a	32 oz/a		EARPRE A	35	DPP	17.8	66.3	100.0	68.8	82.5
7	HM 03351	32 oz/a	32 oz/a		EARPRE B	28	DPP	11.3	77.5	100.0	70.0	81.3
8	HM 03351	32 oz/a	32 oz/a		EARPRE C	21	DPP	3.0	47.5	100.0	61.3	87.5
9	HM 03351	32 oz/a	32 oz/a		EARPRE D	14	DPP	1.3	60.0	100.0	62.5	82.5
10	HM 2010A	22 oz/a	22 oz/a		EARPRE A	35	DPP	20.0	33.3	88.5	60.0	83.8
11	HM 2010A	22 oz/a	22 oz/a		EARPRE B	28	DPP	22.5	47.5	87.8	57.5	75.0
12	HM 2010A	22 oz/a	22 oz/a		EARPRE C	21	DPP	27.3	53.8	97.5	62.5	80.0
13	HM 2010A	22 oz/a	22 oz/a		EARPRE D	14	DPP	22.3	40.0	100.0	47.5	85.0
LSD (P=.05)							12.91	26.99	4.86	14.92	9.91	
Standard Deviation							9.03	18.69	3.40	10.44	6.93	
CV							60.45	36.21	3.81	17.95	9.17	
Bartlett's X2							31.653	4.613	4.153	9.651	9.516	
P(Bartlett's X2)							0.002*	0.948	0.245	0.562	0.574	
Replicate F							4.109	0.177	0.255	1.239	1.614	
Replicate Prob(F)							0.0132	0.9115	0.8574	0.3099	0.2031	
Treatment F							3.236	4.651	258.263	12.547	44.867	
Treatment Prob(F)							0.0031	0.0002	0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Soybean Plant Back Trial with HM0335A

Trial ID: HSB-50210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		PLANT C	ECHCG	AMAPA	PLANT C	PLANT C	PLANT P	PLANT P	PLANT P						
Pest Name		6/18/2010	Common barnyar>	Palmer amaranth	6/18/2010	6/24/2010	6/18/2010	10/5/2010	10/5/2010						
Part Rated		PHYSTU	PLANT P	PLANT P	PHYSTU	PHYSTU	CONTR0	MOICON	WEIDRY						
Rating Date		%	6/18/2010	6/18/2010	%	%	%	%	YIELD						
Rating Type		PHYSTU	CONTR0	CONTR0	PHYSTU	PHYSTU	PHYSTU	PHYSTU	BU						
Rating Unit		%	%	%	%	%	%	%	Harvest						
Crop Stage Majority		V3 3-4"	V3 3-4"	V3 3-4"	V3 3-4"	V5 6-8"	Harvest	Harvest	Harvest						
Pest Stage Majority		35 DA-D	35 DA-D	35 DA-D	35 DA-D	41 DA-D	144 DA-D	144 DA-D	144 DA-D						
Tri-Eval Interval		35 DA-D	35 DA-D	35 DA-D	35 DA-D	41 DA-D	144 DA-D	144 DA-D	144 DA-D						
Tri No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	6	7	8	9	10	11	12	13
1	Untreated Check							0.0	0.0	0.0	0.0	0.0	12.80	5.13	22.6
2	HM 03351	16 oz/a	16 oz/a		EARPRE A	35	DPP	7.5	70.0	72.5	0.0	25.0	10.05	4.07	18.6
3	HM 03351	16 oz/a	16 oz/a		EARPRE B	28	DPP	5.0	62.5	70.0	22.5	30.0		3.05	
4	HM 03351	16 oz/a	16 oz/a		EARPRE C	21	DPP	47.5	70.0	77.5	70.0	66.3		5.00	
5	HM 03351	16 oz/a	16 oz/a		EARPRE D	14	DPP	20.0	70.0	67.5	40.0	60.0	7.65	3.80	17.7
6	HM 03351	32 oz/a	32 oz/a		EARPRE A	35	DPP	0.0	60.0	78.8	10.0	13.8	7.20	3.88	18.1
7	HM 03351	32 oz/a	32 oz/a		EARPRE B	28	DPP	26.3	62.5	65.0	46.3	48.8		2.73	
8	HM 03351	32 oz/a	32 oz/a		EARPRE C	21	DPP	68.8	70.0	78.0	87.5	83.8		0.68	
9	HM 03351	32 oz/a	32 oz/a		EARPRE D	14	DPP	66.3	65.0	70.0	85.0	86.3		1.30	
10	HM 2010A	22 oz/a	22 oz/a		EARPRE A	35	DPP	0.0	70.0	77.5	0.0	15.0		2.35	
11	HM 2010A	22 oz/a	22 oz/a		EARPRE B	28	DPP	0.0	60.0	65.0	0.0	15.0	6.80	3.20	15.0
12	HM 2010A	22 oz/a	22 oz/a		EARPRE C	21	DPP	0.0	67.5	70.0	2.5	7.5	8.90	4.08	18.7
13	HM 2010A	22 oz/a	22 oz/a		EARPRE D	14	DPP	5.0	55.0	57.5	11.3	5.0	8.60	3.18	14.6
LSD (P=.05)		19.62						11.56	11.56	13.45	21.22	26.81	45.612	2.211	11.68
Standard Deviation		13.59						8.09	8.09	9.41	14.70	18.57	4.397	1.532	7.79
CV		71.74						13.44	13.44	14.41	50.95	52.9	49.64	46.93	43.51
Bartlett's X2		12.431						6.773	6.773	13.308	21.416	26.046	6.328	13.649	1.808
P(Bartlett's X2)		0.087						0.747	0.747	0.207	0.006*	0.006*	0.042*	0.324	0.937
Replicate F		1.287						15.612	15.612	2.983	0.131	1.939	0.088	6.902	6.484
Replicate Prob(F)		0.2950						0.0001	0.0001	0.0440	0.9412	0.1412	0.9218	0.0011	0.0044
Treatment F		14.266						21.470	21.470	19.146	20.744	10.688	0.659	2.873	0.460
Treatment Prob(F)		0.0001						0.0001	0.0001	0.0001	0.0001	0.0001	0.7360	0.0089	0.8277

University of Arkansas-Division of Agriculture**Soybean Plant Back Trial with HM0335A**

Trial ID: HSB-50210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US
AMAPA, Amaranthus palmeri, = US

Part Rated

PLANT = plant
C = Crop is Part Rated
P = Pest is Part Rated

Rating Type

COUPLA = count - plant / emergence - objective
CONTRO = control / burndown or knockdown
PHYSTU = phytotoxicity - stunting
MOICON = moisture content
WEIDRY = weight - dry / dry matter content
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
BU = bushel

ARM Action Codes

TY1 = 4.388722*12*(100-@MVAVGREP(11))/87

University of Arkansas-Division of Agriculture

Goal 2XL PrePlant Burndown

Trial ID: HSB-50310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description
Crop 1: GLXMA Glycine max Soybean
Variety: Progeny 5115
BBCH Scale: BSOY
Planting Method: PLANTD planted
Depth, Unit: 1.0 IN
Row Spacing, Unit: 38 IN
Seed Bed: ROU TRA rough/trashy
Soil Moisture: GOOD good
Harvest Date: 10/5/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 13.0
Weighing Equipment: Massey Ferguson 8
Description: RR / Cruiser + Maxim + Apron
Planting Date: 5/28/2010
Rate, Unit: 145000 S/A
Spacing Within Row, Unit: 1.1 IN
Soil Temperature, Unit: 76.7 F
Emergence Date: 6/4/2010
Harvest Equipment: Massey Ferguson 8
Harvested Length, Unit: 28 FT
Moisture Meter: Massey Ferguson 8

Pest Description
Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass
Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth
Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory

Site and Design
Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT2
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CON TIL conventional-till
Study Design: RAC OBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance							
No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	6/18/2010	Roundup PowerMax	4.5	LBAE/GA	SL	22	OZ/A
2.	7/20/2010	Roundup PowerMax	4.5	LBAE/GA	SL	22	OZ/A
3.	4/12/2010	Potassium				90	LB/A
4.	7/20/2010	Barrage	4.7	LB A/GA	SL	5	OZ/A
5.	8/19/2010	Intrepid	2	LB A/GA	SL	5	OZ/A

Soil Description
Description Name: 2010 Soybean
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description			
	A	B	C
Application Date:	4/23/2010	5/21/2010	5/28/2010
Time of Day:	AM	PM	AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	EARPRE	PREPLA	PREPLA
Application Placement:	BROS OI	BROS OI	BROS OI
Applied By:	RD	JM	RD
Air Temperature, Unit:	71.1 F	69.1 F	81.1 F
% Relative Humidity:	79.38	97.72	68.39
Wind Velocity, Unit:	7.15 MPH	2.10 MPH	2.75 MPH
Wind Direction:	SSE	ESE	SW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	70.0 F	71.5 F	78.2 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	70	85	40
Next Rain Occurred On:	5/1/2010	5/26/2010	6/10/2010

Crop Stage At Each Application			
	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Height, Unit:	0 IN	0 IN	0 IN

Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Height, Unit:	0 IN	0 IN	0 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W
Height, Unit:	0 IN	0 IN	0 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W
Height, Unit:	0 IN	0 IN	0 IN

University of Arkansas-Division of Agriculture

Goal 2XL PrePlant Burndown

Trial ID: HSB-50310
 Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment			
	A	B	C
Appl. Equipment:	Hand Boom	Hand Boom	Hand Boom
Equipment Type:	SPRBAC	SPRBAC	SPRBAC
Operating Pressure, Unit:	45 PSI	45 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2
% Coverage:	100	100	100
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes

University of Arkansas-Division of Agriculture

Goal 2XL PrePlant Burndown

Trial ID: HSB-50310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code	PLANT C	ECHCG	AMAPA	IPOSS	ECHCG							
Pest Name	6/11/2010	Common barnyar>	Palmer amaranth	Morning glory	Common barnyar>							
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date	5/27/2010	5/27/2010	5/27/2010	5/27/2010	6/11/2010							
Rating Type	COUPLA	CONTRO	CONTRO	CONTRO	CONTRO							
Rating Unit	5 FT/Row	%	%	%	%							
Crop Stage Majority	V2	PrePlant	PrePlant	PrePlant	V1 1-3*							
Pest Stage Majority		3-6*	4-7*	1-2*	1-4*							
Trt-Eval Interval	14 DA-C	6 DA-B	6 DA-B	6 DA-B	14 DA-C							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check							33.0	0.0	0.0	0.0	0.0
2	Goal 2XL	0.25 lb ai/a	16 oz/a		EARPRE A	30 DPP		33.5	70.5	77.5	71.3	67.5
	Ignite 280	0.53 lb ai/a	29 oz/a		EARPRE A	30 DPP						
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP						
3	Goal 2XL	0.25 lb ai/a	16 oz/a		EARPRE A	30 DPP		38.3	80.5	88.8	86.3	78.0
	Clarity	0.25 lb ae/a	8 oz/a		EARPRE A	30 DPP						
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP						
4	Goal 2XL	0.25 lb ai/a	16 oz/a		EARPRE A	30 DPP		36.3	79.3	84.0	90.0	78.3
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EARPRE A	30 DPP						
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP						
5	Ignite 280	0.53 lb ai/a	29 oz/a		EARPRE A	30 DPP		30.8	27.5	45.5	45.5	30.0
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP						
6	Clarity	0.25 lb ae/a	8 oz/a		EARPRE A	30 DPP		37.8	38.8	42.5	45.0	42.5
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP						
7	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EARPRE A	30 DPP		28.0	18.8	23.8	22.5	30.0
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP						
8	Valor SX	0.064 lb ai/a	2 oz/a		EARPRE A	30 DPP		38.3	84.3	91.8	94.3	80.5
	Clarity	0.25 lb ae/a	8 oz/a		EARPRE A	30 DPP						
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EARPRE A	30 DPP						
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP						
9	Goal 2XL	0.25 lb ai/a	16 oz/a		PREPLA B	7 DPP		35.0	100.0	100.0	100.0	96.8
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		PREPLA B	7 DPP						
	NIS	0.45 lb ai/a	0.5 % v/v		PREPLA B	7 DPP						
	Remove Top of Bed				ATPLAN C	0 DPP						
LSD (P=.05)								8.18	16.79	25.23	25.87	10.61
Standard Deviation								5.60	11.50	17.29	17.73	7.27
CV								16.23	20.73	28.09	28.76	13.0
Bartlett's X2								4.435	20.703	18.171	15.324	9.564
P(Bartlett's X2)								0.816	0.002*	0.006*	0.018*	0.215
Replicate F								1.263	2.231	1.214	0.392	2.426
Replicate Prob(F)								0.3095	0.1105	0.3259	0.7602	0.0903
Treatment F								1.617	36.710	16.277	15.759	76.021
Treatment Prob(F)								0.1723	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Goal 2XL PrePlant Burndown

Trial ID: HSB-50310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		AMAPA		PALMER C		ECHCG		AMAPA		PALMER C		PALMER C	
Pest Name		Palmer amaranth		PLANT C		Common barnyar>		Palmer amaranth		6/18/2010		6/24/2010	
Part Rated		PLANT P		6/11/2010		PLANT P		6/18/2010		6/18/2010		6/24/2010	
Rating Date		6/11/2010		PHYSTU		6/18/2010		6/18/2010		PHYSTU		PHYSTU	
Rating Type		CONTRO		PHYSTU		CONTRO		CONTRO		PHYSTU		PHYSTU	
Rating Unit		%		%		%		%		%		%	
Crop Stage Majority		V1 1-3*		V1 1-3*		V3 3-4*		V3 3-4*		V3 3-4*		V5 6-8*	
Pest Stage Majority		1-4"		1-4"		1-5"		2-6"		2-6"		2-6"	
Trt-Eval Interval		14 DA-C		14 DA-C		21 DA-C		21 DA-C		21 DA-C		27 DA-C	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	6	7	8	9	10	11
1	Untreated Check							0.0	0.0	0.0	0.0	0.0	0.0
2	Goal 2XL	0.25 lb ai/a	16 oz/a		EARPRE A	30 DPP		78.0	0.0	66.3	72.5	0.0	7.5
	Ignite 280	0.53 lb ai/a	29 oz/a		EARPRE A	30 DPP							
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP							
3	Goal 2XL	0.25 lb ai/a	16 oz/a		EARPRE A	30 DPP		87.5	0.0	65.0	69.8	0.0	5.0
	Clarity	0.25 lb ae/a	8 oz/a		EARPRE A	30 DPP							
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP							
4	Goal 2XL	0.25 lb ai/a	16 oz/a		EARPRE A	30 DPP		79.8	0.0	72.5	71.5	0.0	2.5
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EARPRE A	30 DPP							
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP							
5	Ignite 280	0.53 lb ai/a	29 oz/a		EARPRE A	30 DPP		50.0	0.0	65.0	71.3	0.0	11.3
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP							
6	Clarity	0.25 lb ae/a	8 oz/a		EARPRE A	30 DPP		42.5	0.0	67.5	68.5	1.3	7.5
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP							
7	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EARPRE A	30 DPP		41.3	0.0	61.3	71.3	1.3	27.5
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP							
8	Valor SX	0.064 lb ai/a	2 oz/a		EARPRE A	30 DPP		80.0	0.0	65.0	78.0	0.0	3.8
	Clarity	0.25 lb ae/a	8 oz/a		EARPRE A	30 DPP							
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EARPRE A	30 DPP							
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP							
9	Goal 2XL	0.25 lb ai/a	16 oz/a		PREPLA B	7 DPP		87.3	0.0	61.3	57.5	2.5	10.0
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		PREPLA B	7 DPP							
	NIS	0.45 lb ai/a	0.5 % v/v		PREPLA B	7 DPP							
	Remove Top of Bed				ATPLAN C	0 DPP							
LSD (P=.05)								16.51	0.00	11.49	14.41	2.65	12.20
Standard Deviation								11.31	0.00	7.87	9.88	1.82	8.36
CV								18.64	0.0	13.53	15.86	326.92	100.29
Bartlett's X2								23.351	0.0	7.662	5.103	2.013	12.416
P(Bartlett's X2)								0.001*	.	0.363	0.647	0.365	0.088
Replicate F								1.680	0.000	5.748	6.944	3.368	5.064
Replicate Prob(F)								0.1979	1.0000	0.0041	0.0016	0.0351	0.0074
Treatment F								27.219	0.000	31.465	23.551	1.000	3.691
Treatment Prob(F)								0.0001	1.0000	0.0001	0.0001	0.4613	0.0061

University of Arkansas-Division of Agriculture

Goal 2XL PrePlant Burndown

Trial ID: HSB-50310
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		PLANT P		PLANT P		PLANT P				
Pest Name		10/5/2010		10/5/2010		10/5/2010				
Part Rated		MOICON		WEIDRY		YIELD				
Rating Date		%		lb/plot		BU				
Rating Type		Harvest		Harvest		Harvest				
Rating Unit		130 DA-C		130 DA-C		130 DA-C				
Crop Stage Majority										
Pest Stage Majority										
Tri-Eval Interval										
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	12	13	14
1	Untreated Check							12.27	5.13	21.2
2	Goal 2XL	0.25 lb ai/a	16 oz/a		EARPRE A	30 DPP		10.30	6.35	26.8
	Ignite 280	0.53 lb ai/a	29 oz/a		EARPRE A	30 DPP				
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP				
3	Goal 2XL	0.25 lb ai/a	16 oz/a		EARPRE A	30 DPP		10.25	7.70	32.5
	Clarity	0.25 lb ae/a	8 oz/a		EARPRE A	30 DPP				
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP				
4	Goal 2XL	0.25 lb ai/a	16 oz/a		EARPRE A	30 DPP		11.15	7.28	30.4
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EARPRE A	30 DPP				
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP				
5	Ignite 280	0.53 lb ai/a	29 oz/a		EARPRE A	30 DPP		10.15	6.65	28.1
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP				
6	Clarity	0.25 lb ae/a	8 oz/a		EARPRE A	30 DPP		11.85	7.63	31.7
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP				
7	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EARPRE A	30 DPP		9.83	6.63	28.0
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP				
8	Valor SX	0.064 lb ai/a	2 oz/a		EARPRE A	30 DPP		11.00	7.55	31.7
	Clarity	0.25 lb ae/a	8 oz/a		EARPRE A	30 DPP				
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		EARPRE A	30 DPP				
	NIS	0.45 lb ai/a	0.5 % v/v		EARPRE A	30 DPP				
9	Goal 2XL	0.25 lb ai/a	16 oz/a		PREPLA B	7 DPP		10.20	5.95	25.2
	Roundup PowerMax	0.77 lb ae/a	22 oz/a		PREPLA B	7 DPP				
	NIS	0.45 lb ai/a	0.5 % v/v		PREPLA B	7 DPP				
	Remove Top of Bed				ATPLAN C	0 DPP				
LSD (P=.05)								1.607	1.247	5.38
Standard Deviation								1.093	0.854	3.68
CV								10.14	12.64	12.97
Bartlett's X2								11.793	2.098	2.245
P(Bartlett's X2)								0.161	0.978	0.973
Replicate F								0.709	44.734	41.989
Replicate Prob(F)								0.5574	0.0001	0.0001
Treatment F								2.386	4.144	3.969
Treatment Prob(F)								0.0528	0.0032	0.0041

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Goal 2XL PrePlant Burndown

Trial ID: HSB-50310
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

COUPLA = count - plant / emergence - objective

CONTRO = control / burndown or knockdown

PHYSTU = phytotoxicity - stunting

MOICON = moisture content

WEIDRY = weight - dry / dry matter content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.096141*13*(100-@MVAVGREP(12))/87

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CHA-044 Efficacy & Selectivity Applied PRE

Trial ID: HSB-50510
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Progeny 5115
BBCH Scale: BSOY
Planting Method: PLANTD planted
Depth, Unit: 1.25 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Harvest Date: 10/5/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 13.0
Weighing Equipment: Massey Ferguson 8

Description: RR / Cruiser + Maxim + Apron
Planting Date: 5/19/2010
Rate, Unit: 145000 S/A
Spacing Within Row, Unit: 1.1 IN
Soil Temperature, Unit: 74.4 F
Emergence Date: 5/29/2010
Harvest Equipment: Massey Ferguson 8
Harvested Length, Unit: 28 FT
Moisture Meter: Massey Ferguson 8

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT2
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB L Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix Code	Tank Mix
1.	6/16/2010	Roundup PowerMax	4.5	LBAE/GA	SL	22	OZ/A	N	no
2.	4/12/2010	Potassium				90	LB/A	N	no
3.	7/20/2010	Barrage	4.7	LB A/GA	SL	5	OZ/A	N	no
4.	8/19/2010	Intrepid	2	LB A/GA	SL	5	OZ/A	N	no

Comment: Sprayed all plots including UTC

Soil Description

Description Name: 2010 Soybean
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A
Application Date:	5/19/2010
Time of Day:	5:00 PM
Application Method:	SPRAY
Application Timing:	PREPRE
Application Placement:	BROSOI
Applied By:	ZH
Air Temperature, Unit:	69.2 F
% Relative Humidity:	63.97
Wind Velocity, Unit:	5.65 MPH
Wind Direction:	NNW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	71.6 F
Soil Moisture:	NORMAL
% Cloud Cover:	55
Next Rain Occurred On:	5/21/2010

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	V0
Height, Unit:	0 IN

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CHA-044 Efficacy & Selectivity Applied PRE

Trial ID: HSB-50510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Stage At Each Application

A	
Pest 1 Code, Type, Scale:	ECHCG W
Height, Unit:	0 IN
Pest 2 Code, Type, Scale:	AMAPA W
Height, Unit:	0 IN
Pest 3 Code, Type, Scale:	IPOSS W
Height, Unit:	0 IN

Application Equipment

A	
Appl. Equipment:	Multi Boom
Equipment Type:	SPTRMO
Operating Pressure, Unit:	50 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
% Coverage:	100
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	18 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 Liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

CHA-044 Efficacy & Selectivity Applied PRE

Trial ID: HSB-50510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	PLANT C		ECHCG		AMAPA		IPOSS		ECHCG			
Pest Name	6/7/2010		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>			
Part Rated	6/11/2010		PLANT P		PLANT P		PLANT P		6/18/2010			
Rating Date	6/11/2010		6/11/2010		6/11/2010		6/11/2010		6/18/2010			
Rating Type	COUPLA		CONTRO		CONTRO		CONTRO		CONTRO			
Rating Unit	5 FT/Row		%		%		%		%			
Crop Stage Majority	V2		V3 4-5"		V3 4-5"		V3 4-5"		V5 4-7"			
Pest Stage Majority	1-4"		1-4"		1-3"		1-2"		3-8"			
Tri-Eval Interval	19 DA-A		23 DA-A		23 DA-A		23 DA-A		30 DA-A			
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check							31.5	0.0	0.0	0.0	0.0
2	CHA-044	0.94 lb ai/a	24 fl oz/a		PREPRE A	Pre		36.3	95.0	96.8	94.3	95.0
3	CHA-044	1.25 lb ai/a	32 fl oz/a		PREPRE A	Pre		37.5	97.5	97.5	96.3	100.0
4	CHA-044	1.56 lb ai/a	40 fl oz/a		PREPRE A	Pre		39.8	100.0	100.0	97.8	99.5
5	CHA-044	1.88 lb ai/a	48 fl oz/a		PREPRE A	Pre		33.3	100.0	98.8	98.8	100.0
6	CHA-044	3.75 lb ai/a	96 fl oz/a		PREPRE A	Pre		37.5	100.0	100.0	100.0	100.0
7	Dawn Stalwart	0.25 lb ai/a	16 fl oz/a		PREPRE A	Pre		31.3	100.0	97.5	100.0	100.0
8	Dawn Stalwart	1.25 lb ai/a	20 fl oz/a		PREPRE A	Pre		34.8	98.8	100.0	97.3	99.0
9	Prefix	1.32 lb ai/a	32 fl oz/a		PREPRE A	Pre		36.0	100.0	95.0	98.0	100.0
10	Prefix	1.65 lb ai/a	40 fl oz/a		PREPRE A	Pre		37.5	100.0	94.5	99.0	100.0
11	Prefix	0.99 lb ai/a	24 fl oz/a		PREPRE A	Pre		32.5	100.0	90.3	98.5	100.0
LSD (P=.05)								7.30	5.10	9.51	3.02	4.51
Standard Deviation								5.06	3.53	6.59	2.09	3.12
CV								14.34	3.92	7.47	2.35	3.46
Bartlett's X2								8.565	4.904	9.853	1.294	13.656
P(Bartlett's X2)								0.574	0.086	0.131	0.989	0.001*
Replicate F								0.157	0.532	0.538	1.640	0.781
Replicate Prob(F)								0.9241	0.6639	0.6596	0.2010	0.5139
Treatment F								1.235	287.517	79.723	800.505	369.433
Treatment Prob(F)								0.3100	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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CHA-044 Efficacy & Selectivity Applied PRE

Trial ID: HSB-50510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	AMAPA	IPOSS	ECHCG	AMAPA	IPOSS							
Pest Name	Palmer amaranth	Morning glory	Common barnyar>	Palmer amaranth	Morning glory							
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date	6/18/2010	6/18/2010	6/24/2010	6/24/2010	6/24/2010							
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO							
Rating Unit	%	%	%	%	%							
Crop Stage Majority	V5 4-7"	V5 4-7"	V8 11"	V8 11"	V8 11"							
Pest Stage Majority	2-10"	1-4"	2-10"	4-14"	1-4"							
Tri-Eval Interval	30 DA-A	30 DA-A	36 DA-A	36 DA-A	36 DA-A							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	6	7	8	9	10
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	CHA-044	0.94 lb ai/a	24 fl oz/a		PREPRE A	Pre		90.5	91.3	98.8	98.0	96.3
3	CHA-044	1.25 lb ai/a	32 fl oz/a		PREPRE A	Pre		97.5	89.5	98.8	97.5	93.8
4	CHA-044	1.56 lb ai/a	40 fl oz/a		PREPRE A	Pre		99.3	98.0	100.0	100.0	97.5
5	CHA-044	1.88 lb ai/a	48 fl oz/a		PREPRE A	Pre		96.3	96.3	99.3	96.3	97.5
6	CHA-044	3.75 lb ai/a	96 fl oz/a		PREPRE A	Pre		100.0	96.3	100.0	100.0	98.0
7	Dawn Stalwart	0.25 lb ai/a	16 fl oz/a		PREPRE A	Pre		95.0	99.3	98.8	96.3	96.3
8	Dawn Stalwart	0.313 lb ai/a	20 fl oz/a		PREPRE A	Pre		93.0	98.0	100.0	97.5	96.3
9	Prefix	1.32 lb ai/a	32 fl oz/a		PREPRE A	Pre		100.0	95.5	100.0	100.0	97.5
10	Prefix	1.65 lb ai/a	40 fl oz/a		PREPRE A	Pre		97.5	96.0	100.0	100.0	98.8
11	Prefix	0.99 lb ai/a	24 fl oz/a		PREPRE A	Pre		91.5	94.8	98.8	97.5	97.5
LSD (P=.05)		9.22						9.22	4.53	2.27	4.43	4.23
Standard Deviation		6.39						6.39	3.14	1.57	3.07	2.93
CV		7.31						7.31	3.62	1.74	3.43	3.32
Bartlett's X2		12.744						12.744	5.628	0.964	2.402	4.382
P(Bartlett's X2)		0.079						0.079	0.777	0.915	0.791	0.885
Replicate F		0.900						0.900	0.138	1.068	1.699	7.932
Replicate Prob(F)		0.4527						0.4527	0.9368	0.3775	0.1883	0.0005
Treatment F		83.320						83.320	339.663	1460.557	374.078	398.804
Treatment Prob(F)		0.0001						0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

CHA-044 Efficacy & Selectivity Applied PRE

Trial ID: HSB-50510
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG		AMAPA		
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>		Palmer amaranth		
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		
Rating Date		7/2/2010		7/2/2010		7/2/2010		7/2/2010		7/2/2010		
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		
Rating Unit		%		%		%		%		%		
Crop Stage Majority		R1 16"		R1 16"		R1 16"		R2 26.5"		R2 26.5"		
Pest Stage Majority		2-10"		4-16"		1-4"		4-24"		8-36"		
Tri-Eval Interval		44 DA-A		44 DA-A		44 DA-A		54 DA-A		54 DA-A		
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	11	12	13	14	15
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	CHA-044	0.94 lb ai/a	24 fl oz/a		PREPRE A	Pre		95.0	94.3	98.8	91.3	96.0
3	CHA-044	1.25 lb ai/a	32 fl oz/a		PREPRE A	Pre		96.8	95.0	93.3	94.8	95.3
4	CHA-044	1.56 lb ai/a	40 fl oz/a		PREPRE A	Pre		100.0	100.0	98.8	99.0	100.0
5	CHA-044	1.88 lb ai/a	48 fl oz/a		PREPRE A	Pre		98.8	96.3	96.3	97.3	97.0
6	CHA-044	3.75 lb ai/a	96 fl oz/a		PREPRE A	Pre		100.0	100.0	98.8	100.0	100.0
7	Dawn Stalwart	0.25 lb ai/a	16 fl oz/a		PREPRE A	Pre		100.0	98.8	98.5	97.3	98.8
8	Dawn Stalwart	0.313 lb ai/a	20 fl oz/a		PREPRE A	Pre		98.8	100.0	97.5	97.3	98.8
		1.25 lb ai/a	20 fl oz/a		PREPRE A	Pre						
9	Prefix	1.32 lb ai/a	32 fl oz/a		PREPRE A	Pre		100.0	100.0	98.0	96.8	100.0
10	Prefix	1.65 lb ai/a	40 fl oz/a		PREPRE A	Pre		100.0	95.5	100.0	98.0	95.8
11	Prefix	0.99 lb ai/a	24 fl oz/a		PREPRE A	Pre		100.0	96.5	100.0	94.3	94.5
LSD (P=.05)								5.04	4.30	3.65	5.92	6.25
Standard Deviation								3.49	2.98	2.53	4.10	4.33
CV								3.88	3.36	2.84	4.67	4.88
Bartlett's X2								8.235	3.513	4.908	17.616	6.991
P(Bartlett's X2)								0.041*	0.621	0.671	0.024*	0.322
Replicate F								0.514	2.942	4.817	0.214	0.168
Replicate Prob(F)								0.6756	0.0490	0.0074	0.8859	0.9171
Treatment F								293.015	393.113	549.071	203.078	185.610
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

CHA-044 Efficacy & Selectivity Applied PRE

Trial ID: HSB-50510
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	IPOSS	ECHCG	AMAPA	IPOSS	ECHCG						
Pest Name	Morning glory	Common barnyar>	Palmer amaranth	Morning glory	Common barnyar>						
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P						
Rating Date	7/12/2010	7/23/2010	7/23/2010	7/23/2010	10/4/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	%	%	%	%	%						
Crop Stage Majority	R2 26.5"	R2 40"	R2 40"	R2 40"	42.5"						
Pest Stage Majority	2-12"	20-40"	20-40"	10-20"	10-30"						
Tri-Eval Interval	54 DA-A	65 DA-A	65 DA-A	65 DA-A	138 DA-A						
Tri Treatment	Rate	Other	Other	Growth	Appl	Appl					
No. Name	Unit	Rate	Rate	Unit	Code	Description	16	17	18	19	20
1 Untreated Check							0.0	0.0	0.0	0.0	0.0
2 CHA-044	0.94 lb ai/a	24 fl oz/a		PREPRE A	Pre		95.3	90.0	92.5	98.8	82.5
3 CHA-044	1.25 lb ai/a	32 fl oz/a		PREPRE A	Pre		95.0	90.0	92.5	95.0	83.8
4 CHA-044	1.56 lb ai/a	40 fl oz/a		PREPRE A	Pre		98.0	97.5	100.0	98.0	80.0
5 CHA-044	1.88 lb ai/a	48 fl oz/a		PREPRE A	Pre		96.0	95.0	92.5	93.0	86.3
6 CHA-044	3.75 lb ai/a	96 fl oz/a		PREPRE A	Pre		100.0	100.0	100.0	100.0	80.0
7 Dawn	0.25 lb ai/a	16 fl oz/a		PREPRE A	Pre		99.0	92.5	93.8	95.0	77.5
Stalwart	1.0 lb ai/a	16 fl oz/a		PREPRE A	Pre						
8 Dawn	0.313 lb ai/a	20 fl oz/a		PREPRE A	Pre		100.0	96.3	96.3	100.0	77.5
Stalwart	1.25 lb ai/a	20 fl oz/a		PREPRE A	Pre						
9 Prefix	1.32 lb ai/a	32 fl oz/a		PREPRE A	Pre		100.0	96.5	100.0	98.8	78.0
10 Prefix	1.65 lb ai/a	40 fl oz/a		PREPRE A	Pre		100.0	100.0	95.0	100.0	80.0
11 Prefix	0.99 lb ai/a	24 fl oz/a		PREPRE A	Pre		100.0	92.5	85.0	97.5	70.0
LSD (P=.05)							3.45	13.50	12.57	5.74	8.76
Standard Deviation							2.39	9.35	8.71	3.98	6.07
CV							2.67	10.82	10.11	4.48	8.39
Bartlett's X2							1.979	6.775	4.222	7.378	5.693
P(Bartlett's X2)							0.74	0.453	0.647	0.287	0.576
Replicate F							2.308	0.458	0.830	3.246	1.328
Replicate Prob(F)							0.0966	0.7135	0.4881	0.0356	0.2836
Treatment F							618.786	38.149	44.106	220.389	64.429
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

CHA-044 Efficacy & Selectivity Applied PRE

Trial ID: HSB-50510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	AMAPA Palmer amaranth	IPOSS Morning glory	PLANT C 10/4/2010 LODGIN	PLANT P 10/5/2010 MOICON	PLANT P 10/5/2010 WEIDRY	PLANT P 10/5/2010 YIELD							
Pest Name	PLANT P	PLANT P	PLANT C	PLANT P	PLANT P	PLANT P							
Part Rated	10/4/2010	10/4/2010	10/4/2010	10/5/2010	10/5/2010	10/5/2010							
Rating Date	CONTRO	CONTRO	LODGIN	MOICON	WEIDRY	YIELD							
Rating Type	%	%	%	%	%	BU							
Rating Unit	42.5"	42.5"	42.5"	Harvest	lb/plot	Harvest							
Crop Stage Majority	20-60"	10-35"											
Pest Stage Majority	138 DA-A	138 DA-A	138 DA-A	139 DA-A	139 DA-A	139 DA-A							
Tri-Eval Interval													
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	21	22	23	24	25	26
1	Untreated Check	0.0						0.0	0.0	2.00	12.68	6.80	27.9
2	CHA-044	0.94 lb ai/a	24 fl oz/a		PREPRE A	Pre		70.0	70.0	2.00	13.58	7.15	29.0
3	CHA-044	1.25 lb ai/a	32 fl oz/a		PREPRE A	Pre		71.3	67.5	2.00	11.97	6.10	25.3
4	CHA-044	1.56 lb ai/a	40 fl oz/a		PREPRE A	Pre		79.3	65.0	1.50	10.70	7.90	33.2
5	CHA-044	1.88 lb ai/a	48 fl oz/a		PREPRE A	Pre		75.0	67.5	1.75	12.75	7.45	30.6
6	CHA-044	3.75 lb ai/a	96 fl oz/a		PREPRE A	Pre		72.5	70.0	1.13	10.20	8.03	33.9
7	Dawn Stalwart	0.25 lb ai/a 1.0 lb ai/a	16 fl oz/a 16 fl oz/a		PREPRE A PREPRE A	Pre Pre		70.0	65.0	1.38	10.95	7.25	30.4
8	Dawn Stalwart	0.313 lb ai/a 1.25 lb ai/a	20 fl oz/a 20 fl oz/a		PREPRE A PREPRE A	Pre Pre		65.0	62.5	1.38	12.73	7.28	30.1
9	Prefix	1.32 lb ai/a	32 fl oz/a		PREPRE A	Pre		74.5	67.5	1.75	11.45	7.93	33.0
10	Prefix	1.65 lb ai/a	40 fl oz/a		PREPRE A	Pre		75.0	67.5	1.13	12.05	7.80	32.4
11	Prefix	0.99 lb ai/a	24 fl oz/a		PREPRE A	Pre		65.0	60.0	1.50	12.40	6.25	25.8
LSD (P=.05)		11.61						11.61	10.56	0.842	2.854	1.560	6.88
Standard Deviation		8.04						8.04	7.31	0.583	1.974	1.080	4.77
CV		12.33						12.33	12.14	36.66	16.52	14.87	15.81
Bartlett's X2		11.326						11.326	9.355	9.447	12.722	8.005	10.002
P(Bartlett's X2)		0.254						0.254	0.313	0.49	0.24	0.628	0.44
Replicate F		2.798						2.798	3.555	18.664	6.976	0.887	0.380
Replicate Prob(F)		0.0570						0.0570	0.0259	0.0001	0.0011	0.4590	0.7680
Treatment F		30.073						30.073	30.518	1.290	1.078	1.492	1.502
Treatment Prob(F)		0.0001						0.0001	0.0001	0.2802	0.4099	0.1908	0.1870

University of Arkansas-Division of Agriculture

CHA-044 Efficacy & Selectivity Applied PRE

Trial ID: HSB-50510
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US
AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

COUPLA = count - plant / emergence - objective

CONTRO = control / burndown or knockdown

LODGIN = lodging

MOICON = moisture content

WEIDRY = weight - dry / dry matter content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.096141*25*(100-@MVAVGREP(24))/87

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-50610
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Progeny 5115
BBCH Scale: BSOY
Planting Method: PLANTD planted
Depth, Unit: 1.25 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Description: RR / Cruiser + Maxim + Apron
Planting Date: 5/19/2010
Rate, Unit: 145000 S/A
Spacing Within Row, Unit: 1.1 IN
Soil Temperature, Unit: 74.4 F
Emergence Date: 5/29/2010

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass
Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth
Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 29 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix Code	Tank Mix
1.	4/12/2010	Potassium				90	LB/A	N	no
2.	7/20/2010	Barrage	4.7	LB A/GA	SL	5	OZ/A	N	no
3.	8/19/2010	Intrepid	2	LB A/GA	SL	5	OZ/A	N	no

Soil Description

Description Name: 2010 Soybean
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A
Application Date:	5/19/2010
Time of Day:	6:00 PM
Application Method:	SPRAY
Application Timing:	PREPRE
Application Placement:	BROSOL
Applied By:	ZH
Air Temperature, Unit:	69.2 F
% Relative Humidity:	63.97
Wind Velocity, Unit:	5.65 MPH
Wind Direction:	NNW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	71.6 F
Soil Moisture:	NORMAL
% Cloud Cover:	45
Next Rain Occurred On:	5/21/2010

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	V0
Height, Unit:	0 IN

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ECHCG W
Height, Unit:	0 IN
Pest 2 Code, Type, Scale:	AMAPA W
Height, Unit:	0 IN
Pest 3 Code, Type, Scale:	IPOSS W
Height, Unit:	0 IN

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-50610
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment	
	A
Appl. Equipment:	Multi Boom
Equipment Type:	SPTRMO
Operating Pressure, Unit:	50 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
% Coverage:	100
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	18 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 Liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

No.	Date	By	Deviations
1.	6/17/2010	ZH	Plot 101 - UTC was sprayed with Roundup.

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-50610
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG					
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>					
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P					
Rating Date		6/7/2010		6/9/2010		6/9/2010		6/18/2010					
Rating Type		COUPLA		CONTRO		CONTRO		CONTRO					
Rating Unit		5 FT/Row		%		%		%					
Crop Stage Majority		V2		V3 4-5"		V3 4-5"		V3 4-5"					
Pest Stage Majority		V2		1-4"		1-3"		1-2"					
Tri-Eval Interval		19 DA-A		21 DA-A		21 DA-A		30 DA-A					
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check								38.8	0.0	0.0	0.0	0.0
2	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		39.8	93.3	96.3	98.0	85.5
3	V-10233	0.143	lb ai/a	3	oz/a	PREPRE A	Pre		38.8	99.5	99.5	99.0	99.5
4	V-10233	0.178	lb ai/a	3.75	oz/a	PREPRE A	Pre		39.3	100.0	100.0	99.5	100.0
5	Authority Assist	0.156	lb ai/a	5	oz/a	PREPRE A	Pre		39.8	98.8	100.0	100.0	87.8
6	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		42.5	100.0	99.5	98.5	96.0
7	Authority First	0.0014	lb ai/a	3.2	oz/a	PREPRE A	Pre		42.5	94.3	98.0	98.5	64.8
8	Optill					PREPRE A	Pre (2 oz)		38.8	94.0	95.0	97.5	84.0
	>Sharpen	0.02218	lb ai/a	1	oz/a	PREPRE A	Pre						
	>Newpath	0.06273	lb ai/a	4	oz/a	PREPRE A	Pre						
9	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		42.0	99.0	98.8	99.5	94.5
	V-10233	0.0475	lb ai/a	1	oz/a	PREPRE A	Pre						
10	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE A	Pre		43.8	93.5	99.5	98.8	84.3
11	Boundary	1.63	lb ai/a	32	oz/a	PREPRE A	Pre		41.3	98.5	98.8	98.8	98.8
	LSD (P=.05)								7.98	3.43	2.88	2.54	20.13
	Standard Deviation								5.53	2.38	2.00	1.76	13.94
	CV								13.6	2.69	2.23	1.95	17.13
	Bartlett's X2								9.464	11.779	11.049	7.029	53.373
	P(Bartlett's X2)								0.489	0.108	0.137	0.534	0.001*
	Replicate F								1.638	0.454	0.644	2.811	0.774
	Replicate Prob(F)								0.2015	0.7161	0.5925	0.0563	0.5175
	Treatment F								0.433	611.747	888.354	1151.872	17.154
	Treatment Prob(F)								0.9185	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-50610
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA	IPOSS	ECHCG	AMAPA	IPOSS						
Pest Name		Palmer amaranth	Morning glory	Common barnyar	Palmer amaranth	Morning glory						
Part Rated		PLANT P	PLANT P	PLANT P	PLANT P	PLANT P						
Rating Date		6/18/2010	6/18/2010	6/24/2010	6/24/2010	6/24/2010						
Rating Type		CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit		%	%	%	%	%						
Crop Stage Majority		V5 5-8"	V5 5-8"	V8 11"	V8 11"	V8 11"						
Pest Stage Majority		4-10"	1-3"	4-10"	4-16"	1-3"						
Tri-Eval Interval		30 DA-A	30 DA-A	36 DA-A	36 DA-A	36 DA-A						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	6	7	8	9	10
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	Valor SX	0.064 lb ai/a	2 oz/a		PREPRE A	Pre		91.0	92.8	80.0	80.0	97.5
3	V-10233	0.143 lb ai/a	3 oz/a		PREPRE A	Pre		100.0	94.5	97.5	100.0	94.3
4	V-10233	0.178 lb ai/a	3.75 oz/a		PREPRE A	Pre		100.0	97.5	100.0	100.0	96.3
5	Authority Assist	0.156 lb ai/a	5 oz/a		PREPRE A	Pre		93.3	96.3	86.8	89.0	95.0
6	Prefix	1.32 lb ai/a	32 oz/a		PREPRE A	Pre		98.8	94.5	97.5	100.0	95.0
7	Authority First	0.0014 lb ai/a	3.2 oz/a		PREPRE A	Pre		94.3	96.3	76.3	93.0	100.0
8	Optill				PREPRE A	Pre (2 oz)		85.5	91.8	77.5	79.0	92.5
	>Sharpen	0.02218 lb ai/a	1 oz/a		PREPRE A	Pre						
	>Newpath	0.06273 lb ai/a	4 oz/a		PREPRE A	Pre						
9	Valor SX	0.064 lb ai/a	2 oz/a		PREPRE A	Pre		97.0	95.5	90.0	96.8	97.5
	V-10233	0.0475 lb ai/a	1 oz/a		PREPRE A	Pre						
10	Authority MTZ	0.28 lb ai/a	10 oz/a		PREPRE A	Pre		86.5	90.0	75.0	86.5	92.5
11	Boundary	1.63 lb ai/a	32 oz/a		PREPRE A	Pre		98.8	96.0	95.0	96.8	90.0
LSD (P=.05)								7.56	6.83	9.93	12.35	9.30
Standard Deviation								5.24	4.73	6.87	8.55	6.44
CV								6.09	5.5	8.64	10.22	7.45
Bartlett's X2								10.906	5.023	3.241	5.409	4.722
P(Bartlett's X2)								0.143	0.832	0.918	0.493	0.787
Replicate F								2.660	0.480	0.444	0.398	0.258
Replicate Prob(F)								0.0661	0.6988	0.7230	0.7551	0.8550
Treatment F								122.298	146.108	66.256	45.383	80.009
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-50610
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG		AMAPA				
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>		Palmer amaranth				
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P				
Rating Date		7/2/2010		7/2/2010		7/2/2010		7/12/2010		7/12/2010				
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO				
Rating Unit		%		%		%		%		%				
Crop Stage Majority		R1 16"		R1 16"		R1 16"		R2 27.5"		R2 27.5"				
Pest Stage Majority		2-14"		4-26"		1-10"		10-30"		10-60"				
Tri-Eval Interval		44 DA-A		44 DA-A		44 DA-A		54 DA-A		54 DA-A				
Tri	Treatment	Rate	Rate	Other	Other	Growth	Appl	Appl						
No.	Name		Unit	Rate	Rate	Unit	Stage	Code	Description	11	12	13	14	15
1	Untreated Check									0.0	0.0	0.0	0.0	0.0
2	Valor SX	0.064	lb ai/a	2	oz/a		PREPRE	A	Pre	77.5	82.0	92.0	70.0	72.5
3	V-10233	0.143	lb ai/a	3	oz/a		PREPRE	A	Pre	98.8	100.0	92.5	100.0	100.0
4	V-10233	0.178	lb ai/a	3.75	oz/a		PREPRE	A	Pre	100.0	100.0	98.8	97.5	100.0
5	Authority Assist	0.156	lb ai/a	5	oz/a		PREPRE	A	Pre	87.3	87.8	97.5	80.8	84.3
6	Prefix	1.32	lb ai/a	32	oz/a		PREPRE	A	Pre	97.5	98.8	90.0	94.5	100.0
7	Authority First	0.0014	lb ai/a	3.2	oz/a		PREPRE	A	Pre	81.3	89.0	95.0	78.8	87.0
8	Optill						PREPRE	A	Pre (2 oz)	78.5	78.0	92.5	75.0	70.0
	>Sharpen	0.02218	lb ai/a	1	oz/a		PREPRE	A	Pre					
	>Newpath	0.06273	lb ai/a	4	oz/a		PREPRE	A	Pre					
9	Valor SX	0.064	lb ai/a	2	oz/a		PREPRE	A	Pre	88.8	92.8	99.0	88.0	94.5
	V-10233	0.0475	lb ai/a	1	oz/a		PREPRE	A	Pre					
10	Authority MTZ	0.28	lb ai/a	10	oz/a		PREPRE	A	Pre	78.3	88.0	92.5	72.5	80.5
11	Boundary	1.63	lb ai/a	32	oz/a		PREPRE	A	Pre	97.5	97.5	93.8	95.0	96.0
LSD (P=.05)										10.10	10.24	7.24	10.68	9.86
Standard Deviation										6.99	7.09	5.01	7.40	6.83
CV										8.69	8.54	5.85	9.55	8.49
Bartlett's X2										10.306	10.151	12.141	7.561	6.593
P(Bartlett's X2)										0.244	0.18	0.205	0.477	0.36
Replicate F										0.074	0.804	1.901	0.340	0.332
Replicate Prob(F)										0.9737	0.5017	0.1507	0.7964	0.8024
Treatment F										64.655	64.612	130.147	56.447	71.073
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-50610
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		IPOSS	ECHCG	AMAPA	IPOSS	ECHCG							
Pest Name		Morning glory	Common barnyar>	Palmer amaranth	Morning glory	Common barnyar>							
Part Rated		PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date		7/12/2010	7/23/2010	7/23/2010	7/23/2010	10/4/2010							
Rating Type		CONTRO	CONTRO	CONTRO	CONTRO	CONTRO							
Rating Unit		%	%	%	%	%							
Crop Stage Majority		R2 27.5"	R2 40"	R2 40"	R2 40"	42.5"							
Pest Stage Majority		4-14"	20-40"	20-60"	10-20"	10-30"							
Tri-Eval Interval		54 DA-A	65 DA-A	65 DA-A	65 DA-A	138 DA-A							
Tri No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	16	17	18	19	20
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE	A	Pre	92.5	65.0	72.5	95.0	72.5
3	V-10233	0.143	lb ai/a	3	oz/a	PREPRE	A	Pre	99.0	97.5	100.0	100.0	75.0
4	V-10233	0.178	lb ai/a	3.75	oz/a	PREPRE	A	Pre	100.0	100.0	97.5	100.0	80.0
5	Authority Assist	0.156	lb ai/a	5	oz/a	PREPRE	A	Pre	97.5	85.0	85.0	100.0	72.5
6	Prefix	1.32	lb ai/a	32	oz/a	PREPRE	A	Pre	97.0	92.5	97.5	95.0	77.5
7	Authority First	0.0014	lb ai/a	3.2	oz/a	PREPRE	A	Pre	100.0	75.0	83.5	100.0	70.0
8	Optill					PREPRE	A	Pre (2 oz)	95.0	80.0	75.0	97.5	70.0
	>Sharpen	0.02218	lb ai/a	1	oz/a	PREPRE	A	Pre					
	>Newpath	0.06273	lb ai/a	4	oz/a	PREPRE	A	Pre					
9	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE	A	Pre	98.5	86.3	83.8	100.0	70.0
	V-10233	0.0475	lb ai/a	1	oz/a	PREPRE	A	Pre					
10	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE	A	Pre	96.3	72.5	77.5	100.0	67.5
11	Boundary	1.63	lb ai/a	32	oz/a	PREPRE	A	Pre	99.0	87.5	90.0	95.0	75.0
LSD (P=.05)									5.23	11.20	11.13	7.56	7.33
Standard Deviation									3.62	7.75	7.71	5.24	5.08
CV									4.09	10.14	9.84	5.86	7.65
Bartlett's X2									5.686	4.958	6.674	1.606	2.574
P(Bartlett's X2)									0.577	0.762	0.572	0.658	0.86
Replicate F									0.515	0.362	1.692	1.851	1.647
Replicate Prob(F)									0.6753	0.7806	0.1897	0.1593	0.1994
Treatment F									264.966	50.255	51.277	128.735	77.329
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-50610
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		PLANT C					
Pest Name		Palmer amaranth		Morning glory		10/4/2010					
Part Rated		PLANT P		PLANT P		LODGIN					
Rating Date		10/4/2010		10/4/2010							
Rating Type		CONTRO		CONTRO							
Rating Unit		%		%							
Crop Stage Majority		42.5"		42.5"		42.5"					
Pest Stage Majority		20-60"		10-35"							
Tri-Eval Interval		138 DA-A		138 DA-A		138 DA-A					
Tri No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	21	22	23
1	Untreated Check								0.0	0.0	1.50
2	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE	A	Pre	62.5	62.5	1.88
3	V-10233	0.143	lb ai/a	3	oz/a	PREPRE	A	Pre	70.0	67.5	1.00
4	V-10233	0.178	lb ai/a	3.75	oz/a	PREPRE	A	Pre	77.5	62.5	1.25
5	Authority Assist	0.156	lb ai/a	5	oz/a	PREPRE	A	Pre	65.0	65.0	0.75
6	Prefix	1.32	lb ai/a	32	oz/a	PREPRE	A	Pre	75.0	62.5	0.75
7	Authority First	0.0014	lb ai/a	3.2	oz/a	PREPRE	A	Pre	70.0	70.0	1.38
8	Optill					PREPRE	A	Pre (2 oz)	60.0	65.0	1.67
	>Sharpen	0.02218	lb ai/a	1	oz/a	PREPRE	A	Pre			
	>Newpath	0.06273	lb ai/a	4	oz/a	PREPRE	A	Pre			
9	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE	A	Pre	67.5	67.5	1.25
	V-10233	0.0475	lb ai/a	1	oz/a	PREPRE	A	Pre			
10	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE	A	Pre	67.5	65.0	1.00
11	Boundary	1.63	lb ai/a	32	oz/a	PREPRE	A	Pre	70.0	62.5	1.67
LSD (P=.05)									10.72	8.65	1.084
Standard Deviation									7.43	5.99	0.749
CV									11.93	10.14	58.47
Bartlett's X2									3.023	4.067	7.099
P(Bartlett's X2)									0.933	0.851	0.716
Replicate F									0.275	2.532	5.661
Replicate Prob(F)									0.8431	0.0758	0.0037
Treatment F									32.769	43.481	1.021
Treatment Prob(F)									0.0001	0.0001	0.4511

University of Arkansas-Division of Agriculture**Valor and V-10233 Weed Control in Soybean**

Trial ID: HSB-50610
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

COUPLA = count - plant / emergence - objective

CONTRO = control / burndown or knockdown

LODGIN = lodging

Rating Unit

% = percent

University of Arkansas-Division of Agriculture

Residual Control of Amaranthus Palmeri

Trial ID: HSB-50710
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop 1:		Crop Description	
GLXMA	Glycine max Soybean	Description:	RR / Cruiser + Maxim + Apron
Variety:	Progeny 5115	Planting Date:	5/19/2010
BBCH Scale:	BSOY	Rate, Unit:	145000 S/A
Planting Method:	PLANTD planted	Spacing Within Row, Unit:	1.1 IN
Depth, Unit:	1.25 IN	Soil Temperature, Unit:	74.4
Row Spacing, Unit:	38 IN	Emergence Date:	5/29/2010
Seed Bed:	MEDIUM medium	Harvest Equipment:	Almaco
Soil Moisture:	GOOD good	Harvested Length, Unit:	28 FT
Harvest Date:	10/5/2010	Moisture Meter:	Almaco
Harvested Width, Unit:	6.33 FT		
% Standard Moisture:	13.0		
Weighing Equipment:	Almaco		

Pest 1 Type: W		Pest Description	
Code:	ECHCG Echinochloa crus-galli	Common Name:	Common barnyardgrass
Pest 2 Type: W	Code: AMAPA Amaranthus palmeri	Common Name:	Palmer amaranth
Pest 3 Type: W	Code: IPOSS Ipomoea sp.	Common Name:	Morning glory

Site and Design	
Plot Width, Unit:	12.66 FT
Plot Length, Unit:	28 FT
Plot Area, Unit:	354.48 FT ²
Replications:	4
Site Type:	FIELD field
Experimental Unit:	1 PLOT plot
Tillage Type:	CONTRL conventional-till
Study Design:	RACOBL Randomized Complete Block (RCB)
Untreated Arrangement:	INCLUDED single control randomized in each block

Maintenance									
No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix Code	Tank Mix
1.	4/12/2010	Potassium				90	LB/A	N	no
2.	7/20/2010	Barrage	4.7	LB A/GA	SL	5	OZ/A	N	no
3.	8/19/2010	Intrepid	2	LB A/GA	SL	5	OZ/A	N	no

Soil Description	
Description Name:	2010 Soybean
% Sand:	16
% Silt:	65
% Clay:	19
% OM:	2.2
pH:	6.7
CEC:	13
Texture:	SIL silt loam
Soil Name:	Sharkey & Desha Silt Loam
Fert. Level:	G good
Soil Drainage:	G good

Application Description		
	A	B
Application Date:	5/19/2010	5/19/2010
Time of Day:	12:00 PM	7:00 PM
Application Method:	SPRAY	SPRAY
Application Timing:	ATPLAN	PREPRE
Application Placement:	BROSOI	BROSOI
Applied By:	JB	ZH
Air Temperature, Unit:	69.2 F	69.2 F
% Relative Humidity:	63.97	63.97
Wind Velocity, Unit:	5.65 MPH	5.65 MPH
Wind Direction:	NNW	NNW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	71.6 F	71.6 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	35	35
Next Rain Occurred On:	5/21/2010	5/21/2010

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	V0	V0
Height, Unit:	0 IN	0 IN

Pest Stage At Each Application		
	A	B
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W
Height, Unit:	0 IN	0 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W
Height, Unit:	0 IN	0 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W
Height, Unit:	0 IN	0 IN

University of Arkansas-Division of Agriculture

Residual Control of Amaranthus Palmeri

Trial ID: HSB-50710
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment		
	A	B
Appl. Equipment:	Multi Boom	Multi Boom
Equipment Type:	SPTRMO	SPTRMO
Operating Pressure, Unit:	50 PSI	50 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
% Coverage:	100	100
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Residual Control of Amaranthus Palmeri

Trial ID: HSB-50710
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	ECHCG	AMAPA	IPOSS	ECHCG							
Pest Name	Common barnyar>	Palmer amaranth	Morning glory	Common barnyar>							
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date	6/9/2010	6/9/2010	6/9/2010	6/18/2010							
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO							
Rating Unit	%	%	%	%							
Crop Stage Majority	V2 4-5"	V2 4-5"	V2 4-5"	V5 6-8"							
Pest Stage Majority	1-2"	0.5-1"	0.5"	1-4"							
Trt-Eval Interval	21 DA-A	21 DA-A	21 DA-A	30 DA-A							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	1	2	3	4
1	Untreated Check							0.0	0.0	0.0	0.0
2	Valor SX	0.064 lb ai/a	2 oz/a		PREPRE B	Pre		93.5	96.3	96.8	93.0
3	Sharpen	0.0223 lb ai/a	1 oz/a		PREPRE B	Pre		91.3	98.8	99.5	84.3
4	Sharpen	0.0334 lb ai/a	1.5 oz/a		PREPRE B	Pre		93.8	96.8	98.8	87.0
5	Sharpen	0.0445 lb ai/a	2 oz/a		PREPRE B	Pre		89.3	100.0	98.5	84.5
6	Reflex	0.25 lb ai/a	16 oz/a		PREPRE B	Pre		93.8	97.3	96.8	85.0
7	Reflex	0.375 lb ai/a	24 oz/a		PREPRE B	Pre		94.5	99.3	98.0	85.3
8	Dual Magnum	0.95 lb ai/a	16 oz/a		PREPRE B	Pre		97.5	99.3	98.0	97.5
9	Dual Magnum Sharpen	0.95 lb ai/a 0.0223 lb ai/a	16 oz/a 1 oz/a		PREPRE B PREPRE B	Pre Pre		100.0	100.0	99.3	97.5
10	Dual Magnum Sharpen	0.95 lb ai/a 0.0445 lb ai/a	16 oz/a 2 oz/a		PREPRE B PREPRE B	Pre Pre		100.0	100.0	99.8	100.0
11	Prefix	1.32 lb ai/a	32 oz/a		PREPRE B	Pre		100.0	100.0	99.3	99.5
12	Envice >Flumioxazin (Valor SX) >Chlorimuron (Classic WDG) >Thifensulfuron (Harmony SG)	0.0625 lb ai/a 0.02 lb ai/a 0.00625 lb ai/a	1.96 oz/a 1.28 oz/a 0.2 oz/a		PREPRE B PREPRE B PREPRE B	Pre (3,5 oz) Pre Pre		94.8	97.3	100.0	91.3
13	Flexstar GT	1.24 lb ai/a	48 oz/a		PREPRE B	Pre		93.5	98.0	97.8	87.5
14	Cadet	0.00356 lb ai/a	0.5 oz/a		PREPRE B	Pre		91.5	93.3	96.0	85.0
15	Cadet	0.0071 lb ai/a	1 oz/a		PREPRE B	Pre		86.8	93.8	96.5	80.0
16	Traverse >Rimsulfuron (Resolve DF) >Chlorimuron (Classic WDG)	0.0305 lb ai/a 0.0305 lb ai/a	1.95 oz/a 1.95 oz/a		PREPRE B PREPRE B	Pre (3.9 oz) Pre Pre		97.3	98.5	99.8	95.5
17	V-10233	0.166 lb ai/a	3.5 oz/a		PREPRE B	Pre		98.8	100.0	99.5	99.3
18	V-10233	0.178 lb ai/a	3.75 oz/a		PREPRE B	Pre		97.8	99.0	99.8	98.8
19	Basis	0.0234 lb ai/a	0.5 oz/a		PREPRE B	Pre		94.3	99.5	98.8	91.8
20	Synchrony XP >Chlorimuron (Classic WDG) >Tribenuron (Express SG)	0.0284 lb ai/a 0.0085 lb ai/a	1.82 oz/a 0.272 oz/a		PREPRE B PREPRE B PREPRE B	Pre (2.0 oz) Pre Pre		94.8	98.3	98.5	88.3
21	Diligent >Rimsulfuron (Resolve DF) >Chlorimuron (Classic WDG) >Flumioxazin (Valor SX)	0.0238 lb ai/a 0.0238 lb ai/a 0.095 lb ai/a	1.52 oz/a 1.52 oz/a 2.98 oz/a		PREPRE B PREPRE B PREPRE B	Pre (4 oz) Pre Pre Pre		99.5	100.0	100.0	98.0
22	Authority MTZ	0.28 lb ai/a	10 oz/a		PREPRE B	Pre		97.0	99.8	99.5	92.0
23	Boundary	1.63 lb ai/a	32 oz/a		PREPRE B	Pre		100.0	100.0	100.0	100.0
24	Prowl H20	1 lb ai/a	33.7 oz/a		PREINC A	PPI		97.3	98.5	99.3	91.3
25	Treflan	1 lb ai/a	32 oz/a		PREINC A	PPI		98.3	98.8	99.0	95.0
	LSD (P=.05)							5.34	3.92	2.92	6.77
	Standard Deviation							3.77	2.77	2.06	4.78
	CV							4.11	2.93	2.18	5.42
	Bartlett's X2							34.19	38.072	52.821	27.639
	P(Bartlett's X2)							0.017*	0.001*	0.001*	0.151
	Replicate F							5.916	1.080	3.294	2.915
	Replicate Prob(F)							0.0011	0.3633	0.0253	0.0400
	Treatment F							106.250	203.495	367.760	65.420
	Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Residual Control of Amaranthus Palmeri

Trial ID: HSB-50710
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	AMAPA	IPOSS	ECHCG	AMAPA							
Pest Name	Palmer amaranth	Morning glory	Common barnyar	Palmer amaranth							
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date	6/18/2010	6/18/2010	6/24/2010	6/24/2010							
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO							
Rating Unit	%	%	%	%							
Crop Stage Majority	V5 6-8"	V5 6-8"	V7 10.5"	V7 10.5"							
Pest Stage Majority	1-3"	1-2"	1-6"	1-8"							
Trt-Eval Interval	30 DA-A	30 DA-A	36 DA-A	36 DA-A							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	5	6	7	8
1	Untreated Check							0.0	0.0	0.0	0.0
2	Valor SX	0.064 lb ai/a	2 oz/a		PREPRE B	Pre		100.0	98.8	83.5	89.8
3	Sharpen	0.0223 lb ai/a	1 oz/a		PREPRE B	Pre		88.8	98.8	78.5	83.8
4	Sharpen	0.0334 lb ai/a	1.5 oz/a		PREPRE B	Pre		90.0	99.5	78.5	88.5
5	Sharpen	0.0445 lb ai/a	2 oz/a		PREPRE B	Pre		100.0	100.0	74.8	100.0
6	Reflex	0.25 lb ai/a	16 oz/a		PREPRE B	Pre		97.5	100.0	77.5	93.8
7	Reflex	0.375 lb ai/a	24 oz/a		PREPRE B	Pre		97.5	98.0	79.3	98.3
8	Dual Magnum	0.95 lb ai/a	16 oz/a		PREPRE B	Pre		98.0	98.8	96.3	95.5
9	Dual Magnum Sharpen	0.95 lb ai/a 0.0223 lb ai/a	16 oz/a 1 oz/a		PREPRE B PREPRE B	Pre Pre		96.5	99.3	98.8	96.5
10	Dual Magnum Sharpen	0.95 lb ai/a 0.0445 lb ai/a	16 oz/a 2 oz/a		PREPRE B PREPRE B	Pre Pre		100.0	100.0	100.0	100.0
11	Prefix	1.32 lb ai/a	32 oz/a		PREPRE B	Pre		100.0	97.8	98.8	100.0
12	Envive				PREPRE B	Pre (3,5 oz)		90.5	100.0	85.0	87.5
	>Flumioxazin (Valor SX)	0.0625 lb ai/a	1.96 oz/a		PREPRE B	Pre					
	>Chlorimuron (Classic WDG)	0.02 lb ai/a	1.28 oz/a		PREPRE B	Pre					
	>Thifensulfuron (Harmony SG)	0.00625 lb ai/a	0.2 oz/a		PREPRE B	Pre					
13	Flexstar GT	1.24 lb ai/a	48 oz/a		PREPRE B	Pre		97.5	100.0	80.5	97.0
14	Cadet	0.00356 lb ai/a	0.5 oz/a		PREPRE B	Pre		85.8	100.0	75.0	67.5
15	Cadet	0.0071 lb ai/a	1 oz/a		PREPRE B	Pre		81.3	100.0	73.5	80.0
16	Traverse				PREPRE B	Pre (3.9 oz)		91.3	100.0	85.0	77.5
	>Rimsulfuron (Resolve DF)	0.0305 lb ai/a	1.95 oz/a		PREPRE B	Pre					
	>Chlorimuron (Classic WDG)	0.0305 lb ai/a	1.95 oz/a		PREPRE B	Pre					
17	V-10233	0.166 lb ai/a	3.5 oz/a		PREPRE B	Pre		98.8	99.5	93.8	97.5
18	V-10233	0.178 lb ai/a	3.75 oz/a		PREPRE B	Pre		100.0	98.8	97.5	100.0
19	Basis	0.0234 lb ai/a	0.5 oz/a		PREPRE B	Pre		85.3	100.0	85.0	75.0
20	Synchrony XP				PREPRE B	Pre (2.0 oz)		90.0	100.0	80.0	82.5
	>Chlorimuron (Classic WDG)	0.0284 lb ai/a	1.82 oz/a		PREPRE B	Pre					
	>Tribenuron (Express SG)	0.0085 lb ai/a	0.272 oz/a		PREPRE B	Pre					
21	Diligent				PREPRE B	Pre (4 oz)		100.0	100.0	95.5	100.0
	>Rimsulfuron (Resolve DF)	0.0238 lb ai/a	1.52 oz/a		PREPRE B	Pre					
	>Chlorimuron (Classic WDG)	0.0238 lb ai/a	1.52 oz/a		PREPRE B	Pre					
	>Flumioxazin (Valor SX)	0.095 lb ai/a	2.98 oz/a		PREPRE B	Pre					
22	Authority MTZ	0.28 lb ai/a	10 oz/a		PREPRE B	Pre		96.3	98.8	87.5	96.5
23	Boundary	1.63 lb ai/a	32 oz/a		PREPRE B	Pre		99.5	99.5	98.8	100.0
24	Prowl H20	1 lb ai/a	33.7 oz/a		PREINC A	PPI		84.0	95.0	87.5	76.0
25	Treflan	1 lb ai/a	32 oz/a		PREINC A	PPI		85.0	97.5	95.0	83.0
	LSD (P=.05)							8.47	3.03	9.89	9.25
	Standard Deviation							5.99	2.14	7.00	6.54
	CV							6.65	2.25	8.39	7.55
	Bartlett's X2							24.86	20.544	26.324	18.557
	P(Bartlett's X2)							0.098	0.057	0.238	0.355
	Replicate F							0.875	1.683	7.710	0.401
	Replicate Prob(F)							0.4581	0.1782	0.0002	0.7527
	Treatment F							43.493	344.297	30.975	39.199
	Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Residual Control of Amaranthus Palmeri

Trial ID: HSB-50710
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		IPOSS		ECHCG		AMAPA		IPOSS			
Pest Name		Morning glory		Common barnyar>		Palmer amaranth		Morning glory			
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P			
Rating Date		6/24/2010		7/2/2010		7/2/2010		7/2/2010			
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO			
Rating Unit		%		%		%		%			
Crop Stage Majority		V7 10.5"		R1 10.5"		R1 10.5"		R1 10.5"			
Pest Stage Majority		1-2"		1-7"		2-11"		1-3"			
Trt-Eval Interval		36 DA-A		44 DA-A		44 DA-A		44 DA-A			
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Appl Code	Appl Description	9	10	11	12
1	Untreated Check							0.0	0.0	0.0	0.0
2	Valor SX	0.064 lb ai/a	2 oz/a		PREPRE B	Pre		100.0	77.8	81.0	96.3
3	Sharpen	0.0223 lb ai/a	1 oz/a		PREPRE B	Pre		100.0	70.0	76.3	95.0
4	Sharpen	0.0334 lb ai/a	1.5 oz/a		PREPRE B	Pre		100.0	72.5	77.5	92.5
5	Sharpen	0.0445 lb ai/a	2 oz/a		PREPRE B	Pre		100.0	68.3	90.8	98.8
6	Reflex	0.25 lb ai/a	16 oz/a		PREPRE B	Pre		100.0	71.3	93.8	98.8
7	Reflex	0.375 lb ai/a	24 oz/a		PREPRE B	Pre		98.8	79.0	93.5	97.5
8	Dual Magnum	0.95 lb ai/a	16 oz/a		PREPRE B	Pre		98.8	90.8	95.0	96.3
9	Dual Magnum Sharpen	0.95 lb ai/a 0.0223 lb ai/a	16 oz/a 1 oz/a		PREPRE B PREPRE B	Pre Pre		100.0	91.8	90.8	96.3
10	Dual Magnum Sharpen	0.95 lb ai/a 0.0445 lb ai/a	16 oz/a 2 oz/a		PREPRE B PREPRE B	Pre Pre		100.0	95.0	98.8	100.0
11	Prefix	1.32 lb ai/a	32 oz/a		PREPRE B	Pre		96.8	96.0	97.5	96.5
12	Envive				PREPRE B	Pre (3,5 oz)		95.0	76.8	87.5	95.0
	>Flumioxazin (Valor SX)	0.0625 lb ai/a	1.96 oz/a		PREPRE B	Pre					
	>Chlorimuron (Classic WDG)	0.02 lb ai/a	1.28 oz/a		PREPRE B	Pre					
	>Thifensulfuron (Harmony SG)	0.00625 lb ai/a	0.2 oz/a		PREPRE B	Pre					
13	Flexstar GT	1.24 lb ai/a	48 oz/a		PREPRE B	Pre		100.0	78.8	90.0	93.8
14	Cadet	0.00356 lb ai/a	0.5 oz/a		PREPRE B	Pre		97.5	62.5	67.5	91.3
15	Cadet	0.0071 lb ai/a	1 oz/a		PREPRE B	Pre		87.5	62.5	72.5	90.0
16	Traverse				PREPRE B	Pre (3.9 oz)		100.0	81.3	78.0	93.8
	>Rimsulfuron (Resolve DF)	0.0305 lb ai/a	1.95 oz/a		PREPRE B	Pre					
	>Chlorimuron (Classic WDG)	0.0305 lb ai/a	1.95 oz/a		PREPRE B	Pre					
17	V-10233	0.166 lb ai/a	3.5 oz/a		PREPRE B	Pre		98.8	93.8	95.5	97.5
18	V-10233	0.178 lb ai/a	3.75 oz/a		PREPRE B	Pre		98.8	98.3	98.8	97.5
19	Basis	0.0234 lb ai/a	0.5 oz/a		PREPRE B	Pre		93.8	75.0	71.5	88.8
20	Synchrony XP				PREPRE B	Pre (2.0 oz)		95.0	74.8	73.3	87.5
	>Chlorimuron (Classic WDG)	0.0284 lb ai/a	1.82 oz/a		PREPRE B	Pre					
	>Tribenuron (Express SG)	0.0085 lb ai/a	0.272 oz/a		PREPRE B	Pre					
21	Diligent				PREPRE B	Pre (4 oz)		100.0	93.0	97.0	98.0
	>Rimsulfuron (Resolve DF)	0.0238 lb ai/a	1.52 oz/a		PREPRE B	Pre					
	>Chlorimuron (Classic WDG)	0.0238 lb ai/a	1.52 oz/a		PREPRE B	Pre					
	>Flumioxazin (Valor SX)	0.095 lb ai/a	2.98 oz/a		PREPRE B	Pre					
22	Authority MTZ	0.28 lb ai/a	10 oz/a		PREPRE B	Pre		96.3	76.8	90.0	93.5
23	Boundary	1.63 lb ai/a	32 oz/a		PREPRE B	Pre		98.8	97.8	100.0	99.5
24	Prowl H20	1 lb ai/a	33.7 oz/a		PREINC A	PPI		95.0	82.5	65.0	91.3
25	Treflan	1 lb ai/a	32 oz/a		PREINC A	PPI		97.5	87.5	68.8	91.3
	LSD (P=.05)							6.80	10.09	11.78	7.10
	Standard Deviation							4.81	7.13	8.33	5.02
	CV							5.12	9.13	10.16	5.51
	Bartlett's X2							26.623	25.22	32.21	21.992
	P(Bartlett's X2)							0.014*	0.339	0.074	0.46
	Replicate F							2.295	6.529	0.352	2.478
	Replicate Prob(F)							0.0850	0.0006	0.7877	0.0681
	Treatment F							67.729	30.086	24.077	58.961
	Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Residual Control of Amaranthus Palmeri

Trial ID: HSB-50710
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG			
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>			
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P			
Rating Date		7/12/2010		7/12/2010		7/12/2010		7/23/2010			
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO			
Rating Unit		%		%		%		%			
Crop Stage Majority		R2 24"		R2 24"		R2 24"		R2 30"			
Pest Stage Majority		4-20"		3-30"		1-6"		10-30"			
Trt-Eval Interval		54 DA-A		54 DA-A		54 DA-A		65 DA-A			
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Appl Code	Appl Description	13	14	15	16
1	Untreated Check							0.0	0.0	0.0	0.0
2	Valor SX	0.064 lb ai/a	2 oz/a		PREPRE B	Pre		75.5	74.5	97.5	77.5
3	Sharpen	0.0223 lb ai/a	1 oz/a		PREPRE B	Pre		65.0	78.0	92.5	70.0
4	Sharpen	0.0334 lb ai/a	1.5 oz/a		PREPRE B	Pre		60.0	67.5	91.3	70.0
5	Sharpen	0.0445 lb ai/a	2 oz/a		PREPRE B	Pre		62.5	85.0	95.0	70.0
6	Reflex	0.25 lb ai/a	16 oz/a		PREPRE B	Pre		62.5	89.3	95.0	67.5
7	Reflex	0.375 lb ai/a	24 oz/a		PREPRE B	Pre		68.8	91.3	92.5	76.3
8	Dual Magnum	0.95 lb ai/a	16 oz/a		PREPRE B	Pre		85.5	91.0	95.0	92.5
9	Dual Magnum Sharpen	0.95 lb ai/a 0.0223 lb ai/a	16 oz/a 1 oz/a		PREPRE B PREPRE B	Pre Pre		87.5	86.0	95.0	88.8
10	Dual Magnum Sharpen	0.95 lb ai/a 0.0445 lb ai/a	16 oz/a 2 oz/a		PREPRE B PREPRE B	Pre Pre		96.3	97.5	100.0	98.8
11	Prefix	1.32 lb ai/a	32 oz/a		PREPRE B	Pre		86.3	88.8	96.3	100.0
12	Envide >Flumioxazin (Valor SX) >Chlorimuron (Classic WDG) >Thifensulfuron (Harmony SG)	0.0625 lb ai/a 0.02 lb ai/a 0.00625 lb ai/a	1.96 oz/a 1.28 oz/a 0.2 oz/a		PREPRE B PREPRE B PREPRE B	Pre (3,5 oz) Pre Pre		70.0	77.3	93.0	70.0
13	Flexstar GT	1.24 lb ai/a	48 oz/a		PREPRE B	Pre		65.0	92.3	91.8	70.0
14	Cadet	0.00356 lb ai/a	0.5 oz/a		PREPRE B	Pre		62.5	56.7	88.8	62.5
15	Cadet	0.0071 lb ai/a	1 oz/a		PREPRE B	Pre		60.0	65.0	95.0	65.0
16	Traverse >Rimsulfuron (Resolve DF) >Chlorimuron (Classic WDG)	0.0305 lb ai/a 0.0305 lb ai/a	1.95 oz/a 1.95 oz/a		PREPRE B PREPRE B	Pre (3.9 oz) Pre Pre		65.0	71.3	93.8	82.5
17	V-10233	0.166 lb ai/a	3.5 oz/a		PREPRE B	Pre		91.3	97.0	97.5	95.0
18	V-10233	0.178 lb ai/a	3.75 oz/a		PREPRE B	Pre		97.5	98.0	98.8	100.0
19	Basis	0.0234 lb ai/a	0.5 oz/a		PREPRE B	Pre		65.0	67.5	92.5	72.5
20	Synchrony XP >Chlorimuron (Classic WDG) >Tribenuron (Express SG)	0.0284 lb ai/a 0.0085 lb ai/a	1.82 oz/a 0.272 oz/a		PREPRE B PREPRE B PREPRE B	Pre (2.0 oz) Pre Pre		65.0	73.5	91.8	87.5
21	Diligent >Rimsulfuron (Resolve DF) >Chlorimuron (Classic WDG) >Flumioxazin (Valor SX)	0.0238 lb ai/a 0.0238 lb ai/a 0.095 lb ai/a	1.52 oz/a 1.52 oz/a 2.98 oz/a		PREPRE B PREPRE B PREPRE B	Pre (4 oz) Pre Pre		88.0	92.5	97.5	100.0
22	Authority MTZ	0.28 lb ai/a	10 oz/a		PREPRE B	Pre		66.0	88.8	97.5	80.0
23	Boundary	1.63 lb ai/a	32 oz/a		PREPRE B	Pre		94.3	98.8	100.0	100.0
24	Prowl H20	1 lb ai/a	33.7 oz/a		PREINC A	PPI		72.5	62.5	92.5	67.5
25	Treflan	1 lb ai/a	32 oz/a		PREINC A	PPI		80.0	67.5	90.0	92.5
	LSD (P=.05)							10.86	11.84	5.64	12.81
	Standard Deviation							7.68	8.37	3.99	9.06
	CV							10.71	10.69	4.39	11.58
	Bartlett's X2							19.169	30.357	14.407	25.608
	P(Bartlett's X2)							0.574	0.139	0.759	0.06
	Replicate F							1.479	2.632	0.868	1.108
	Replicate Prob(F)							0.2274	0.0568	0.4616	0.3516
	Treatment F							25.711	24.160	92.388	21.065
	Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Residual Control of Amaranthus Palmeri

Trial ID: HSB-50710
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	AMAPA	IPOSS	ECHCG	AMAPA	IPOSS							
Pest Name	Palmer amaranth	Morning glory	Common barnyar	Palmer amaranth	Morning glory							
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date	7/23/2010	7/23/2010	10/4/2010	10/4/2010	10/4/2010							
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO							
Rating Unit	%	%	%	%	%							
Crop Stage Majority	R2 30"	R2 30"	42.5"	42.5"	42.5"							
Pest Stage Majority	15-50"	10-20"	10-30"	10-50"	10-20"							
Trt-Eval Interval	65 DA-A	65 DA-A	46 DA-D	46 DA-D	46 DA-D							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	17	18	19	20	21
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	Valor SX	0.064 lb ai/a	2 oz/a		PREPRE B	Pre		86.0	100.0	100.0	96.3	100.0
3	Sharpen	0.0223 lb ai/a	1 oz/a		PREPRE B	Pre		77.5	100.0	97.5	91.3	100.0
4	Sharpen	0.0334 lb ai/a	1.5 oz/a		PREPRE B	Pre		72.5	100.0	85.0	90.0	100.0
5	Sharpen	0.0445 lb ai/a	2 oz/a		PREPRE B	Pre		82.5	100.0	95.0	95.0	100.0
6	Reflex	0.25 lb ai/a	16 oz/a		PREPRE B	Pre		100.0	100.0	95.0	92.5	100.0
7	Reflex	0.375 lb ai/a	24 oz/a		PREPRE B	Pre		100.0	100.0	100.0	100.0	100.0
8	Dual Magnum	0.95 lb ai/a	16 oz/a		PREPRE B	Pre		95.0	100.0	95.0	100.0	100.0
9	Dual Magnum Sharpen	0.95 lb ai/a 0.0223 lb ai/a	16 oz/a 1 oz/a		PREPRE B PREPRE B	Pre Pre		85.0	97.5	100.0	95.0	100.0
10	Dual Magnum Sharpen	0.95 lb ai/a 0.0445 lb ai/a	16 oz/a 2 oz/a		PREPRE B PREPRE B	Pre Pre		100.0	100.0	100.0	100.0	100.0
11	Prefix	1.32 lb ai/a	32 oz/a		PREPRE B	Pre		96.0	100.0	100.0	100.0	100.0
12	Envive >Flumioxazin (Valor SX) >Chlorimuron (Classic WDG) >Thifensulfuron (Harmony SG)	0.0625 lb ai/a 0.02 lb ai/a 0.00625 lb ai/a	1.96 oz/a 1.28 oz/a 0.2 oz/a		PREPRE B PREPRE B PREPRE B	Pre (3,5 oz) Pre Pre		80.0	100.0	100.0	92.5	100.0
13	Flexstar GT	1.24 lb ai/a	48 oz/a		PREPRE B	Pre		82.5	100.0	95.0	95.0	100.0
14	Cadet	0.00356 lb ai/a	0.5 oz/a		PREPRE B	Pre		66.7	100.0	85.0	82.5	85.0
15	Cadet	0.0071 lb ai/a	1 oz/a		PREPRE B	Pre		70.0	100.0	75.0	77.5	90.0
16	Traverse >Rimsulfuron (Resolve DF) >Chlorimuron (Classic WDG)	0.0305 lb ai/a 0.0305 lb ai/a	1.95 oz/a 1.95 oz/a		PREPRE B PREPRE B	Pre (3.9 oz) Pre Pre		80.0	100.0	97.5	92.5	100.0
17	V-10233	0.166 lb ai/a	3.5 oz/a		PREPRE B	Pre		97.5	100.0	100.0	100.0	100.0
18	V-10233	0.178 lb ai/a	3.75 oz/a		PREPRE B	Pre		100.0	100.0	100.0	100.0	100.0
19	Basis	0.0234 lb ai/a	0.5 oz/a		PREPRE B	Pre		72.5	100.0	95.0	87.5	100.0
20	Synchrony XP >Chlorimuron (Classic WDG) >Tribenuron (Express SG)	0.0284 lb ai/a 0.0085 lb ai/a	1.82 oz/a 0.272 oz/a		PREPRE B PREPRE B PREPRE B	Pre (2.0 oz) Pre Pre		80.0	100.0	100.0	92.5	100.0
21	Diligent >Rimsulfuron (Resolve DF) >Chlorimuron (Classic WDG) >Flumioxazin (Valor SX)	0.0238 lb ai/a 0.0238 lb ai/a 0.095 lb ai/a	1.52 oz/a 1.52 oz/a 2.98 oz/a		PREPRE B PREPRE B PREPRE B	Pre (4 oz) Pre Pre		92.5	100.0	100.0	100.0	100.0
22	Authority MTZ	0.28 lb ai/a	10 oz/a		PREPRE B	Pre		87.5	100.0	92.5	92.5	97.5
23	Boundary	1.63 lb ai/a	32 oz/a		PREPRE B	Pre		100.0	100.0	100.0	100.0	100.0
24	Prowl H20	1 lb ai/a	33.7 oz/a		PREINC A	PPI		65.0	100.0	82.5	75.0	82.5
25	Treflan	1 lb ai/a	32 oz/a		PREINC A	PPI		70.0	100.0	85.0	82.5	86.3
	LSD (P=.05)							14.03	1.41	10.09	13.69	7.00
	Standard Deviation							9.92	1.00	7.14	9.68	4.95
	CV							12.17	1.04	7.84	10.85	5.28
	Bartlett's X2							20.239	0.0	6.863	5.791	2.828
	P(Bartlett's X2)							0.32	.	0.867	0.983	0.587
	Replicate F							4.867	1.000	2.172	2.184	0.773
	Replicate Prob(F)							0.0039	0.3979	0.0987	0.0973	0.5129
	Treatment F							17.151	1597.667	31.979	16.948	66.868
	Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Residual Control of Amaranthus Palmeri

Trial ID: HSB-50710
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		PLANT C		PLANT P		PLANT P		PLANT P			
Pest Name		10/4/2010		10/5/2010		10/5/2010		10/5/2010			
Part Rated		LODGIN		MOICON		WEIDRY		YIELD			
Rating Date		%		%		lb/plot		BU			
Rating Type		42.5*		Harvest		Harvest		Harvest			
Rating Unit		36 DA-D		89 DA-A		89 DA-A		89 DA-A			
Crop Stage Majority											
Pest Stage Majority											
Trt-Eval Interval											
Trt No.	Treatment Name	Rate	Other Unit	Other Rate	Growth Unit	Appl Code	Appl Description	22	23	24	25
1	Untreated Check							0.00	10.50	4.415	18.6
2	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE B	Pre	0.25	10.63	5.030	21.1
3	Sharpen	0.0223	lb ai/a	1	oz/a	PREPRE B	Pre	0.25	10.25	4.523	19.1
4	Sharpen	0.0334	lb ai/a	1.5	oz/a	PREPRE B	Pre	0.25	10.33	4.438	18.7
5	Sharpen	0.0445	lb ai/a	2	oz/a	PREPRE B	Pre	0.25	10.03	3.908	16.6
6	Reflex	0.25	lb ai/a	16	oz/a	PREPRE B	Pre	0.50	10.30	4.490	19.0
7	Reflex	0.375	lb ai/a	24	oz/a	PREPRE B	Pre	0.25	10.40	4.655	19.6
8	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE B	Pre	0.00	10.73	4.860	20.4
9	Dual Magnum Sharpen	0.95 0.0223	lb ai/a lb ai/a	16 1	oz/a oz/a	PREPRE B PREPRE B	Pre Pre	0.00	10.58	4.940	20.8
10	Dual Magnum Sharpen	0.95 0.0445	lb ai/a lb ai/a	16 2	oz/a oz/a	PREPRE B PREPRE B	Pre Pre	0.25	10.60	4.575	19.2
11	Prefix	1.32	lb ai/a	32	oz/a	PREPRE B	Pre	0.25	10.20	4.070	17.2
12	Envive >Flumioxazin (Valor SX) >Chlorimuron (Classic WDG) >Thifensulfuron (Harmony SG)	0.0625 0.02 0.00625	lb ai/a lb ai/a lb ai/a	1.96 1.28 0.2	oz/a oz/a oz/a	PREPRE B PREPRE B PREPRE B	Pre (3,5 oz) Pre Pre	0.38	10.28	4.168	17.6
13	Flexstar GT	1.24	lb ai/a	48	oz/a	PREPRE B	Pre	0.00	10.35	4.445	18.7
14	Cadet	0.00356	lb ai/a	0.5	oz/a	PREPRE B	Pre	0.50	10.10	3.848	16.3
15	Cadet	0.0071	lb ai/a	1	oz/a	PREPRE B	Pre	0.75	10.40	4.143	17.5
16	Traverse >Rimsulfuron (Resolve DF) >Chlorimuron (Classic WDG)	0.0305 0.0305	lb ai/a lb ai/a	1.95 1.95	oz/a oz/a	PREPRE B PREPRE B	Pre (3.9 oz) Pre Pre	0.50	10.00	3.873	16.4
17	V-10233	0.166	lb ai/a	3.5	oz/a	PREPRE B	Pre	0.00	10.00	4.140	17.5
18	V-10233	0.178	lb ai/a	3.75	oz/a	PREPRE B	Pre	0.50	10.50	4.813	20.3
19	Basis	0.0234	lb ai/a	0.5	oz/a	PREPRE B	Pre	0.63	10.15	4.003	16.9
20	Synchrony XP >Chlorimuron (Classic WDG) >Tribenuron (Express SG)	0.0284 0.0085	lb ai/a lb ai/a	1.82 0.272	oz/a oz/a	PREPRE B PREPRE B PREPRE B	Pre (2.0 oz) Pre Pre	0.88	10.45	4.588	19.3
21	Diligent >Rimsulfuron (Resolve DF) >Chlorimuron (Classic WDG) >Flumioxazin (Valor SX)	0.0238 0.0238 0.095	lb ai/a lb ai/a lb ai/a	1.52 1.52 2.98	oz/a oz/a oz/a	PREPRE B PREPRE B PREPRE B	Pre (4 oz) Pre Pre	0.13	10.73	5.283	22.2
22	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE B	Pre	0.25	10.65	4.768	20.0
23	Boundary	1.63	lb ai/a	32	oz/a	PREPRE B	Pre	0.25	10.28	4.440	18.8
24	Prowl H20	1	lb ai/a	33.7	oz/a	PREINC A	PPI	1.25	10.80	4.895	20.5
25	Treflan	1	lb ai/a	32	oz/a	PREINC A	PPI	1.13	10.50	4.658	19.6
LSD (P=.05)								0.737	0.749	1.2424	5.08
Standard Deviation								0.521	0.530	0.8785	3.59
CV								138.92	5.1	19.62	19.02
Bartlett's X2								9.361	28.541	20.822	20.347
P(Bartlett's X2)								0.967	0.158	0.649	0.677
Replicate F								4.480	4.292	9.427	9.635
Replicate Prob(F)								0.0061	0.0077	0.0001	0.0001
Treatment F								1.689	0.782	0.773	0.772
Treatment Prob(F)								0.0463	0.7463	0.7561	0.7582

University of Arkansas-Division of Agriculture

Residual Control of Amaranthus Palmeri

Trial ID: HSB-50710
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US
AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

LODGIN = lodging

MOICON = moisture content

WEIDRY = weight - dry / dry matter content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.096141*24*(100-@MVAVGREP(23))/87

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-50810
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Progeny 5115
BBCH Scale: BSOY
Planting Method: PLANTD planted
Depth, Unit: 1.25 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Harvest Date: 10/5/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 13.0
Weighing Equipment: Massey Ferguson 8

Description: RR / Cruiser + Maxim + Apron
Planting Date: 5/19/2010
Rate, Unit: 145000 S/A
Spacing Within Row, Unit: 1.1 IN
Soil Temperature, Unit: 74.4 F
Emergence Date: 5/29/2010
Harvest Equipment: Massey Ferguson 8
Harvested Length, Unit: 28 FT
Moisture Meter: Massey Ferguson 8

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix Code	Tank Mix
1.	4/12/2010	Potassium				90	LB/A	N	no
2.	7/20/2010	Barrage	4.7	LB A/GA	SL	5	OZ/A	N	no
3.	8/19/2010	Intrepid	2	LB A/GA	SL	5	OZ/A	N	no

Soil Description

Description Name: 2010 Soybean
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B
Application Date:	5/19/2010	6/17/2010
Time of Day:	8:10 PM	10:15 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS
Application Placement:	BROSOI	BROFOL
Applied By:	JB	JB
Air Temperature, Unit:	69.2 F	85.6 F
% Relative Humidity:	63.97	68.71
Wind Velocity, Unit:	5.65 MPH	3.71 MPH
Wind Direction:	NNW	WSW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	71.6 F	85.2 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	40	45
Next Rain Occurred On:	5/21/2010	6/29/2010

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	V0	V5
Height, Unit:	0 IN	6 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W
Height, Unit:	0 IN	4 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W
Height, Unit:	0 IN	5 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W
Height, Unit:	0 IN	1 IN

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-50810
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment		
	A	B
Appl. Equipment:	Multi Boom	Multi Boom
Equipment Type:	SPTRMO	SPTRMO
Operating Pressure, Unit:	50 PSI	50 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
% Coverage:	100	100
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

No. Date	By	Deviations
1.6/7/2010	JB	Plots 108 & 110 Not completely planted
Reasons: Planter Error		

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-50810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG					
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>					
Part Rated	PLANT C	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P				
Rating Date	6/24/2010	7/2/2010	7/2/2010	7/2/2010	7/2/2010	7/2/2010	7/2/2010	7/12/2010	7/12/2010				
Rating Type	PHYSTU	CONTR0	CONTR0	CONTR0	CONTR0	CONTR0	CONTR0	CONTR0	CONTR0				
Rating Unit	%	%	%	%	%	%	%	%	%				
Crop Stage Majority	V7 10.5*	R1 11*	R1 11*	R1 11*	R1 11*	R1 11*	R1 11*	R2 26*	R2 26*				
Pest Stage Majority		3-9*	3-9*	4-16*	4-16*	4-16*	4-16*	6-26*	6-26*				
Trt-Eval Interval	7 DA-B	15 DA-B	15 DA-B	15 DA-B	15 DA-B	15 DA-B	15 DA-B	25 DA-B	25 DA-B				
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	12	13	14	15	16
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		0.0	85.8	81.3	95.5	81.8
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
3	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		0.0	98.8	98.8	100.0	100.0
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
4	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		1.3	90.0	81.3	96.3	85.0
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
5	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		1.3	91.5	94.5	97.8	80.0
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
6	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		0.0	98.8	100.0	100.0	98.8
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
7	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		0.0	100.0	100.0	100.0	100.0
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre						
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
8	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		0.0	97.5	100.0	100.0	98.8
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
9	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		0.0	100.0	97.5	100.0	100.0
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre						
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
10	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		6.3	95.0	88.3	97.5	97.5
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
11	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		1.3	92.5	85.0	98.8	97.5
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
12	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		0.0	100.0	97.5	100.0	100.0
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
13	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		0.0	100.0	98.0	100.0	100.0
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
LSD (P=.05)									3.32	8.17	12.36	3.40	8.30
Standard Deviation									2.32	5.71	8.65	2.38	5.81
CV									301.96	6.46	10.02	2.61	6.63
Bartlett's X2									6.387	10.574	20.158	2.292	14.784
P(Bartlett's X2)									0.094	0.158	0.01*	0.682	0.022*
Replicate F									1.901	3.142	4.590	1.915	3.051
Replicate Prob(F)									0.1469	0.0370	0.0080	0.1445	0.0408
Treatment F									2.228	89.113	38.656	532.650	88.730
Treatment Prob(F)									0.0317	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-50810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA	IPOSS	ECHCG	AMAPA	IPOSS							
Pest Name		Palmer amaranth	Morning glory	Common barnyar>	Palmer amaranth	Morning glory							
Part Rated		PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date		7/12/2010	7/12/2010	7/23/2010	7/23/2010	7/23/2010							
Rating Type		CONTRO	CONTRO	CONTRO	CONTRO	CONTRO							
Rating Unit		%	%	%	%	%							
Crop Stage Majority		R2 26"	R2 26"	R2 32.5"	R2 32.5"	R2 32.5"							
Pest Stage Majority		10-50"	4-14"	20-30"	20-60"	10-25"							
Trt-Eval Interval		25 DA-B	25 DA-B	36 DA-B	36 DA-B	36 DA-B							
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	17	18	19	20	21
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		84.3	95.0	82.5	79.0	100.0
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
3	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		95.0	100.0	100.0	92.5	100.0
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
4	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		77.5	100.0	82.5	75.0	100.0
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
5	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		87.0	100.0	75.0	82.5	100.0
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
6	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		100.0	100.0	100.0	100.0	100.0
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
7	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		100.0	100.0	100.0	100.0	100.0
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre						
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
8	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		98.8	98.8	97.5	100.0	100.0
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
9	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		97.5	100.0	100.0	95.0	100.0
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre						
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
10	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		90.0	98.8	100.0	100.0	100.0
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
11	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		85.0	100.0	97.5	85.0	100.0
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
12	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		96.3	100.0	100.0	100.0	100.0
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
13	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		98.0	100.0	100.0	97.5	100.0
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
LSD (P=.05)									11.12	2.61	10.20	11.99	0.00
Standard Deviation									7.78	1.83	7.06	8.30	0.00
CV									9.12	1.99	8.09	9.76	0.0
Bartlett's X2									17.252	2.955	7.339	4.997	0.0
P(Bartlett's X2)									0.045*	0.228	0.119	0.544	.
Replicate F									5.288	1.728	3.032	4.803	0.000
Replicate Prob(F)									0.0040	0.1786	0.0421	0.0066	1.0000
Treatment F									46.826	912.456	61.173	42.563	0.000
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	1.0000

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-50810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG		AMAPA			
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>		Palmer amaranth			
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P			
Rating Date		8/2/2010		8/2/2010		8/2/2010		10/4/2010		10/4/2010			
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO			
Rating Unit		%		%		%		%		%			
Crop Stage Majority		R3 40"		R3 40"		R3 40"		42.5"		42.5"			
Pest Stage Majority		30-45"		50-80"		30-40"		10-30"		15-65"			
Trt-Eval Interval		46 DA-B		46 DA-B		46 DA-B		109 DA-B		109 DA-B			
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	22	23	24	25	26
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		85.0	82.5	92.5	75.0	72.5
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
3	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		97.5	90.0	100.0	95.0	87.5
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
4	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		80.0	75.0	92.5	72.5	72.5
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
5	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		77.5	87.5	95.0	82.5	82.5
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
6	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		100.0	97.5	100.0	97.5	97.5
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
7	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		100.0	100.0	100.0	100.0	100.0
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre						
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
8	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		96.3	100.0	100.0	92.5	87.5
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
9	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		100.0	95.0	100.0	97.5	92.5
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre						
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
10	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		92.5	90.0	97.5	87.5	82.5
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
11	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		95.0	88.8	97.5	85.0	85.0
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
12	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	100.0	100.0	90.0	90.0
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
13	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		98.8	96.3	100.0	95.0	92.5
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
LSD (P=.05)									11.31	14.78	6.02	16.53	17.53
Standard Deviation									7.92	10.34	4.21	11.57	12.26
CV									9.17	12.19	4.66	14.06	15.29
Bartlett's X2									11.347	6.724	3.178	11.688	5.826
P(Bartlett's X2)									0.124	0.567	0.528	0.306	0.83
Replicate F									4.019	3.627	3.036	6.551	7.001
Replicate Prob(F)									0.0145	0.0219	0.0415	0.0012	0.0008
Treatment F									46.851	26.372	168.181	20.464	17.241
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-50810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		IPOSS		PLANT C		PLANT P		PLANT P		PLANT P			
Pest Name		Moring glory		10/4/2010		10/5/2010		10/5/2010		10/5/2010			
Part Rated		PLANT P		LODGIN		MOICON		WEIDRY		YIELD			
Rating Date		10/4/2010		0-3		%		lb/plot		BU			
Rating Type		CONTR		42.5"		Harvest		Harvest		Harvest			
Rating Unit		%		10-25"									
Crop Stage Majority		109 DA-B		109 DA-B		110 DA-B		110 DA-B		110 DA-B			
Pest Stage Majority													
Trt-Eval Interval													
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	27	28	29	30	31
1	Untreated Check								0.0	2.00	11.90	4.410	18.2
2	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		80.0	1.63	12.30	7.543	31.4
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
3	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		95.0	1.25	8.55	8.920	38.5
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
4	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		72.5	2.00	12.03	7.033	29.5
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
5	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		90.0	1.00	10.13	7.950	33.7
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
6	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		97.5	1.25	7.48	10.600	46.2
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
7	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		100.0	1.00	6.85	9.875	43.3
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre						
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
8	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		92.5	1.50	7.80	8.075	35.1
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
9	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		97.5	1.50	7.00	9.375	41.1
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre						
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
10	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		92.5	1.25	9.23	8.033	34.2
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
11	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		85.0	1.88	10.10	8.000	34.0
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
12	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		92.5	1.88	10.60	9.100	38.2
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
13	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		90.0	1.38	7.50	9.650	42.0
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
LSD (P=.05)									15.49	1.050	3.464	2.4559	11.03
Standard Deviation									10.84	0.735	2.399	1.7009	7.64
CV									12.98	48.97	25.68	20.37	21.34
Bartlett's X2									10.745	9.561	39.145	15.62	20.877
P(Bartlett's X2)									0.378	0.654	0.001*	0.209	0.052
Replicate F									6.879	5.299	1.251	0.052	0.100
Replicate Prob(F)									0.0009	0.0040	0.3081	0.9841	0.9591
Treatment F									23.369	0.927	2.716	3.386	3.550
Treatment Prob(F)									0.0001	0.5316	0.0125	0.0031	0.0022

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-50810
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

COUPLA = count - plant / emergence - objective

CONTRO = control / burndown or knockdown

PHYGEN = phytotoxicity - general / injury

PHYSTU = phytotoxicity - stunting

LODGIN = lodging

MOICON = moisture content

WEIDRY = weight - dry / dry matter content

YIELD = yield

Rating Unit

% = percent

0-3 = 0-3 index/scale

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.096141*30*(100-@MVAVGREP(29))/87

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-50910
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop 1:		Crop Description	
GLXMA	Glycine max Soybean	Description: RR / Cruiser + Maxim + Apron	
Variety: Progeny 5115		Planting Date: 5/19/2010	
BBCH Scale: BSOY		Rate, Unit: 145000	S/A
Planting Method: PLANTD	planted		
Depth, Unit: 1.25	IN	Spacing Within Row, Unit: 1.1	IN
Row Spacing, Unit: 38	IN	Soil Temperature, Unit: 74.4	F
Seed Bed: MEDIUM	medium	Emergence Date: 5/29/2010	
Soil Moisture: GOOD	good	Harvest Equipment: Almaco	
Harvest Date: 10/5/2010		Harvested Length, Unit: 28	FT
Harvested Width, Unit: 6.33	FT	Moisture Meter: Almaco	
% Standard Moisture: 13.0			
Weighing Equipment: Almaco			

Pest 1 Type: W		Pest Description	
Code: ECHCG	Echinochloa crus-galli	Common Name: Common barnyardgrass	
Pest 2 Type: W	Code: AMAPA	Amaranthus palmeri	Common Name: Palmer amaranth
Pest 3 Type: W	Code: IPOSS	Ipomoea sp.	Common Name: Morning glory

Plot Width, Unit: 12.66		Site and Design	
FT		Site Type: FIELD	field
Plot Length, Unit: 28	FT	Experimental Unit: 1	PLOT plot
Plot Area, Unit: 354.48	FT ²	Tillage Type: CONTL	conventional-till
Replications: 4		Study Design: RACOB	Randomized Complete Block (RCB)
		Untreated Arrangement: INCLUDED	single control randomized in each block

Maintenance									
No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix Code	Tank Mix
1.	4/12/2010	Potassium				90	LB/A	N	no
2.	7/20/2010	Barrage	4.7	LB A/GA	SL	5	OZ/A	N	no
3.	8/19/2010	Intrepid	2	LB A/GA	SL	5	OZ/A	N	no

Description Name: 2010 Soybean				Soil Description			
% Sand: 16	% OM: 2.2	Texture: SIL	silt loam				
% Silt: 65	pH: 6.7	Soil Name: Sharkey & Desha	Silt Loam				
% Clay: 19	CEC: 13	Fert. Level: G	good				
		Soil Drainage: G	good				

Application Description				
	A	B	C	D
Application Date:	5/19/2010	6/9/2010	6/24/2010	7/2/2010
Time of Day:	8:20 PM	10:00 AM	9:00 AM	10:00 AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS	POSPOS	POSPOS
Application Placement:	BROSOL	BROFOL	BROFOL	BROFOL
Applied By:	JB	ZH	KO	ZH
Air Temperature, Unit:	69.2 F	83.6 F	86.4 F	76.3 F
% Relative Humidity:	63.97	69.37	73.08	84.32
Wind Velocity, Unit:	5.65 MPH	1.15 MPH	1.8 MPH	1.3 MPH
Wind Direction:	NNW	E	SSW	SE
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	71.6 F	83.1 F	86.4 F	81.5 F
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL
% Cloud Cover:	45	60	70	80
Next Rain Occurred On:	5/21/2010	6/9/2010	6/29/2010	7/7/2010

Crop Stage At Each Application				
	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	V0	V3	V7	R1
Height, Unit:	0 IN	5.5 IN	11 IN	13 IN

Pest Stage At Each Application				
	A	B	C	D
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W	ECHCG W
Height, Unit:	0 IN	3 IN	6 IN	10 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W	AMAPA W
Height, Unit:	0 IN	2 IN	10 IN	18 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W	IPOSS W
Height, Unit:	0 IN	1 IN	2 IN	4 IN

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-50910
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment				
	A	B	C	D
Appl. Equipment:	Multi Boom	Multi Boom	Hand Boom	Hand Boom
Equipment Type:	SPTRMO	SPTRMO	SPRBAC	SPRBAC
Operating Pressure, Unit:	50 PSI	50 PSI	45 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2	2
% Coverage:	100	100	100	100
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes	Y yes

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-50910
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG					
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>					
Part Rated		PLANT P		PLANT P		PLANT P		PLANT C					
Rating Date		6/18/2010		6/18/2010		6/18/2010		6/24/2010					
Rating Type		CONTRO		CONTRO		CONTRO		PHYGEN					
Rating Unit		%		%		%		%					
Crop Stage Majority		V5 6-8"		V5 6-8"		V5 6-8"		V5 6-8"					
Pest Stage Majority		1-6"		2-12"		1-3"		4-8"					
Trt-Eval Interval		9 DA-B		9 DA-B		9 DA-B		15 DA-B					
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		98.8	91.3	100.0	18.8	88.8
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS C	V6 - V8						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS C	V6 - V8						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	95.0	97.5	21.3	100.0
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	95.0	100.0	6.3	97.5
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS D	V9 - R1						
	MON 63410 - Acetochlor AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
5	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		97.5	95.0	97.5	20.0	98.8
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	Reflex AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
6	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE A	Pre		98.8	100.0	100.0	6.3	97.5
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	Reflex AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	97.5	97.5	23.8	100.0
	Dual Magnum AMS	1.31	lb ai/a	22	oz/a	POSPOS B	V2 - V3						
	Dual Magnum AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
8	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	97.5	100.0	7.5	100.0
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
9	Boundary	1.83	lb ai/a	36	oz/a	PREPRE A	Pre		100.0	100.0	100.0	11.3	100.0
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	Reflex AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	100.0	11.3	97.5
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor AMS	0.294	lb ai/a	20	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	100.0	16.3	100.0
	Prefix AMS	1.32	lb ai/a	32	oz/a	POSPOS B	V2 - V3						
	Prefix AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
LSD (P=.05)									2.79	7.59	3.43	14.82	4.92
Standard Deviation									1.93	5.25	2.38	10.26	3.41
CV									2.13	5.94	2.63	79.21	3.83
Bartlett's X2									2.025	3.462	1.007	7.386	2.167
P(Bartlett's X2)									0.363	0.629	0.604	0.597	0.705
Replicate F									0.407	2.056	0.671	13.504	0.391
Replicate Prob(F)									0.7491	0.1280	0.5766	0.0001	0.7604
Treatment F									967.837	125.707	635.745	2.176	303.997
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0489	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-50910
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		Common barnyar>		AMAPA					
Pest Name		Palmer amaranth		Morning glory		Palmer amaranth		Palmer amaranth					
Part Rated		PLANT P		PLANT P		PLANT C		PLANT P					
Rating Date		6/24/2010		6/24/2010		6/24/2010		7/2/2010					
Rating Type		CONTRO		CONTRO		PHYSTU		CONTRO					
Rating Unit		%		%		%		%					
Crop Stage Majority		V7 11"		V7 11"		V7 11"		R1 12"					
Pest Stage Majority		4-14"		1-3"		4-14"		4-14"					
Tri-Eval Interval		15 DA-B		15 DA-B		15 DA-B		8 DA-C					
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	6	7	8	9	10
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		75.5	95.0	10.0	100.0	96.3
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS C	V6 - V8						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS C	V6 - V8						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
3	Roundup PowerMax MON 63410 - Acetochlor AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		87.5	100.0	12.5	85.0	79.8
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
4	Roundup PowerMax MON 63410 - Acetochlor AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		92.5	97.5	6.3	88.8	85.0
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
5	Valor SX Roundup PowerMax MON 63410 - Acetochlor AMS	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		98.8	98.8	11.3	87.5	87.8
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
6	Authority MTZ Roundup PowerMax MON 63410 - Acetochlor AMS	0.28	lb ai/a	10	oz/a	PREPRE A	Pre		98.0	100.0	2.5	93.5	97.0
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
7	Roundup PowerMax Dual Magnum AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	99.0	16.3	92.5	87.0
	Roundup PowerMax AMS	1.31	lb ai/a	22	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
8	Prefix Roundup PowerMax AMS	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		97.5	100.0	6.3	96.3	91.3
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
9	Boundary Roundup PowerMax AMS	1.83	lb ai/a	36	oz/a	PREPRE A	Pre		100.0	100.0	7.5	98.8	94.3
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
10	Roundup PowerMax MON 63410 - Acetochlor Flexstar AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		90.5	97.5	8.8	95.0	88.0
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.294	lb ai/a	20	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
11	Roundup PowerMax Prefix AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	8.8	98.0	93.8
	Roundup PowerMax AMS	1.32	lb ai/a	32	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
LSD (P=.05)									9.17	4.26	12.30	12.23	15.23
Standard Deviation									6.35	2.95	8.52	8.47	10.55
CV									7.43	3.28	104.15	9.97	12.89
Bartlett's X2									10.125	4.246	13.724	13.031	8.432
P(Bartlett's X2)									0.119	0.374	0.133	0.111	0.491
Replicate F									1.713	0.770	5.321	4.819	5.941
Replicate Prob(F)									0.1854	0.5200	0.0046	0.0074	0.0026
Treatment F									85.209	409.446	1.125	45.600	27.456
Treatment Prob(F)									0.0001	0.0001	0.3767	0.0001	0.0001

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-50910
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		IPOSS		PLANT C		ECHCG		AMAPA		IPOSS		PLANT C		
Pest Name		Morning glory		7/2/2010		Common barnyar>		Palmer amaranth		Morning glory		7/12/2010		
Part Rated		PLANT P		PHYSTU		PLANT P		PLANT P		PLANT P		PHYCHL		
Rating Date		7/12/2010		7/12/2010		7/12/2010		7/12/2010		7/12/2010		7/12/2010		
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		
Rating Unit		%		%		%		%		%		%		
Crop Stage Majority		R1 12"		R1 12"		R2 27"		R2 27"		R2 27"		R2 27"		
Pest Stage Majority		2-6"		2-6"		10-30"		10-30"		10-60"		4-14"		
Tri-Eval Interval		8 DA-C		8 DA-C		10 DA-D		10 DA-D		10 DA-D		10 DA-D		
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	11	12	13	14	15	16
1	Untreated Check								0.0	0.0	0.0	0.0	0.0	0.0
2	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		98.8	15.0	100.0	100.0	100.0	7.5
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS C	V6 - V8							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS C	V6 - V8							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
3	Roundup PowerMax MON 63410 - Acetochlor AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		93.8	6.3	100.0	97.5	100.0	5.0
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1							
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
4	Roundup PowerMax MON 63410 - Acetochlor AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		95.0	0.0	100.0	100.0	100.0	5.0
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
5	Valor SX Roundup PowerMax MON 63410 - Acetochlor AMS	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		92.5	7.5	100.0	100.0	100.0	1.8
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1							
	Reflex AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
6	Authority MTZ Roundup PowerMax MON 63410 - Acetochlor AMS	0.28	lb ai/a	10	oz/a	PREPRE A	Pre		100.0	2.5	100.0	100.0	100.0	2.5
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1							
	Reflex AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
7	Roundup PowerMax Dual Magnum AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		97.5	13.8	100.0	97.5	100.0	8.8
	Roundup PowerMax AMS	1.31	lb ai/a	22	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1							
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
8	Prefix Roundup PowerMax AMS	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		97.5	0.0	100.0	100.0	100.0	10.5
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1							
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
9	Boundary Roundup PowerMax AMS	1.83	lb ai/a	36	oz/a	PREPRE A	Pre		98.8	5.0	100.0	100.0	100.0	5.0
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1							
	Reflex AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
10	Roundup PowerMax MON 63410 - Acetochlor Flexstar AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		95.5	0.0	100.0	100.0	100.0	7.5
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.294	lb ai/a	20	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1							
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
11	Roundup PowerMax Prefix AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		98.8	10.0	100.0	100.0	100.0	7.5
	Roundup PowerMax AMS	1.32	lb ai/a	32	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1							
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
LSD (P=.05)									6.54	12.70	0.00	3.13	0.00	4.86
Standard Deviation									4.53	8.79	0.00	2.17	0.00	3.36
CV									5.15	161.2	0.0	2.4	0.0	60.64
Bartlett's X2									11.307	12.408	0.0	0.0	0.0	5.828
P(Bartlett's X2)									0.185	0.053	.	.	.	0.667
Replicate F									5.171	3.312	0.000	0.645	0.000	2.337
Replicate Prob(F)									0.0053	0.0332	1.0000	0.5921	1.0000	0.0936
Treatment F									167.293	1.621	0.000	767.323	0.000	3.594
Treatment Prob(F)									0.0001	0.1483	1.0000	0.0001	1.0000	0.0031

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-50910
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		PLANT C		PLANT C		ECHCG		AMAPA		IPOSS			
Pest Name		7/12/2010		7/12/2010		Common barnyar>		Palmer amaranth		Morning glory			
Part Rated		PHYNEC		PHYSTU		PLANT P		PLANT P		PLANT P			
Rating Date		%		%		7/23/2010		7/23/2010		7/23/2010			
Rating Type		R2 27"		R2 27"		CONTRO		CONTRO		CONTRO			
Rating Unit		%		%		%		%		%			
Crop Stage Majority		20-38"		20-38"		20-38"		20-70"		10-20"			
Pest Stage Majority		21 DA-D		21 DA-D		21 DA-D		21 DA-D		21 DA-D			
Trit-Eval Interval		10 DA-D		10 DA-D		21 DA-D		21 DA-D		21 DA-D			
Trit No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	17	18	19	20	21
1	Untreated Check								0.0	0.0	25.0	25.0	25.0
2	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		1.3	11.3	100.0	100.0	100.0
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS C	V6 - V8						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS C	V6 - V8						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		2.5	13.8	100.0	100.0	100.0
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		2.5	2.5	100.0	100.0	100.0
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
5	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		7.5	8.8	100.0	100.0	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
6	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE A	Pre		11.3	6.3	100.0	100.0	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		4.3	15.0	95.0	95.0	100.0
	Dual Magnum AMS	1.31	lb ai/a	22	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
8	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		3.8	6.3	100.0	100.0	100.0
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
9	Boundary	1.83	lb ai/a	36	oz/a	PREPRE A	Pre		12.5	3.8	100.0	100.0	100.0
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		5.0	6.3	100.0	100.0	100.0
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Flexstar AMS	0.294	lb ai/a	20	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		5.0	11.3	100.0	100.0	100.0
	Prefix AMS	1.32	lb ai/a	32	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
LSD (P=.05)									5.31	14.91	22.06	22.06	21.77
Standard Deviation									3.68	10.32	15.28	15.28	15.08
CV									72.86	133.61	16.47	16.47	16.18
Bartlett's X2									5.751	15.124	5.648	5.648	0.0
P(Bartlett's X2)									0.765	0.088	0.017*	0.017*	.
Replicate F									0.186	4.151	1.143	1.143	1.000
Replicate Prob(F)									0.9050	0.0142	0.3477	0.3477	0.4064
Treatment F									4.594	0.842	8.688	8.688	9.000
Treatment Prob(F)									0.0005	0.5934	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-50910
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		ECHCG					
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>					
Part Rated		PLANT P		PLANT P		PLANT P		PLANT C					
Rating Date		8/2/2010		8/2/2010		8/2/2010		8/2/2010					
Rating Type		CONTRO		CONTRO		CONTRO		PHYSTU					
Rating Unit		%		%		%		%					
Crop Stage Majority		R3 40"		R3 40"		R3 40"		R3 40"					
Pest Stage Majority		30-45"		50-80"		30-40"		42.5"					
Tri-Eval Interval		31 DA-D		31 DA-D		31 DA-D		31 DA-D					
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	22	23	24	25	26
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		95.0	93.8	97.5	1.3	100.0
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS C	V6 - V8						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS C	V6 - V8						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		97.5	97.5	97.5	2.5	100.0
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	100.0	0.0	100.0
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
5	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		100.0	100.0	100.0	0.0	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
6	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE A	Pre		100.0	100.0	100.0	0.0	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	95.0	100.0	6.3	100.0
	Dual Magnum AMS	1.31	lb ai/a	22	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
8	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	100.0	100.0	2.5	100.0
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
9	Boundary	1.83	lb ai/a	36	oz/a	PREPRE A	Pre		100.0	100.0	100.0	1.3	100.0
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	100.0	7.5	100.0
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Flexstar AMS	0.294	lb ai/a	20	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	100.0	6.3	100.0
	Prefix AMS	1.32	lb ai/a	32	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
LSD (P=.05)									4.67	6.66	2.92	8.64	0.00
Standard Deviation									3.23	4.61	2.02	5.99	0.00
CV									3.58	5.14	2.24	239.44	0.0
Bartlett's X2									1.319	2.18	0.0	12.533	0.0
P(Bartlett's X2)									0.251	0.336	.	0.051	.
Replicate F									1.957	3.235	2.222	1.628	0.000
Replicate Prob(F)									0.1418	0.0360	0.1060	0.2037	1.0000
Treatment F									343.609	167.417	881.000	0.907	0.000
Treatment Prob(F)									0.0001	0.0001	0.0001	0.5391	1.0000

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-50910
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		PLANT C	PLANT P	PLANT P	PLANT P					
Pest Name		Palmer amaranth		Morning glory		10/4/2010	10/5/2010	10/5/2010	10/5/2010					
Part Rated		PLANT P		PLANT P		LODGIN	MOICON	WEIDRY	YIELD					
Rating Date		10/4/2010		10/4/2010		%	%	lb/plot	BU					
Rating Type		CONTRO		CONTRO		%	Harvest	Harvest	Harvest					
Rating Unit		%		%		42.5"	42.5"	42.5"						
Crop Stage Majority		20-60"		10-40"		94 DA-D	95 DA-D	95 DA-D	95 DA-D					
Pest Stage Majority		94 DA-D		94 DA-D		94 DA-D	95 DA-D	95 DA-D	95 DA-D					
Tri-Eval Interval														
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	27	28	29	30	31	32
1	Untreated Check								0.0	0.0	1.75	10.00	2.790	11.8
2	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		95.0	100.0	1.00	11.50	6.873	28.6
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS C	V6 - V8							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS C	V6 - V8							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
3	Roundup PowerMax MON 63410 - Acetochlor AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	1.13	11.20	5.853	24.5
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
4	Roundup PowerMax MON 63410 - Acetochlor AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	1.75	11.15	5.963	24.9
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
5	Valor SX Roundup PowerMax MON 63410 - Acetochlor AMS	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		100.0	100.0	1.63	11.65	6.753	28.1
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
6	Authority MTZ Roundup PowerMax MON 63410 - Acetochlor AMS	0.28	lb ai/a	10	oz/a	PREPRE A	Pre		100.0	100.0	1.50	11.50	6.773	28.2
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
7	Roundup PowerMax Dual Magnum AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	0.38	11.58	6.308	26.3
	Roundup PowerMax AMS	1.31	lb ai/a	22	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
8	Prefix Roundup PowerMax AMS	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	100.0	1.50	11.63	6.395	26.6
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
9	Boundary Roundup PowerMax AMS	1.83	lb ai/a	36	oz/a	PREPRE A	Pre		100.0	100.0	0.50	11.35	5.890	24.6
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
10	Roundup PowerMax MON 63410 - Acetochlor Flexstar AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		95.0	100.0	1.50	11.48	6.578	27.4
	Roundup PowerMax AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.294	lb ai/a	20	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
11	Roundup PowerMax Prefix AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	1.00	11.23	5.818	24.3
	Roundup PowerMax AMS	1.32	lb ai/a	32	oz/a	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3							
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1							
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1							
LSD (P=.05)									6.26	0.00	1.054	0.753	1.2698	5.12
Standard Deviation									4.33	0.00	0.730	0.519	0.8751	3.53
CV									4.82	0.0	58.96	4.59	14.59	14.11
Bartlett's X2									0.0	0.0	8.582	9.698	14.489	14.612
P(Bartlett's X2)									.	.	0.572	0.375	0.106	0.102
Replicate F									0.645	0.000	8.164	0.385	0.721	0.741
Replicate Prob(F)									0.5921	1.0000	0.0004	0.7649	0.5484	0.5371
Treatment F									190.548	0.000	1.722	3.187	6.728	6.977
Treatment Prob(F)									0.0001	1.0000	0.1216	0.0080	0.0001	0.0001

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-50910
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest CodeECHCG, Echinochloa crus-galli, = US
AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

PHYGEN = phytotoxicity - general / injury

PHYSTU = phytotoxicity - stunting

PHYCHL = phytotoxicity - chlorosis

PHYNEC = phytotoxicity - necrosis /burn

LODGIN = lodging

MOICON = moisture content

WEIDRY = weight - dry / dry matter content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.096141*31*(100-@MVAVGREP(30))/87

University of Arkansas-Division of Agriculture

Efficacy of Permit & GWN-3404 Applied Pre and Post in Soybean

Trial ID: HSB-51010
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Progeny 4606
BBCH Scale: BSOY
Planting Method: PLANTD planted
Depth, Unit: 1.25 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Description: RR+STS / Cruiser+Maxim+Apron
Planting Date: 5/19/2010
Rate, Unit: 145000 S/A
Spacing Within Row, Unit: 1.1 IN
Soil Temperature, Unit: 74.4 F
Emergence Date: 5/29/2010

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass
Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth
Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 29 FT
Plot Area, Unit: 354.48 FT²
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTL conventional-till
Study Design: RACOB Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix Code	Tank Mix
1.	4/12/2010	Potassium				90	LB/A	N	no
2.	7/20/2010	Barrage	4.7	LB A/GA	SL	5	OZ/A	N	no
3.	8/19/2010	Intrepid	2	LB A/GA	SL	5	OZ/A	N	no

Soil Description

Description Name: 2010 Soybean
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	5/19/2010	6/3/2010	6/14/2010
Time of Day:	5:00 PM	2:00 PM	10:15 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS	POSPOS
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	ZH	JB	JB
Air Temperature, Unit:	69.2 F	79.6 F	84.8 F
% Relative Humidity:	63.97	79.47	75.26
Wind Velocity, Unit:	5.65 MPH	2.50 MPH	5.25 MPH
Wind Direction:	NNW	E	SW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	71.6 F	81.0 F	82.2 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	55	75	40
Next Rain Occurred On:	5/21/2010	6/10/2010	6/17/2010

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	V0	V1	V4
Height, Unit:	0 IN	2 IN	7 IN

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Height, Unit:	0 IN	1 IN	3 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W
Height, Unit:	0 IN	0.5 IN	4 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W
Height, Unit:	0 IN	0.25 IN	1 IN

University of Arkansas-Division of Agriculture

Efficacy of Permit & GWN-3404 Applied Pre and Post in Soybean

Trial ID: HSB-51010
 Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment			
	A	B	C
Appl. Equipment:	Multi Boom	Hand Boom	Multi Boom
Equipment Type:	SPTRMO	SPRBAC	SPTRMO
Operating Pressure, Unit:	50 PSI	45 PSI	50 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2
% Coverage:	100	100	100
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes

University of Arkansas-Division of Agriculture

Efficacy of Permit & GWN-3404 Applied Pre and Post in Soybean

Trial ID: HSB-51010
 Location: Rohwer, AR
 Investigator: Kenneth Smith

							PLANT C 6/7/2010 COUPLA 5 FT/Row V2 19 DA-A	ECHCG Common barnyar> PLANT P 6/9/2010 CONTRO % V3 5" 1-2" 6 DA-B	AMAPA Palmer amaranth PLANT P 6/9/2010 CONTRO % V3 5" 0.5-1" 6 DA-B	IPOSS Morning glory PLANT P 6/9/2010 CONTRO % V3 5" 0.5" 6 DA-B	PLANT C 6/9/2010 PHYSTU % V3 5" 6 DA-B	PLANT C 6/9/2010 PHYCHL % V3 5" 6 DA-B		
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4	5	6
1	Untreated Check								26.8	0.0	0.0	0.0	1.3	2.5
2	Permit	0.0314	lb ai/a	0.67	oz/a	PREPRE	A	Pre	22.8	88.8	85.0	88.8	1.3	0.0
3	Permit COC	0.0314 0.83	lb ai/a lb ai/a	0.67 1	oz/a % v/v	EAPOWE	B	V1 - V2 V1 - V2	21.8	84.5	78.0	84.8	10.8	17.5
4	Permit COC	0.0314 0.83	lb ai/a lb ai/a	0.67 1	oz/a % v/v	MIPOWE	C	V3 - V5 V3 - V5	26.3	79.8	75.0	79.3	0.0	0.0
5	GWN-3404	0.035	lb ai/a	0.75	oz/a	PREPRE	A	Pre	23.5	94.3	87.5	95.0	0.0	0.0
6	GWN-3404 COC	0.035 0.83	lb ai/a lb ai/a	0.75 1	oz/a % v/v	EAPOWE	B	V1 - V2 V1 - V2	32.0	88.0	92.5	95.5	7.5	11.3
7	GWN-3404 COC	0.035 0.83	lb ai/a lb ai/a	0.75 1	oz/a % v/v	MIPOWE	C	V3 - V5 V3 - V5	26.8	86.8	75.0	88.0	0.0	0.0
8	Prefix Roundup PowerMax	1.32 0.77	lb ai/a lb ae/a	32 22	oz/a oz/a	PREPRE	A	Pre V3 - V5	31.5	100.0	97.5	99.5	1.3	0.0
9	Authority MTZ Roundup PowerMax	0.28 0.77	lb ai/a lb ae/a	10 22	oz/a oz/a	PREPRE	A	Pre V3 - V5	29.5	95.5	97.5	95.8	2.5	0.0
LSD (P=.05)									10.67	12.29	10.93	12.02	4.52	3.65
Standard Deviation									7.31	8.42	7.49	8.23	3.10	2.50
CV									27.32	10.56	9.8	10.2	113.83	72.0
Bartlett's X2									8.153	4.173	8.369	16.651	3.959	0.937
P(Bartlett's X2)									0.419	0.653	0.301	0.02*	0.555	0.626
Replicate F									4.173	3.550	0.540	2.175	0.436	1.000
Replicate Prob(F)									0.0164	0.0294	0.6596	0.1172	0.7293	0.4098
Treatment F									1.025	52.527	64.050	56.453	6.043	26.444
Treatment Prob(F)									0.4446	0.0001	0.0001	0.0001	0.0003	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Efficacy of Permit & GWN-3404 Applied Pre and Post in Soybean

Trial ID: HSB-51010
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		ECHCG		AMAPA							
Pest Name		Common barnyar>		Palmer amaranth		Common barnyar>		Palmer amaranth							
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P							
Rating Date		6/18/2010		6/18/2010		6/24/2010		6/24/2010							
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO							
Rating Unit		%		%		%		%							
Crop Stage Majority		V6 8-10"		V6 8-10"		V6 8-10"		V9 11"							
Pest Stage Majority		2-6"		2-12"		2-8"		4-14"							
Tri-Eval Interval		4 DA-C		4 DA-C		4 DA-C		10 DA-C							
Tri	Treatment	Rate	Other	Other	Growth	Appl	Appl								
No.	Name	Rate	Unit	Rate	Rate	Unit	Stage	Code	Description	7	8	9	10	11	12
1	Untreated Check									0.0	0.0	0.0	0.0	0.0	0.0
2	Permit	0.0314	lb ai/a	0.67	oz/a		PREPRE	A	Pre	70.0	52.5	0.0	62.5	60.0	0.0
3	Permit COC	0.0314 0.83	lb ai/a lb ai/a	0.67 1	oz/a % v/v		EAPOWE	B	V1 - V2 V1 - V2	70.0	52.5	0.0	62.5	52.5	0.0
4	Permit COC	0.0314 0.83	lb ai/a lb ai/a	0.67 1	oz/a % v/v		MIPOWE	C	V3 - V5 V3 - V5	65.0	50.0	0.0	57.5	55.0	0.0
5	GWN-3404	0.035	lb ai/a	0.75	oz/a		PREPRE	A	Pre	72.5	67.5	0.0	65.0	65.0	0.0
6	GWN-3404 COC	0.035 0.83	lb ai/a lb ai/a	0.75 1	oz/a % v/v		EAPOWE	B	V1 - V2 V1 - V2	72.5	67.5	1.3	62.5	62.5	2.5
7	GWN-3404 COC	0.035 0.83	lb ai/a lb ai/a	0.75 1	oz/a % v/v		MIPOWE	C	V3 - V5 V3 - V5	67.5	55.0	0.0	65.0	60.0	0.0
8	Prefix Roundup PowerMax	1.32 0.77	lb ai/a lb ae/a	32 22	oz/a oz/a		PREPRE	A	Pre V3 - V5	100.0	100.0	0.0	100.0	100.0	0.0
9	Authority MTZ Roundup PowerMax	0.28 0.77	lb ai/a lb ae/a	10 22	oz/a oz/a		PREPRE	A	Pre V3 - V5	100.0	98.8	0.0	100.0	98.8	0.0
LSD (P=.05)										18.32	18.95	1.22	19.86	16.36	2.43
Standard Deviation										12.56	12.98	0.83	13.61	11.21	1.67
CV										18.3	21.49	600.0	21.3	18.22	600.0
Bartlett's X2										1.737	10.331	0.0	5.176	11.51	0.0
P(Bartlett's X2)										0.884	0.111	.	0.395	0.042*	.
Replicate F										0.300	0.740	1.000	1.180	0.403	1.000
Replicate Prob(F)										0.8254	0.5384	0.4098	0.3382	0.7519	0.4098
Treatment F										21.335	20.918	1.000	18.195	27.022	1.000
Treatment Prob(F)										0.0001	0.0001	0.4613	0.0001	0.0001	0.4613

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Efficacy of Permit & GWN-3404 Applied Pre and Post in Soybean

Trial ID: HSB-51010
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US
AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant
C = Crop is Part Rated
P = Pest is Part Rated

Rating Type

COUPLA = count - plant / emergence - objective
CONTRO = control / burndown or knockdown
PHYSTU = phytotoxicity - stunting
PHYCHL = phytotoxicity - chlorosis

Rating Unit

% = percent

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Different Application Timing of Ignite with Different Pre Applications

Trial ID: HSB-52010
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Halo 4:94
BBCH Scale: BSOY
Planting Method: PLANTD planted
Depth, Unit: 1.25 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Harvest Date: 10/5/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 13.0
Weighing Equipment: Massey Ferguson 8

Description: LL / Trilex + Allegiance
Planting Date: 5/19/2010
Rate, Unit: 145000 S/A
Spacing Within Row, Unit: 1.1 IN
Soil Temperature, Unit: 74.4 F
Emergence Date: 5/29/2010
Harvest Equipment: Massey Ferguson 8
Harvested Length, Unit: 28 FT
Moisture Meter: Massey Ferguson 8

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTL conventional-till
Study Design: RACOB1 Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix Code	Tank Mix
1.	4/12/2010	Potassium				90	LB/A	N	no
2.	7/20/2010	Barrage	4.7	LB A/GA	SL	5	OZ/A	N	no
3.	8/19/2010	Intrepid	2	LB A/GA	SL	5	OZ/A	N	no

Soil Description

Description Name: 2010 Soybean
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C	D	E
Application Date:	5/19/2010	6/11/2010	6/17/2010	6/24/2010	7/2/2010
Time of Day:	8:45 PM	9:00 AM	9:05 AM	9:35 AM	10:00 AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS	POSPOS	POSPOS	POSPOS
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	JB	ZH	JB	KO	ZH
Air Temperature, Unit:	69.2 F	80.3 F	85.6 F	86.4 F	76.3 F
% Relative Humidity:	63.97	85.09	68.71	73.08	84.32
Wind Velocity, Unit:	5.65 MPH	5.24 MPH	3.71 MPH	1.81 MPH	1.3 MPH
Wind Direction:	NNW	NE	SW	SSW	SE
Dew Presence (Y/N):	N no	N no	N no	N no	N no
Soil Temperature, Unit:	71.6 F	80.6 F	85.2 F	86.4 F	81.5 F
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
% Cloud Cover:	55	75	50	70	75
Next Rain Occurred On:	5/21/2010	6/17/2010	6/17/2010	6/29/2010	7/7/2010

Crop Stage At Each Application

	A	B	C	D	E
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC	DESC	DESC
Stage Majority, Percent:	V0	V3	V5	V6	V8
Height, Unit:	0 IN	6 IN	7 IN	10 IN	12 IN

Pest Stage At Each Application

	A	B	C	D	E
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W	ECHCG W	ECHCG W
Height, Unit:	0 IN	4 IN	5 IN	6 IN	7 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W	AMAPA W	AMAPA W
Height, Unit:	0 IN	2 IN	4 IN	6 IN	10 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W	IPOSS W	IPOSS W
Height, Unit:	0 IN	1 IN	2 IN	2 IN	4 IN

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Different Application Timing of Ignite with Different Pre Applications

Trial ID: HSB-52010
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment					
	A	B	C	D	E
Appl. Equipment:	Multi Boom	Hand Boom	Multi Boom	Hand Boom	Hand Boom
Equipment Type:	SPTRMO	SPRBAC	SPTRMO	SPRBAC	SPRBAC
Operating Pressure, Unit:	50 PSI	45 PSI	50 PSI	45 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2	2	2
% Coverage:	100	100	100	100	100
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN	18 IN
Carrier:	WATER	WATER	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes	Y yes	Y yes

Trt No Treatment Application Comment

All POST Treatments made with 1 - 3 Gallon Can with 163 ml Ignite 280 + 568 ml Class Act

University of Arkansas-Division of Agriculture

Different Application Timing of Ignite with Different Pre Applications

Trial ID: HSB-52010
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code	ECHCG	AMAPA	IPOSS	ECHCG	AMAPA						
Pest Name	Common barnyar>	Palmer amaranth	Morning glory	Common barnyar>	Palmer amaranth						
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P						
Rating Date	6/18/2010	6/18/2010	6/18/2010	6/24/2010	6/24/2010						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	%	%	%	%	%						
Crop Stage Majority	V5 6-7"	V5 6-7"	V5 6-7"	V6 8-10"	V6 8-10"						
Pest Stage Majority	1-4"	1-5"	1-2"	1-6"	1-8"						
Tri-Eval Interval	7 DA-B	7 DA-B	7 DA-B	7 DA-C	7 DA-C						
Tri Treatment No. Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1 Untreated Check							0.0	0.0	0.0	0.0	0.0
2 Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA		98.8	100.0	100.0	100.0	100.0
3 Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA		95.5	100.0	100.0	100.0	100.0
4 Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA		92.8	98.8	100.0	93.0	97.5
5 Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA		96.8	100.0	100.0	97.5	100.0
6 Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA		98.0	100.0	100.0	88.8	100.0
7 Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA		91.3	100.0	100.0	100.0	100.0
8 Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA		92.3	98.8	100.0	82.0	90.0
9 Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA		93.8	98.8	100.0	84.3	92.5
10 Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA		97.8	100.0	100.0	97.5	100.0
11 Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA		95.8	98.0	100.0	100.0	97.5
12 Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA		90.3	100.0	100.0	80.0	92.5
13 Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA		90.8	100.0	100.0	77.5	90.0
LSD (P=.05)							5.22	2.38	0.00	8.89	10.55
Standard Deviation							3.65	1.67	0.00	6.22	7.38
CV							4.19	1.81	0.0	7.35	8.27
Bartlett's X2							17.604	1.096	0.0	8.594	5.694
P(Bartlett's X2)							0.091	0.778	.	0.283	0.337
Replicate F							1.426	0.524	0.000	1.650	0.847
Replicate Prob(F)							0.2510	0.6683	1.0000	0.1951	0.4773
Treatment F							208.615	1099.083	0.000	74.034	53.941
Treatment Prob(F)							0.0001	0.0001	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Different Application Timing of Ignite with Different Pre Applications

Trial ID: HSB-52010
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		IPOSS		ECHCG		AMAPA		IPOSS		ECHCG		
Pest Name		Morning glory		Common barnyar>		Palmer amaranth		Morning glory		Common barnyar>		
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		
Rating Date		6/24/2010		7/2/2010		7/2/2010		7/2/2010		7/12/2010		
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		
Rating Unit		%		%		%		%		%		
Crop Stage Majority		V6 8-10"		V8 11"		V8 11"		V8 11"		R2 15"		
Pest Stage Majority		1-2"		1-7"		2-12"		1-4"		4-16"		
Tri-Eval Interval		7 DA-C		8 DA-D		8 DA-D		8 DA-D		10 DA-E		
Tri No.	Treatment Name	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	6	7	8	9	10
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA		98.8	98.0	100.0	99.5	95.0
3	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA		100.0	100.0	100.0	100.0	97.5
4	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA		100.0	99.5	100.0	100.0	96.3
5	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA		100.0	93.8	100.0	100.0	97.5
6	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA		100.0	79.8	90.0	100.0	72.5
7	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA		100.0	97.5	100.0	100.0	86.8
8	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA		97.5	98.8	100.0	100.0	94.3
9	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA		97.5	81.3	88.8	99.5	90.0
10	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA		100.0	98.8	100.0	100.0	88.0
11	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA		100.0	98.3	97.0	100.0	93.8
12	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA		100.0	98.0	100.0	100.0	94.5
13	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA		100.0	80.0	92.5	100.0	100.0
LSD (P=.05)		2.90		9.52		7.86		0.57		13.14		
Standard Deviation		2.03		6.66		5.50		0.40		9.19		
CV		2.21		7.71		6.12		0.43		10.8		
Bartlett's X2		1.535		37.449		2.089		0.0		15.957		
P(Bartlett's X2)		0.464		0.001*		0.554		.		0.101		
Replicate F		1.675		3.827		3.436		0.649		1.876		
Replicate Prob(F)		0.1895		0.0178		0.0269		0.5889		0.1511		
Treatment F		741.156		66.304		98.632		19427.920		33.279		
Treatment Prob(F)		0.0001		0.0001		0.0001		0.0001		0.0001		

University of Arkansas-Division of Agriculture

Different Application Timing of Ignite with Different Pre Applications

Trial ID: HSB-52010
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		AMAPA		ECHCG		
Pest Name		Palmer amaranth		Morning glory		Common barnyar>		Palmer amaranth		Common barnyar>		
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P		
Rating Date		7/12/2010		7/12/2010		7/23/2010		7/23/2010		8/2/2010		
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO		
Rating Unit		%		%		%		%		%		
Crop Stage Majority		R2 15*		R2 15*		R2 22*		R2 22*		R3 32*		
Pest Stage Majority		6-26*		1-4*		10-25*		10-30*		25-35*		
Tri-Eval Interval		10 DA-E		10 DA-E		21 DA-E		21 DA-E		31 DA-E		
Tri No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	11	12	13	14	15
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA		100.0	97.5	96.0	100.0	97.5
3	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA		100.0	100.0	100.0	100.0	96.3
4	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA		98.8	100.0	97.5	97.5	95.0
5	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA		97.5	100.0	100.0	98.0	97.5
6	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA		88.0	97.5	67.5	90.0	72.5
7	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA		97.5	100.0	88.8	98.8	85.0
8	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA		100.0	100.0	93.0	100.0	92.5
9	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA		92.5	97.5	87.5	90.0	92.5
10	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA		98.0	100.0	83.5	96.3	85.0
11	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA		95.0	100.0	92.5	95.0	92.5
12	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA		100.0	100.0	96.5	100.0	96.3
13	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA		100.0	100.0	95.5	100.0	92.5
LSD (P=.05)								8.29	3.40	12.60	8.55	13.01
Standard Deviation								5.80	2.38	8.81	5.98	9.10
CV								6.46	2.59	10.43	6.68	10.8
Bartlett's X2								12.261	0.0	11.865	10.985	14.335
P(Bartlett's X2)								0.056	.	0.221	0.089	0.215
Replicate F								0.663	1.245	0.639	0.195	1.130
Replicate Prob(F)								0.5804	0.3077	0.5947	0.8988	0.3499
Treatment F								87.942	537.453	37.073	82.444	33.259
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Different Application Timing of Ignite with Different Pre Applications

Trial ID: HSB-52010
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA	IPOSS	ECHCG	AMAPA	IPOSS	PLANT C						
Pest Name		Palmer amaranth	Morning glory	Common barnyar>	Palmer amaranth	Morning glory	10/5/2010						
Part Rated		PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT C						
Rating Date		8/2/2010	8/2/2010	10/5/2010	10/5/2010	10/5/2010	10/5/2010						
Rating Type		CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	LODGIN						
Rating Unit		%	%	%	%	%	%						
Crop Stage Majority		R3 32"	R3 32"	R8 35"	R8 35"	R8 35"	R8 35"						
Pest Stage Majority		20-40"	10-20"	10-30"	10-40"	5-30"							
Trt-Eval Interval		31 DA-E	31 DA-E	95 DA-E	95 DA-E	95 DA-E	95 DA-E						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	16	17	18	19	20	21
1	Untreated Check							0.0	0.0	0.0	0.0	0.0	0.0
2	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA		100.0	100.0	98.8	100.0	100.0	0.0
3	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA		95.0	100.0	96.3	96.3	100.0	0.0
4	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA		97.5	100.0	90.0	97.5	100.0	0.0
5	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA		97.5	100.0	100.0	93.8	100.0	0.0
6	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA		87.5	100.0	82.5	78.8	97.5	0.0
7	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA		92.5	100.0	96.7	73.8	98.8	0.0
8	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA		97.5	100.0	91.3	95.0	100.0	0.0
9	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA		95.0	100.0	98.3	87.5	97.5	0.0
10	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA		96.3	100.0	91.7	92.5	96.3	0.0
11	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA		92.5	100.0	96.7	96.3	100.0	0.0
12	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA		100.0	100.0	96.3	98.8	100.0	0.0
13	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA		100.0	100.0	95.0	97.5	98.8	0.0
LSD (P=.05)								11.06	0.00	10.15	14.52	3.84	0.00
Standard Deviation								7.74	0.00	7.02	10.16	2.66	0.00
CV								8.74	0.0	8.05	11.93	2.91	0.0
Bartlett's X2								8.154	0.0	17.331	20.228	2.754	0.0
P(Bartlett's X2)								0.419	.	0.067	0.027*	0.60	.
Replicate F								2.577	0.000	0.844	1.595	0.431	0.000
Replicate Prob(F)								0.0688	1.0000	0.4813	0.2075	0.7319	1.0000
Treatment F								48.147	0.000	57.450	27.784	428.568	0.000
Treatment Prob(F)								0.0001	1.0000	0.0001	0.0001	0.0001	1.0000

University of Arkansas-Division of Agriculture

Different Application Timing of Ignite with Different Pre Applications

Trial ID: HSB-52010
 Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code							PLANT P	PLANT P	PLANT P
Pest Name							10/5/2010	10/5/2010	10/5/2010
Part Rated							MOICON	WEIDRY	YIELD
Rating Date							%	lb/plot	BU
Rating Type							Harvest	Harvest	Harvest
Rating Unit							95 DA-E	95 DA-E	95 DA-E
Crop Stage Majority									
Pest Stage Majority									
Tri-Eval Interval									
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description		
		Unit	Unit	Unit					
1	Untreated Check							7.15	4.70
2	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA			2.78 11.6
3	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA			3.20 13.4
4	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA			3.85 16.1
5	Prefix Ignite 280 AMS	1.32 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	32 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA			3.23 13.5
6	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA			3.23 13.5
7	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA			2.95 12.4
8	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA			4.23 17.7
9	Valor SX Ignite 280 AMS	0.064 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	2 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA			2.90 12.2
10	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS B POSPOS B	Pre 21 DAA 21 DAA			3.13 13.1
11	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS C POSPOS C	Pre 28 DAA 28 DAA			3.48 14.6
12	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS D POSPOS D	Pre 35 DAA 35 DAA			3.43 14.4
13	Authority MTZ Ignite 280 AMS	0.28 lb ai/a 0.402 lb ai/a 2.53 lb ai/a	10 oz/a 22 oz/a 5 gal/100 gal		PREPRE A POSPOS E POSPOS E	Pre 42 DAA 42 DAA			3.30 13.8
LSD (P=.05)								0.977	4.10
Standard Deviation								0.684	2.87
CV								20.03	20.03
Bartlett's X2								5.983	5.983
P(Bartlett's X2)								0.917	0.917
Replicate F								8.293	8.293
Replicate Prob(F)								0.0003	0.0003
Treatment F								2.571	2.571
Treatment Prob(F)								0.0142	0.0142

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Different Application Timing of Ignite with Different Pre Applications

Trial ID: HSB-52010
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

LODGIN = lodging

MOICON = moisture content

WEIDRY = weight - dry / dry matter content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.190305*23

University of Arkansas-Division of Agriculture

POST Weed Control in LL Soybean

Trial ID: HSB-52110
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Halo 4:94
BBCH Scale: BSOY
Planting Method: PLANTD planted
Depth, Unit: 1.25 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Harvest Date: 10/5/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 13.0
Weighing Equipment: Massey Ferguson 8

Description: LL / Trilex + Allegiance
Planting Date: 5/19/2010
Rate, Unit: 145000 S/A
Spacing Within Row, Unit: 1.1 IN
Soil Temperature, Unit: 74.4 F
Emergence Date: 5/29/2010
Harvest Equipment: Massey Ferguson 8
Harvested Length, Unit: 28 FT
Moisture Meter: Massey Ferguson 8

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTL conventional-till
Study Design: RACOB Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix Code	Tank Mix
1.	4/12/2010	Potassium				90	LB/A	N	no
2.	7/20/2010	Barrage	4.7	LB A/GA	SL	5	OZ/A	N	no
3.	8/19/2010	Intrepid	2	LB A/GA	SL	5	OZ/A	N	no

Soil Description

Description Name: 2010 Soybean
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	5/19/2010	6/3/2010	6/17/2010
Time of Day:	6:00 PM	11:00 AM	9:00 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS	POSPOS
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	ZH	ZH	JB
Air Temperature, Unit:	69.2 F	79.6 F	85.6 F
% Relative Humidity:	63.97	79.47	68.71
Wind Velocity, Unit:	5.65 MPH	2.50 MPH	3.71 MPH
Wind Direction:	NNW	E	SW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	71.6 F	81.0 F	85.2 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	40	70	50
Next Rain Occurred On:	5/21/2010	6/10/2010	6/29/2010

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	V0	V1	V5
Height, Unit:	0 IN	1.5 IN	6 IN

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Height, Unit:	0 IN	1 IN	4 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W
Height, Unit:	0 IN	0.5 IN	4 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W
Height, Unit:	0 IN	0.25 IN	2 IN

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POST Weed Control in LL Soybean

Trial ID: HSB-52110
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment			
	A	B	C
Appl. Equipment:	Multi Boom	Multi Boom	Multi Boom
Equipment Type:	SPTRMO	SPTRMO	SPTRMO
Operating Pressure, Unit:	50 PSI	50 PSI	50 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2
% Coverage:	100	100	100
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes

No.	Date	By	Deviations
1.6/17/2010		JB	Plot 105 recieved Ignite 280 + AMS at V4 by error Plot 414 only got half sprayed when bottle ran out.
Reasons: Sprayer Error			

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POST Weed Control in LL Soybean

Trial ID: HSB-52110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		PLANT C		PLANT C			
Pest Name		Common barnyar-		Palmer amaranth		Morning glory		6/9/2010		6/9/2010			
Part Rated		PLANT P		PLANT P		PLANT P		PHYSTU		PHYCHL			
Rating Date		6/9/2010		6/9/2010		6/9/2010		6/9/2010		6/9/2010			
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO			
Rating Unit		%		%		%		%		%			
Crop Stage Majority		V3 5"		V3 5"		V3 5"		V3 5"		V3 5"			
Pest Stage Majority		1-2"		0.5-1"		0.5"		0.5"		0.5"			
Trt-Eval Interval		6 DA-B		6 DA-B		6 DA-B		6 DA-B		6 DA-B			
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		100.0	100.0	100.0	0.0	7.5
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5						
3	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		100.0	100.0	100.0	1.3	5.0
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	LAPOCR C	V4 - V5						
4	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	99.5	99.5	0.0	1.3
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	LAPOCR C	V4 - V5						
5	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		100.0	100.0	100.0	3.8	22.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
6	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		100.0	100.0	100.0	6.3	22.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
7	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		100.0	100.0	100.0	0.0	5.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
8	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		100.0	100.0	100.0	1.3	8.8
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
9	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		100.0	100.0	100.0	0.0	1.3
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
10	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		100.0	100.0	100.0	0.0	2.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
11	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		100.0	100.0	100.0	0.0	13.8
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
12	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		100.0	100.0	100.0	1.3	21.3
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
13	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		100.0	100.0	100.0	0.0	12.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
14	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		100.0	100.0	100.0	21.3	41.3
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
15	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		100.0	100.0	100.0	5.0	11.3
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
16	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		100.0	100.0	100.0	7.5	18.8
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
LSD (P=.05)									0.00	0.36	0.36	3.79	7.25
Standard Deviation									0.00	0.25	0.25	2.65	5.08
CV									0.0	0.27	0.27	89.43	41.65
Bartlett's X2									0.0	0.0	0.0	6.571	17.017
P(Bartlett's X2)									.	.	.	0.475	0.255
Replicate F									0.000	1.000	1.000	0.961	4.730
Replicate Prob(F)									1.0000	0.4016	0.4016	0.4196	0.0059
Treatment F									0.000	39974.336	39974.336	17.010	18.679
Treatment Prob(F)									1.0000	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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POST Weed Control in LL Soybean

Trial ID: HSB-52110
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		AMAPA					
Pest Name		Palmer amaranth		Morning glory		Common barnyar		Palmer amaranth					
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P					
Rating Date		6/24/2010		6/24/2010		7/2/2010		7/2/2010					
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO					
Rating Unit		%		%		%		%					
Crop Stage Majority		V6 8-10"		V6 8-10"		V8 11"		V8 11"					
Pest Stage Majority		4-12"		1-2"		1-6"		2-12"					
Tri-Eval Interval		7 DA-C		7 DA-C		15 DA-C		15 DA-C					
Tri No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	11	12	13	14	
1	Untreated Check								0.0	0.0	0.0	0.0	
2	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		100.0	100.0	95.8	91.3	
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5						
3	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		100.0	100.0	93.0	94.3	
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	LAPOCR C	V4 - V5						
4	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	100.0	100.0	96.8	
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	LAPOCR C	V4 - V5						
5	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		98.8	100.0	97.8	98.0	
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
6	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		99.0	100.0	96.8	96.8	
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
7	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		89.3	100.0	93.8	88.0	
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
8	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		92.5	100.0	97.5	93.0	
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
9	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		95.5	100.0	96.3	96.0	
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
10	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		98.8	100.0	94.0	93.5	
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
11	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		95.5	100.0	91.0	92.3	
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
12	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		96.3	100.0	90.0	94.8	
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
13	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		81.8	100.0	81.0	73.5	
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
14	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		76.3	100.0	72.5	70.0	
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
15	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		89.3	100.0	80.0	83.8	
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
16	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		83.0	97.5	78.8	82.8	
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
LSD (P=.05)										6.80	1.79	8.26	7.22
Standard Deviation										4.76	1.25	5.78	5.05
CV										5.45	1.34	6.81	6.01
Bartlett's X2										16.891	0.0	25.473	6.532
P(Bartlett's X2)										0.111	.	0.02*	0.925
Replicate F										0.409	1.000	10.232	3.651
Replicate Prob(F)										0.7470	0.4016	0.0001	0.0193
Treatment F										105.157	1595.667	69.197	89.417
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

POST Weed Control in LL Soybean

Trial ID: HSB-52110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		IPOSS		ECHCG		AMAPA		IPOSS				
Pest Name		Morning glory		Common barnyar>		Palmer amaranth		Morning glory				
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P				
Rating Date		7/2/2010		7/12/2010		7/12/2010		7/12/2010				
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO				
Rating Unit		%		%		%		%				
Crop Stage Majority		V8 11"		R2 20"		R2 20"		R2 20"				
Pest Stage Majority		1-4"		4-20"		5-30"		1-6"				
Tri-Eval Interval		15 DA-C		25 DA-C		25 DA-C		25 DA-C				
Tri	Treatment	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	15	16	17	18
1	Untreated Check								0.0	0.0	0.0	0.0
2	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		100.0	85.0	75.0	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5					
3	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		100.0	83.8	87.5	98.8
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	LAPOCR C	V4 - V5					
4	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	97.5	93.3	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	LAPOCR C	V4 - V5					
5	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		100.0	97.5	96.3	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
6	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		100.0	98.8	96.8	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
7	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		98.5	85.0	79.3	97.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
8	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		98.8	90.5	84.8	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
9	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		98.8	90.0	88.8	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
10	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		98.8	81.3	81.5	96.3
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
11	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		98.8	75.5	75.0	97.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
12	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		100.0	77.5	88.8	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
13	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		98.8	65.0	70.0	95.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
14	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		90.0	60.0	65.0	90.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
15	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		97.5	65.0	75.0	93.8
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
16	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		97.5	65.0	72.5	97.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
LSD (P=.05)									4.14	9.13	11.19	5.72
Standard Deviation									2.89	6.39	7.83	4.00
CV									3.13	8.4	10.19	4.37
Bartlett's X2									10.785	19.125	8.156	7.606
P(Bartlett's X2)									0.214	0.16	0.833	0.369
Replicate F									1.743	5.895	3.991	3.341
Replicate Prob(F)									0.1718	0.0018	0.0133	0.0274
Treatment F									292.265	55.530	33.262	151.192
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

POST Weed Control in LL Soybean

Trial ID: HSB-52110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		PLANT P	PLANT P	PLANT P				
Pest Name		Common barnyar-		Palmer amaranth		Morning glory		10/5/2010	10/5/2010	10/5/2010				
Part Rated		PLANT P		PLANT P		PLANT P		MOICON	WEIDRY	YIELD				
Rating Date		7/23/2010		7/23/2010		7/23/2010		%	lb/plot	BU				
Rating Type		CONTRO		CONTRO		CONTRO		Harvest	Harvest	Harvest				
Rating Unit		%		%		%								
Crop Stage Majority		R2 22"		R2 22"		R2 22"								
Pest Stage Majority		10-25"		10-35"		10-20"								
Trt-Eval Interval		36 DA-C		36 DA-C		36 DA-C		110 DA-C	110 DA-C	110 DA-C				
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	19	20	21	22	23	24
1	Untreated Check								0.0	0.0	0.0	11.03	4.68	19.6
2	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		87.5	80.0	100.0	8.60	5.40	23.2
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5							
3	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		85.0	82.0	100.0	7.80	4.28	18.6
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1							
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5							
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	LAPOCR C	V4 - V5							
4	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		97.5	95.0	100.0	8.20	4.80	20.7
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5							
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	LAPOCR C	V4 - V5							
5	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		97.5	95.0	100.0	27.50	4.05	13.4
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1							
6	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		97.5	95.0	100.0	9.35	5.83	24.8
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1							
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1							
7	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		87.5	75.0	100.0	11.10	5.38	22.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1							
8	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		93.8	82.0	100.0	10.60	4.73	19.9
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1							
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1							
9	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		90.0	85.0	100.0	7.65	4.85	21.1
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1							
10	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		85.0	80.0	100.0	7.85	5.60	24.3
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1							
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1							
11	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		77.5	77.5	100.0	10.77	6.53	27.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1							
12	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		72.5	80.0	100.0	9.20	6.00	25.6
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1							
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1							
13	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		72.5	67.5	100.0	10.90	5.05	21.2
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1							
14	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		62.5	65.0	97.5	8.80	3.10	13.3
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1							
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1							
15	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		72.5	77.5	100.0	9.45	4.85	20.6
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1							
16	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		72.5	67.5	97.5	13.15	5.13	21.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1							
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1							
LSD (P=.05)									14.20	12.74	2.44	22.075	2.572	10.71
Standard Deviation									9.94	8.92	1.71	14.796	1.800	7.50
CV									12.71	11.85	1.83	137.67	35.9	35.56
Bartlett's X2									18.342	12.072	0.0	81.239	22.72	18.84
P(Bartlett's X2)									0.192	0.601	.	0.001*	0.09	0.221
Replicate F									9.627	6.792	2.143	0.438	6.976	8.506
Replicate Prob(F)									0.0001	0.0007	0.1080	0.7290	0.0006	0.0001
Treatment F									22.301	24.567	852.429	0.407	0.822	1.059
Treatment Prob(F)									0.0001	0.0001	0.0001	0.9565	0.6488	0.4191

University of Arkansas-Division of Agriculture**POST Weed Control in LL Soybean**

Trial ID: HSB-52110
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

PHYSTU = phytotoxicity - stunting

PHYCHL = phytotoxicity - chlorosis

PHYNEC = phytotoxicity - necrosis /burn

MOICON = moisture content

WEIDRY = weight - dry / dry matter content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.096141*23*(100-@MVAVGREP(22))/87

University of Arkansas-Division of Agriculture

CHA-044 Efficacy & Selectivity when Applied POST

Trial ID: HSB-52210
 Location: Rohwer, AR
 Investigator: Kenneth Smith

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Halo 4:94
BBCH Scale: BSOY
Planting Method: PLANTD planted
Depth, Unit: 1.5 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Harvest Date: 10/5/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 13.0
Weighing Equipment: Massey Ferguson 8

Description: LL / Trilex + Allegiance
Planting Date: 5/19/2010
Rate, Unit: 145000 S/A
Spacing Within Row, Unit: 1.1 IN
Soil Temperature, Unit: 74.4 F
Emergence Date: 5/29/2010
Harvest Equipment: Massey Ferguson 8
Harvested Length, Unit: 28 FT
Moisture Meter: Massey Ferguson 8

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix Code	Tank Mix
1.	4/12/2010	Potassium				90	LB/A	N	no
2.	7/20/2010	Barrage	4.7	LB A/GA	SL	5	OZ/A	N	no
3.	8/19/2010	Intrepid	2	LB A/GA	SL	5	OZ/A	N	no

Soil Description

Description Name: 2010 Soybean
% Sand: 16 **% OM:** 2.2 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.7 **Soil Name:** Sharkey & Desha Silt Loam
% Clay: 19 **CEC:** 13 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A
Application Date:	6/14/2010
Time of Day:	10:45 AM
Application Method:	SPRAY
Application Timing:	POSPOS
Application Placement:	BROFOL
Applied By:	JB
Air Temperature, Unit:	84.8 F
% Relative Humidity:	65.2
Wind Velocity, Unit:	5.25 MPH
Wind Direction:	SW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	82.4 F
Soil Moisture:	NORMAL
% Cloud Cover:	35
Next Rain Occurred On:	6/17/2010

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	V4
Height, Unit:	5 IN

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ECHCG W
Height, Unit:	3 IN
Pest 2 Code, Type, Scale:	AMAPA W
Height, Unit:	4 IN
Pest 3 Code, Type, Scale:	IPOSS W
Height, Unit:	1 IN

University of Arkansas-Division of Agriculture

CHA-044 Efficacy & Selectivity when Applied POST

Trial ID: HSB-52210
Location: Rohwer, AR

Investigator: Kenneth Smith

Application Equipment	
	A
Appl. Equipment:	Multi Boom
Equipment Type:	SPTRMO
Operating Pressure, Unit:	50 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
% Coverage:	100
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	18 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 Liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

CHA-044 Efficacy & Selectivity when Applied POST

Trial ID: HSB-52210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		IPOSS		PLANT C		ECHCG			
Pest Name		Common barnyar>		Palmer amaranth		Morning glory		6/18/2010		Common barnyar>			
Part Rated		PLANT P		PLANT P		PLANT P		6/18/2010		PLANT P			
Rating Date		6/18/2010		6/18/2010		6/18/2010		6/18/2010		6/24/2010			
Rating Type		CONTRO		CONTRO		CONTRO		PHYNEC		CONTRO			
Rating Unit		%		%		%		%		%			
Crop Stage Majority		V5 5-7"		V5 5-7"		V5 5-7"		V5 5-7"		V6 8-10"			
Pest Stage Majority		1-6"		1-10"		1-2"		V5 5-7"		1-8"			
Trt-Eval Interval		4 DA-A		4 DA-A		4 DA-A		4 DA-A		10 DA-A			
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	1	2	3	4	5	6
1	Untreated Check							0.0	0.0	0.0	0.0	0.0	0.0
2	CHA-044 Ignite 280	0.94 lb ai/a 0.402 lb ai/a	24 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	100.0	99.3	100.0	3.3	6.3	98.8
3	CHA-044 Ignite 280	1.25 lb ai/a 0.402 lb ai/a	32 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	100.0	100.0	100.0	10.0	8.8	100.0
4	CHA-044 Ignite 280	1.56 lb ai/a 0.402 lb ai/a	40 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	100.0	100.0	100.0	10.0	7.5	98.8
5	CHA-044 Ignite 280	3.13 lb ai/a 0.402 lb ai/a	80 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	100.0	100.0	100.0	20.0	20.0	98.8
6	Dawn Stalwart Ignite 280	0.25 lb ai/a 1 lb ai/a 0.402 lb ai/a	16 fl oz/a 16 fl oz/a 22 oz/a		EAPOWE A EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd 2-3" Wd	100.0	100.0	100.0	6.3	5.0	100.0
7	Prefix Ignite 280	1.32 lb ai/a 0.402 lb ai/a	32 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	100.0	100.0	100.0	7.5	5.0	98.8
8	Prefix Ignite 280	1.53 lb ai/a 0.402 lb ai/a	37 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	100.0	100.0	100.0	10.0	8.8	97.5
9	Prefix Ignite 280	0.99 lb ai/a 0.402 lb ai/a	24 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	100.0	99.0	100.0	8.8	6.3	100.0
10	Prefix Ignite 280	1.65 lb ai/a 0.402 lb ai/a	40 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	100.0	100.0	100.0	10.0	7.5	100.0
LSD (P=.05)								0.00	1.17	0.00	5.99	5.07	3.27
Standard Deviation								0.00	0.80	0.00	4.13	3.50	2.26
CV								0.0	0.9	0.0	48.11	46.61	2.53
Bartlett's X2								0.0	0.241	0.0	10.124	5.78	2.745
P(Bartlett's X2)								.	0.624	.	0.182	0.448	0.601
Replicate F								0.000	0.657	0.000	5.281	2.591	0.818
Replicate Prob(F)								1.0000	0.5858	1.0000	0.0054	0.0734	0.4952
Treatment F								0.000	6157.087	0.000	6.453	8.409	772.964
Treatment Prob(F)								1.0000	0.0001	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

CHA-044 Efficacy & Selectivity when Applied POST

Trial ID: HSB-52210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		ECHCG		AMAPA				
Pest Name		Palmer amaranth		Morning glory		Common barnyar>		Palmer amaranth				
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P				
Rating Date		6/24/2010		6/24/2010		7/2/2010		7/2/2010				
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO				
Rating Unit		%		%		%		%				
Crop Stage Majority		V6 8-10"		V6 8-10"		V6 8-10"		R1 14"				
Pest Stage Majority		4-14"		1-4"		2-12"		4-24"				
Trt-Eval Interval		10 DA-A		10 DA-A		10 DA-A		18 DA-A				
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit Stage	Appl Code	Appl Description	7	8	9	10	11
1	Untreated Check							0.0	0.0	0.0	0.0	0.0
2	CHA-044 Ignite 280	0.94 lb ai/a 0.402 lb ai/a	24 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	97.5	100.0	8.8	93.3	93.0
3	CHA-044 Ignite 280	1.25 lb ai/a 0.402 lb ai/a	32 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	98.8	100.0	13.8	93.3	89.5
4	CHA-044 Ignite 280	1.56 lb ai/a 0.402 lb ai/a	40 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	94.8	100.0	15.0	96.5	95.5
5	CHA-044 Ignite 280	3.13 lb ai/a 0.402 lb ai/a	80 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	100.0	100.0	16.3	94.3	95.8
6	Dawn Stalwart Ignite 280	0.25 lb ai/a 1 lb ai/a 0.402 lb ai/a	16 fl oz/a 16 fl oz/a 22 oz/a		EAPOWE A EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd 2-3" Wd	95.0	100.0	5.0	94.8	95.0
7	Prefix Ignite 280	1.32 lb ai/a 0.402 lb ai/a	32 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	100.0	100.0	8.8	94.3	96.5
8	Prefix Ignite 280	1.53 lb ai/a 0.402 lb ai/a	37 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	97.5	100.0	12.5	93.8	90.8
9	Prefix Ignite 280	0.99 lb ai/a 0.402 lb ai/a	24 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	97.5	100.0	10.0	96.0	92.8
10	Prefix Ignite 280	1.65 lb ai/a 0.402 lb ai/a	40 fl oz/a 22 oz/a		EAPOWE A EAPOWE A		2-3" Wd 2-3" Wd	97.5	100.0	12.5	94.8	89.5
LSD (P=.05)		6.38		0.00		8.84		3.35		6.46		
Standard Deviation		4.40		0.00		6.09		2.31		4.45		
CV		5.01		0.0		59.45		2.71		5.31		
Bartlett's X2		2.293		0.0		7.167		16.212		7.211		
P(Bartlett's X2)		0.891		.		0.519		0.039*		0.514		
Replicate F		0.325		0.000		2.446		2.408		1.872		
Replicate Prob(F)		0.8069		1.0000		0.0855		0.0890		0.1582		
Treatment F		197.541		0.000		2.611		672.061		176.462		
Treatment Prob(F)		0.0001		1.0000		0.0259		0.0001		0.0001		

University of Arkansas-Division of Agriculture

CHA-044 Efficacy & Selectivity when Applied POST

Trial ID: HSB-52210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		IPOSS		PLANT P	PLANT P	PLANT P
Pest Name		Palmer amaranth		Morning glory		10/5/2010	10/5/2010	10/5/2010
Part Rated		PLANT P		PLANT P		MOICON	WEIDRY	YIELD
Rating Date		7/23/2010		7/23/2010		%	lb/plot	BU
Rating Type		CONTRO		CONTRO		Harvest	Harvest	Harvest
Rating Unit		%		%				
Crop Stage Majority		R2 32"		R2 32"				
Pest Stage Majority		20-60"		10-15"				
Trt-Eval Interval		39 DA-A		39 DA-A		113 DA-A	113 DA-A	113 DA-A
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Appl Description	
1	Untreated Check							
		0.0						
2	CHA-044 Ignite 280	0.94 lb ai/a 0.402 lb ai/a	24 fl oz/a 22 oz/a		EAPOWE A EAPOWE A	2-3" Wd 2-3" Wd		
3	CHA-044 Ignite 280	1.25 lb ai/a 0.402 lb ai/a	32 fl oz/a 22 oz/a		EAPOWE A EAPOWE A	2-3" Wd 2-3" Wd		
4	CHA-044 Ignite 280	1.56 lb ai/a 0.402 lb ai/a	40 fl oz/a 22 oz/a		EAPOWE A EAPOWE A	2-3" Wd 2-3" Wd		
5	CHA-044 Ignite 280	3.13 lb ai/a 0.402 lb ai/a	80 fl oz/a 22 oz/a		EAPOWE A EAPOWE A	2-3" Wd 2-3" Wd		
6	Dawn Stalwart Ignite 280	0.25 lb ai/a 1 lb ai/a 0.402 lb ai/a	16 fl oz/a 16 fl oz/a 22 oz/a		EAPOWE A EAPOWE A EAPOWE A	2-3" Wd 2-3" Wd 2-3" Wd		
7	Prefix Ignite 280	1.32 lb ai/a 0.402 lb ai/a	32 fl oz/a 22 oz/a		EAPOWE A EAPOWE A	2-3" Wd 2-3" Wd		
8	Prefix Ignite 280	1.53 lb ai/a 0.402 lb ai/a	37 fl oz/a 22 oz/a		EAPOWE A EAPOWE A	2-3" Wd 2-3" Wd		
9	Prefix Ignite 280	0.99 lb ai/a 0.402 lb ai/a	24 fl oz/a 22 oz/a		EAPOWE A EAPOWE A	2-3" Wd 2-3" Wd		
10	Prefix Ignite 280	1.65 lb ai/a 0.402 lb ai/a	40 fl oz/a 22 oz/a		EAPOWE A EAPOWE A	2-3" Wd 2-3" Wd		
	LSD (P=.05)	15.95						
	Standard Deviation	10.99						
	CV	15.84						
	Bartlett's X2	5.791						
	P(Bartlett's X2)	0.671						
	Replicate F	2.088						
	Replicate Prob(F)	0.1252						
	Treatment F	20.133						
	Treatment Prob(F)	0.0001						

University of Arkansas-Division of Agriculture

CHA-044 Efficacy & Selectivity when Applied POST

Trial ID: HSB-52210
Location: Rohwer, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US
AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

PHYNEC = phytotoxicity - necrosis /burn

PHYCHL = phytotoxicity - chlorosis

MOICON = moisture content

WEIDRY = weight - dry / dry matter content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.096141*20*(100-@MVAVGREP(19))/87

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-53010
Location: Marianna, AR

Investigator: Kenneth Smith

Crop 1:		Soybean	Crop Description
Variety:	GLXMA Glycine max		Description: RR / Cruiser + Maxim + Apron
BBCH Scale:	Progeny 5115		Planting Date: 6/2/2010
Planting Method:	BSOY		Rate, Unit: 145000 S/A
Depth, Unit:	PLANTD planted		
Row Spacing, Unit:	1.25 IN		Spacing Within Row, Unit: 1.1 IN
Seed Bed:	MEDIUM medium		Soil Temperature, Unit: 80.5 F
Soil Moisture:	GOOD good		Emergence Date: 6/8/2010
Harvest Date:	10/21/2010		Harvest Equipment: Massey Ferguson 8 XP
Harvested Width, Unit:	6.33 FT		Harvested Length, Unit: 28 FT
% Standard Moisture:	13.0		Moisture Meter: Massey Ferguson 8 XP
Weighing Equipment:	Massey Ferguson 8 XP		

Pest 1 Type: W		Code: ECHCG	Echinochloa crus-galli	Common Name: Common barnyardgrass	Pest Description
Pest 2 Type: W		Code: AMAPA	Amaranthus palmeri	Common Name: Palmer amaranth	
Pest 3 Type: W		Code: IPOSS	Ipomoea sp.	Common Name: Morning glory	

Plot Width, Unit: 12.66 FT		Site Type: FIELD	field	Plot Length, Unit: 28 FT	Experimental Unit: 1	PLOT plot	Plot Area, Unit: 354.48 FT ²	Tillage Type: CONTIL	conventional-till	Replications: 4	Study Design: RACOB	Randomized Complete Block (RCB)	Untreated Arrangement: INCLUDED	single control randomized in each block
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Description Name: 2010 Soybean Marianna - RR		Soil Description	
% Sand: 13	% OM: 2	Texture: SIL	silt loam
% Silt: 66	pH: 7	Soil Name: Memphis Silt Loam	
% Clay: 21	CEC: 15	Fert. Level: G	good
		Soil Drainage: G	good

Application Description	
	A
Application Date:	6/2/2010
Time of Day:	2:00 PM
Application Method:	SPRAY
Application Timing:	PREPRE
Application Placement:	BROSOI
Applied By:	ZH
Air Temperature, Unit:	81.9 F
% Relative Humidity:	72.82
Wind Velocity, Unit:	3.35 MPH
Wind Direction:	ENE
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	80.5 F
Soil Moisture:	NORMAL
% Cloud Cover:	50
Next Rain Occurred On:	6/25/2010

Crop Stage At Each Application	
	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	V0
Height, Unit:	0 IN

Pest Stage At Each Application	
	A
Pest 1 Code, Type, Scale:	ECHCG W
Height, Unit:	0 IN
Pest 2 Code, Type, Scale:	AMAPA W
Height, Unit:	0 IN
Pest 3 Code, Type, Scale:	IPOSS W
Height, Unit:	0 IN

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-53010
Location: Marianna, AR

Investigator: Kenneth Smith

Application Equipment	
	A
Appl. Equipment:	Multi Boom
Equipment Type:	SPTRMO
Operating Pressure, Unit:	50 PSI
Nozzle Type:	Air-Mix
Nozzle Size:	110015
Nozzle Spacing, Unit:	19 IN
Nozzles/Row:	2
% Coverage:	100
Boom Length, Unit:	12.6 FT
Boom Height, Unit:	18 IN
Carrier:	WATER
Spray Volume, Unit:	12 gal/ac
Mix Size, Unit:	3 Liters
Propellant:	COMCO2
Tank Mix (Y/N):	Y yes

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-53010
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		ECHCG		AMAPA	
Pest Name		Common barnyar>		Palmer amaranth		Common barnyar>		Palmer amaranth	
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P	
Rating Date		6/15/2010		6/15/2010		6/21/2010		6/21/2010	
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO	
Rating Unit		%		%		%		%	
Crop Stage Majority		V2 2-4"		V2 2-4"		V3 3-4"		V3 3-4"	
Pest Stage Majority		1-4"		1-3"		1-3"		2-5"	
Tri-Eval Interval		13 DA-A		13 DA-A		19 DA-A		19 DA-A	
Tri No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Stage	Appl Code	Appl Description	
1	Untreated Check								
		0.0						0.0	0.0
2	Valor SX	0.064 lb ai/a	2 oz/a		PREPRE	A	Pre	97.5	91.8
3	V-10233	0.143 lb ai/a	3 oz/a		PREPRE	A	Pre	100.0	96.8
4	V-10233	0.178 lb ai/a	3.75 oz/a		PREPRE	A	Pre	100.0	98.0
5	Authority Assist	0.156 lb ai/a	5 oz/a		PREPRE	A	Pre	98.8	93.8
6	Prefix	1.32 lb ai/a	32 oz/a		PREPRE	A	Pre	100.0	98.0
7	Authority First	0.0014 lb ai/a	3.2 oz/a		PREPRE	A	Pre	94.3	93.8
8	Optill				PREPRE	A	Pre (2 oz)	95.0	87.8
	>Sharpen	0.02218 lb ai/a	1 oz/a		PREPRE	A	Pre		
	>Newpath	0.06273 lb ai/a	4 oz/a		PREPRE	A	Pre		
9	Valor SX	0.064 lb ai/a	2 oz/a		PREPRE	A	Pre	100.0	94.5
	V-10233	0.0475 lb ai/a	1 oz/a		PREPRE	A	Pre		
10	Authority MTZ	0.28 lb ai/a	10 oz/a		PREPRE	A	Pre	100.0	92.8
11	Boundary	1.63 lb ai/a	32 oz/a		PREPRE	A	Pre	100.0	100.0
	LSD (P=.05)							3.94	5.61
	Standard Deviation							2.73	3.88
	CV							3.05	4.51
	Bartlett's X2							7.065	2.811
	P(Bartlett's X2)							0.07	0.946
	Replicate F							3.624	2.053
	Replicate Prob(F)							0.0241	0.1276
	Treatment F							476.458	219.259
	Treatment Prob(F)							0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-53010
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		ECHCG	AMAPA	ECHCG	AMAPA	IPOSS							
Pest Name		Common barnyar>	Palmer amaranth	Common barnyar>	Palmer amaranth	Morning glory							
Part Rated		PLANT P	PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date		7/1/2010	7/1/2010	7/9/2010	7/9/2010	7/9/2010							
Rating Type		CONTRO	CONTRO	CONTRO	CONTRO	CONTRO							
Rating Unit		%	%	%	%	%							
Crop Stage Majority		V6 10.5"	V6 10.5"	V6 11"	V6 11"	V6 11"							
Pest Stage Majority		2-12"	4-24"	6-14"	3-33"	2-6"							
Tri-Eval Interval		29 DA-A	29 DA-A	37 DA-A	37 DA-A	37 DA-A							
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	5	6	7	8	9
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		87.0	87.8	90.0	75.8	95.0
3	V-10233	0.143	lb ai/a	3	oz/a	PREPRE A	Pre		97.5	93.3	98.0	93.8	100.0
4	V-10233	0.178	lb ai/a	3.75	oz/a	PREPRE A	Pre		98.0	94.3	98.8	96.8	97.5
5	Authority Assist	0.156	lb ai/a	5	oz/a	PREPRE A	Pre		86.5	80.0	90.0	76.0	96.5
6	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		98.8	95.5	98.5	96.8	96.8
7	Authority First	0.0014	lb ai/a	3.2	oz/a	PREPRE A	Pre		86.3	88.3	82.5	82.3	96.8
8	Optill					PREPRE A	Pre (2 oz)		87.3	66.0	94.3	66.3	96.3
	>Sharpen	0.02218	lb ai/a	1	oz/a	PREPRE A	Pre						
	>Newpath	0.06273	lb ai/a	4	oz/a	PREPRE A	Pre						
9	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		94.5	92.0	93.3	84.8	100.0
	V-10233	0.0475	lb ai/a	1	oz/a	PREPRE A	Pre						
10	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE A	Pre		88.5	86.0	86.5	75.5	98.8
11	Boundary	1.63	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	98.8	100.0	98.0	100.0
LSD (P=.05)									5.48	8.89	8.49	11.84	4.53
Standard Deviation									3.80	6.15	5.88	8.20	3.14
CV									4.52	7.68	6.94	10.66	3.53
Bartlett's X2									6.322	18.258	18.698	10.05	2.584
P(Bartlett's X2)									0.611	0.032*	0.017*	0.346	0.859
Replicate F									1.339	4.859	7.429	1.172	2.271
Replicate Prob(F)									0.2803	0.0071	0.0007	0.3369	0.1005
Treatment F									223.955	83.142	94.806	45.468	353.570
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-53010
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		ECHCG		AMAPA		IPOSS				
Pest Name		Common barnyar>		Palmer amaranth		Common barnyar>		Palmer amaranth		Morning glory				
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT P				
Rating Date		7/14/2010		7/14/2010		7/22/2010		7/22/2010		7/22/2010				
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO				
Rating Unit		%		%		%		%		%				
Crop Stage Majority		R1 18"		R1 18"		R2 22"		R2 22"		R2 22"				
Pest Stage Majority		4-24"		8-48"		16-22"		12-32"		2-10"				
Tri-Eval Interval		42 DA-A		42 DA-A		50 DA-A		50 DA-A		50 DA-A				
Tri	Treatment	Rate	Rate	Other	Other	Growth	Appl	Appl						
No.	Name		Unit	Rate	Rate	Unit	Stage	Code	Description	10	11	12	13	14
1	Untreated Check									0.0	0.0	0.0	0.0	0.0
2	Valor SX	0.064	lb ai/a	2	oz/a		PREPRE	A	Pre	75.0	72.5	65.0	70.0	77.5
3	V-10233	0.143	lb ai/a	3	oz/a		PREPRE	A	Pre	91.5	85.0	91.8	84.8	98.8
4	V-10233	0.178	lb ai/a	3.75	oz/a		PREPRE	A	Pre	96.5	98.8	98.0	96.3	100.0
5	Authority Assist	0.156	lb ai/a	5	oz/a		PREPRE	A	Pre	83.8	77.5	78.0	70.8	90.0
6	Prefix	1.32	lb ai/a	32	oz/a		PREPRE	A	Pre	97.5	91.8	98.8	94.3	100.0
7	Authority First	0.0014	lb ai/a	3.2	oz/a		PREPRE	A	Pre	74.5	76.8	75.0	70.0	86.3
8	Optill						PREPRE	A	Pre (2 oz)	88.3	62.5	66.3	55.0	80.0
	>Sharpen	0.02218	lb ai/a	1	oz/a		PREPRE	A	Pre					
	>Newpath	0.06273	lb ai/a	4	oz/a		PREPRE	A	Pre					
9	Valor SX	0.064	lb ai/a	2	oz/a		PREPRE	A	Pre	92.8	84.5	88.8	83.5	93.8
	V-10233	0.0475	lb ai/a	1	oz/a		PREPRE	A	Pre					
10	Authority MTZ	0.28	lb ai/a	10	oz/a		PREPRE	A	Pre	78.8	76.3	78.8	68.8	87.5
11	Boundary	1.63	lb ai/a	32	oz/a		PREPRE	A	Pre	99.5	95.0	100.0	95.0	100.0
LSD (P=.05)										11.00	13.86	12.14	11.37	10.21
Standard Deviation										7.62	9.60	8.41	7.87	7.07
CV										9.54	12.87	11.01	10.98	8.51
Bartlett's X2										17.918	13.512	15.298	4.4	8.644
P(Bartlett's X2)										0.036*	0.141	0.054	0.819	0.195
Replicate F										1.679	2.531	1.544	2.528	1.708
Replicate Prob(F)										0.1924	0.0759	0.2236	0.0762	0.1864
Treatment F										53.744	31.383	45.224	47.763	65.909
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-53010
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code							PLANT C	PLANT C	PLANT C
Pest Name							10/21/2010	10/21/2010	10/21/2010
Part Rated							WEIDRY	MOICON	YIELD
Rating Date							lb/plot	%	BU
Rating Type							R8	R8	R8
Rating Unit							50 DA-A	50 DA-A	50 DA-A
Crop Stage Majority									
Pest Stage Majority									
Tri-Eval Interval									
Tri	Treatment	Rate	Rate	Other	Other	Growth	Appl	Appl	
No.	Name		Unit	Rate	Rate	Unit Stage	Code	Description	
1	Untreated Check						15	16	17
2	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE A	4.40	14.48	17.7
3	V-10233	0.143	lb ai/a	3	oz/a	PREPRE A	7.53	14.23	30.2
4	V-10233	0.178	lb ai/a	3.75	oz/a	PREPRE A	10.23	13.30	41.7
5	Authority Assist	0.156	lb ai/a	5	oz/a	PREPRE A	10.45	14.30	42.1
6	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	9.43	11.30	38.5
7	Authority First	0.0014	lb ai/a	3.2	oz/a	PREPRE A	7.45	16.25	29.3
8	Optill					PREPRE A			
	>Sharpen	0.02218	lb ai/a	1	oz/a	PREPRE A			Pre (2 oz)
	>Newpath	0.06273	lb ai/a	4	oz/a	PREPRE A			Pre
9	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE A	6.35	14.55	25.6
	V-10233	0.0475	lb ai/a	1	oz/a	PREPRE A			Pre
10	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE A	5.93	15.50	23.9
11	Boundary	1.63	lb ai/a	32	oz/a	PREPRE A	9.15	13.18	37.4
	LSD (P=.05)						4.309	3.420	17.49
	Standard Deviation						2.930	2.325	11.89
	CV						37.18	16.47	37.36
	Bartlett's X2						8.57	24.515	8.782
	P(Bartlett's X2)						0.38	0.002*	0.361
	Replicate F						3.134	2.107	3.003
	Replicate Prob(F)						0.0471	0.1299	0.0534
	Treatment F						2.019	1.509	2.082
	Treatment Prob(F)						0.0943	0.2133	0.0853

University of Arkansas-Division of Agriculture

Valor and V-10233 Weed Control in Soybean

Trial ID: HSB-53010
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

WEIDRY = weight - dry / dry matter content

MOICON = moisture content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.096141*15*(100-@MVAVGREP(16))/87

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-53110
 Location: Marianna, AR

Investigator: Kenneth Smith

Crop 1:		Crop Description
GLXMA	Glycine max Soybean	
Variety: Progeny 5115		Description: RR / Cruiser + Maxim + Apron
BBCH Scale: BSOY		Planting Date: 6/2/2010
Planting Method: PLANTD planted		Rate, Unit: 145000 S/A
Depth, Unit: 1.25 IN		
Row Spacing, Unit: 38 IN		Spacing Within Row, Unit: 1.1 IN
Seed Bed: MEDIUM medium		
Soil Moisture: GOOD good		Emergence Date: 6/8/2010
Harvest Date: 10/21/2010		Harvest Equipment: Massey Ferguson 8 XP
Harvested Width, Unit: 6.33 FT		Harvested Length, Unit: 28 FT
% Standard Moisture: 13.0		Moisture Meter: Massey Ferguson 8 XP
Weighing Equipment: Massey Ferguson 8 XP		

Pest 1 Type: W		Pest Description
Code: ECHCG	Echinochloa crus-galli	
Common Name: Common barnyardgrass		
Pest 2 Type: W	Code: AMAPA	Amaranthus palmeri
Common Name: Palmer amaranth		
Pest 3 Type: W	Code: IPOSS	Ipomoea sp.
Common Name: Morning glory		

Plot Width, Unit: 12.66 FT		Site and Design
Plot Length, Unit: 28 FT		Site Type: FIELD field
Plot Area, Unit: 354.48 FT ²		Experimental Unit: 1 PLOT plot
Replications: 4		Tillage Type: CONTIL conventional-till
		Study Design: RACOB� Randomized Complete Block (RCB)
		Untreated Arrangement: INCLUDED single control randomized in each block

Description Name: 2010 Soybean Marianna - RR		Soil Description
% Sand: 13	% OM: 2	Texture: SIL silt loam
% Silt: 66	pH: 7	Soil Name: Memphis Silt Loam
% Clay: 21	CEC: 15	Fert. Level: G good
		Soil Drainage: G good

Application Description		
	A	B
Application Date:	6/2/2010	7/9/2010
Time of Day:	2:30 PM	11:00 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS
Application Placement:	BROSOI	BROFOL
Applied By:	ZH	KO
Air Temperature, Unit:	81.9 F	85.4 F
% Relative Humidity:	72.82	67.3
Wind Velocity, Unit:	3.35 MPH	1.0 MPH
Wind Direction:	ENE	SSE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	80.5 F	82.3 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	50	40
Next Rain Occurred On:	6/25/2010	7/13/2010

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	V0	V6
Height, Unit:	0 IN	11 IN

Pest Stage At Each Application		
	A	B
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W
Height, Unit:	0 IN	6 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W
Height, Unit:	0 IN	7 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W
Height, Unit:	0 IN	2 IN

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-53110
Location: Marianna, AR

Investigator: Kenneth Smith

Application Equipment		
	A	B
Appl. Equipment:	Multi Boom	Hand Boom
Equipment Type:	SPTRMO	SPRBAC
Operating Pressure, Unit:	50 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:	2	2
% Coverage:	100	100
Boom Length, Unit:	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN
Carrier:	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-53110
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		ECHCG		AMAPA				
Pest Name		Common barnyar>		Palmer amaranth		Common barnyar>		Palmer amaranth				
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P				
Rating Date		6/15/2010		6/15/2010		6/21/2010		6/21/2010				
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO				
Rating Unit		%		%		%		%				
Crop Stage Majority		V2 2-4"		V2 2-4"		V3 4-5"		V3 4-5"				
Pest Stage Majority		1-3"		1-5"		1-4"		2-7"				
Tri-Eval Interval		13 DA-A		13 DA-A		19 DA-A		19 DA-A				
Tri No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4
1	Untreated Check								0.0	0.0	0.0	0.0
2	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		100.0	96.8	100.0	90.5
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre					
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd					
3	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		100.0	100.0	100.0	100.0
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre					
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd					
4	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		100.0	100.0	100.0	99.3
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre					
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd					
5	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		100.0	100.0	100.0	98.8
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre					
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd					
6	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		100.0	99.3	100.0	96.3
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd					
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd					
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd					
7	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		100.0	96.0	100.0	91.0
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre					
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd					
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd					
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd					
8	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		100.0	100.0	100.0	98.0
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd					
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd					
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd					
9	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		100.0	100.0	100.0	100.0
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre					
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd					
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd					
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd					
10	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		100.0	100.0	100.0	99.3
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre					
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd					
11	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	100.0	100.0	96.0
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd					
12	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	100.0	100.0	96.8
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd					
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd					
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd					
13	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	100.0	100.0	97.8
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd					
LSD (P=.05)		0.00		2.18		0.00		3.80				
Standard Deviation		0.00		1.52		0.00		2.66				
CV		0.0		1.66		0.0		2.97				
Bartlett's X2		0.0		2.459		0.0		15.258				
P(Bartlett's X2)		.		0.292		.		0.084				
Replicate F		0.000		0.552		0.000		1.343				
Replicate Prob(F)		1.0000		0.6503		1.0000		0.2757				
Treatment F		0.000		1309.668		0.000		413.727				
Treatment Prob(F)		1.0000		0.0001		1.0000		0.0001				

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-53110
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		ECHCG		AMAPA				
Pest Name		Common barnyar>		Palmer amaranth		Common barnyar>		Palmer amaranth				
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P				
Rating Date		7/1/2010		7/1/2010		7/9/2010		7/9/2010				
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO				
Rating Unit		%		%		%		%				
Crop Stage Majority		V6 10.5"		V6 10.5"		V6 12"		V6 12"				
Pest Stage Majority		2-12"		4-24"		4-11"		3-33"				
Trt-Eval Interval		29 DA-A		29 DA-A		37 DA-A		37 DA-A				
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	5	6	7	8
1	Untreated Check								0.0	0.0	0.0	0.0
2	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		100.0	70.5	100.0	70.0
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre					
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd					
3	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		100.0	98.0	100.0	100.0
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre					
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd					
4	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		100.0	97.3	100.0	97.5
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre					
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd					
5	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		100.0	99.5	100.0	98.0
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre					
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd					
6	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		100.0	88.3	97.5	85.8
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd					
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd					
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd					
7	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		100.0	75.5	100.0	80.5
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre					
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd					
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd					
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd					
8	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		100.0	93.5	98.8	92.8
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd					
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd					
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd					
9	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		100.0	94.3	100.0	98.5
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre					
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd					
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd					
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd					
10	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		100.0	99.0	100.0	97.5
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre					
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd					
11	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	92.3	98.8	92.3
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd					
12	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	90.3	100.0	89.0
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd					
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd					
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd					
13	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	87.5	100.0	88.8
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd					
LSD (P=.05)		0.00		10.43		2.25		9.40				
Standard Deviation		0.00		7.30		1.58		6.58				
CV		0.0		8.74		1.71		7.84				
Bartlett's X2		0.0		22.758		2.033		9.338				
P(Bartlett's X2)		.		0.019*		0.362		0.50				
Replicate F		0.000		0.693		3.097		0.887				
Replicate Prob(F)		1.0000		0.5623		0.0388		0.4571				
Treatment F		0.000		53.090		1229.387		65.368				
Treatment Prob(F)		1.0000		0.0001		0.0001		0.0001				

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-53110
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		IPOSS		ECHCG		AMAPA		ECHCG					
Pest Name		Morning glory		Common barnyar>		Palmer amaranth		Common barnyar>					
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P					
Rating Date		7/9/2010		7/14/2010		7/14/2010		7/22/2010					
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO					
Rating Unit		%		%		%		%					
Crop Stage Majority		V6 12"		R1 14"		R1 14"		R2 21"					
Pest Stage Majority		1-4"		4-14"		4-44"		16-19"					
Trt-Eval Interval		37 DA-A		5 DA-B		5 DA-B		13 DA-B					
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	9	10	11	12	13
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		100.0	98.8	71.3	6.3	100.0
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
3	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		100.0	97.5	97.8	3.8	100.0
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
4	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		100.0	99.0	95.5	2.5	100.0
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
5	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		100.0	100.0	97.0	2.5	100.0
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
6	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		100.0	97.5	87.3	13.8	100.0
	Glyphos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
7	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		97.5	100.0	76.5	17.5	100.0
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre						
	Glyphos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
8	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		100.0	99.5	93.3	16.3	100.0
	Glyphos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
9	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		100.0	100.0	93.8	18.8	99.3
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre						
	Glyphos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
10	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		100.0	100.0	96.0	2.5	100.0
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre						
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
11	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		96.3	100.0	88.5	6.3	100.0
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd						
12	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		97.5	100.0	88.5	16.3	100.0
	Glyphos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd						
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd						
13	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	100.0	84.0	1.3	100.0
	Glyphos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd						
LSD (P=.05)				4.19		3.02		10.29		9.42		0.59	
Standard Deviation				2.93		2.11		7.20		6.59		0.42	
CV				3.2		2.3		8.76		79.69		0.45	
Bartlett's X2				0.686		8.274		15.085		12.94		0.0	
P(Bartlett's X2)				0.71		0.082		0.179		0.297		.	
Replicate F				0.354		1.728		0.976		0.664		1.000	
Replicate Prob(F)				0.7865		0.1785		0.4148		0.5795		0.4040	
Treatment F				353.348		681.546		52.045		4.594		17756.556	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0002		0.0001	

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-53110
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code	AMAPA	IPOSS	ECHCG	AMAPA	PLANT C	PLANT C	PLANT C								
Pest Name	Palmer amaranth	Morning glory	Common barnyar>	Palmer amaranth	10/21/2010	10/21/2010	10/21/2010								
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	WEIDRY	MOICON	YIELD								
Rating Date	7/22/2010	7/22/2010	8/3/2010	8/3/2010	lb/plot	%	BU								
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	R8	R8	R8								
Rating Unit	%	%	%	%											
Crop Stage Majority	R2 21"	R2 21"	R2 36.5"	R2 36.5"											
Pest Stage Majority	15-35"	2-8"	10-30"	20-70"											
Trt-Eval Interval	13 DA-B	13 DA-B	25 DA-B	25 DA-B	104 DA-B	104 DA-B	104 DA-B								
Trt No.	Treatment	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	14	15	16	17	18	19	20
1	Untreated Check								0.0	0.0	0.0	0.0		15.30	
2	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		62.5	100.0	87.5	67.5	4.28	16.03	16.8
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre								
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd								
3	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		97.5	100.0	97.5	92.8	7.48	11.85	31.0
	Authority MTZ	0.45	lb ai/a	16	oz/a	PREPRE A	Pre								
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd								
4	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		90.0	100.0	100.0	93.8	7.00	12.73	28.9
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre								
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd								
5	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre		95.8	100.0	100.0	97.5	8.48	11.88	35.1
	Authority Broadleaf	0.284	lb ai/a	6.5	oz/a	PREPRE A	Pre								
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd								
6	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		78.0	100.0	97.5	82.3	7.15	11.70	29.7
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd								
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd								
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd								
7	Authority MTZ	0.338	lb ai/a	12	oz/a	PREPRE A	Pre		76.3	100.0	92.5	70.0	6.20	12.08	25.6
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre								
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd								
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd								
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd								
8	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		93.8	100.0	100.0	92.5	7.58	11.80	31.4
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd								
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd								
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd								
9	Authority Broadleaf	0.175	lb ai/a	4	oz/a	PREPRE A	Pre		98.8	100.0	95.0	91.3	8.60	11.75	35.7
	Dual Magnum	0.95	lb ai/a	16	oz/a	PREPRE A	Pre								
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd								
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd								
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd								
10	Command	0.49	lb ai/a	21	oz/a	PREPRE A	Pre		95.0	100.0	100.0	95.0	7.18	11.53	29.9
	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre								
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd								
11	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		89.3	100.0	100.0	89.0	6.40	11.80	26.6
	FirstRate	0.0158	lb ai/a	0.3	oz/a	MIPOWE B	3-5" Wd								
12	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		90.8	100.0	100.0	93.8	6.93	11.70	28.8
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd								
	Cadet	0.00356	lb ai/a	0.5	oz/a	MIPOWE B	3-5" Wd								
	NIS	0.224	lb ai/a	0.25	% v/v	MIPOWE B	3-5" Wd								
13	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		87.5	100.0	97.5	88.8	9.75	12.08	40.3
	Glyfos X-Tra	0.75	lb ae/a	24	oz/a	MIPOWE B	3-5" Wd								
LSD (P=.05)									13.37	0.00	9.91	11.23	3.170	2.346	13.07
Standard Deviation									9.36	0.00	6.93	7.86	2.195	1.625	9.05
CV									11.53	0.0	7.72	9.69	30.28	13.02	30.19
Bartlett's X2									12.493	0.0	9.186	6.821	14.215	54.925	14.793
P(Bartlett's X2)									0.328	.	0.102	0.813	0.221	0.001*	0.192
Replicate F									1.622	0.000	1.000	2.081	0.619	4.682	0.453
Replicate Prob(F)									0.2013	1.0000	0.4040	0.1199	0.6078	0.0078	0.7170
Treatment F									31.925	0.000	61.747	44.058	1.553	3.189	1.674
Treatment Prob(F)									0.0001	1.0000	0.0001	0.0001	0.1596	0.0041	0.1236

University of Arkansas-Division of Agriculture

Efficacy & Crop Response to Authority MTZ, Authority BL, Cadet, & Command Programs in Soybean

Trial ID: HSB-53110
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US

AMAPA, Amaranthus palmeri, = US

IPOSS, Ipomoea sp., = US

Part Rated

PLANT = plant

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

PHYGEN = phytotoxicity - general / injury

WEIDRY = weight - dry / dry matter content

MOICON = moisture content

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = 4.096141*18*(100-@MVAVGREP(19))/87

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-53210
 Location: Marianna, AR

Investigator: Kenneth Smith

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Progeny 5115
BBCH Scale: BSOY
Planting Method: PLANTD planted
Depth, Unit: 1.25 IN
Row Spacing, Unit: 38 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good
Harvest Date: 10/21/2010
Harvested Width, Unit: 6.33 FT
% Standard Moisture: 13.0
Weighing Equipment: Massey Ferguson 8 XP

Description: RR / Cruiser + Maxim + Apron
Planting Date: 6/2/2010
Rate, Unit: 145000 S/A
Spacing Within Row, Unit: 1.1 IN
Emergence Date: 6/8/2010
Harvest Equipment: Massey Ferguson 8 XP
Harvested Length, Unit: 28 FT
Moisture Meter: Massey Ferguson 8 XP

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory

Site and Design

Plot Width, Unit: 12.66 FT
Plot Length, Unit: 28 FT
Plot Area, Unit: 354.48 FT²
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB L Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: 2010 Soybean Marianna - RR
% Sand: 13 **% OM:** 2 **Texture:** SIL silt loam
% Silt: 66 **pH:** 7 **Soil Name:** Memphis Silt Loam
% Clay: 21 **CEC:** 15 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C	D
Application Date:	6/2/2010	6/15/2010	7/1/2010	7/14/2010
Time of Day:	1:30 PM	10:35 AM	11:15 AM	10:45 AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS	POSPOS	POSPOS
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL
Applied By:	ZH	JM	ZH	BM
Air Temperature, Unit:	81.9 F	95.5 F	77.6 F	84.3 F
% Relative Humidity:	72.82	38.3	62.4	83.1
Wind Velocity, Unit:	3.35 MPH	5.11 MPH	4.7 MPH	1.3 MPH
Wind Direction:	ENE	ENE	SSW	ESE
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	80.5 F	89.8 F	80.1 F	81.1 F
Soil Moisture:	NORMAL	NORMAL	NORMAL	SLIWET
% Cloud Cover:	40	60	50	60
Next Rain Occurred On:	6/25/2010	6/25/2010	7/13/2010	8/9/2010

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	V0	V3	V6	V9
Height, Unit:	0 IN	3 IN	10 IN	15 IN

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W	ECHCG W
Height, Unit:	0 IN	2 IN	5 IN	10 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W	AMAPA W
Height, Unit:	0 IN	2 IN	14 IN	20 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W	IPOSS W
Height, Unit:	0 IN	0.25 IN	1 IN	4 IN

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-53210
Location: Marianna, AR

Investigator: Kenneth Smith

Application Equipment				
	A	B	C	D
Appl. Equipment:	Multi Boom	Multi Boom	Hand Boom	Hand Boom
Equipment Type:	SPTRMO	SPTRMO	SPRBAC	SPRBAC
Operating Pressure, Unit:	50 PSI	50 PSI	45 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2	2
% Coverage:	100	100	100	100
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes	Y yes

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-53210

Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		ECHCG		AMAPA				
Pest Name		Common barnyar>		Palmer amaranth		Common barnyar>		Palmer amaranth				
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P				
Rating Date		6/21/2010		6/21/2010		7/1/2010		7/1/2010				
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO				
Rating Unit		%		%		%		%				
Crop Stage Majority		V3 4-5"		V3 4-5"		V5 9-10"		V5 9-10"				
Pest Stage Majority		1-3"		2-6"		1-6"		4-24"				
Tri-Eval Interval		19 DA-A		19 DA-A		16 DA-B		16 DA-B				
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4
1	Untreated Check								0.0	0.0	0.0	0.0
2	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	93.8	100.0	93.8
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS C	V6 - V8					
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS C	V6 - V8					
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	95.5	100.0	92.5
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3					
	MON 63410 - Acetochlor AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1					
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	97.3	99.0	93.3
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3					
	MON 63410 - Acetochlor AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS D	V9 - R1					
	MON 63410 - Acetochlor AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
5	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		100.0	100.0	100.0	99.3
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3					
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3					
	MON 63410 - Acetochlor AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1					
	Reflex AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
6	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE A	Pre		100.0	100.0	100.0	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3					
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3					
	MON 63410 - Acetochlor AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1					
	Reflex AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	96.8	100.0	92.3
	Dual Magnum AMS	1.31	lb ai/a	22	oz/a	POSPOS B	V2 - V3					
	Dual Magnum AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1					
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
8	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	100.0	100.0	100.0
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3					
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1					
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
9	Boundary	1.83	lb ai/a	36	oz/a	PREPRE A	Pre		100.0	100.0	100.0	77.5
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3					
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1					
	Reflex AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	99.3	100.0	97.5
	MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3					
	Flexstar AMS	0.0184	lb ai/a	1.25	oz/a	POSPOS B	V2 - V3					
	Flexstar AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1					
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	100.0	96.3
	Prefix AMS	1.32	lb ai/a	32	oz/a	POSPOS B	V2 - V3					
	Prefix AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1					
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
LSD (P=.05)									0.00	2.66	0.87	20.41
Standard Deviation									0.00	1.84	0.60	14.13
CV									0.0	2.07	0.66	16.5
Bartlett's X2									0.0	3.748	0.0	54.399
P(Bartlett's X2)									.	0.441	.	0.001*
Replicate F									0.000	4.105	1.000	0.773
Replicate Prob(F)									1.0000	0.0149	0.4064	0.5184
Treatment F									0.000	1037.062	9981.001	16.955
Treatment Prob(F)									1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-53210
 Location: Marianna, AR
 Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		ECHCG						
Pest Name		Common barnyar>		Palmer amaranth		Common barnyar>						
Part Rated		PLANT P		PLANT P		PLANT P						
Rating Date		7/9/2010		7/9/2010		7/14/2010						
Rating Type		CONTRO		CONTRO		PHYSTU						
Rating Unit		%		%		%						
Crop Stage Majority		V6 11"		V6 11"		V6 11"						
Pest Stage Majority		2-6"		3-23"		4-12"						
Tri-Eval Interval		8 DA-C		8 DA-C		13 DA-C						
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	5	6	7	8
1	Untreated Check								0.0	0.0	0.0	0.0
2	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		97.5	74.3	0.0	100.0
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS C	V6 - V8					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS C	V6 - V8					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		99.3	88.8	0.0	99.0
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		97.5	85.0	0.0	100.0
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS D	V9 - R1					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
5	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		100.0	98.8	1.3	77.5
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3					
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Reflex	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
6	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE A	Pre		100.0	98.0	0.0	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3					
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Reflex	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	86.3	5.0	100.0
	Dual Magnum	1.31	lb ai/a	22	oz/a	POSPOS B	V2 - V3					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
8	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	100.0	0.0	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
9	Boundary	1.83	lb ai/a	36	oz/a	PREPRE A	Pre		100.0	100.0	3.8	100.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Reflex	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		98.8	96.3	0.0	98.8
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3					
	Flexstar	0.0184	lb ai/a	1.25	oz/a	POSPOS B	V2 - V3					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	95.0	6.3	98.8
	Prefix	1.32	lb ai/a	32	oz/a	POSPOS B	V2 - V3					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3					
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1					
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1					
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1					
LSD (P=.05)									3.07	12.07	7.24	19.62
Standard Deviation									2.13	8.36	5.02	13.59
CV									2.36	9.97	339.49	15.35
Bartlett's X2									4.768	13.962	7.08	41.574
P(Bartlett's X2)									0.19	0.052	0.069	0.001*
Replicate F									2.935	0.348	1.348	1.015
Replicate Prob(F)									0.0493	0.7906	0.2775	0.3996
Treatment F									793.663	47.982	0.886	19.634
Treatment Prob(F)									0.0001	0.0001	0.5568	0.0001

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-53210

Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		ECHCG		AMAPA		IPOSS		PLANT C			
Pest Name		Palmer amaranth		Common barnyard		Palmer amaranth		Morning glory		7/22/2010			
Part Rated		PLANT P		PLANT P		PLANT P		PLANT P		PLANT C			
Rating Date		7/14/2010		7/22/2010		7/22/2010		7/22/2010		7/22/2010			
Rating Type		CONTRO		CONTRO		CONTRO		CONTRO		PHYSTU			
Rating Unit		%		%		%		%		%			
Crop Stage Majority		V8 16"		R2 21"		R2 21"		R2 21"		R2 21"			
Pest Stage Majority		3-30"		5-12"		12-32"		2-8"		8 DA-D			
Tri-Eval Interval		13 DA-C		8 DA-D		8 DA-D		8 DA-D		8 DA-D			
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	9	10	11	12	13
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		77.5	100.0	72.5	100.0	0.0
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS C	V6 - V8						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS C	V6 - V8						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
3	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		87.5	100.0	80.0	100.0	1.3
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
4	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		84.3	100.0	73.8	100.0	0.0
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
5	Valor SX	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		98.8	100.0	95.5	100.0	0.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Reflex	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
6	Authority MTZ	0.28	lb ai/a	10	oz/a	PREPRE A	Pre		100.0	100.0	95.0	100.0	0.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Reflex	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
7	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		80.5	95.0	72.5	97.5	7.5
	Dual Magnum	1.31	lb ai/a	22	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
8	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	100.0	100.0	100.0	0.0
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
9	Boundary	1.83	lb ai/a	36	oz/a	PREPRE A	Pre		98.8	100.0	100.0	100.0	2.5
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Reflex	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
10	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		93.5	100.0	86.0	100.0	0.0
	MON 63410 - Acetochlor	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3						
	Flexstar	0.0184	lb ai/a	1.25	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
11	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		95.8	95.0	92.5	97.5	2.5
	Prefix	1.32	lb ai/a	32	oz/a	POSPOS B	V2 - V3						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3						
	Roundup PowerMax	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1						
	Classic	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1						
	AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1						
LSD (P=.05)									8.85	5.84	11.04	2.92	5.28
Standard Deviation									6.13	4.05	7.64	2.02	3.66
CV									7.36	4.49	9.69	2.24	292.53
Bartlett's X2									12.021	0.0	3.247	0.0	4.778
P(Bartlett's X2)									0.10	.	0.861	.	0.189
Replicate F									0.293	2.222	0.893	2.222	1.062
Replicate Prob(F)									0.8304	0.1060	0.4562	0.1060	0.3797
Treatment F									88.225	218.778	54.753	881.000	1.589
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.1579

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-53210
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		PLANT C	PLANT C	PLANT C	PLANT C	PLANT C					
Pest Name		Common barnyar>		Palmer amaranth		8/3/2010	8/3/2010	10/21/2010	10/21/2010	10/21/2010					
Part Rated		PLANT P		PLANT P		PHYSTU	PHYCHL	WEIDRY	MOICON	YIELD					
Rating Date		8/3/2010		8/3/2010		%	%	lb/plot	%	BU					
Rating Type		CONTRO		CONTRO		R2 36.5"	R2 36.5"	R8	R8	R8					
Rating Unit		%		%		20 DA-D	20 DA-D	99 DA-D	99 DA-D	99 DA-D					
Crop Stage Majority		R2 36.5"		R2 36.5"											
Pest Stage Majority		10-30"		20-70"											
Tri-Eval Interval		20 DA-D		20 DA-D											
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	14	15	16	17	18	19	20
1	Untreated Check								0.0	0.0	0.0	0.0			
2	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		97.5	80.0	5.0	12.5	9.20	14.45	37.4
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3								
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS C	V6 - V8								
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS C	V6 - V8								
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1								
3	Roundup PowerMax MON 63410 - Acetochlor AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		97.5	82.5	2.5	10.0	10.45	12.33	43.1
	Roundup PowerMax MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3								
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3								
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1								
	Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1								
	Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1								
4	Roundup PowerMax MON 63410 - Acetochlor AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		96.3	72.5	1.3	6.3	6.88	12.15	28.4
	Roundup PowerMax MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3								
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3								
	Roundup PowerMax MON 63410 - Acetochlor AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1								
5	Valor SX Roundup PowerMax MON 63410 - Acetochlor AMS	0.064	lb ai/a	2	oz/a	PREPRE A	Pre		100.0	97.5	3.8	8.8	10.93	12.18	45.2
	Roundup PowerMax MON 63410 - Acetochlor AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3								
	Roundup PowerMax MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3								
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3								
	Roundup PowerMax Reflex AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Reflex AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1								
6	Authority MTZ Roundup PowerMax MON 63410 - Acetochlor AMS	0.28	lb ai/a	10	oz/a	PREPRE A	Pre		100.0	98.8	0.0	6.3	10.23	11.85	42.4
	Roundup PowerMax MON 63410 - Acetochlor AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3								
	Roundup PowerMax MON 63410 - Acetochlor AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3								
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3								
	Roundup PowerMax Reflex AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Reflex AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1								
7	Roundup PowerMax Dual Magnum AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	86.3	5.0	6.3	9.90	12.65	40.8
	Roundup PowerMax Dual Magnum AMS	1.31	lb ai/a	22	oz/a	POSPOS B	V2 - V3								
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3								
	Roundup PowerMax Classic AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1								
8	Prefix Roundup PowerMax AMS	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	100.0	3.8	8.8	12.18	12.18	50.3
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3								
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3								
	Roundup PowerMax Classic AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1								
9	Boundary Roundup PowerMax AMS	1.83	lb ai/a	36	oz/a	PREPRE A	Pre		100.0	100.0	0.0	8.8	11.53	12.48	47.5
	Roundup PowerMax AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3								
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3								
	Roundup PowerMax Reflex AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Reflex AMS	0.25	lb ai/a	16	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Reflex AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1								
10	Roundup PowerMax MON 63410 - Acetochlor Flexstar AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	0.0	6.3	11.90	12.28	49.2
	Roundup PowerMax MON 63410 - Acetochlor Flexstar AMS	1.125	lb ai/a	48	oz/a	POSPOS B	V2 - V3								
	Roundup PowerMax Flexstar AMS	0.0184	lb ai/a	1.25	oz/a	POSPOS B	V2 - V3								
	Roundup PowerMax Flexstar AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3								
	Roundup PowerMax Classic AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1								
11	Roundup PowerMax Prefix AMS	0.77	lb ae/a	22	oz/a	POSPOS B	V2 - V3		100.0	100.0	5.0	12.5	9.18	12.08	37.9
	Roundup PowerMax Prefix AMS	1.32	lb ai/a	32	oz/a	POSPOS B	V2 - V3								
	Roundup PowerMax AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS B	V2 - V3								
	Roundup PowerMax Classic AMS	0.77	lb ae/a	22	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Classic AMS	0.00516	lb ai/a	0.33	oz/a	POSPOS D	V9 - R1								
	Roundup PowerMax Classic AMS	2.53	lb ai/a	5	gal/100 gal	POSPOS D	V9 - R1								
LSD (P=.05)									3.36	8.82	6.40	9.40	3.268	2.084	13.62
Standard Deviation									2.33	6.11	4.43	6.51	2.252	1.436	9.39
CV									2.58	7.32	185.62	83.0	22.01	11.53	22.24
Bartlett's X2									0.007	6.374	6.532	7.091	10.66	56.767	10.505
P(Bartlett's X2)									0.996	0.271	0.366	0.628	0.30	0.001*	0.311
Replicate F									3.462	0.832	7.519	2.053	1.254	0.520	1.254
Replicate Prob(F)									0.0285	0.4866	0.0007	0.1276	0.3097	0.6720	0.3098
Treatment F									661.028	92.537	0.985	1.154	1.955	1.040	1.955
Treatment Prob(F)									0.0001	0.0001	0.4772	0.3582	0.0861	0.4351	0.0862

University of Arkansas-Division of Agriculture

MON 63410 - Encapsulated Acetochlor Applied POST in Soybean

Trial ID: HSB-53210
Location: Marianna, AR

Investigator: Kenneth Smith

Pest CodeECHCG, Echinochloa crus-galli, = US
AMAPA, Amaranthus palmeri, = US
IPOSS, Ipomoea sp., = US**Part Rated**PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated**Rating Type**CONTRO = control / burndown or knockdown
PHYSTU = phytotoxicity - stunting
PHYCHL = phytotoxicity - chlorosis
WEIDRY = weight - dry / dry matter content
MOIDCON = moisture content
YIELD = yield**Rating Unit**% = percent
lb/plot = pounds per plot
BU = bushel**ARM Action Codes**

TY1 = 4.096141*18*(100-@MVAVGREP(19))/87

University of Arkansas-Division of Agriculture

POST Weed Control in LL Soybean

Trial ID: HSB-53410
Location: Marianna, AR

Investigator: Kenneth Smith

Crop 1: GLXMA Glycine max Soybean		Crop Description	
Variety: Halo 4:94		Description: LL / Trilex + Allegiance	
BBCH Scale: BSOY		Planting Date: 6/2/2010	
Planting Method: PLANTD planted		Rate, Unit: 145000 S/A	
Depth, Unit: 1.25 IN		Spacing Within Row, Unit: 1.1 IN	
Row Spacing, Unit: 38 IN		Emergence Date: 6/8/2010	
Seed Bed: MEDIUM medium		Harvest Equipment: Massey Ferguson 8 XP	
Soil Moisture: GOOD good		Harvested Width, Unit: 6.33 FT	
Harvest Date: 10/21/2010		Harvested Length, Unit: 28 FT	
Harvested Width, Unit: 6.33 FT		Moisture Meter: Massey Ferguson 8 XP	
% Standard Moisture: 13.0			
Weighing Equipment: Massey Ferguson 8 XP			

Pest 1 Type: W Code: ECHCG Echinochloa crus-galli		Pest Description	
Common Name: Common barnyardgrass			
Pest 2 Type: W Code: AMAPA Amaranthus palmeri			
Common Name: Palmer amaranth			
Pest 3 Type: W Code: IPOSS Ipomoea sp.			
Common Name: Morning glory			

Plot Width, Unit: 12.66 FT		Site and Design	
Plot Length, Unit: 28 FT		Site Type: FIELD field	
Plot Area, Unit: 354.48 FT ²		Experimental Unit: 1 PLOT plot	
Replications: 4		Tillage Type: CONTIL conventional-till	
		Study Design: RACOB L Randomized Complete Block (RCB)	
		Untreated Arrangement: INCLUDED single control randomized in each block	

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	6/30/2010	Ignite 280	2.34	LBA/GAL	SL	36	OZ/A

Description Name: 2010 Soybean Marianna - LL		Soil Description	
% Sand: 14	% OM: 2	Texture: SICL silty clay loam	
% Silt: 66	pH: 7	Soil Name: Calloway Silt Loam	
% Clay: 20	CEC: 15	Fert. Level: G good	
		Soil Drainage: G good	

Application Description

	A	B	C
Application Date:	6/2/2010	6/15/2010	7/1/2010
Time of Day:	2:00 PM	11:00 AM	10:30 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PREPRE	POSPOS	POSPOS
Application Placement:	BROSOL	BROFOL	BROFOL
Applied By:	ZH	ZH	ZH
Air Temperature, Unit:	81.9 F	95.9 F	77.6 F
% Relative Humidity:	72.82	38.8	62.4
Wind Velocity, Unit:	3.35 MPH	5.1 MPH	4.7 MPH
Wind Direction:	ENE	ENE	SSW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	80.5 F	89.1 F	78.8 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	50	60	50
Next Rain Occurred On:	6/25/2010	6/22/2010	7/13/2010

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DSEC	DESC
Stage Majority, Percent:	V0	V2	V4
Height, Unit:	0 IN	3 IN	8 IN

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Height, Unit:	0 IN	1 IN	7 IN
Pest 2 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W
Height, Unit:	0 IN	2 IN	14 IN
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W	IPOSS W
Height, Unit:	0 IN	0.25 IN	1 IN

University of Arkansas-Division of Agriculture

POST Weed Control in LL Soybean

Trial ID: HSB-53410
 Location: Marianna, AR

Investigator: Kenneth Smith

Application Equipment			
	A	B	C
Appl. Equipment:	Hand Boom	Multi Boom	Hand Boom
Equipment Type:	SPRBAC	SPTRMO	SPRBAC
Operating Pressure, Unit:	45 PSI	50 PSI	45 PSI
Nozzle Type:	Air-Mix	Air-Mix	Air-Mix
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN
Nozzles/Row:	2	2	2
% Coverage:	100	100	100
Boom Length, Unit:	12.6 FT	12.6 FT	12.6 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	12 gal/ac	12 gal/ac	12 gal/ac
Mix Size, Unit:	3 Liters	3 Liters	3 Liters
Propellant:	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N):	Y yes	Y yes	Y yes

University of Arkansas-Division of Agriculture

POST Weed Control in LL Soybean

Trial ID: HSB-53410
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		ECHCG		AMAPA		PLANT C		ECHCG					
Pest Name		Common barnyar>		Palmer amaranth		6/21/2010		Common barnyar>					
Part Rated		PLANT P		PLANT P		PLANT C		PLANT P					
Rating Date		6/21/2010		6/21/2010		6/21/2010		7/1/2010					
Rating Type		CONTRO		CONTRO		PHYNEC		CONTRO					
Rating Unit		%		%		%		%					
Crop Stage Majority		V3 4-5*		V3 4-5*		V3 4-5*		V4 7-9*					
Pest Stage Majority		1-3*		2-6*				2-8*					
Trt-Eval Interval		6 DA-B		6 DA-B		6 DA-B		16 DA-B					
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	1	2	3	4	5
1	Untreated Check								0.0	0.0	0.0	0.0	0.0
2	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		100.0	98.8	6.3	1.3	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5						
3	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		100.0	99.3	0.0	1.3	100.0
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	LAPOCR C	V4 - V5						
4	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		100.0	93.0	0.0	0.0	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	LAPOCR C	V4 - V5						
5	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		100.0	100.0	3.8	5.0	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
6	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		100.0	97.3	3.8	3.8	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
7	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		100.0	97.3	1.3	3.8	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
8	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		100.0	98.8	8.8	3.8	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
9	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		100.0	99.0	0.0	0.0	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
10	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		100.0	98.3	0.0	0.0	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
11	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		100.0	95.5	3.8	2.5	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
12	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		100.0	99.3	7.5	3.8	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
13	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		100.0	96.8	6.3	6.3	97.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
14	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		100.0	75.0	5.0	2.5	98.8
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
15	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		100.0	99.3	0.0	2.5	99.3
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
16	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		100.0	98.5	3.8	0.0	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1						
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1						
LSD (P=.05)									0.00	16.09	7.59	3.98	1.97
Standard Deviation									0.00	11.26	5.31	2.78	1.38
CV									0.0	12.46	169.92	122.89	1.47
Bartlett's X2									0.0	102.693	12.935	6.067	4.054
P(Bartlett's X2)									.	0.001*	0.166	0.81	0.132
Replicate F									0.000	0.925	1.256	0.319	2.670
Replicate Prob(F)									1.0000	0.4366	0.3008	0.8115	0.0588
Treatment F									0.000	19.450	1.300	2.066	1311.769
Treatment Prob(F)									1.0000	0.0001	0.2417	0.0309	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

POST Weed Control in LL Soybean

Trial ID: HSB-53410
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA	ECHCG	AMAPA	ECHCG					
Pest Name		Palmer amaranth	Common barnyar>	Palmer amaranth	Common barnyar>					
Part Rated		PLANT P	PLANT P	PLANT P	PLANT P					
Rating Date		7/1/2010	7/9/2010	7/9/2010	7/14/2010					
Rating Type		CONTR0	CONTR0	CONTR0	CONTR0					
Rating Unit		%	%	%	%					
Crop Stage Majority		V4 7-9*	V8 11*	V8 11*	V9 12.5*					
Pest Stage Majority		4-20*	2-10*	4-22*	2-12*					
Trt-Eval Interval		16 DA-B	8 DA-C	8 DA-C	13 DA-C					
Trt No.	Treatment Name	Rate	Other Rate	Growth Stage	Appl Code	Appl Description	6	7	8	9
1	Untreated Check						0.0	0.0	0.0	0.0
2	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1		96.8	100.0	98.8	99.8
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR C	V4 - V5					
3	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1		98.8	100.0	100.0	98.8
	Ammonium Sulfate	2.53 lb ai/a	5 gal/100 gal	EAPOCR B	V1					
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR C	V4 - V5					
	Ammonium Sulfate	2.53 lb ai/a	5 gal/100 gal	EAPOCR C	V4 - V5					
4	Prefix	1.32 lb ai/a	32 oz/a	PREPRE A	Pre		87.5	100.0	96.3	100.0
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR C	V4 - V5					
	Ammonium Sulfate	2.53 lb ai/a	5 gal/100 gal	EAPOCR C	V4 - V5					
5	Prefix	1.32 lb ai/a	32 oz/a	EAPOCR B	V1		97.5	100.0	100.0	100.0
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1					
6	Prefix	1.32 lb ai/a	32 oz/a	EAPOCR B	V1		100.0	100.0	100.0	99.8
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53 lb ai/a	5 gal/100 gal	EAPOCR B	V1					
7	Dual Magnum	1.19 lb ai/a	20 oz/a	EAPOCR B	V1		98.8	100.0	100.0	100.0
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1					
8	Dual Magnum	1.19 lb ai/a	20 oz/a	EAPOCR B	V1		97.5	100.0	100.0	100.0
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53 lb ai/a	5 gal/100 gal	EAPOCR B	V1					
9	MON 63410 - Acetochlor	1.13 lb ai/a	48 oz/a	EAPOCR B	V1		98.0	100.0	100.0	100.0
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1					
10	MON 63410 - Acetochlor	1.13 lb ai/a	48 oz/a	EAPOCR B	V1		100.0	100.0	100.0	99.3
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53 lb ai/a	5 gal/100 gal	EAPOCR B	V1					
11	Flexstar	0.235 lb ai/a	16 oz/a	EAPOCR B	V1		95.3	100.0	100.0	100.0
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1					
12	Flexstar	0.235 lb ai/a	16 oz/a	EAPOCR B	V1		98.0	100.0	100.0	100.0
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53 lb ai/a	5 gal/100 gal	EAPOCR B	V1					
13	Cadet	0.0064 lb ai/a	0.9 oz/a	EAPOCR B	V1		90.5	100.0	98.8	97.8
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1					
14	Cadet	0.0064 lb ai/a	0.9 oz/a	EAPOCR B	V1		96.5	100.0	99.3	98.5
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53 lb ai/a	5 gal/100 gal	EAPOCR B	V1					
15	Python	0.00625 lb ai/a	0.125 oz/a	EAPOCR B	V1		97.5	100.0	100.0	98.3
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1					
16	Python	0.00625 lb ai/a	0.125 oz/a	EAPOCR B	V1		95.0	100.0	97.5	98.5
	Ignite 280	0.402 lb ai/a	22 oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53 lb ai/a	5 gal/100 gal	EAPOCR B	V1					
LSD (P=.05)							7.40	0.00	2.86	1.73
Standard Deviation							5.18	0.00	2.00	1.21
CV							5.72	0.0	2.15	1.3
Bartlett's X2							15.987	0.0	5.27	11.895
P(Bartlett's X2)							0.192	.	0.261	0.104
Replicate F							1.139	0.000	0.694	1.431
Replicate Prob(F)							0.3434	1.0000	0.5606	0.2463
Treatment F							88.531	0.000	619.383	1679.861
Treatment Prob(F)							0.0001	1.0000	0.0001	0.0001

University of Arkansas-Division of Agriculture

POST Weed Control in LL Soybean

Trial ID: HSB-53410
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA	ECHCG	AMAPA	ECHCG							
Pest Name		Palmer amaranth	Common barnyar>	Palmer amaranth	Common barnyar>							
Part Rated		PLANT P	PLANT P	PLANT P	PLANT P							
Rating Date		7/14/2010	7/22/2010	7/22/2010	8/3/2010							
Rating Type		CONTR0	CONTR0	CONTR0	CONTR0							
Rating Unit		%	%	%	%							
Crop Stage Majority		V9 12.5*	R1 13.5*	R1 13.5*	R1 26.5*							
Pest Stage Majority		4-25*	4-8*	4-18*	6-16*							
Trt-Eval Interval		13 DA-C	21 DA-C	21 DA-C	33 DA-C							
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	10	11	12	13
1	Untreated Check								0.0	0.0	0.0	0.0
2	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		99.0	100.0	100.0	90.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR C	V4 - V5					
3	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		100.0	96.8	100.0	92.5
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR C	V4 - V5					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR C	V4 - V5					
4	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		97.8	98.8	100.0	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V4 - V5					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR C	V4 - V5					
5	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		100.0	100.0	100.0	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
6	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		99.3	97.5	100.0	100.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
7	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		100.0	100.0	100.0	97.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
8	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		100.0	100.0	100.0	95.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
9	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		99.8	100.0	100.0	98.8
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
10	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		100.0	97.5	100.0	97.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
11	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		100.0	96.8	100.0	86.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
12	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		100.0	73.0	100.0	90.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
13	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		99.5	97.0	100.0	85.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
14	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		99.3	91.5	98.8	83.5
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
15	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		98.5	91.5	100.0	75.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
16	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		98.8	97.8	100.0	85.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
LSD (P=.05)									1.27	15.90	0.89	11.09
Standard Deviation									0.89	11.13	0.63	7.76
CV									0.95	12.38	0.67	9.02
Bartlett's X2									9.512	55.541	0.0	15.473
P(Bartlett's X2)									0.218	0.001*	.	0.116
Replicate F									2.602	1.006	1.000	1.488
Replicate Prob(F)									0.0636	0.3991	0.4016	0.2305
Treatment F									3129.654	20.000	6390.334	38.520
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

University of Arkansas-Division of Agriculture

POST Weed Control in LL Soybean

Trial ID: HSB-53410
 Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code		AMAPA		PLANT C		PLANT C		PLANT C				
Pest Name		Palmer amaranth		10/21/2010		10/21/2010		10/21/2010				
Part Rated		PLANT P		MOICON		WEIDRY		YIELD				
Rating Date		8/3/2010		%		lb/plot		BU				
Rating Type		CONTR		R8		R8		R8				
Rating Unit		R1 26.5*		10-60*								
Crop Stage Majority		33 DA-C		112 DA-C		112 DA-C		112 DA-C				
Pest Stage Majority												
Trt-Eval Interval												
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	14	15	16	17
1	Untreated Check								0.0	11.65	4.48	18.8
2	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		100.0	11.38	6.10	25.5
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5					
3	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1		100.0	10.95	8.23	34.5
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	LAPOCR C	V4 - V5					
4	Prefix	1.32	lb ai/a	32	oz/a	PREPRE A	Pre		95.0	10.93	7.80	32.7
	Ignite 280	0.402	lb ai/a	22	oz/a	LAPOCR C	V4 - V5					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	LAPOCR C	V4 - V5					
5	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		100.0	11.00	7.43	31.1
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
6	Prefix	1.32	lb ai/a	32	oz/a	EAPOCR B	V1		100.0	10.73	7.83	32.9
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
7	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		97.5	11.13	6.68	27.9
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
8	Dual Magnum	1.19	lb ai/a	20	oz/a	EAPOCR B	V1		95.0	11.10	6.48	27.1
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
9	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		100.0	10.85	8.18	34.3
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
10	MON 63410 - Acetochlor	1.13	lb ai/a	48	oz/a	EAPOCR B	V1		100.0	10.50	5.75	24.2
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
11	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		100.0	11.05	6.20	26.0
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
12	Flexstar	0.235	lb ai/a	16	oz/a	EAPOCR B	V1		100.0	10.93	6.78	28.4
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
13	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		92.5	11.20	6.43	26.8
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
14	Cadet	0.0064	lb ai/a	0.9	oz/a	EAPOCR B	V1		95.0	10.75	6.60	27.8
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
15	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		97.5	10.75	7.20	30.2
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
16	Python	0.00625	lb ai/a	0.125	oz/a	EAPOCR B	V1		100.0	11.08	6.25	26.1
	Ignite 280	0.402	lb ai/a	22	oz/a	EAPOCR B	V1					
	Ammonium Sulfate	2.53	lb ai/a	5	gal/100 gal	EAPOCR B	V1					
LSD (P=.05)									8.06	0.979	2.624	10.97
Standard Deviation									5.64	0.685	1.836	7.68
CV									6.13	6.23	27.11	27.04
Bartlett's X2									5.955	32.002	11.386	11.33
P(Bartlett's X2)									0.311	0.006*	0.725	0.729
Replicate F									0.965	1.943	1.507	1.566
Replicate Prob(F)									0.4175	0.1362	0.2255	0.2106
Treatment F									76.446	0.639	1.145	1.160
Treatment Prob(F)									0.0001	0.8267	0.3475	0.3361

University of Arkansas-Division of Agriculture

POST Weed Control in LL Soybean

Trial ID: HSB-53410
Location: Marianna, AR

Investigator: Kenneth Smith

Pest Code

ECHCG, Echinochloa crus-galli, = US
AMAPA, Amaranthus palmeri, = US

Part Rated

PLANT = plant
P = Pest is Part Rated
C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown
PHYNEC = phytotoxicity - necrosis /burn
PHYCHL = phytotoxicity - chlorosis
MOICON = moisture content
WEIDRY = weight - dry / dry matter content
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
BU = bushel

ARM Action Codes

TY1 = 4.096141*16*(100-15)/87

University of Arkansas-Division of Agriculture

Herbicide programs for weed control in sunflower

Trial ID: HSF-110110
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Crop Description

Crop 1: HELAN Helianthus annuus Common sunflower
BBCH Scale: BSUN **Planting Date:** 5/11/2010
Planting Method: BEDDED bedded **Rate, Unit:** 3 S/FT
Depth, Unit: 1.25 IN
Row Spacing, Unit: 38 IN
Seed Bed: SMOOTH smooth
Soil Moisture: FAIR fair **Emergence Date:** 5/17/2010

Pest Description

Pest 1 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Pest 2 Type: W **Code:** CASOB Cassia obtusifolia
Common Name: Sickle pod

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morningglory

Site and Design

Plot Width, Unit: 12.67 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 354.76 FT² **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: Silt Loam **Texture:** SIL silt loam
% Sand: 16 **% OM:** 2.2 **pH:** 7.1 **Soil Name:** Herbert Silt Loam
% Silt: 67 **CEC:** 14 **Fert. Level:** G
% Clay: 17 **Soil Drainage:** G good

Application Description

	A	B
Application Date:	5/13/2010	6/14/2010
Time of Day:	AM	Noon
Application Method:	SPRAY	SPRAY
Application Timing:	PREMCR	LAYBY
Application Placement:	BROSOI	BRODIR
Applied By:	JM	JM
Air Temperature, Unit:	78.3 F	85.1 F
% Relative Humidity:	78.55	69.9
Wind Velocity, Unit:	3.85 MPH	4.95 MPH
Wind Direction:	ENE	
Dew Presence (Y/N):		N no
Soil Temperature, Unit:	75.5 F	84.6 F
Soil Moisture:		NORMAL
% Cloud Cover:		40
Next Rain Occurred On:		6/17/2010

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	HELAN BSUN	HELAN BSUN

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ECHCG W	ECHCG W
Pest 2 Code, Type, Scale:	CASOB W	CASOB W
Pest 3 Code, Type, Scale:	IPOSS W	IPOSS W

University of Arkansas-Division of Agriculture

Herbicide programs for weed control in sunflower

Trial ID: HSF-110110
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Application Equipment

	A	B
Appl. Equipment:	Hand Boom	Multi-Boom
Equipment Type:	BACSPR	
Operating Pressure, Unit:	45 PSI	55 PSI
Nozzle Type:	AM FF	Air-Mix
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	19 IN	19 IN
Nozzles/Row:		2
Boom Length, Unit:		12.6 FT
Boom Height, Unit:		18 IN
Ground Speed, Unit:		3.8 MPH
Carrier:	WATER	H2O
Spray Volume, Unit:	12 gal/ac	12 GPA
Mix Size, Unit:	3 liters	3 Liters
Propellant:	COMCO2	CO2
Tank Mix (Y/N):	Y yes	

University of Arkansas-Division of Agriculture

Herbicide programs for weed control in sunflower

Trial ID: HSF-110110
 Location: Rohwer, AR Study Director:
 Investigator: Kenneth Smith
 Sponsor Contact:

Pest Code	PLAEME C	PLANT C	ECHCG	IPOSS	CASOB	PLAEME C	PLAEME C
Pest Name	5/18/2010	5/21/2010	Common barnyar-	Morning glory	Sickle pod	5/27/2010	5/27/2010
Part Rated	PHYGEN	STASUB	PLAEME P	PLAEME P	PLAEME P	PHYGEN	EMERGE
Rating Date	percent	5 ft	5/27/2010	5/27/2010	5/27/2010	percent	percent
Rating Type			CONTR0	CONTR0	CONTR0	percent	percent
Rating Unit			percent	percent	percent	4-5 leaf	4-5 leaf
Crop Stage Majority	5 DA-A	8 DA-A	4-5 leaf	4-5 leaf	4-5 leaf	2 leaf	4-5 leaf
Pest Stage Majority			1-3 leaf	2 leaf	2 leaf		
Trt-Eval Interval			14 DA-A	14 DA-A	14 DA-A		
Trt Treatment	Rate	Other	Other	Growth	Appl	Appl	
No. Name	Rate	Unit	Rate	Rate	Unit	Stage	Code
Description	1	2	3	4	5	6	7
1 Untreated Check							
2 Spartan	0.125 lb ai/a		4 oz/a	PRE	A	PRE	
3 Spartan	0.125 lb ai/a		4 oz/a	PRE	A		
Dual Magnum	0.95 lb ai/a		1 pt/a	PRE	A		
4 Dual Magnum	0.95 lb ai/a		1 pt/a	PRE	A	PRE	
5 Dual Magnum	1.9 lb ai/a		2 pt/a	PRE	A	PRE	
6 Caparol	1 lb ai/a		2 pt/a	PRE	A	PRE	
7 Reflex	0.25 lb ai/a		1 pt/a	PRE	A		
8 Prefix	1.32 lb ai/a		1 qt/a	PRE	A	PRE	
9 Valor	0.064 lb ai/a		2 oz/a	PRE	A		
10 Valor	0.064 lb ai/a		2 oz/a	PRE	A		
Dual Magnum	0.95 lb ai/a		1 pt/a	PRE	A		
11 Command	0.3 lb ai/a		12.8 oz/a	PRE	A	PRE	
12 Prowl H20	1.09 lb ai/a		2.3 pt/a	PRE	A	PRE	
13 Spartan	0.125 lb ai/a		4 oz/a	PRE	A	PRE	
Caparol	1 lb ai/a		2 pt/a	12-14 in	B	Directed	
14 Spartan	0.125 lb ai/a		4 oz/a	PRE	A	PRE	
Valor	0.064 lb ai/a		2 oz/a	12-14 in	B	Directed	
15 Prowl H20	1.09 lb ai/a		2.3 pt/a	PRE	A	PRE	
Valor	0.064 lb ai/a		2 oz/a	12-14 in	B	Directed	
16 Command	0.3 lb ai/a		12.8 oz/a	PRE	A	PRE	
Caparol	1 lb ai/a		2 pt/a	12-14 in	B	Directed	
LSD (P=.05)	10.91	2.50		11.06	29.81	27.78	9.00
Standard Deviation	7.63	1.75		7.74	20.86	19.44	6.30
CV	25.11	15.88		9.1	25.35	24.34	31.75
Bartlett's X2	15.032	14.011		26.491	48.465	56.195	6.528
P(Bartlett's X2)	0.376	0.449		0.009*	0.001*	0.001*	0.258
Replicate F	0.347	0.614		0.547	1.910	1.550	2.848
Replicate Prob(F)	0.7918	0.6094		0.6526	0.1414	0.2148	0.0480
Treatment F	67.750	22.471		39.532	5.681	6.193	74.370
Treatment Prob(F)	0.0001	0.0001		0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Arkansas-Division of Agriculture

Herbicide programs for weed control in sunflower

Trial ID: HSF-110110
Location: Rohwer, AR Study Director:
Investigator: Kenneth Smith
Sponsor Contact:

Pest Code

ECHCG, Echinochloa crus-galli, = US

IPOSS, Ipomoea sp., = US

CASOB, Cassia obtusifolia, = US

Part Rated

PLAEME = plant - emerged

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury

STASUB = stand - subjective / emergence

CONTRO = control / burndown or knockdown

EMERGE = emergence

UofA

DIVISION OF AGRICULTURE

RESEARCH & EXTENSION

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