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Field Evaluation of Herbicides on Rice 2005

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FIELD EVALUATION



OF HERBICIDES ON RICE

2005

ARKANSAS AGRICULTURAL EXPERIMENT STATION

Division of Agriculture

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**FIELD EVALUATION OF HERBICIDES
ON RICE
- 2005 -**

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SUMMARY

Field studies to evaluate herbicides in rice weed management systems were conducted in 2005 at the Rice Research and Extension Center near Stuttgart, Arkansas. New herbicides, herbicide mixtures, and application timings were evaluated for weed control efficacy and rice tolerance. Results of these studies, in part, provide useful information to producers, fellow researchers, and the crop protection industry for the most effective, economical herbicide programs for successful rice production in Arkansas.

INTRODUCTION

“Field Evaluation of Herbicides on Rice, 2005” contains results from annual herbicide evaluation experiments on rice. The experiments reflect current concerns of Arkansas rice producers and the crop protection industry and are conducted under conditions common to Arkansas rice production practices.

Each experiment is prefaced by a site description form, which describes the methods and specific conditions of the experiment. Each site description is followed by the data table. Temperatures and rainfall data are located in the Appendix table.

This publication can be found online at: <http://www.uark.edu/depts/agripub/Publications/researchseries/>

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List of Herbicides Used in Trials

By Common Name:

Common name	Trade name	Formulation	Manufacturer
2,4-D	several	several	several
acifluorfen	Ultra Blazer	2 SL	BASF
bensulfuron	Londax	60 DF	DuPont
bentazon	Basagran	4 SL	BASF
bentazon + acifluorfen	Storm	4 SL	BASF
bispyribac	Regiment	80 DF	Valent
carfentrazone	Aim	2 EC	FMC
clomazone	Command	3 ME	FMC
cyhalofop	Clincher	2.38 EC	Dow AgroSciences
fenoxaprop	Ricestar	0.58 EC	Bayer
glyphosate	Roundup UltraMax	3.7 (ae) SL	Monsanto
halosulfuron	Permit	75 DG	Gowan
imazethapyr	Newpath	2 AS	BASF
IR 5878	--	50 WG	Isagro
pendimethalin	Pendimax; Prowl	3.3 EC	Dow AgroSciences; BASF
penoxsulam	Grasp	2 EC	Dow AgroSciences
propanil	Stam; Super Wham; RiceShot	4 EC, 4 SC, 80 DF	Dow AgroSciences/RiceCo
propanil + bensulfuron	Duet	4.03 EC	RiceCo
quinclorac	Facet	75 DF	BASF
thiobencarb	Bolero	8 EC	Valent
triclopyr	Grandstand	3 SL	Dow AgroSciences

By Trade Name:

Trade name	Common name	Formulation	Manufacturer
--	IR 5878	50 WG	Isagro
2,4-D (several trade names)	2,4-D	several	several
Aim	carfentrazone	2 EC	FMC
Basagran	bentazon	4 SL	BASF
Bolero	thiobencarb	8 EC	Valent
Clincher	cyhalofop	2.38 EC	Dow AgroSciences
Command	clomazone	3 ME	FMC
Duet	propanil + bensulfuron	4.03 EC	RiceCo
Facet	quinclorac	75 DF	BASF
Grandstand	triclopyr	3 SL	Dow AgroSciences
Grasp	penoxsulam	2 EC	Dow AgroSciences
Londax	bensulfuron	60 DF	DuPont
Newpath	imazethapyr	2 AS	BASF
Pendimax	pendimethalin	3.3 EC	Dow AgroSciences
Permit	halosulfuron	75 DG	Gowan
Prowl	pendimethalin	3.3 EC	BASF
Regiment	bispyribac	80 DF	Valent
Rice Shot	propanil	4 EC	RiceCo
Ricestar	fenoxaprop	0.58 EC	Bayer
Roundup UltraMax	glyphosate	3.7 (ae) SL	Monsanto
Stam	propanil	4 SC, 80 DF	Dow AgroSciences
Storm	bentazon + acifluorfen	4 SL	BASF
Super Wham	propanil	4 EC	RiceCo
Ultra Blazer	acifluorfen	2 SL	BASF

List of Abbreviations Used in Tables

Abbreviations

BDLF or brdlf – broadleaf weeds
BROFOL – broadcast foliar application
BROSOL – broadcast soil application
BU/AC – bushels per acre
BYG – barnyardgrass
COC – crop oil concentrate
DA-A (or B, etc.) – days after application of timing A, B, etc.
DPP – days before planting (preplant)
DPRE – delayed preemergence
EPOST – early postemergence
IRR – irrigation
LF or lf – leaf
LPOST – late postemergence
NIS – nonionic surfactant
NS – not significant according to LSD (least significant difference)
Pofld – postflood
PPI – preplant incorporated
PRE – preemergence
PREFLD – preflood

Bayer codes of weeds

AESVI – Northern jointvetch (*Aeschynomene virginica*)
AMAPA – Palmer amaranth (*Amaranthus palmeri*)
BRAPP – broadleaf signalgrass (*Brachiaria platyphylla*)
CASOB – sicklepod (*Senna obtusifolia*)
CYPES – yellow nutsedge (*Cyperus esculentus*)
ECHCG – barnyardgrass (*Echinochloa crus-galli*)
IPOLA – pitted morningglory (*Ipomoea lacunosa*)
PHYAN – cutleaf groundcherry (*Physalis angulata*)
POLLA – pale smartweed (*Polygonum lapathifolium*)
SEBEX – hemp sesbania (*Sesbania exaltata*)

University of Arkansas

Table 1. Evaluation of Herbicides for Non-Traditional Weeds in Rice, Lonoke

Trial ID: LONOKE 01-05
Location: Lonoke, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Objective: Evaluate efficacy of several broadleaf rice herbicides on five non-traditional broadleaf weeds.

Conclusions: Several weeds that have not been a problem in rice have become a problem or are a potential problem, especially on levees or where flood is not constant, and are referred to as non-traditional rice weeds. Cutleaf groundcherry was controlled >90% 6

weeks after EPOST application of acifluorfen, carfentrazone, quinclorac, imazethapyr, triclopyr, propanil, and penoxsulam. Control with LPOST applications was >90% only with quinclorac, triclopyr, and propanil. Sicklepod and pitted morningglory were controlled >90% with EPOST applications of quinclorac and triclopyr and EPOST and LPOST applications of 2,4-D. Carfentrazone EPOST or LPOST also controlled pitted morningglory. Only acifluorfen and carfentrazone had significant activity on pale smartweed (average 85%) and then only for about 2 weeks after application. After 2 weeks, regrowth of pale smartweed was rapid. Palmer amaranth was also very difficult to control in this experiment. EPOST application of acifluorfen, carfentrazone, or triclopyr controlled Palmer amaranth at least 89%, but regrowth and continued emergence negated early control. 2,4-D was the only herbicide that controlled Palmer amaranth greater than 90% for over 2 weeks. Hemp sesbania was controlled by most herbicides including halosulfuron, acifluorfen, carfentrazone, quinclorac, bispyribac, propanil, and 2,4-D applied either EPOST or LPOST. Hemp sesbania control with triclopyr and IR5878 was fair.

In summary, each of these weeds can be controlled, with pale smartweed and Palmer amaranth being the most difficult to control. A herbicide program must be carefully chosen, both for herbicide and application timing, in fields where more than one of these non-traditional weeds are present.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	PHYAN	cutleaf groundcherry	Physalis angulata
2.	IPOLA	pitted morningglory	Ipomoea lacunosa
3.	CASOB	sicklepod	Senna obtusifolia
4.	AMAPA	Palmer amaranth	Amaranthus palmeri
5.	POLLA	pale smartweed	Polygonum lapathifolium

Crop 1:	ORYSI RICE, PADDY (DRY-SEEDED+IRR)	Variety: CI 161
Planting Date:	11/May/05	Planting Method: DRILLED
Rate:	70 LB/A	Depth: 1.5 IN
Row Spacing:	7 in	Emergence Date: 18/Aug/05
Soil Moisture:	SLIGHTLY DRY	

Plots were not flooded.

SITE AND DESIGN

Plot Width:	6 FT	Plot Length: 14 FT	Reps: 4
Tillage Type:	CONVENTIONAL-TILL	Study Design: Randomized complete block	

SOIL DESCRIPTION

% Sand: 8	OM: 0.94	Texture:	SILT LOAM
% Silt: 75	pH: 5.8	Soil Name:	DEWITT
% Clay: 16	CEC: 14.3	Fert. Level:	GOOD

APPLICATION DESCRIPTION

	A	B
Application Date:	13/Jun/05	13/Jul/05
Time of Day:	8:00am	7:00pm
Application Method:	SPRAY	SPRAY
Application Timing:	EPOST	LPOST
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	93 F	83 F
% Relative Humidity:	98	80
Wind Velocity, Unit:	4.3 MPH	2 MPH
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	93 F	84 F
Soil Moisture:	Adequate	Adequate
% Cloud Cover:	35	60

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ORYSI EPOST, 3-4 lf	ORYSI LPOST, panicle differentiation

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	PHYAN 2.5/4-5	PHYAN 8-10;12
Stage Scale:	in/lf	LF;IN
Weed 2 Code, Stage:	IPOLA 3.5/10-12	IPOLA 30-36;18
Stage Scale:	in/lf	LF;IN
Weed 3 Code, Stage:	CASOB 4.5/5	CASOB 10-14;18
Stage Scale:	in/lf	LF;IN
Weed 4 Code, Stage:	AMAPA 7-9;3-8	AMAPA 9-28,9-28
Stage Scale:	nodes;in	cm,nodes
Weed 5 Code, Stage:	POLLA 6-9;6-10	POLLA 10-15;15
Stage Scale:	lf;in	lf;in

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	32	32
Nozzle Type:	TJ80015EV	TJ80015EV
Nozzle Size:	015	015
Nozzle Spacing, Unit:	20 IN	20 IN
Nozzles/Row:	3	3
Boom Length, Unit:	40 IN	40 IN
Boom Height, Unit:	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA
Propellant:	CO2	CO2

University of Arkansas

Evaluation of Herbicides for Non-Traditional Weeds in Rice, Lonoke

Trial ID: LONOKE 01-05
 Location: Lonoke, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code	PHYAN	PHYAN	PHYAN	PHYAN
Rating Data Type	Control	Control	Control	Control
Rating Unit	%	%	%	%
Rating Date	21/Jun/05	28/Jun/05	6/Jul/05	25/Jul/05
Trt-Eval Interval	8 DA-A	15 DA-A	23 DA-A	12 DA-B

Trt No.	Treatment Name	Rate	Rate Unit	Appl Description	53	63	73	66
1	Halosulfuron (Permit)	0.063	lb ai/a	EPOST	53	63	73	66
	NIS (nonionic surfactant)	0.25	% v/v					
2	Halosulfuron	0.063	lb ai/a	LPOST	0	0	0	10
	NIS	0.25	% v/v					
3	Acifluorfen (UltraBlazer)	0.20	lb ai/a	EPOST	96	98	100	99
	NIS	0.25	% v/v					
4	Acifluorfen	0.20	lb ai/a	LPOST	0	0	0	45
	NIS	0.25	% v/v					
5	Carfentrazone (Aim)	0.025	lb ai/a	EPOST	96	99	100	100
	NIS	0.25	% v/v					
6	Carfentrazone	0.025	lb ai/a	LPOST	0	0	0	75
	NIS	0.25	% v/v					
7	Quinclorac (Facet)	0.375	lb ai/a	EPOST	71	86	99	99
	COC	1	% v/v					
8	Quinclorac	0.375	lb ai/a	LPOST	0	0	0	80
	COC	1	% v/v					
9	Bentazon (Basagran)	0.75	lb ai/a	EPOST	9	11	11	6
	NIS	0.25	% v/v					
10	Bentazon	0.75	lb ai/a	LPOST	0	0	0	5
	NIS	0.25	% v/v					
11	Bispyribac (Regiment)	0.032	lb ai/a	EPOST	88	90	88	85
	Kinetic	0.125	% v/v					
12	Bispyribac	0.032	lb ai/a	LPOST	0	0	0	5
	Kinetic	0.125	% v/v					
13	Imazethapyr (Newpath)	0.063	lb ai/a	EPOST	53	96	98	99
	NIS	0.25	% v/v					
14	Imazethapyr	0.063	lb ai/a	LPOST	0	0	0	70
	NIS	0.25	% v/v					
15	Triclopyr (Grandstand)	0.25	lb ai/a	EPOST	50	85	91	90
	NIS	0.25	% v/v					
16	Triclopyr	0.25	lb ai/a	LPOST	0	0	0	96
	NIS	0.25	% v/v					
17	Propanil (Stam)	4	lb ai/a	EPOST	99	100	100	96
18	Propanil	4	lb ai/a	LPOST	0	0	0	85
19	Penoxsulam (Grasp)	0.031	lb ai/a	EPOST	50	95	94	96
	COC	1.25	% v/v					
20	Penoxsulam	0.031	lb ai/a	LPOST	0	0	0	51
	COC	1.25	% v/v					
21	IR5878	0.067	lb ai/a	EPOST	18	71	84	65
	Kinetic	0.2	% v/v					
22	IR5878	0.067	lb ai/a	LPOST	0	0	0	16
	Kinetic	0.2	% v/v					
23	2,4-D	1.5	lb ai/a	EPOST	39	20	10	0
24	2,4-D	1.5	lb ai/a	LPOST	0	0	0	9
25	Untreated check				4	0	0	0
LSD (P=.05)					5	4	3	4

University of Arkansas

Evaluation of Herbicides for Non-Traditional Weeds in Rice, Lonoke

Trial ID: LONOKE 01-05
Location: Lonoke, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code				PHYAN	CASOB	CASOB	CASOB	
Rating Data Type				Control	Control	Control	Control	
Rating Unit				%	%	%	%	
Rating Date				3/Aug/05	21/Jun/05	28/Jun/05	6/Jul/05	
Trt-Eval Interval				21 DA-B	8 DA-A	15 DA-A	23 DA-A	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Description				
1	Halosulfuron (Permit)	0.063	lb ai/a	EPOST	60	44	53	
	NIS (nonionic surfactant)	0.25	% v/v				58	
2	Halosulfuron	0.063	lb ai/a	LPOST	15	0	0	
	NIS	0.25	% v/v				0	
3	Acifluorfen (UltraBlazer)	0.20	lb ai/a	EPOST	84	20	30	
	NIS	0.25	% v/v				35	
4	Acifluorfen	0.20	lb ai/a	LPOST	70	0	0	
	NIS	0.25	% v/v				0	
5	Carfentrazone (Aim)	0.025	lb ai/a	EPOST	100	30	25	
	NIS	0.25	% v/v				15	
6	Carfentrazone	0.025	lb ai/a	LPOST	80	0	0	
	NIS	0.25	% v/v				0	
7	Quinclorac (Facet)	0.375	lb ai/a	EPOST	99	80	90	
	COC	1	% v/v				95	
8	Quinclorac	0.375	lb ai/a	LPOST	98	3	3	
	COC	1	% v/v				3	
9	Bentazon (Basagran)	0.75	lb ai/a	EPOST	5	10	10	
	NIS	0.25	% v/v				10	
10	Bentazon	0.75	lb ai/a	LPOST	5	0	0	
	NIS	0.25	% v/v				0	
11	Bispyribac (Regiment)	0.032	lb ai/a	EPOST	80	55	70	
	Kinetic	0.125	% v/v				85	
12	Bispyribac	0.032	lb ai/a	LPOST	10	0	0	
	Kinetic	0.125	% v/v				0	
13	Imazethapyr (Newpath)	0.063	lb ai/a	EPOST	98	0	0	
	NIS	0.25	% v/v				5	
14	Imazethapyr	0.063	lb ai/a	LPOST	79	0	0	
	NIS	0.25	% v/v				0	
15	Triclopyr (Grandstand)	0.25	lb ai/a	EPOST	85	63	80	
	NIS	0.25	% v/v				90	
16	Triclopyr	0.25	lb ai/a	LPOST	98	0	0	
	NIS	0.25	% v/v				0	
17	Propanil (Stam)	4	lb ai/a	EPOST	92	50	55	
18	Propanil	4	lb ai/a	LPOST	94	0	0	
19	Penoxsulam (Grasp)	0.031	lb ai/a	EPOST	94	30	45	
	COC	1.25	% v/v				45	
20	Penoxsulam	0.031	lb ai/a	LPOST	65	0	0	
	COC	1.25	% v/v				0	
21	IR5878	0.067	lb ai/a	EPOST	50	15	27	
	Kinetic	0.2	% v/v				22	
22	IR5878	0.067	lb ai/a	LPOST	24	0	0	
	Kinetic	0.2	% v/v				0	
23	2,4-D	1.5	lb ai/a	EPOST		85	99	
24	2,4-D	1.5	lb ai/a	LPOST	0	0	0	
25	Untreated check				0	0	0	
LSD (P=.05)					4	4	4	2

University of Arkansas

Evaluation of Herbicides for Non-Traditional Weeds in Rice, Lonoke

Trial ID: LONOKE 01-05
Location: Lonoke, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code				CASOB	CASOB	IPOLA	IPOLA	
Rating Data Type				Control	Control	Control	Control	
Rating Unit				%	%	%	%	
Rating Date				25/Jul/05	3/Aug/05	21/Jun/05	28/Jun/05	
Trt-Eval Interval				12 DA-B	21 DA-B	8 DA-A	15 DA-A	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Description				
1	Halosulfuron (Permit)	0.063	lb ai/a	EPOST	50	48	35	
	NIS (nonionic surfactant)	0.25	% v/v				40	
2	Halosulfuron	0.063	lb ai/a	LPOST	25	31	0	
	NIS	0.25	% v/v				0	
3	Acifluorfen (UltraBlazer)	0.20	lb ai/a	EPOST	35	35	80	
	NIS	0.25	% v/v				85	
4	Acifluorfen	0.20	lb ai/a	LPOST	40	45	0	
	NIS	0.25	% v/v				0	
5	Carfentrazone (Aim)	0.025	lb ai/a	EPOST	15	15	85	
	NIS	0.25	% v/v				95	
6	Carfentrazone	0.025	lb ai/a	LPOST	30	45	0	
	NIS	0.25	% v/v				0	
7	Quinclorac (Facet)	0.375	lb ai/a	EPOST	98	95	70	
	COC	1	% v/v				90	
8	Quinclorac	0.375	lb ai/a	LPOST	40	44	0	
	COC	1	% v/v				0	
9	Bentazon (Basagran)	0.75	lb ai/a	EPOST	10	10	20	
	NIS	0.25	% v/v				25	
10	Bentazon	0.75	lb ai/a	LPOST	10	10	0	
	NIS	0.25	% v/v				0	
11	Bispyribac (Regiment)	0.032	lb ai/a	EPOST	80	75	55	
	Kinetic	0.125	% v/v				65	
12	Bispyribac	0.032	lb ai/a	LPOST	50	65	0	
	Kinetic	0.125	% v/v				0	
13	Imazethapyr (Newpath)	0.063	lb ai/a	EPOST	0	0	55	
	NIS	0.25	% v/v				65	
14	Imazethapyr	0.063	lb ai/a	LPOST	0	0	0	
	NIS	0.25	% v/v				0	
15	Triclopyr (Grandstand)	0.25	lb ai/a	EPOST	95	95	75	
	NIS	0.25	% v/v				95	
16	Triclopyr	0.25	lb ai/a	LPOST	70	88	0	
	NIS	0.25	% v/v				0	
17	Propanil (Stam)	4	lb ai/a	EPOST	30	10	40	
	Propanil	4	lb ai/a	LPOST	55	65	0	
19	Penoxsulam (Grasp)	0.031	lb ai/a	EPOST	40	35	10	
	COC	1.25	% v/v				25	
20	Penoxsulam	0.031	lb ai/a	LPOST	20	35	0	
	COC	1.25	% v/v				0	
21	IR5878	0.067	lb ai/a	EPOST	8	10	35	
	Kinetic	0.2	% v/v				65	
22	IR5878	0.067	lb ai/a	LPOST	25	35	0	
	Kinetic	0.2	% v/v				0	
23	2,4-D	1.5	lb ai/a	EPOST	100	100	60	
24	2,4-D	1.5	lb ai/a	LPOST	80	95	0	
25	Untreated check				0	0	0	
LSD (P=.05)					5	6	9	3

University of Arkansas

Evaluation of Herbicides for Non-Traditional Weeds in Rice, Lonoke

Trial ID: LONOKE 01-05
Location: Lonoke, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code				IPOLA	IPOLA	IPOLA	POLLA	
Rating Data Type				Control	Control	Control	Control	
Rating Unit				%	%	%	%	
Rating Date				6/Jul/05	25/Jul/05	3/Aug/05	21/Jun/05	
Trt-Eval Interval				23 DA-A	12 DA-B	21 DA-B	8 DA-A	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Description				
1	Halosulfuron (Permit)	0.063	lb ai/a	EPOST	55	50	0	
	NIS (nonionic surfactant)	0.25	% v/v					
2	Halosulfuron	0.063	lb ai/a	LPOST	0	30	0	
	NIS	0.25	% v/v					
3	Acifluorfen (UltraBlazer)	0.20	lb ai/a	EPOST	95	90	70	
	NIS	0.25	% v/v					
4	Acifluorfen	0.20	lb ai/a	LPOST	0	60	0	
	NIS	0.25	% v/v					
5	Carfentrazone (Aim)	0.025	lb ai/a	EPOST	100	95	81	
	NIS	0.25	% v/v					
6	Carfentrazone	0.025	lb ai/a	LPOST	0	85	0	
	NIS	0.25	% v/v					
7	Quinclorac (Facet)	0.375	lb ai/a	EPOST	90	95	9	
	COC	1	% v/v					
8	Quinclorac	0.375	lb ai/a	LPOST	0	65	0	
	COC	1	% v/v					
9	Bentazon (Basagran)	0.75	lb ai/a	EPOST	30	20	20	
	NIS	0.25	% v/v					
10	Bentazon	0.75	lb ai/a	LPOST	0	5	0	
	NIS	0.25	% v/v					
11	Bispyribac (Regiment)	0.032	lb ai/a	EPOST	65	60	0	
	Kinetic	0.125	% v/v					
12	Bispyribac	0.032	lb ai/a	LPOST	0	20	0	
	Kinetic	0.125	% v/v					
13	Imazethapyr (Newpath)	0.063	lb ai/a	EPOST	75	70	8	
	NIS	0.25	% v/v					
14	Imazethapyr	0.063	lb ai/a	LPOST	0	50	0	
	NIS	0.25	% v/v					
15	Triclopyr (Grandstand)	0.25	lb ai/a	EPOST	95	90	50	
	NIS	0.25	% v/v					
16	Triclopyr	0.25	lb ai/a	LPOST	0	90	0	
	NIS	0.25	% v/v					
17	Propanil (Stam)	4	lb ai/a	EPOST	50	45	60	
18	Propanil	4	lb ai/a	LPOST	0	65	0	
19	Penoxsulam (Grasp)	0.031	lb ai/a	EPOST	30	25	0	
	COC	1.25	% v/v					
20	Penoxsulam	0.031	lb ai/a	LPOST	0	10	3	
	COC	1.25	% v/v					
21	IR5878	0.067	lb ai/a	EPOST	85	80	13	
	Kinetic	0.2	% v/v					
22	IR5878	0.067	lb ai/a	LPOST	0	25	0	
	Kinetic	0.2	% v/v					
23	2,4-D	1.5	lb ai/a	EPOST	100		76	
24	2,4-D	1.5	lb ai/a	LPOST	0	100	0	
25	Untreated check				0	0	0	
LSD (P=.05)					3	3	5	8

University of Arkansas

Evaluation of Herbicides for Non-Traditional Weeds in Rice, Lonoke

Trial ID: LONOKE 01-05
Location: Lonoke, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code				POLLA	POLLA	POLLA	POLLA	
Rating Data Type				Control	Control	Control	Control	
Rating Unit				%	%	%	%	
Rating Date				28/Jun/05	6/Jul/05	25/Jul/05	3/Aug/05	
Trt-Eval Interval				15 DA-A	23 DA-A	12 DA-B	21 DA-B	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Description				
1	Halosulfuron (Permit)	0.063	lb ai/a	EPOST	5	0	0	
	NIS (nonionic surfactant)	0.25	% v/v					
2	Halosulfuron	0.063	lb ai/a	LPOST	19	0	29	
	NIS	0.25	% v/v				15	
3	Acifluorfen (UltraBlazer)	0.20	lb ai/a	EPOST	85	40	0	
	NIS	0.25	% v/v					
4	Acifluorfen	0.20	lb ai/a	LPOST	8	0	86	
	NIS	0.25	% v/v				68	
5	Carfentrazone (Aim)	0.025	lb ai/a	EPOST	89	30	0	
	NIS	0.25	% v/v					
6	Carfentrazone	0.025	lb ai/a	LPOST	0	0	75	
	NIS	0.25	% v/v				30	
7	Quinclorac (Facet)	0.375	lb ai/a	EPOST	3	0	0	
	COC	1	% v/v					
8	Quinclorac	0.375	lb ai/a	LPOST	5	0	8	
	COC	1	% v/v				0	
9	Bentazon (Basagran)	0.75	lb ai/a	EPOST	41	24	0	
	NIS	0.25	% v/v					
10	Bentazon	0.75	lb ai/a	LPOST	8	0	44	
	NIS	0.25	% v/v				2	
11	Bispyribac (Regiment)	0.032	lb ai/a	EPOST	13	35	24	
	Kinetic	0.125	% v/v					
12	Bispyribac	0.032	lb ai/a	LPOST	10	0	40	
	Kinetic	0.125	% v/v				70	
13	Imazethapyr (Newpath)	0.063	lb ai/a	EPOST	14	0	0	
	NIS	0.25	% v/v					
14	Imazethapyr	0.063	lb ai/a	LPOST	0	0	13	
	NIS	0.25	% v/v				8	
15	Triclopyr (Grandstand)	0.25	lb ai/a	EPOST	25	0	0	
	NIS	0.25	% v/v					
16	Triclopyr	0.25	lb ai/a	LPOST	0	0	14	
	NIS	0.25	% v/v				0	
17	Propanil (Stam)	4	lb ai/a	EPOST	48	0	0	
18	Propanil	4	lb ai/a	LPOST	8	0	48	
19	Penoxsulam (Grasp)	0.031	lb ai/a	EPOST	5	0	11	
	COC	1.25	% v/v					
20	Penoxsulam	0.031	lb ai/a	LPOST	0	0	30	
	COC	1.25	% v/v				11	
21	IR5878	0.067	lb ai/a	EPOST	9	0	8	
	Kinetic	0.2	% v/v					
22	IR5878	0.067	lb ai/a	LPOST	0	0	0	
	Kinetic	0.2	% v/v				0	
23	2,4-D	1.5	lb ai/a	EPOST	81	38	8	
24	2,4-D	1.5	lb ai/a	LPOST	0	0	76	
25	Untreated check				4	0	0	
LSD (P=.05)					15	7	14	18

University of Arkansas

Evaluation of Herbicides for Non-Traditional Weeds in Rice, Lonoke

Trial ID: LONOKE 01-05
 Location: Lonoke, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code	AMAPA	AMAPA	AMAPA	AMAPA
Rating Data Type	Control	Control	Control	Control
Rating Unit	%	%	%	%
Rating Date	22/Jun/05	29/Jun/05	7/Jul/05	13/Jul/05
Trt-Eval Interval	9 DA-A	16 DA-A	24 DA-A	30 DA-A

Trt No.	Treatment Name	Rate	Rate Unit	Appl Description	43	34	0	0
1	Halosulfuron (Permit)	0.063	lb ai/a	EPOST	43	34	0	0
	NIS (nonionic surfactant)	0.25	% v/v					
2	Halosulfuron	0.063	lb ai/a	LPOST	10	36	23	8
	NIS	0.25	% v/v					
3	Acifluorfen (UltraBlazer)	0.20	lb ai/a	EPOST	95	89	23	19
	NIS	0.25	% v/v					
4	Acifluorfen	0.20	lb ai/a	LPOST	6	72	45	8
	NIS	0.25	% v/v					
5	Carfentrazone (Aim)	0.025	lb ai/a	EPOST	87	95	31	20
	NIS	0.25	% v/v					
6	Carfentrazone	0.025	lb ai/a	LPOST	0	69	39	18
	NIS	0.25	% v/v					
7	Quinclorac (Facet)	0.375	lb ai/a	EPOST	16	35	14	9
	COC	1	% v/v					
8	Quinclorac	0.375	lb ai/a	LPOST	5	31	24	14
	COC	1	% v/v					
9	Bentazon (Basagran)	0.75	lb ai/a	EPOST	12	14	0	0
	NIS	0.25	% v/v					
10	Bentazon	0.75	lb ai/a	LPOST	0	10	0	0
	NIS	0.25	% v/v					
11	Bispyribac (Regiment)	0.032	lb ai/a	EPOST	70	74	43	11
	Kinetic	0.125	% v/v					
12	Bispyribac	0.032	lb ai/a	LPOST	0	30	44	43
	Kinetic	0.125	% v/v					
13	Imazethapyr (Newpath)	0.063	lb ai/a	EPOST	46	50	20	6
	NIS	0.25	% v/v					
14	Imazethapyr	0.063	lb ai/a	LPOST	0	46	51	35
	NIS	0.25	% v/v					
15	Triclopyr (Grandstand)	0.25	lb ai/a	EPOST	48	48	30	13
	NIS	0.25	% v/v					
16	Triclopyr	0.25	lb ai/a	LPOST	4	49	38	30
	NIS	0.25	% v/v					
17	Propanil (Stam)	4	lb ai/a	EPOST	98	89	33	24
18	Propanil	4	lb ai/a	LPOST	0	66	26	6
19	Penoxsulam (Grasp)	0.031	lb ai/a	EPOST	71	66	24	13
	COC	1.25	% v/v					
20	Penoxsulam	0.031	lb ai/a	LPOST	0	35	46	19
	COC	1.25	% v/v					
21	IR5878	0.067	lb ai/a	EPOST	31	26	5	0
	Kinetic	0.2	% v/v					
22	IR5878	0.067	lb ai/a	LPOST	0	40	25	5
	Kinetic	0.2	% v/v					
23	2,4-D	1.5	lb ai/a	EPOST	97	100	100	100
24	2,4-D	1.5	lb ai/a	LPOST	0	85	95	91
25	Untreated check				0	9	0	0
LSD (P=.05)					15	21	34	28

University of Arkansas

Evaluation of Herbicides for Non-Traditional Weeds in Rice, Lonoke

Trial ID: LONOKE 01-05
Location: Lonoke, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code				SEBEX	SEBEX	SEBEX	SEBEX	
Rating Data Type				Control	Control	Control	Control	
Rating Unit				%	%	%	%	
Rating Date				28/Jun/05	6/Jul/05	25/Jul/05	3/Aug/05	
Trt-Eval Interval				15 DA-A	23 DA-A	12 DA-B	21 DA-B	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Description				
1	Halosulfuron (Permit)	0.063	lb ai/a	EPOST	92	97	100	
	NIS (nonionic surfactant)	0.25	% v/v					
2	Halosulfuron	0.063	lb ai/a	LPOST	0	0	82	
	NIS	0.25	% v/v				88	
3	Acifluorfen (UltraBlazer)	0.20	lb ai/a	EPOST	100	97	100	
	NIS	0.25	% v/v					
4	Acifluorfen	0.20	lb ai/a	LPOST	0	0	100	
	NIS	0.25	% v/v				100	
5	Carfentrazone (Aim)	0.025	lb ai/a	EPOST	100	100	98	
	NIS	0.25	% v/v					
6	Carfentrazone	0.025	lb ai/a	LPOST	0	0	100	
	NIS	0.25	% v/v				98	
7	Quinclorac (Facet)	0.375	lb ai/a	EPOST	84	91	100	
	COC	1	% v/v					
8	Quinclorac	0.375	lb ai/a	LPOST	0	0	69	
	COC	1	% v/v				84	
9	Bentazon (Basagran)	0.75	lb ai/a	EPOST	48	71	0	
	NIS	0.25	% v/v					
10	Bentazon	0.75	lb ai/a	LPOST	0	0	25	
	NIS	0.25	% v/v				0	
11	Bispyribac (Regiment)	0.032	lb ai/a	EPOST	99	99	100	
	Kinetic	0.125	% v/v					
12	Bispyribac	0.032	lb ai/a	LPOST	0	0	73	
	Kinetic	0.125	% v/v				99	
13	Imazethapyr (Newpath)	0.063	lb ai/a	EPOST	20	15	0	
	NIS	0.25	% v/v					
14	Imazethapyr	0.063	lb ai/a	LPOST	0	0	0	
	NIS	0.25	% v/v				0	
15	Triclopyr (Grandstand)	0.25	lb ai/a	EPOST	88	72	70	
	NIS	0.25	% v/v					
16	Triclopyr	0.25	lb ai/a	LPOST	0	0	73	
	NIS	0.25	% v/v				92	
17	Propanil (Stam)	4	lb ai/a	EPOST	100	100	100	
18	Propanil	4	lb ai/a	LPOST	0	0	100	
19	Penoxsulam (Grasp)	0.031	lb ai/a	EPOST	36	14	0	
	COC	1.25	% v/v					
20	Penoxsulam	0.031	lb ai/a	LPOST	0	0	59	
	COC	1.25	% v/v				64	
21	IR5878	0.067	lb ai/a	EPOST	63	66	100	
	Kinetic	0.2	% v/v					
22	IR5878	0.067	lb ai/a	LPOST	0	0	50	
	Kinetic	0.2	% v/v				80	
23	2,4-D	1.5	lb ai/a	EPOST	100	100	100	
24	2,4-D	1.5	lb ai/a	LPOST	0	0	98	
25	Untreated check				0	0	0	
LSD (P=.05)					18	19	17	9

University of Arkansas

Table 2. Evaluation of Herbicides for Non-Traditional Weeds in Rice, Stuttgart, 2005

Trial ID: STUT 07-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert
Affiliation: Univ. of Arkansas; Dept. Crop, Soil, and Environmental Sciences

Objective: Evaluate efficacy of several broadleaf rice herbicides on five non-traditional broadleaf weeds.

Conclusions: This experiment is a second location for evaluating herbicides on weeds that are becoming a problem in some rice fields, especially on levees and where flood is not constant (other location was at Lonoke; Table 1 in this series). Sicklepod was controlled >90% with quinclorac applied EPOST and LPOST and with EPOST application of 2,4-D, although 2,4-D activity was short-lived. Triclopyr was less effective in this experiment than at Lonoke, but propanil applied EPOST was more effective for the first 3 weeks after application (89 to 94%). As at Lonoke, carfentrazone had excellent activity on pitted morningglory, both EPOST and LPOST (>95% almost 3 weeks after application). Control with quinclorac and triclopyr EPOST and 2,4-D EPOST or LPOST was also >90%. Carfentrazone also controlled cutleaf groundcherry as did quinclorac, bispyribac, imazethapyr, and propanil EPOST and triclopyr and imazethapyr LPOST. Quinclorac was the only herbicide that could be used to control a complex of sicklepod, pitted morningglory, and cutleaf groundcherry.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	PHYAN	Cutleaf groundcherry	Physalis angulata
2.	IPOLA	Pitted morningglory	Ipomoea lacunosa
3.	CASOB	Sicklepod	Senna obtusifolia

Crop 1: ORYSI RICE, PADDY (DRY-SEEDED+IRR) **Variety:** CI 161
Planting Date: 28/Apr/05 **Planting Method:** DRILLED
Rate: 90 lbs/a **Emergence Date:** 7/May/05

Plots were not flooded.

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 14 FT **Reps:** 4
Study Design: Randomized complete block

SOIL DESCRIPTION

% Sand:	% OM: 0.94	Texture: SILT LOAM
% Silt: 75	pH: 5.8	Soil Name: DEWITT
% Clay: 16	CEC: 14.3	Fert. Level: ADEQUATE

APPLICATION DESCRIPTION

	A	B
Application Date:	2/Jun/05	6/Jul/05
Time of Day:	5:45AM	10:00am
Application Method:	SPRAY	SPRAY
Application Timing:	EPOST	LPOST
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	75 F	80 F
% Relative Humidity:	76	85
Wind Velocity, Unit:	4 MPH	4 MPH
Dew Presence (Y/N):	N	Y
Soil Temp., Unit:	70 F	78 F
Soil Moisture:	MODERATE	EXCESSIVE
% Cloud Cover:	95	100

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ORYSI EPOST, 3-4 lf	ORYSI LPOST, panicle differentiation

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	PHYAN 3-4;1	PHYAN 8-10;12
Stage Scale:	lf;in	LF;IN
Weed 2 Code, Stage:	IPOLA 4-5;2	IPOLA 30-36;18
Stage Scale:	lf;in	LF;IN
Weed 3 Code, Stage:	CASOB 3;2	CASOB 8-12;16
Stage Scale:	lf;in	LF;IN

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	32 psi	32 psi
Nozzle Type:	TJ80015EV	TJ80015EV
Nozzle Spacing, Unit:	20 IN	20 IN
Boom Length, Unit:	40 IN	40 IN
Boom Height, Unit:	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA
Propellant:	CO2	CO2

University of Arkansas

Evaluation of Herbicides for Non-Traditional Weeds in Rice, Stuttgart, 2005

Trial ID: STUT 07-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code	CASOB	CASOB	CASOB	CASOB	CASOB
Rating Data Type	Control	Control	Control	Control	Control
Rating Unit	%	%	%	%	%
Rating Date	7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05	14/Jul/05
Trt-Eval Interval	5 DA-A	12 DA-A	18 DA-A	26 DA-A	8 DA-B

Trt No.	Treatment Name	Rate	Rate Unit	Appl Description	5 DA-A	12 DA-A	18 DA-A	26 DA-A	8 DA-B
1	Halosulfuron (Permit)	0.063	lb ai/a	EPOST	34	36	33	12	13
	NIS (non-ionic surfactant)	0.25	% v/v						
2	Halosulfuron	0.063	lb ai/a	LPOST	0	0	0	14	16
	NIS	0.25	% v/v						
3	Acifluorfen (Ultra Blazer)	0.20	lb ai/a	EPOST	48	53	53	39	18
	NIS	0.25	% v/v						
4	Acifluorfen	0.20	lb ai/a	LPOST	3	0	0	34	39
	NIS	0.25	% v/v						
5	Carfentrazone (Aim)	0.025	lb ai/a	EPOST	68	73	73	45	8
	NIS	0.25	% v/v						
6	Carfentrazone	0.025	lb ai/a	LPOST	4	0	0	31	36
	NIS	0.25	% v/v						
7	Quinclorac (Facet)	0.375	lb ai/a	EPOST	94	96	96	92	95
	COC (crop oil)	1	% v/v						
8	Quinclorac	0.375	lb ai/a	LPOST	0	0	0	95	95
	COC	1	% v/v						
9	Bentazon (Basagran)	0.75	lb ai/a	EPOST	9	5	13	4	1
	NIS	0.25	% v/v						
10	Bentazon	0.75	lb ai/a	LPOST	0	0	0	9	13
	NIS	0.25	% v/v						
11	Bispyribac (Regiment)	0.032	lb ai/a	EPOST	78	79	83	41	6
	Kinetic	0.125	% v/v						
12	Bispyribac	0.032	lb ai/a	LPOST	3	0	0	14	18
	Kinetic	0.125	% v/v						
13	Imazethapyr (Newpath)	0.063	lb ai/a	EPOST	1	0	3	2	1
	NIS	0.25	% v/v						
14	Imazethapyr	0.063	lb ai/a	LPOST	0	0	0	0	5
	NIS	0.25	% v/v						
15	Triclopyr (Grandstand)	0.25	lb ai/a	EPOST	46	60	65	83	68
	NIS	0.25	% v/v						
16	Triclopyr	0.25	lb ai/a	LPOST	0	0	0	66	81
	NIS	0.25	% v/v						
17	Propanil (Stam)	4	lb ai/a	EPOST	89	94	91	60	18
18	Propanil	4	lb ai/a	LPOST	3	3	5	23	23
19	Penoxsulam (Grasp)	0.031	lb ai/a	EPOST	29	34	33	9	3
	COC	1.25	% v/v						
20	Penoxsulam	0.031	lb ai/a	LPOST	3	0	0	29	30
	COC	1.25	% v/v						
21	IR5878	0.067	lb ai/a	EPOST	8	8	6	5	0
	Kinetic	0.2	% v/v						
22	IR5878	0.067	lb ai/a	LPOST	0	0	0	15	20
	Kinetic	0.2	% v/v						
23	2,4-D	1.5	lb ai/a	EPOST	59	98	94	95	68
24	2,4-D	1.5	lb ai/a	LPOST	0	0	0	68	73
25	Untreated check				0	0	8	3	0
LSD (P=.05)					10	12	14	12	18

University of Arkansas

Evaluation of Herbicides for Non-Traditional Weeds in Rice, Stuttgart, 2005

Trial ID: STUT 07-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code	CASOB	IPOLA	IPOLA	IPOLA	IPOLA
Rating Data Type	Control	Control	Control	Control	Control
Rating Unit	%	%	%	%	%
Rating Date	25/Jul/05	7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05
Trt-Eval Interval	19 DA-B	5 DA-A	12 DA-A	18 DA-A	26 DA-A

Trt No.	Treatment Name	Rate	Rate Unit	Appl Description					
1	Halosulfuron (Permit)	0.063	lb ai/a	EPOST	0	14	62	56	72
	NIS (non-ionic surfactant)	0.25	% v/v						
2	Halosulfuron	0.063	lb ai/a	LPOST	21	0	3	10	4
	NIS	0.25	% v/v						
3	Acifluorfen (Ultra Blazer)	0.20	lb ai/a	EPOST	14	66	86	87	61
	NIS	0.25	% v/v						
4	Acifluorfen	0.20	lb ai/a	LPOST	41	0	3	0	50
	NIS	0.25	% v/v						
5	Carfentrazone (Aim)	0.025	lb ai/a	EPOST	0	90	94	95	51
	NIS	0.25	% v/v						
6	Carfentrazone	0.025	lb ai/a	LPOST	39	0	0	4	84
	NIS	0.25	% v/v						
7	Quinclorac (Facet)	0.375	lb ai/a	EPOST	93	74	88	92	97
	COC (crop oil)	1	% v/v						
8	Quinclorac	0.375	lb ai/a	LPOST	92	0	0	0	70
	COC	1	% v/v						
9	Bentazon (Basagran)	0.75	lb ai/a	EPOST	0	30	34	35	23
	NIS	0.25	% v/v						
10	Bentazon	0.75	lb ai/a	LPOST	9	0	0	0	18
	NIS	0.25	% v/v						
11	Bispyribac (Regiment)	0.032	lb ai/a	EPOST	0	59	73	70	48
	Kinetic	0.125	% v/v						
12	Bispyribac	0.032	lb ai/a	LPOST	19	13	6	0	8
	Kinetic	0.125	% v/v						
13	Imazethapyr (Newpath)	0.063	lb ai/a	EPOST	0	45	75	86	81
	NIS	0.25	% v/v						
14	Imazethapyr	0.063	lb ai/a	LPOST	0	4	0	0	28
	NIS	0.25	% v/v						
15	Triclopyr (Grandstand)	0.25	lb ai/a	EPOST	61	24	85	92	93
	NIS	0.25	% v/v						
16	Triclopyr	0.25	lb ai/a	LPOST	94	0	0	0	76
	NIS	0.25	% v/v						
17	Propanil (Stam)	4	lb ai/a	EPOST	11	87	95	94	71
18	Propanil	4	lb ai/a	LPOST	25	4	10	4	21
19	Penoxsulam (Grasp)	0.031	lb ai/a	EPOST	0	55	65	76	60
	COC	1.25	% v/v						
20	Penoxsulam	0.031	lb ai/a	LPOST	29	0	0	0	16
	COC	1.25	% v/v						
21	IR5878	0.067	lb ai/a	EPOST	0	29	68	60	67
	Kinetic	0.2	% v/v						
22	IR5878	0.067	lb ai/a	LPOST	18	0	0	0	0
	Kinetic	0.2	% v/v						
23	2,4-D	1.5	lb ai/a	EPOST	32	54	99	100	100
24	2,4-D	1.5	lb ai/a	LPOST	86	3	0	15	10
25	Untreated check				0	0	0	0	0
LSD (P=.05)					18	19	9	14	15

University of Arkansas

Evaluation of Herbicides for Non-Traditional Weeds in Rice, Stuttgart, 2005

Trial ID: STUT 07-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code									
Rating Data Type									
Rating Unit									
Rating Date									
Trt-Eval Interval									
					IPOLA	IPOLA	PHYAN	PHYAN	PHYAN
					Control	Control	Control	Control	Control
					%	%	%	%	%
					14/Jul/05	25/Jul/05	7/Jun/05	14/Jun/05	20/Jun/05
					8 DA-B	19 DA-B	5 DA-A	12 DA-A	18 DA-A

Trt No.	Treatment Name	Rate	Rate Unit	Appl Description					
1	Halosulfuron (Permit)	0.063	lb ai/a	EPOST	15	22	63	77	95
	NIS (non-ionic surfactant)	0.25	% v/v						
2	Halosulfuron	0.063	lb ai/a	LPOST	24	15	0	0	0
	NIS	0.25	% v/v						
3	Acifluorfen (Ultra Blazer)	0.20	lb ai/a	EPOST	26	15	81	89	93
	NIS	0.25	% v/v						
4	Acifluorfen	0.20	lb ai/a	LPOST	55	56	1	6	5
	NIS	0.25	% v/v						
5	Carfentrazone (Aim)	0.025	lb ai/a	EPOST	5	15	38	90	100
	NIS	0.25	% v/v						
6	Carfentrazone	0.025	lb ai/a	LPOST	89	97	4	5	8
	NIS	0.25	% v/v						
7	Quinclorac (Facet)	0.375	lb ai/a	EPOST	98	98	13	63	97
	COC (crop oil)	1	% v/v						
8	Quinclorac	0.375	lb ai/a	LPOST	78	85	10	0	15
	COC	1	% v/v						
9	Bentazon (Basagran)	0.75	lb ai/a	EPOST	14	5	0	15	18
	NIS	0.25	% v/v						
10	Bentazon	0.75	lb ai/a	LPOST	23	21	15	20	30
	NIS	0.25	% v/v						
11	Bispyribac (Regiment)	0.032	lb ai/a	EPOST	26	20	15	90	65
	Kinetic	0.125	% v/v						
12	Bispyribac	0.032	lb ai/a	LPOST	13	16	0	0	22
	Kinetic	0.125	% v/v						
13	Imazethapyr (Newpath)	0.063	lb ai/a	EPOST	57	26	0	100	100
	NIS	0.25	% v/v						
14	Imazethapyr	0.063	lb ai/a	LPOST	65	70	0	0	10
	NIS	0.25	% v/v						
15	Triclopyr (Grandstand)	0.25	lb ai/a	EPOST	51	67	37	88	90
	NIS	0.25	% v/v						
16	Triclopyr	0.25	lb ai/a	LPOST	85	98	0	5	0
	NIS	0.25	% v/v						
17	Propanil (Stam)	4	lb ai/a	EPOST	29	15	88	95	100
18	Propanil	4	lb ai/a	LPOST	28	34	0	0	23
19	Penoxsulam (Grasp)	0.031	lb ai/a	EPOST	11	0	33	43	56
	COC	1.25	% v/v						
20	Penoxsulam	0.031	lb ai/a	LPOST	13	16	0	0	0
	COC	1.25	% v/v						
21	IR5878	0.067	lb ai/a	EPOST	41	38	3	13	25
	Kinetic	0.2	% v/v						
22	IR5878	0.067	lb ai/a	LPOST	32	51	0	0	0
	Kinetic	0.2	% v/v						
23	2,4-D	1.5	lb ai/a	EPOST	93	97	22	75	47
24	2,4-D	1.5	lb ai/a	LPOST	78	99	0	0	5
25	Untreated check				0	0	0	0	0
LSD (P=.05)					24	25	29	29	24

University of Arkansas

Evaluation of Herbicides for Non-Traditional Weeds in Rice, Stuttgart, 2005

Trial ID: STUT 07-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code	PHYAN	PHYAN	PHYAN
Rating Data Type	Control	Control	Control
Rating Unit	%	%	%
Rating Date	28/Jun/05	14/Jul/05	25/Jul/05
Trt-Eval Interval	26 DA-A	8 DA-B	19 DA-B

Trt No.	Treatment Name	Rate	Rate Unit	Appl Description	28/Jun/05	14/Jul/05	25/Jul/05
1	Halosulfuron (Permit)	0.063	lb ai/a	EPOST	25	5	0
	NIS (non-ionic surfactant)	0.25	% v/v				
2	Halosulfuron	0.063	lb ai/a	LPOST	7	9	10
	NIS	0.25	% v/v				
3	Acifluorfen (Ultra Blazer)	0.20	lb ai/a	EPOST	67	50	42
	NIS	0.25	% v/v				
4	Acifluorfen	0.20	lb ai/a	LPOST	41	76	88
	NIS	0.25	% v/v				
5	Carfentrazone (Aim)	0.025	lb ai/a	EPOST	100	100	100
	NIS	0.25	% v/v				
6	Carfentrazone	0.025	lb ai/a	LPOST	10	53	100
	NIS	0.25	% v/v				
7	Quinclorac (Facet)	0.375	lb ai/a	EPOST	100	100	100
	COC (crop oil)	1	% v/v				
8	Quinclorac	0.375	lb ai/a	LPOST	8	38	50
	COC	1	% v/v				
9	Bentazon (Basagran)	0.75	lb ai/a	EPOST	0	0	0
	NIS	0.25	% v/v				
10	Bentazon	0.75	lb ai/a	LPOST	33	43	67
	NIS	0.25	% v/v				
11	Bispyribac (Regiment)	0.032	lb ai/a	EPOST	100	100	100
	Kinetic	0.125	% v/v				
12	Bispyribac	0.032	lb ai/a	LPOST	12	66	66
	Kinetic	0.125	% v/v				
13	Imazethapyr (Newpath)	0.063	lb ai/a	EPOST	100	100	100
	NIS	0.25	% v/v				
14	Imazethapyr	0.063	lb ai/a	LPOST	15	43	98
	NIS	0.25	% v/v				
15	Triclopyr (Grandstand)	0.25	lb ai/a	EPOST	84	75	75
	NIS	0.25	% v/v				
16	Triclopyr	0.25	lb ai/a	LPOST	7	49	100
	NIS	0.25	% v/v				
17	Propanil (Stam)	4	lb ai/a	EPOST	100	100	100
18	Propanil	4	lb ai/a	LPOST	20	35	0
19	Penoxsulam (Grasp)	0.031	lb ai/a	EPOST	63	42	33
	COC	1.25	% v/v				
20	Penoxsulam	0.031	lb ai/a	LPOST	0	68	0
	COC	1.25	% v/v				
21	IR5878	0.067	lb ai/a	EPOST	58	15	50
	Kinetic	0.2	% v/v				
22	IR5878	0.067	lb ai/a	LPOST	0	5	0
	Kinetic	0.2	% v/v				
23	2,4-D	1.5	lb ai/a	EPOST	64	37	33
24	2,4-D	1.5	lb ai/a	LPOST	3	14	25
25	Untreated check				0	0	0
LSD (P=.05)					39	43	55

University of Arkansas

Table 3. Programs with Clincher, Command, and Facet in Southern U.S. Rice

Trial ID: STUT 03-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert
Affiliation: Univ. of Arkansas, Dept. Crop, Soil, and Environmental Sciences

Objective: To evaluate weed control with Clincher (cyhalofop), Command (clomazone), and Facet (quinclorac) herbicide programs.

Conclusions: Barnyardgrass and broadleaf signalgrass were controlled with clomazone at 0.225 lb/A PRE or cyhalofop at 0.25 lb/A + clomazone or quinclorac applied at the 3- to 4-leaf grass stage. Herbicide applications at pre-flood followed by the flood controlled all grass weeds by the end of June. Hemp sesbania and pitted morningglory were controlled with cyhalofop + quinclorac applied 2 weeks before the flood (3- to 4-leaf grass stage applications) and followed by triclopyr and halosulfuron applied 1 week before flood. Although pitted morningglory control was enhanced by the flood, cyhalofop applied post-flood (pofld) was needed to control hemp sesbania >90%. None of the herbicide programs controlled yellow nutsedge early in the season. Preflood treatments of triclopyr + halosulfuron helped with nutsedge control, and by 2 weeks after flood, nutsedge control ranged from 87 to 93% in all herbicide-treated plots. Rice yields did not differ among herbicide programs.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	ECHCG	Barnyardgrass	Echinochloa crus-galli
2.	BRAPP	Signalgrass, broadleaf	Brachiaria platyphylla
3.	AESVI	Northern jointvetch	Aeschynomene virginica
4.	SEBEX	Hemp sesbania	Sesbania exaltata
5.	IPOLA	Morningglory, pitted	Ipomoea lacunosa
6.	CYPES	Yellow nutsedge	Cyperus esculentus

Crop 1: ORYSI RICE, PADDY (DRY-SEEDED+IRR) **Variety:** Wells
Planting Date: 27/Apr/05 **Planting Method:** DRILLED **Plots flushed weekly from planting to flood**
Rate: 90 lbs/A **Permanent flood June 13**
Row Spacing: 7 in **Seed Bed:** SMOOTH

SITE AND DESIGN

Plot Width: 6 FT **Plot Length:** 18 FT **Reps:** 4
Tillage Type: CONVENTIONAL-TILL **Study Design:** Randomized complete block

SOIL DESCRIPTION

% Sand: 8	% OM: 0.94	Texture: SILT LOAM
% Silt: 75	pH: 5.8	Soil Name: DEWITT
% Clay: 16	CEC: 14.3	Fert. Level: ADEQUATE

APPLICATION DESCRIPTION

	A	B	C	D	E
Application Date:	29/Apr/05	23/May/05	6/Jun/05	20/Jun/05	28/Jun/05
Time of Day:	7:00am	9:30pm	9:00pm	9:00PM	7:00AM
Application Method:	Spray	Spray	Spray	Spray	Spray
Application Timing:	PRE	3-4LF BYG	PREFLD	1wk post flood	10AAD
Applic. Placement:	BROSOI	BROSOI	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	70 F	79	82 F	80 F	83 F
% Relative Humidity:	67	81	80	92	95
Wind Velocity, Unit:	4 mph	1.1 MPH	4 MPH	0 MPH	1.8 MPH
Dew Presence (Y/N):	N	Y	N	Y	Y
Soil Temp., Unit:	70 F	79 F	89 F	91 F	79 F
Soil Moisture:	INADEQUAT	INADEQUAT	ADEQUATE	EXCESSIVE	EXCESSIVE
% Cloud Cover:	85	0	60	0	0

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	ECHCG	ECHCG 3-4	ECHCG 1-2
Stage Scale:		LF	TILLER
Weed 2 Code, Stage:	BRAPP	BRAPP 3-4	BRAPP 1-2
Stage Scale:		LF	TILLER
Weed 3 Code, Stage:	AESVI	AESVI 2	AESVI 5-6
Stage Scale:		LF	LF
Weed 4 Code, Stage:	SEBEX	SEBEX 3	SEBEX 5-6
Stage Scale:		LF	LF
Weed 5 Code, Stage:	IPOLA	IPOLA 7-8	IPOLA 10-12
Stage Scale:		LF	LF
Weed 6 Code, Stage:	CYPES	CYPES 7	CYPES 7-9
Stage Scale:		LF	LF
	D	E	
Weed 1 Code, Stage:	ECHCG 2-3	ECHCG 5-8	
Stage Scale:	TILLER	TILLER	
Weed 2 Code, Stage:	BRAPP 2-3	BRAPP 5-8	
Stage Scale:	TILLER	TILLER	
Weed 3 Code, Stage:	AESVI 9-10	AESVI 12-14	
Stage Scale:	LF	LF	
Weed 4 Code, Stage:	SEBEX 9-10	SEBEX 12-14	
Stage Scale:	LF	LF	
Weed 5 Code, Stage:	IPOLA 14-18	IPOLA 18-22	
Stage Scale:	LF	LF	
Weed 6 Code, Stage:	CYPES 12-14	CYPES 14-16	
Stage Scale:	LF	LF	

APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	Backpack	Backpack	Backpack	Backpack
Operating Pressure:	23 PSI	23 PSI	23 PSI	23 PSI
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	110015 DG	110015 DG	110015 DG	110015 DG
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN
Boom Length, Unit:	40 IN	40 IN	40 IN	40 IN
Boom Height, Unit:	15 IN	15 IN	15 IN	15 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA	10 GPA	10 GPA
Propellant:	CO2	CO2	CO2	CO2
	E			
Appl. Equipment:	Backpack			
Operating Pressure:	23 PSI			
Nozzle Type:	FLAT FAN			
Nozzle Size:	110015 DG			
Nozzle Spacing, Unit:	20 IN			
Boom Length, Unit:	40 IN			
Boom Height, Unit:	15 IN			
Ground Speed, Unit:	3 MPH			
Carrier:	WATER			
Spray Volume, Unit:	10 GPA			
Propellant:	CO2			

Permanent flood: June 13

University of Arkansas

Programs with Clincher, Command, and Facet in Southern U.S. Rice

Trial ID: STUT 03-05
Location: Stuttgart, Ark.

Study Dir.: Ellis; Talbert

Weed Code	ECHCG	ECHCG	ECHCG	ECHCG	ECHCG
Rating Data Type	Control	Control	Control	Control	Control
Rating Unit	%	%	%	%	%
Rating Date	2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
1	Cyhalofop (Clincher)	0.25	lb ai/a	3-4 lf grass	82	92	100	95	100
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
2	COC	1	pt/a	Preflood					
	Cyhalofop	0.19	lb ai/a	3-4 lf grass	81	80	100	100	100
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
3	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
	Cyhalofop	0.25	lb ai/a	3-4 lf grass	98	95	100	100	100
	Quinclorac (Facet)	0.38	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
4	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.19	lb ai/a	3-4 lf grass	78	84	100	98	100
	Quinclorac	0.38	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
5	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
6	Clomazone	0.225	lb ai/a	PRE	100	100	100	98	100
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
7	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	% v/v	1wk pofld					
	Clomazone	0.225	lb ai/a	PRE	99	99	98	100	100
	Triclopyr	0.08	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
8	Cyhalofop	0.19	lb ai/a	10 d later					
	COC	1	qt/a	10 d later					
	Cyhalofop	0.25	lb ai/a	3-4 lf grass	93	93	100	100	100
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
9	Penoxsulam (Grasp)	0.031	lb ai/a	Preflood					
	Triclopyr	0.19	lb ai/a	Preflood					
	COC	1	qt/a	Preflood					
	Untreated check				0	5	0	0	0
LSD (P=.05)					9	10	2	4	1

University of Arkansas

Programs with Clincher, Command, and Facet in Southern U.S. Rice

Trial ID: STUT 03-05
Location: Stuttgart, Ark.

Study Dir.: Ellis; Talbert

Weed Code	BRAPP	BRAPP	BRAPP	BRAPP	BRAPP
Rating Data Type	Control	Control	Control	Control	Control
Rating Unit	%	%	%	%	%
Rating Date	2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
1	Cyhalofop (Clincher)	0.25	lb ai/a	3-4 lf grass	89	92	100	98	100
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
2	Cyhalofop	0.19	lb ai/a	3-4 lf grass	84	91	100	100	100
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
3	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
	Cyhalofop	0.25	lb ai/a	3-4 lf grass	84	90	100	100	100
	Quinclorac (Facet)	0.38	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
4	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.19	lb ai/a	3-4 lf grass	63	79	100	100	100
	Quinclorac	0.38	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
5	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
	Clomazone	0.225	lb ai/a	PRE	100	100	98	99	100
	Triclopyr	0.25	lb ai/a	Preflood					
6	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Clomazone	0.225	lb ai/a	PRE	100	98	100	99	100
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
7	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	% v/v	1wk pofld					
	Clomazone	0.08	lb ai/a	PRE	89	70	86	73	100
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
8	COC	1	qt/a	1wk pofld					
	Cyhalofop	0.19	lb ai/a	10 d later					
	COC	1	qt/a	10 d later					
	Cyhalofop	0.25	lb ai/a	3-4 lf grass	82	90	100	100	100
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
9	Penoxsulam (Grasp)	0.031	lb ai/a	Preflood					
	Triclopyr	0.19	lb ai/a	Preflood					
	COC	1	qt/a	Preflood					
	Untreated check				0	0	0	15	0
LSD (P=.05)					19	10	7	17	1

University of Arkansas

Programs with Clincher, Command, and Facet in Southern U.S. Rice

Trial ID: STUT 03-05
Location: Stuttgart, Ark.

Study Dir.: Ellis; Talbert

Weed Code					SEBEX	SEBEX	SEBEX	SEBEX	SEBEX
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
1	Cyhalofop (Clincher)	0.25	lb ai/a	3-4 lf grass	19	52	38	83	95
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
2	Cyhalofop	0.19	lb ai/a	3-4 lf grass	4	50	35	80	85
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
3	Cyhalofop	0.25	lb ai/a	3-4 lf grass	100	100	100	100	100
	Quinclorac (Facet)	0.38	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
4	Cyhalofop	0.19	lb ai/a	3-4 lf grass	97	100	100	100	100
	Quinclorac	0.38	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
5	Clomazone	0.225	lb ai/a	PRE	15	50	33	80	67
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
6	Clomazone	0.225	lb ai/a	PRE	16	47	42	80	96
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	% v/v	1wk pofld					
7	Clomazone	0.08	lb ai/a	PRE	5	49	29	79	95
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
	Cyhalofop	0.19	lb ai/a	10 d later					
	COC	1	qt/a	10 d later					
8	Cyhalofop	0.25	lb ai/a	3-4 lf grass	23	54	58	92	96
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Penoxsulam (Grasp)	0.031	lb ai/a	Preflood					
	Triclopyr	0.19	lb ai/a	Preflood					
	COC	1	qt/a	Preflood					
9	Untreated check				0	0	0	0	0
LSD (P=.05)					14	6	14	14	27

University of Arkansas

Programs with Clincher, Command, and Facet in Southern U.S. Rice

Trial ID: STUT 03-05
Location: Stuttgart, Ark.

Study Dir.: Ellis; Talbert

Weed Code					IPOLA	IPOLA	IPOLA	IPOLA	IPOLA
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
1	Cyhalofop (Clincher)	0.25	lb ai/a	3-4 lf grass	13	47	64	100	100
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
2	Cyhalofop	0.19	lb ai/a	3-4 lf grass	15	46	34	91	100
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
3	Cyhalofop	0.25	lb ai/a	3-4 lf grass	88	92	100	100	100
	Quinclorac (Facet)	0.38	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
4	Cyhalofop	0.19	lb ai/a	3-4 lf grass	78	91	100	100	100
	Quinclorac	0.38	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
5	Clomazone	0.225	lb ai/a	PRE	26	48	82	98	100
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
6	Clomazone	0.225	lb ai/a	PRE	15	39	74	95	100
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	% v/v	1wk pofld					
7	Clomazone	0.08	lb ai/a	PRE	8	39	66	98	100
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
	Cyhalofop	0.19	lb ai/a	10 d later					
	COC	1	qt/a	10 d later					
8	Cyhalofop	0.25	lb ai/a	3-4 lf grass	28	41	65	91	100
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Penoxsulam (Grasp)	0.031	lb ai/a	Preflood					
	Triclopyr	0.19	lb ai/a	Preflood					
	COC	1	qt/a	Preflood					
9	Untreated check				0	0	0	0	100
LSD (P=.05)					17	8	31	7	1

University of Arkansas

Programs with Clincher, Command, and Facet in Southern U.S. Rice

Trial ID: STUT 03-05
Location: Stuttgart, Ark.

Study Dir.: Ellis; Talbert

Weed Code					CYPES	CYPES	CYPES	CYPES	CYPES
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
1	Cyhalofop (Clincher)	0.25	lb ai/a	3-4 lf grass	4	0	45	71	87
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood					
	Halosulfuron (Permit)	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
2	Cyhalofop	0.19	lb ai/a	3-4 lf grass	1	0	38	71	93
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
3	Cyhalofop	0.25	lb ai/a	3-4 lf grass	0	8	43	73	95
	Quinclorac (Facet)	0.38	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
4	Cyhalofop	0.19	lb ai/a	3-4 lf grass	0	6	45	68	95
	Quinclorac	0.38	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
5	Clomazone	0.225	lb ai/a	PRE	0	0	48	68	88
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
6	Clomazone	0.225	lb ai/a	PRE	0	0	40	67	93
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1	pt/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	% v/v	1wk pofld					
7	Clomazone	0.08	lb ai/a	PRE	0	0	39	71	95
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	Cyhalofop	0.28	lb ai/a	1wk pofld					
	COC	1	qt/a	1wk pofld					
	Cyhalofop	0.19	lb ai/a	10 d later					
	COC	1	qt/a	10 d later					
8	Cyhalofop	0.25	lb ai/a	3-4 lf grass	7	4	9	19	90
	Clomazone	0.3	lb ai/a	3-4 lf grass					
	COC	1	qt/a	3-4 lf grass					
	Penoxsulam (Grasp)	0.031	lb ai/a	Preflood					
	Triclopyr	0.19	lb ai/a	Preflood					
	COC	1	qt/a	Preflood					
9	Untreated check				0	0	0	0	48
LSD (P=.05)					5	5	11	21	33

University of Arkansas

Programs with Clincher, Command, and Facet in Southern U.S. Rice

Trial ID: STUT 03-05
Location: Stuttgart, Ark.

Study Dir.: Ellis; Talbert

Crop					Rice
Data Type					YIELD
Unit					BU/AC
Trt. No.	Treatment Name	Rate	Rate Unit	Grow Stg	
1	Cyhalofop (Clincher)	0.25	lb ai/a	3-4 lf grass	182.2
	Clomazone	0.3	lb ai/a	3-4 lf grass	
	COC	1	qt/a	3-4 lf grass	
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood	
	Halosulfuron	0.023	lb ai/a	Preflood	
	COC	1	pt/a	Preflood	
2	Cyhalofop	0.19	lb ai/a	3-4 lf grass	188.3
	Clomazone	0.3	lb ai/a	3-4 lf grass	
	COC	1	qt/a	3-4 lf grass	
	Triclopyr	0.25	lb ai/a	Preflood	
	Halosulfuron	0.023	lb ai/a	Preflood	
	COC	1	pt/a	Preflood	
	Cyhalofop	0.28	lb ai/a	1wk pofld	
	COC	1	qt/a	1wk pofld	
3	Cyhalofop	0.25	lb ai/a	3-4 lf grass	185.8
	Quinclorac (Facet)	0.38	lb ai/a	3-4 lf grass	
	COC	1	qt/a	3-4 lf grass	
	Triclopyr	0.25	lb ai/a	Preflood	
	Halosulfuron	0.023	lb ai/a	Preflood	
	COC	1	pt/a	Preflood	
4	Cyhalofop	0.19	lb ai/a	3-4 lf grass	184.1
	Quinclorac	0.38	lb ai/a	3-4 lf grass	
	COC	1	qt/a	3-4 lf grass	
	Triclopyr	0.25	lb ai/a	Preflood	
	Halosulfuron	0.023	lb ai/a	Preflood	
	COC	1	pt/a	Preflood	
	Cyhalofop	0.28	lb ai/a	1wk pofld	
	COC	1	qt/a	1wk pofld	
5	Clomazone	0.225	lb ai/a	PRE	185.2
	Triclopyr	0.25	lb ai/a	Preflood	
	Halosulfuron	0.023	lb ai/a	Preflood	
	COC	1	pt/a	Preflood	
6	Clomazone	0.225	lb ai/a	PRE	182.6
	Triclopyr	0.25	lb ai/a	Preflood	
	Halosulfuron	0.023	lb ai/a	Preflood	
	COC	1	pt/a	Preflood	
	Cyhalofop	0.28	lb ai/a	1wk pofld	
	COC	1	% v/v	1wk pofld	
7	Clomazone	0.08	lb ai/a	PRE	186.4
	Triclopyr	0.25	lb ai/a	Preflood	
	Halosulfuron	0.023	lb ai/a	Preflood	
	Cyhalofop	0.28	lb ai/a	1wk pofld	
	COC	1	qt/a	1wk pofld	
	Cyhalofop	0.19	lb ai/a	10 d later	
	COC	1	qt/a	10 d later	
8	Cyhalofop	0.25	lb ai/a	3-4 lf grass	145.4
	Clomazone	0.3	lb ai/a	3-4 lf grass	
	COC	1	qt/a	3-4 lf grass	
	Penoxsulam (Grasp)	0.031	lb ai/a	Preflood	
	Triclopyr	0.19	lb ai/a	Preflood	
	COC	1	qt/a	Preflood	
9	Untreated check				46.8
LSD (P=.05)					44.4

University of Arkansas

Table 4. Comparison of propanil formulations (Stam SC and Stam M-4)

Trial ID: Stut 06-05 **Study Dir.:** Drew Ellis; Ron Talbert
Location: Stuttgart, Ark.

Objective: To compare Stam M-4 and Stam 4SC for weed control in rice.

Conclusions: In general, activity of Stam SC and Stam M-4 was equal. By 22 days after application, control of broadleaf signalgrass and hemp sesbania was at least 90% with all treatments. Barnyardgrass was controlled only with Command or Facet plus Stam.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	ECHCG	Barnyardgrass	Echinochloa crus-galli
2.	BRAPP	Broadleaf signalgrass	Brachiaria platyphylla
3.	SEBEX	Hemp sesbania	Sesbania exaltata

Crop 1: ORYSI RICE, PADDY (DRY-SEEDED+IRR) **Variety:** Wells
Planting Date: 27/Apr/05 **Planting Method:** DRILLED **Plots flushed weekly from planting to flood**
Rate: 90 lbs/A **Row Spacing:** 7 in **Permanent flood:** June 13

SITE AND DESIGN

Plot Width: 6 FT **Plot Length:** 18 FT **Reps:** 4 **Study Design:** Randomized complete block

SOIL DESCRIPTION

% Sand: 8	OM: 0.94	Texture: SILT LOAM
% Silt: 75	pH: 5.8	Soil Name: DEWITT
% Clay: 16	CEC: 14.3	Fert. Level: ADEQUATE

APPLICATION DESCRIPTION

Application Date: 23/May/05
Time of Day: 9:30pm
Application Method: spray
Application Timing: 3-4LF BYG
Applic. Placement: BROSOI
Air Temp., Unit: 79
% Relative Humidity: 81
Wind Velocity, Unit: 1.1 MPH
Dew Presence (Y/N): Y
Soil Temp., Unit: 79 F
Soil Moisture: INADEQUAT
% Cloud Cover: 0

APPLICATION EQUIPMENT

A
Appl. Equipment: C02 backpack
Operating Pressure: 23 PSI
Nozzle Type: FLAT FAN
Nozzle Size: 110015 DG
Nozzle Spacing, Unit: 20 IN
Boom Length, Unit: 40 IN
Boom Height, Unit: 15 IN
Ground Speed, Unit: 3 MPH
Carrier: WATER
Spray Volume, Unit: 10 GPA

University of Arkansas

Comparison of propanil formulations (Stam SC and Stam M-4)

Trial ID: Stut 06-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

					ECHCG	ECHCG	ECHCG	ECHCG	
					Control	Control	Control	Control	
					%	%	%	%	
					2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05	
					10 DA-A	15 DA-A	22 DA-A	28 DA-A	
Trt	Treatment		Rate	Rate					
No.	Name			Unit	Grow				
					Stg				
01	Clomazone (Command 3ME)		0.5	lb ai/a	3-4 lf weed	80	86	79	88
	Stam 4 SC (propanil)		4	lb ai/a	3-4 lf weed				
	COC (crop oil)		2.5	% v/v	3-4 lf weed				
02	Stam 4 SC		4	lb ai/a	3-4 lf weed	90	98	99	100
	Facet (quinclorac)		0.375	lb ai/a	3-4 lf weed				
	COC		2.5	% v/v	3-4 lf weed				
03	Stam 4 SC		4	lb ai/a	3-4 lf weed	65	55	26	38
	Grandstand (triclopyr)		0.25	lb ai/a	3-4 lf weed				
	COC		2.5	% v/v	3-4 lf weed				
04	Stam 4SC		4	lb ai/a	3-4 lf weed	75	68	52	77
	Grasp (penoxsulam)		0.031	lb ai/a	3-4 lf weed				
	COC		2.5	% v/v	3-4 lf weed				
05	Stam 4SC		4	% v/v	3-4 lf weed	68	55	40	50
	Pendimax (pendimethalin)		1	lb ai/a	3-4 lf weed				
	COC		2.5	% v/v	3-4 lf weed				
06	Untreated check					0	0	0	0
07	Command (clomazone)		0.5	lb ai/a	3-4 lf weed	94	91	95	93
	Stam M-4 (propanil)		4	lb ai/a	3-4 lf weed				
	COC		2.5	% v/v	3-4 lf weed				
08	Stam M-4		4	lb ai/a	3-4 lf weed	96	100	100	99
	Facet		0.375	lb ai/a	3-4 lf weed				
	COC		2.5	% v/v	3-4 lf weed				
09	Stam M-4		4	lb ai/a	3-4 lf weed	61	35	16	23
	Grandstand		0.25	lb ai/a	3-4 lf weed				
	COC		2.5	% v/v	3-4 lf weed				
10	Stam M-4		4	lb ai/a	3-4 lf weed	81	63	66	83
	Penoxsulam		0.031	lb ai/a	3-4 lf weed				
	COC		2.5	% v/v	3-4 lf weed				
11	Stam 4SC		4	% v/v	3-4 lf weed	58	47	21	61
	Pendimax		1	lb ai/a	3-4 lf weed				
	COC		2.5	% v/v	3-4 lf weed				
12	Clomazone		0.5	lb ai/a	3-4 lf weed	95	92	93	92
	Super Wham (propanil)		4	lb ai/a	3-4 lf weed				
	COC		2.5	% v/v	3-4 lf weed				
LSD (P=.05)						15	11	16	20

University of Arkansas

Comparison of propanil formulations (Stam SC and Stam M-4)

Trial ID: Stut 06-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					BRAPP	BRAPP	BRAPP	BRAPP
Rating Data Type					Control	Control	Control	Control
Rating Unit					%	%	%	%
Rating Date					2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05
Trt-Eval Interval					10 DA-A	15 DA-A	22 DA-A	28 DA-A
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg				
01	Clomazone (Command 3ME)	0.5	lb ai/a	3-4 lf weed	100	100	100	100
	Stam 4 SC (propanil)	4	lb ai/a	3-4 lf weed				
	COC (crop oil)	2.5	% v/v	3-4 lf weed				
02	Stam 4 SC	4	lb ai/a	3-4 lf weed	99	100	100	100
	Facet (quinclorac)	0.375	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
03	Stam 4 SC	4	lb ai/a	3-4 lf weed	97	100	100	99
	Grandstand (triclopyr)	0.25	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
04	Stam 4SC	4	lb ai/a	3-4 lf weed	95	97	100	100
	Grasp (penoxsulam)	0.031	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
05	Stam 4SC	4	% v/v	3-4 lf weed	100	99	100	99
	Pendimax (pendimethalin)	1	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
06	Untreated check				0	0	0	0
07	Command (clomazone)	0.5	lb ai/a	3-4 lf weed	100	100	100	100
	Stam M-4 (propanil)	4	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
08	Stam M-4	4	lb ai/a	3-4 lf weed	100	100	100	100
	Facet	0.375	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
09	Stam M-4	4	lb ai/a	3-4 lf weed	97	71	100	99
	Grandstand	0.25	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
10	Stam M-4	4	lb ai/a	3-4 lf weed	100	91	90	100
	Penoxsulam	0.031	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
11	Stam 4SC	4	% v/v	3-4 lf weed	81	52	100	96
	Pendimax	1	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
12	Clomazone	0.5	lb ai/a	3-4 lf weed	100	100	100	100
	Super Wham (propanil)	4	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
LSD (P=.05)					9	18	8	2

University of Arkansas

Comparison of propanil formulations (Stam SC and Stam M-4)

Trial ID: Stut 06-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					SEBEX	SEBEX	SEBEX	SEBEX
Rating Data Type					Control	Control	Control	Control
Rating Unit					%	%	%	%
Rating Date					2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05
Trt-Eval Interval					10 DA-A	15 DA-A	22 DA-A	28 DA-A
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg				
01	Clomazone (Command 3ME)	0.5	lb ai/a	3-4 lf weed	100	100	98	95
	Stam 4 SC (propanil)	4	lb ai/a	3-4 lf weed				
	COC (crop oil)	2.5	% v/v	3-4 lf weed				
02	Stam 4 SC	4	lb ai/a	3-4 lf weed	100	100	100	100
	Facet (quinclorac)	0.375	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
03	Stam 4 SC	4	lb ai/a	3-4 lf weed	100	100	100	100
	Grandstand (triclopyr)	0.25	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
04	Stam 4SC	4	lb ai/a	3-4 lf weed	100	100	100	100
	Grasp (penoxsulam)	0.031	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
05	Stam 4SC	4	% v/v	3-4 lf weed	100	100	100	100
	Pendimax (pendimethalin)	1	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
06	Untreated check				0	0	0	0
07	Command (clomazone)	0.5	lb ai/a	3-4 lf weed	100	100	100	100
	Stam M-4 (propanil)	4	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
08	Stam M-4	4	lb ai/a	3-4 lf weed	100	100	100	100
	Facet	0.375	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
09	Stam M-4	4	lb ai/a	3-4 lf weed	100	100	100	100
	Grandstand	0.25	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
10	Stam M-4	4	lb ai/a	3-4 lf weed	100	100	100	100
	Penoxsulam	0.031	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
11	Stam 4SC	4	% v/v	3-4 lf weed	99	78	100	100
	Pendimax	1	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
12	Clomazone	0.5	lb ai/a	3-4 lf weed	100	100	100	100
	Super Wham (propanil)	4	lb ai/a	3-4 lf weed				
	COC	2.5	% v/v	3-4 lf weed				
LSD (P=.05)					3	18	2	4

University of Arkansas

Comparison of propanil formulations (Stam SC and Stam M-4)

Trial ID: Stut 06-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code

Rating Data Type

Rating Unit

Rating Date

Rice

Yield

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	BU/AC
01	Clomazone (Command 3ME)	0.5	lb ai/a	3-4 lf weed	126.1
	Stam 4 SC (propanil)	4	lb ai/a	3-4 lf weed	
	COC (crop oil)	2.5	% v/v	3-4 lf weed	
02	Stam 4 SC	4	lb ai/a	3-4 lf weed	157.8
	Facet	0.375	lb ai/a	3-4 lf weed	
	COC	2.5	% v/v	3-4 lf weed	
03	Stam 4 SC	4	lb ai/a	3-4 lf weed	36.2
	Grandstand (triclopyr)	0.25	lb ai/a	3-4 lf weed	
	COC	2.5	% v/v	3-4 lf weed	
04	Stam 4SC	4	lb ai/a	3-4 lf weed	110.6
	Grasp (penoxsulam)	0.031	lb ai/a	3-4 lf weed	
	COC	2.5	% v/v	3-4 lf weed	
05	Stam 4SC	4	% v/v	3-4 lf weed	45.3
	Pendimax (pendimethalin)	1	lb ai/a	3-4 lf weed	
	COC	2.5	% v/v	3-4 lf weed	
06	Untreated check				17.1
07	Command (clomazone)	0.5	lb ai/a	3-4 lf weed	161.5
	Stam M-4 (propanil)	4	lb ai/a	3-4 lf weed	
	COC	2.5	% v/v	3-4 lf weed	
08	Stam M-4	4	lb ai/a	3-4 lf weed	178.7
	Facet	0.375	lb ai/a	3-4 lf weed	
	COC	2.5	% v/v	3-4 lf weed	
09	Stam M-4	4	lb ai/a	3-4 lf weed	23.1
	Grandstand	0.25	lb ai/a	3-4 lf weed	
	COC	2.5	% v/v	3-4 lf weed	
10	Stam M-4	4	lb ai/a	3-4 lf weed	120.1
	Penoxsulam	0.031	lb ai/a	3-4 lf weed	
	COC	2.5	% v/v	3-4 lf weed	
11	Stam 4SC	4	% v/v	3-4 lf weed	87.5
	Pendimax	1	lb ai/a	3-4 lf weed	
	COC	2.5	% v/v	3-4 lf weed	
12	Clomazone	0.5	lb ai/a	3-4 lf weed	153.7
	Super Wham (propanil)	4	lb ai/a	3-4 lf weed	
	COC	2.5	% v/v	3-4 lf weed	
LSD (P=.05)					29.7

University of Arkansas

Table 5. Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Objective: To evaluate efficacy of penoxsulam (Grasp) for weed control in conventional and Clearfield rice herbicide programs.

Conclusions: Barnyardgrass and broadleaf signalgrass were controlled with clomazone applied PRE or in a tank mixture with penoxsulam (Grasp). Penoxsulam did not increase control of the grasses in the Clearfield (Newpath) system. However, penoxsulam controlled hemp sesbania in the Clearfield system, especially when applied pre-flood (3- to 4-leaf rice). Penoxsulam may have had minimal activity on pitted morningglory, but good (>90%) control was obtained until flood was established when quinclorac or triclopyr were used in the management system. Penoxsulam had little activity on yellow nutsedge, but controlled Northern jointvetch in the Clearfield system. Penoxsulam applied with clomazone or propanil at the 2-leaf rice stage, even if followed by triclopyr plus halosulfuron pre-flood, had lower yield than other treatments.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	ECHCG	Barnyardgrass	Echinochloa crus-galli
2.	BRAPP	Signalgrass, broadleaf	Brachiaria platyphylla
3.	AESVI	Northern jointvetch	Aeschynomene virginica
4.	SEBEX	Hemp sesbania	Sesbania exaltata
5.	IPOLA	Morningglory, pitted	Ipomoea lacunosa
6.	CYPES	Yellow nutsedge	Cyperus esculentus

Crop 1: ORYSI RICE, PADDY (DRY-SEEDED+IRR) **Variety:** CL 161
Planting Date: 27/Apr/05 **Planting Method:** DRILLED **Plots flushed weekly from planting to flood**
Rate: 90 lbs/A **Row Spacing:** 7 in **Permanent flood:** June 13

SITE AND DESIGN

Plot Width: 6 FT **Plot Length:** 18 FT **Reps:** 4
Tillage Type: Conventional tillage **Study Design:** Randomized complete block

SOIL DESCRIPTION

% Sand: 8 **% OM:** 0.94 **Texture:** SILT LOAM
% Silt: 75 **pH:** 5.93 **Soil Name:** DEWITT
% Clay: 16 **CEC:** 14.3 **Fert. Level:** GOOD

APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	29/Apr/05	17/May/05	6/Jun/05	20/Jun/05
Time of Day:	7:00AM	3:00PM	9:00pm	9:00PM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPOST	PREFLD	1wk pofld
Applic. Placement:	BROSOL	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	70 F	85 F	82 F	83 F
% Relative Humidity:	67	75	80	86
Wind Velocity, Unit:	4 mph	3 MPH	4 MPH	0 MPH
Dew Presence (Y/N):	N	N	N	N
Soil Temp., Unit:	70 F	78 F	89 F	88 F
Soil Moisture:	INADEQUAT	VERY WET	ADEQUATE	EXCESSIVE
% Cloud Cover:	85	0	60	0

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	ORYSI	ORYSI 2-If	ORYSI 4-If	ORYSI
Height, Unit:		4 IN		

WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code, Stage:	ECHCG PRE	ECHCG 1-2 If	ECHCG 2-3 TILLER	ECHCG 4-5 TILLER
Weed 2 Code, Stage:	BRAPP PRE	BRAPP 1-2 If	BRAPP 2-3 TILLER	BRAPP 4-5 TILLER
Weed 3 Code, Stage:	AESVI PRE	AESVI COT-1 If	AESVI 5-6 If	AESVI 6-7 If
Weed 4 Code, Stage:	SEBEX PRE	SEBEX 1-2 If	SEBEX 5-6 If	SEBEX 6-7 If
Weed 5 Code, Stage:	IPOLA PRE	IPOLA COT-1 If	IPOLA 4-5 If	IPOLA 5-6 If

APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	Backpack	Backpack	Backpack	Backpack
Operating Pressure:	23 PSI	23 PSI	23 PSI	23 PSI
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	110015 DG	110015 DG	110015 DG	110015 DG
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN
Boom Length, Unit:	40 IN	40 IN	40 IN	40 IN
Boom Height, Unit:	15 IN	15 IN	15 IN	15 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA	10 GPA	10 GPA
Propellant:	CO2	CO2	CO2	CO2

Permanent flood: June 13

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code	ECHCG	ECHCG	ECHCG	ECHCG	ECHCG				
Rating Data Type	Control	Control	Control	Control	Control				
Rating Unit	%	%	%	%	%				
Rating Date	17/May/05	2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05				
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
1	Penoxsulam (Grasp)	0.031	lb ai/a	1-2 lf rice	0	98	100	90	85
	Clomazone (Command)	0.3	lb ai/a	1-2 lf rice					
	COC (crop oil)	2.5	% v/v	1-2 lf rice					
2	Penoxsulam	0.031	lb ai/a	1-2 lf rice	0	99	100	95	87
	Clomazone	0.3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
3	Penoxsulam	0.031	lb ai/a	1-2 lf rice	0	92	73	86	78
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
4	Penoxsulam	0.031	lb ai/a	1-2 lf rice	0	95	88	90	80
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
5	Penoxsulam	0.031	lb ai/a	1-2 lf rice	3	100	100	99	100
	Quinclorac	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
6	Penoxsulam	0.031	lb ai/a	1-2 lf rice	0	98	97	100	97
	Quinclorac (Facet)	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Propanil (Stam 4SC)	4	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
7	Clomazone	0.3	lb ai/a	PRE	94	96	98	100	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
8	Clomazone	0.3	lb ai/a	PRE	96	100	100	100	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	Triclopyr	0.19	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
9	Clomazone	0.3	lb ai/a	PRE	98	100	100	100	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	Halosulfuron (Permit)	0.023	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
10	Clomazone	0.3	lb ai/a	PRE	99	79	95	100	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	Propanil	4	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
11	Clomazone	0.3	lb ai/a	PRE	98	100	100	100	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	Cyhalofop (Clincher)	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					ECHCG	ECHCG	ECHCG	ECHCG	ECHCG
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					17/May/05	2/June/05	7/June/05	14/June/05	20/June/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
12	Clomazone	0.3	lb ai/a	PRE	96	99	100	100	98
	Penoxsulam	0.031	lb ai/a	Preflood					
	Bensulfuron (Londax)	0.028	lb ai/a	Preflood					
	Quinclorac	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
13	Clomazone	0.15	lb ai/a	PRE	96	100	99	100	98
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
14	Clomazone	0.15	lb ai/a	PRE	95	100	98	100	100
	Penoxsulam	0.044	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
15	Clomazone	0.15	lb ai/a	PRE	99	100	100	100	100
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	Cyhalofop	0.28	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
16	Imazethapyr (Newpath)	0.063	lb ai/a	1-2 lf rice	26	99	98	100	100
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
17	Imazethapyr	0.063	lb ai/a	1-2 lf rice	11	100	100	100	100
	Penoxsulam	0.031	lb ai/a	1-2 lf rice					
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
18	Imazethapyr	0.063	lb ai/a	1-2 lf rice	28	95	100	100	100
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	Penoxsulam	0.031	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
LSD (P=.05)					9	NS	8	NS	NS

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					ECHCG	BRAPP	BRAPP	BRAPP	BRAPP
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					28/Jun/05	17/May/05	2/Jun/05	7/Jun/05	14/Jun/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
1	Penoxsulam (Grasp)	0.031	lb ai/a	1-2 lf rice	100	0	76	44	55
	Clomazone (Command)	0.3	lb ai/a	1-2 lf rice					
	COC (crop oil)	2.5	% v/v	1-2 lf rice					
2	Penoxsulam	0.031	lb ai/a	1-2 lf rice	100	0	82	93	89
	Clomazone	0.3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
3	Penoxsulam	0.031	lb ai/a	1-2 lf rice	100	0	98	61	94
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
4	Penoxsulam	0.031	lb ai/a	1-2 lf rice	100	0	93	91	95
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
5	Penoxsulam	0.031	lb ai/a	1-2 lf rice	100	0	100	99	100
	Quinclorac	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
6	Penoxsulam	0.031	lb ai/a	1-2 lf rice	100	10	98	100	100
	Quinclorac (Facet)	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Propanil (Stam 4SC)	4	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
7	Clomazone	0.3	lb ai/a	PRE	100	74	97	99	99
	Penoxsulam	0.031	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
8	Clomazone	0.3	lb ai/a	PRE	100	89	100	97	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	Triclopyr	0.19	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
9	Clomazone	0.3	lb ai/a	PRE	100	94	100	98	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	Halosulfuron (Permit)	0.023	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
10	Clomazone	0.3	lb ai/a	PRE	100	74	76	87	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	Propanil	4	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
11	Clomazone	0.3	lb ai/a	PRE	100	93	100	100	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	Cyhalofop (Clincher)	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
12	Clomazone	0.3	lb ai/a	PRE	100	88	99	100	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	Bensulfuron (Londax)	0.028	lb ai/a	Preflood					
	Quinclorac	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					ECHCG	BRAPP	BRAPP	BRAPP	BRAPP
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					28/Jun/05	17/May/05	2/Jun/05	7/Jun/05	14/Jun/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
13	Clomazone	0.15	lb ai/a	PRE	100	85	99	59	92
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
14	Clomazone	0.15	lb ai/a	PRE	100	90	100	75	78
	Penoxsulam	0.044	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
15	Clomazone	0.15	lb ai/a	PRE	100	86	95	81	81
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	Cyhalofop	0.28	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
16	Imazethapyr (Newpath)	0.063	lb ai/a	1-2 lf rice	100	31	95	92	100
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
17	Imazethapyr	0.063	lb ai/a	1-2 lf rice	100	11	99	93	100
	Penoxsulam	0.031	lb ai/a	1-2 lf rice					
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
18	COC	1.25	% v/v	Preflood					
	Imazethapyr	0.063	lb ai/a	1-2 lf rice	100	23	96	91	100
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
18	Penoxsulam	0.031	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
	COC	1.25	% v/v	Preflood					
LSD (P=.05)					1	23	NS	18	19

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					BRAPP	BRAPP	SEBEX	SEBEX	SEBEX
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					20/Jun/05	28/Jun/05	17/May/05	2/Jun/05	7/Jun/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
1	Penoxsulam (Grasp)	0.031	lb ai/a	1-2 lf rice	67	88	33	99	96
	Clomazone (Command)	0.3	lb ai/a	1-2 lf rice					
	COC (crop oil)	2.5	% v/v	1-2 lf rice					
2	Penoxsulam	0.031	lb ai/a	1-2 lf rice	92	100	33	99	95
	Clomazone	0.3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
3	Penoxsulam	0.031	lb ai/a	1-2 lf rice	95	100	33	100	100
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
4	Penoxsulam	0.031	lb ai/a	1-2 lf rice	92	100	33	100	100
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
5	Penoxsulam	0.031	lb ai/a	1-2 lf rice	100	100	33	100	100
	Quinclorac	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
6	Penoxsulam	0.031	lb ai/a	1-2 lf rice	96	100	33	100	100
	Quinclorac (Facet)	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Propanil (Stam 4SC)	4	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
7	Clomazone	0.3	lb ai/a	PRE	99	99	38	49	81
	Penoxsulam	0.031	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
8	Clomazone	0.3	lb ai/a	PRE	100	100	31	61	74
	Penoxsulam	0.031	lb ai/a	Preflood					
	Triclopyr	0.19	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
9	Clomazone	0.3	lb ai/a	PRE	100	100	31	73	76
	Penoxsulam	0.031	lb ai/a	Preflood					
	Halosulfuron (Permit)	0.023	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
10	Clomazone	0.3	lb ai/a	PRE	80	100	31	55	99
	Penoxsulam	0.031	lb ai/a	Preflood					
	Propanil	4	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
11	Clomazone	0.3	lb ai/a	PRE	100	100	33	37	82
	Penoxsulam	0.031	lb ai/a	Preflood					
	Cyhalofop (Clincher)	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
12	Clomazone	0.3	lb ai/a	PRE	100	100	31	75	95
	Penoxsulam	0.031	lb ai/a	Preflood					
	Bensulfuron (Londax)	0.028	lb ai/a	Preflood					
	Quinclorac	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					BRAPP	BRAPP	SEBEX	SEBEX	SEBEX
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					20/Jun/05	28/Jun/05	17/May/05	2/Jun/05	7/Jun/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
13	Clomazone	0.15	lb ai/a	PRE	96	100	30	28	8
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
14	Clomazone	0.15	lb ai/a	PRE	98	100	31	6	0
	Penoxsulam	0.044	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
15	Clomazone	0.15	lb ai/a	PRE	97	100	30	30	16
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	Cyhalofop	0.28	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
16	Imazethapyr (Newpath)	0.063	lb ai/a	1-2 lf rice	98	100	30	21	9
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
17	Imazethapyr	0.063	lb ai/a	1-2 lf rice	100	100	31	96	94
	Penoxsulam	0.031	lb ai/a	1-2 lf rice					
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
18	Imazethapyr	0.063	lb ai/a	1-2 lf rice	100	100	31	24	75
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	Penoxsulam	0.031	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
LSD (P=.05)					16	4	NS	27	12

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					SEBEX	SEBEX	SEBEX	IPOLA	IPOLA
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					14/Jun/05	20/Jun/05	28/Jun/05	17/May/05	2/Jun/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
1	Penoxsulam (Grasp)	0.031	lb ai/a	1-2 lf rice	96	90	88	13	82
	Clomazone (Command)	0.3	lb ai/a	1-2 lf rice					
	COC (crop oil)	2.5	% v/v	1-2 lf rice					
2	Penoxsulam	0.031	lb ai/a	1-2 lf rice	100	100	100	8	69
	Clomazone	0.3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
3	Penoxsulam	0.031	lb ai/a	1-2 lf rice	100	100	100	8	95
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
4	Penoxsulam	0.031	lb ai/a	1-2 lf rice	100	100	100	12	93
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
5	Penoxsulam	0.031	lb ai/a	1-2 lf rice	100	100	100	15	93
	Quinclorac	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
6	Penoxsulam	0.031	lb ai/a	1-2 lf rice	100	100	100	8	93
	Quinclorac (Facet)	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Propanil (Stam 4SC)	4	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
7	Clomazone	0.3	lb ai/a	PRE	88	89	92	76	59
	Penoxsulam	0.031	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
8	Clomazone	0.3	lb ai/a	PRE	84	98	97	65	66
	Penoxsulam	0.031	lb ai/a	Preflood					
	Triclopyr	0.19	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
9	Clomazone	0.3	lb ai/a	PRE	95	100	100	71	73
	Penoxsulam	0.031	lb ai/a	Preflood					
	Halosulfuron (Permit)	0.023	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
10	Clomazone	0.3	lb ai/a	PRE	100	100	100	64	73
	Penoxsulam	0.031	lb ai/a	Preflood					
	Propanil	4	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
11	Clomazone	0.3	lb ai/a	PRE	93	96	98	76	72
	Penoxsulam	0.031	lb ai/a	Preflood					
	Cyhalofop (Clincher)	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
12	Clomazone	0.3	lb ai/a	PRE	100	100	100	71	73
	Penoxsulam	0.031	lb ai/a	Preflood					
	Bensulfuron (Londax)	0.028	lb ai/a	Preflood					
	Quinclorac	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					SEBEX	SEBEX	SEBEX	IPOLA	IPOLA
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					14/Jun/05	20/Jun/05	28/Jun/05	17/May/05	2/Jun/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
13	Clomazone	0.15	lb ai/a	PRE	6	81	90	58	15
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
14	Clomazone	0.15	lb ai/a	PRE	0	45	72	48	11
	Penoxsulam	0.044	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
15	Clomazone	0.15	lb ai/a	PRE	0	16	95	63	30
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	Cyhalofop	0.28	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
16	Imazethapyr (Newpath)	0.063	lb ai/a	1-2 lf rice	8	5	9	16	86
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
17	Imazethapyr	0.063	lb ai/a	1-2 lf rice	100	99	76	13	87
	Penoxsulam	0.031	lb ai/a	1-2 lf rice					
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
18	COC	1.25	% v/v	Preflood	88	95	100	34	82
	Imazethapyr	0.063	lb ai/a	1-2 lf rice					
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	Penoxsulam	0.031	lb ai/a	Preflood					
COC	1.25	% v/v	Preflood						
LSD (P=.05)					11	20	16	20	17

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					IPOLA	IPOLA	IPOLA	IPOLA	CYPES
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05	17/May/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
1	Penoxsulam (Grasp)	0.031	lb ai/a	1-2 lf rice	31	18	14	100	0
	Clomazone (Command)	0.3	lb ai/a	1-2 lf rice					
	COC (crop oil)	2.5	% v/v	1-2 lf rice					
2	Penoxsulam	0.031	lb ai/a	1-2 lf rice	85	98	98	100	0
	Clomazone	0.3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
3	Penoxsulam	0.031	lb ai/a	1-2 lf rice	80	96	95	100	0
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
4	Penoxsulam	0.031	lb ai/a	1-2 lf rice	88	100	100	100	0
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
5	Penoxsulam	0.031	lb ai/a	1-2 lf rice	93	100	100	100	0
	Quinclorac	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
6	Penoxsulam	0.031	lb ai/a	1-2 lf rice	92	100	100	100	0
	Quinclorac (Facet)	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Propanil (Stam 4SC)	4	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
7	Clomazone	0.3	lb ai/a	PRE	55	94	87	100	0
	Penoxsulam	0.031	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
8	Clomazone	0.3	lb ai/a	PRE	66	100	100	100	0
	Penoxsulam	0.031	lb ai/a	Preflood					
	Triclopyr	0.19	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
9	Clomazone	0.3	lb ai/a	PRE	65	100	100	100	0
	Penoxsulam	0.031	lb ai/a	Preflood					
	Halosulfuron (Permit)	0.023	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
10	Clomazone	0.3	lb ai/a	PRE	87	95	97	100	0
	Penoxsulam	0.031	lb ai/a	Preflood					
	Propanil	4	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
11	Clomazone	0.3	lb ai/a	PRE	67	89	91	100	0
	Penoxsulam	0.031	lb ai/a	Preflood					
	Cyhalofop (Clincher)	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
12	Clomazone	0.3	lb ai/a	PRE	79	100	100	100	0
	Penoxsulam	0.031	lb ai/a	Preflood					
	Bensulfuron (Londax)	0.028	lb ai/a	Preflood					
	Quinclorac	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					IPOLA	IPOLA	IPOLA	IPOLA	CYPES
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05	17/May/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
13	Clomazone	0.15	lb ai/a	PRE	5	8	3	100	0
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
14	Clomazone	0.15	lb ai/a	PRE	0	4	3	100	0
	Penoxsulam	0.044	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
15	Clomazone	0.15	lb ai/a	PRE	10	3	15	100	0
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	Cyhalofop	0.28	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
16	Imazethapyr (Newpath)	0.063	lb ai/a	1-2 lf rice	72	100	100	100	0
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
17	Imazethapyr	0.063	lb ai/a	1-2 lf rice	81	100	100	100	0
	Penoxsulam	0.031	lb ai/a	1-2 lf rice					
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
18	COC	1.25	% v/v	Preflood					
	Imazethapyr	0.063	lb ai/a	1-2 lf rice	77	99	81	100	0
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
18	Penoxsulam	0.031	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
	COC	1.25	% v/v	Preflood					
LSD (P=.05)					17	9	16	NS	NS

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					CYPES	CYPES	CYPES	CYPES	CYPES
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
1	Penoxsulam (Grasp)	0.031	lb ai/a	1-2 lf rice	0	9	10	0	0
	Clomazone (Command)	0.3	lb ai/a	1-2 lf rice					
	COC (crop oil)	2.5	% v/v	1-2 lf rice					
2	Penoxsulam	0.031	lb ai/a	1-2 lf rice	0	11	34	75	100
	Clomazone	0.3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
3	COC	1.25	% v/v	Preflood					
	Penoxsulam	0.031	lb ai/a	1-2 lf rice	25	28	46	0	25
	Propanil	3	lb ai/a	1-2 lf rice					
4	COC	2.5	% v/v	1-2 lf rice					
	Penoxsulam	0.031	lb ai/a	1-2 lf rice	38	37	84	96	100
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
5	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
	Penoxsulam	0.031	lb ai/a	1-2 lf rice	0	11	6	0	3
	Quinclorac	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
6	Penoxsulam	0.031	lb ai/a	1-2 lf rice	10	19	81	92	98
	Quinclorac (Facet)	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Propanil (Stam 4SC)	4	lb ai/a	Preflood					
7	COC	2.5	% v/v	Preflood					
	Clomazone	0.3	lb ai/a	PRE	0	3	58	82	90
	Penoxsulam	0.031	lb ai/a	Preflood					
8	COC	2.5	% v/v	Preflood					
	Clomazone	0.3	lb ai/a	PRE	0	11	75	66	75
	Penoxsulam	0.031	lb ai/a	Preflood					
	Triclopyr	0.19	lb ai/a	Preflood					
9	COC	2.5	% v/v	Preflood					
	Clomazone	0.3	lb ai/a	PRE	0	15	77	93	99
	Penoxsulam	0.031	lb ai/a	Preflood					
	Halosulfuron (Permit)	0.023	lb ai/a	Preflood					
10	COC	2.5	% v/v	Preflood					
	Clomazone	0.3	lb ai/a	PRE	4	40	68	83	99
	Penoxsulam	0.031	lb ai/a	Preflood					
	Propanil	4	lb ai/a	Preflood					
11	COC	2.5	% v/v	Preflood					
	Clomazone	0.3	lb ai/a	PRE	0	11	64	85	98
	Penoxsulam	0.031	lb ai/a	Preflood					
	Cyhalofop (Clincher)	0.25	lb ai/a	Preflood					
12	COC	2.5	% v/v	Preflood					
	Clomazone	0.3	lb ai/a	PRE	0	13	37	50	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	Bensulfuron (Londax)	0.028	lb ai/a	Preflood					
	Quinclorac	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					CYPES	CYPES	CYPES	CYPES	CYPES
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
13	Clomazone	0.15	lb ai/a	PRE	0	0	6	0	0
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
14	Clomazone	0.15	lb ai/a	PRE	0	0	0	0	0
	Penoxsulam	0.044	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
15	Clomazone	0.15	lb ai/a	PRE	0	0	4	0	0
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	Cyhalofop	0.28	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
16	Imazethapyr (Newpath)	0.063	lb ai/a	1-2 lf rice	31	64	100	98	100
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
17	Imazethapyr	0.063	lb ai/a	1-2 lf rice	38	60	100	98	100
	Penoxsulam	0.031	lb ai/a	1-2 lf rice					
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
18	COC	1.25	% v/v	Preflood					
	Imazethapyr	0.063	lb ai/a	1-2 lf rice	29	68	98	89	100
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
18	Penoxsulam	0.031	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
LSD (P=.05)					13	19	26	21	24

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code	AESVI	AESVI	AESVI	AESVI	AESVI				
Rating Data Type	Control	Control	Control	Control	Control				
Rating Unit	%	%	%	%	%				
Rating Date	17/May/05	2/Jun/05	7/Jun/05	20/Jun/05	28/Jun/05				
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
1	Penoxsulam (Grasp)	0.031	lb ai/a	1-2 lf rice	0	94	92	0	0
	Clomazone (Command)	0.3	lb ai/a	1-2 lf rice					
	COC (crop oil)	2.5	% v/v	1-2 lf rice					
2	Penoxsulam	0.031	lb ai/a	1-2 lf rice	8	96	97	100	100
	Clomazone	0.3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
3	Penoxsulam	0.031	lb ai/a	1-2 lf rice	3	94	25	0	4
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
4	Penoxsulam	0.031	lb ai/a	1-2 lf rice	0	94	86	100	100
	Propanil	3	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Halosulfuron	0.023	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
5	Penoxsulam	0.031	lb ai/a	1-2 lf rice	3	96	100	100	100
	Quinclorac	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
6	Penoxsulam	0.031	lb ai/a	1-2 lf rice	3	96	100	100	100
	Quinclorac (Facet)	0.28	lb ai/a	1-2 lf rice					
	COC	2.5	% v/v	1-2 lf rice					
	Triclopyr	0.25	lb ai/a	Preflood					
	Propanil (Stam 4SC)	4	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
7	Clomazone	0.3	lb ai/a	PRE	86	96	99	100	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
8	Clomazone	0.3	lb ai/a	PRE	86	93	100	100	93
	Penoxsulam	0.031	lb ai/a	Preflood					
	Triclopyr	0.19	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
9	Clomazone	0.3	lb ai/a	PRE	81	94	100	100	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	Halosulfuron (Permit)	0.023	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
10	Clomazone	0.3	lb ai/a	PRE	85	93	100	99	99
	Penoxsulam	0.031	lb ai/a	Preflood					
	Propanil	4	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
11	Clomazone	0.3	lb ai/a	PRE	86	96	99	99	99
	Penoxsulam	0.031	lb ai/a	Preflood					
	Cyhalofop (Clincher)	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					
12	Clomazone	0.3	lb ai/a	PRE	84	97	100	100	100
	Penoxsulam	0.031	lb ai/a	Preflood					
	Bensulfuron (Londax)	0.028	lb ai/a	Preflood					
	Quinclorac	0.25	lb ai/a	Preflood					
	COC	2.5	% v/v	Preflood					

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Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					AESVI	AESVI	AESVI	AESVI	AESVI
Rating Data Type					Control	Control	Control	Control	Control
Rating Unit					%	%	%	%	%
Rating Date					17/May/05	2/Jun/05	7/Jun/05	20/Jun/05	28/Jun/05
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg					
13	Clomazone	0.15	lb ai/a	PRE	40	95	97	94	98
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
14	Clomazone	0.15	lb ai/a	PRE	44	91	96	95	81
	Penoxsulam	0.044	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
15	Clomazone	0.15	lb ai/a	PRE	53	85	85	95	93
	Penoxsulam	0.036	lb ai/a	1 wk pofld					
	Cyhalofop	0.28	lb ai/a	1 wk pofld					
	COC	2.5	% v/v	1 wk pofld					
16	Imazethapyr (Newpath)	0.063	lb ai/a	1-2 lf rice	3	9	11	3	5
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
17	Imazethapyr	0.063	lb ai/a	1-2 lf rice	6	91	86	99	91
	Penoxsulam	0.031	lb ai/a	1-2 lf rice					
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
18	COC	1.25	% v/v	Preflood	1	19	81	96	99
	Imazethapyr	0.063	lb ai/a	1-2 lf rice					
	COC	1.25	% v/v	1-2 lf rice					
	Imazethapyr	0.063	lb ai/a	Preflood					
	Penoxsulam	0.031	lb ai/a	Preflood					
	COC	1.25	% v/v	Preflood					
LSD (P=.05)					17	9	10	5	8

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Crop					Rice
Rating Data Type					Yield
Rating Unit					BU/AC
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	
1	Penoxsulam (Grasp)	0.031	lb ai/a	1-2 lf rice	151.7
	Clomazone (Command)	0.3	lb ai/a	1-2 lf rice	
	COC (crop oil)	2.5	% v/v	1-2 lf rice	
2	Penoxsulam	0.031	lb ai/a	1-2 lf rice	131.0
	Clomazone	0.3	lb ai/a	1-2 lf rice	
	COC	2.5	% v/v	1-2 lf rice	
	Triclopyr (Grandstand)	0.25	lb ai/a	Preflood	
	Halosulfuron	0.023	lb ai/a	Preflood	
3	COC	1.25	% v/v	Preflood	131.5
	Penoxsulam	0.031	lb ai/a	1-2 lf rice	
	Propanil	3	lb ai/a	1-2 lf rice	
	COC	2.5	% v/v	1-2 lf rice	
4	Penoxsulam	0.031	lb ai/a	1-2 lf rice	131.1
	Propanil	3	lb ai/a	1-2 lf rice	
	COC	2.5	% v/v	1-2 lf rice	
	Triclopyr	0.25	lb ai/a	Preflood	
	Halosulfuron	0.023	lb ai/a	Preflood	
	COC	1.25	% v/v	Preflood	
5	Penoxsulam	0.031	lb ai/a	1-2 lf rice	160.0
	Quinclorac	0.28	lb ai/a	1-2 lf rice	
	COC	2.5	% v/v	1-2 lf rice	
6	Penoxsulam	0.031	lb ai/a	1-2 lf rice	157.8
	Quinclorac (Facet)	0.28	lb ai/a	1-2 lf rice	
	COC	2.5	% v/v	1-2 lf rice	
	Triclopyr	0.25	lb ai/a	Preflood	
	Propanil (Stam 4SC)	4	lb ai/a	Preflood	
	COC	2.5	% v/v	Preflood	
7	Clomazone	0.3	lb ai/a	PRE	154.1
	Penoxsulam	0.031	lb ai/a	Preflood	
	COC	2.5	% v/v	Preflood	
8	Clomazone	0.3	lb ai/a	PRE	162.4
	Penoxsulam	0.031	lb ai/a	Preflood	
	Triclopyr	0.19	lb ai/a	Preflood	
	COC	2.5	% v/v	Preflood	
9	Clomazone	0.3	lb ai/a	PRE	158.6
	Penoxsulam	0.031	lb ai/a	Preflood	
	Halosulfuron (Permit)	0.023	lb ai/a	Preflood	
	COC	2.5	% v/v	Preflood	
10	Clomazone	0.3	lb ai/a	PRE	166.3
	Penoxsulam	0.031	lb ai/a	Preflood	
	Propanil	4	lb ai/a	Preflood	
	COC	2.5	% v/v	Preflood	
11	Clomazone	0.3	lb ai/a	PRE	163.2
	Penoxsulam	0.031	lb ai/a	Preflood	
	Cyhalofop (Clincher)	0.25	lb ai/a	Preflood	
	COC	2.5	% v/v	Preflood	
12	Clomazone	0.3	lb ai/a	PRE	161.9
	Penoxsulam	0.031	lb ai/a	Preflood	
	Bensulfuron (Londax)	0.028	lb ai/a	Preflood	
	Quinclorac	0.25	lb ai/a	Preflood	
	COC	2.5	% v/v	Preflood	

University of Arkansas

Penoxsulam (Grasp) in Rice Weed Management Programs

Trial ID: Stut 04-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Crop					Rice
Rating	Data Type				Yield
Rating Unit					BU/AC
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	
13	Clomazone	0.15	lb ai/a	PRE	154.1
	Penoxsulam	0.036	lb ai/a	1 wk pofld	
	COC	2.5	% v/v	1 wk pofld	
14	Clomazone	0.15	lb ai/a	PRE	164.6
	Penoxsulam	0.044	lb ai/a	1 wk pofld	
	COC	2.5	% v/v	1 wk pofld	
15	Clomazone	0.15	lb ai/a	PRE	166.8
	Penoxsulam	0.036	lb ai/a	1 wk pofld	
	Cyhalofop	0.28	lb ai/a	1 wk pofld	
	COC	2.5	% v/v	1 wk pofld	
16	Imazethapyr (Newpath)	0.063	lb ai/a	1-2 lf rice	156.0
	COC	1.25	% v/v	1-2 lf rice	
	Imazethapyr	0.063	lb ai/a	Preflood	
	COC	1.25	% v/v	Preflood	
17	Imazethapyr	0.063	lb ai/a	1-2 lf rice	163.9
	Penoxsulam	0.031	lb ai/a	1-2 lf rice	
	COC	1.25	% v/v	1-2 lf rice	
	Imazethapyr	0.063	lb ai/a	Preflood	
	COC	1.25	% v/v	Preflood	
18	Imazethapyr	0.063	lb ai/a	1-2 lf rice	154.3
	COC	1.25	% v/v	1-2 lf rice	
	Imazethapyr	0.063	lb ai/a	Preflood	
	Penoxsulam	0.031	lb ai/a	Preflood	
	COC	1.25	% v/v	Preflood	
LSD (P=.05)					20.1

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Table 6. Rice Root Tolerance to Penoxsulam (Grasp) in Arkansas

Trial ID: STUT 05-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Objective: To evaluate the effect of penoxsulam (Grasp) and bispyribac (Regiment) on rice root development.

Conclusions: Both penoxsulam and bispyribac caused significant visual root-mass reduction from 12 to 19 days after application. Rate response to penoxsulam was not significant, although root injury was more severe with bispyribac at 0.044 lb/A than at 0.022 lb/A at 12 days after application. However, by 26 days after application, no root injury was evident with either of the herbicides, and rice yields did not differ among treatments.

Crop Description

Crop 1: ORYSI RICE, PADDY (DRY-SEEDED+IRR) **Variety:** Wells
Planting Date: 27/Apr/05 **Planting Method:** DRILLED
Rate: 90 lbs/A **Row Spacing:** 7 in
Plots flushed weekly from planting to flood
Permanent flood: June 13

SITE AND DESIGN

Plot Width: 6 FT **Plot Length:** 18 FT **Reps:** 4 **Study Design:** Randomized complete block

SOIL DESCRIPTION

% Sand: 8	% OM: 0.94	Texture: SILT LOAM
% Silt: 75	pH: 5.8	Soil Name: DEWITT
% Clay: 16	CEC: 14.3	Fert. Level: ADEQUATE

APPLICATION DESCRIPTION

	A	B
Application Date:	29/Apr/05	2/Jun/05
Time of Day:	7:00am	5:45am
Application Method:	Spray	Spray
Application Timing:	PRE	4-5lf
Applic. Placement:	BROSOI	BROFOL
Air Temp., Unit:	70 F	75 F
% Relative Humidity:	67	76
Wind Velocity, Unit:	4 mph	4 mph
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	70 F	70
Soil Moisture:	INADEQUAT	ADEQUATE
% Cloud Cover:	85	95

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	23 PSI	23 PSI
Nozzle Type:	FLAT FAN	FLAT FAN
Nozzle Size:	110015 DG	110015 DG
Nozzle Spacing, Unit:	20 IN	20 IN
Boom Length, Unit:	40 IN	40 IN
Boom Height, Unit:	15 IN	15 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA
Propellant:	CO2	CO2

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Rice Tolerance to Penoxsulam (Grasp) in Arkansas

Trial ID: STUT 05-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Injury is percentage visual root mass reduction compared to root mass of quinclorac + propanil.

Crop Code					Rice	Rice	Rice	
Rating Data Type					Root injury	Root injury	Root injury	
Rating Unit					%	%	%	Rice
Rating Date					14/Jun/05	20/Jun/05	28/Jun/05	Yield
Trt-Eval Interval					12 DA-B	18 DA-B	26 DA-B	BU/AC
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg				
1	Clomazone (Command)	0.3	lb ai/a	PRE	28	53	0	186.4
	Penoxsulam (Grasp)	0.031	lb ai/a	4-5 lf rice				
	COC (crop oil)	2.5	% v/v	4-5 lf rice				
2	Clomazone	0.3	lb ai/a	PRE	15	40	0	186.5
	Penoxsulam	0.062	lb ai/a	4-5 lf rice				
	COC	2.5	% v/v	4-5 lf rice				
3	Clomazone	0.3	lb ai/a	PRE	16	30	0	183.2
	Bispyribac (Regiment)	0.022	lb ai/a	4-5 lf rice				
	Kinetic (adjuvant)	0.25	% v/v	4-5 lf rice				
4	Clomazone	0.3	lb ai/a	PRE	68	33	0	192.3
	Bispyribac	0.044	lb ai/a	4-5 lf rice				
	Kinetic	0.25	% v/v	4-5 lf rice				
5	Clomazone	0.3	lb ai/a	PRE	0	0	0	191.2
	Quinclorac (Facet)	0.3754	lb ai/a	4-5 lf rice				
	Propanil (Stam 4SC)	4	lb ai/a	4-5 lf rice				
	COC	2.5	% v/v	4-5 lf rice				
LSD (P=.05)					22	13	NS	NS

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Table 7. Propanil (Super Wham) plus Cyhalofop (Clincher) for Control of Resistant Barnyardgrass

Trial ID: STUT 08-05
Location: Stuttgart, Ark.

Study Dir.: Dr. Robert Scott, Extension Weed Specialist; Drew Ellis

Objectives:

To evaluate control of propanil-resistant barnyardgrass with propanil formulation Super Wham and cyhalofop (Clincher)

Conclusions: Poor barnyardgrass control resulted when applications of Super Wham plus Clincher were delayed until barnyardgrass was 8 to 10 inches tall rather than when sprayed at the 4- to 6-inch stage, regardless of Clincher or Super Wham rate. Clincher at 6, 8, or 10 oz product/A tended to be more effective than 4 oz/A. Even with Clincher applied at high rates to 4- to 6-inch barnyardgrass, control declined between 4 and 5 weeks after application.

CROP AND WEED DESCRIPTION

Crop: ORYSI Oryza sativa	Rice, seeded, dried paddy	
Variety: Wells	Planting Date: 27/Apr/05	
Planting Method: DRILLED	Rate, Unit: 90 lbs/A	Plots flushed weekly from planting until flood
Row Spacing, Unit: 7 in	Seed Bed: SMOOTH	Permanent flood: June 13

Weed Code	Common Name	Scientific Name
ECHCG	Barnyardgrass (propanil resistant)	Echinochloa crus-galli

SITE AND DESIGN

Plot Width: 6 FT	Plot Length, Unit: 18 FT
Replications: 4	Study Design: Randomized complete block

SOIL DESCRIPTION

% Sand: 8	% OM: 0.94	Texture: SILT LOAM
% Silt: 75	pH: 5.8	Soil Name: DEWITT
% Clay: 16	CEC: 14.3	Fert. Level: ADEQUATE

APPLICATION DESCRIPTION

	A	B	C
Application Date:	23/May/05	2/Jun/05	13/Jun/05
Time of Day:	9:30pm	5:45AM	9:00PM
Application Method:	Spray	Spray	Spray
Application Timing:	4-6" BYG	3-4" BDLF	8-10" BYG
Application Placement:	BROFOL	BROFOL	BROFOL
Air Temperature, Unit:	79 F	75 F	80 F
% Relative Humidity:	81	76	92
Wind Velocity, Unit:	1 MPH	4 MPH	0 MPH
Dew Presence (Y/N):	Y	N	Y
Soil Temperature, Unit:	79 F	70 F	91 F
Soil Moisture:	INADEQUAT	ADEQUATE	EXCESSIVE
% Cloud Cover:	0	95	0

BYG = barnyardgrass; BDLF = broadleaf weeds

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed Code:	ECHCG W	ECHCG W	ECHCG W
Height, Unit:	4 IN	3 IN	8 IN
Crop Code:	ORYSI		
Height:	6 IN		

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	Backpack	Backpack	Backpack
Operating Pressure:	28	28	28
Pressure Unit:	PSI	PSI	PSI
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	110015 DG	110015 DG	110015 DG
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN
Boom Height, Unit:	15 IN	15 IN	15 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	H2O	H2O	H2O
Spray Volume:	10 GPA	10 GPA	10 GPA
Propellant:	CO2	CO2	CO2

University of Arkansas

Propanil (Super Wham) plus Cyhalofop (Clincher) for Control of Resistant Barnyardgrass

Trial ID: STUT 08-05
 Location: Stuttgart, Ark.

Study Dir.: Dr. Robert Scott, Extension Weed Specialist; Drew Ellis

Weed Code					ECHCG	ECHCG	ECHCG	ECHCG	ECHCG	RICE Yield BU/AC
Rating Date					2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05	
Rating Data Type					Control	Control	Control	Control	Control	
Rating Unit					%	%	%	%	%	
Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage						
1	Super Wham	4	qt/a	4-6"byg	85	83	73	75	67	121.0
	Clincher	4	oz/a	4-6"byg						
	Storm	1.5	pt/a	3-4"brdlf						
	Agridex	1	% v/v	3-4"brdlf						
2	Riceshot	5	qt/a	4-6"byg	63	74	62	67	47	90.2
	Agridex	1	% v/v	4-6"byg						
	Storm	1.5	pt/a	3-4"brdlf						
	Agridex	1	% v/v	3-4"brdlf						
3	Super Wham	4	qt/a	4-6"byg	86	83	77	86	82	132.3
	Clincher	6	oz/a	4-6"byg						
	Storm	1.5	pt/a	3-4"brdlf						
	Agridex	1	% v/v	3-4"brdlf						
4	Storm	1.5	pt/a	3-4"bdlf	9	44	38	56	58	82.1
	Agridex	1	% v/v	3-4"bdlf						
	Super Wham	4	qt/a	8-10"byg						
	Clincher	6	oz/a	8-10"byg						
5	Super Wham	4	qt/a	4-6"byg	86	87	86	91	71	150.4
	Clincher	8	oz/a	4-6"byg						
	Storm	1.5	pt/a	3-4"brdlf						
	Agridex	1	% v/v	3-4"brdlf						
6	Storm	1.5	pt/a	3-4"brdlf	13	47	38	54	64	79.3
	Agridex	1	% v/v	3-4"brdlf						
	Super Wham	4	qt/a	8-10"byg						
	Clincher	8	oz/a	8-10"byg						
7	Super Wham	4	qt/a	4-6"byg	86	95	92	97	88	161.7
	Clincher	10	oz/a	4-6"byg						
	Storm	1.5	pt/a	3-4"brdlf						
	Agridex	1	% v/v	3-4"brdlf						
8	Storm	1.5	pt/a	3-4"brdlf	6	36	20	47	68	100.2
	Agridex	1	% v/v	3-4"brdlf						
	Super Wham	4	qt/a	8-10"byg						
	Clincher	10	oz/a	8-10"byg						
9	Super Wham	5	qt/a	4-6"byg	74	78	72	68	64	101.4
	Clincher	4	oz/a	4-6"byg						
	Storm	1.5	pt/a	3-4"brdlf						
	Agridex	1	% v/v	3-4"brdlf						
10	Storm	1.5	pt/a	3-4"brdlf	19	47	29	56	68	107.9
	Agridex	1	% v/v	3-4"brdlf						
	Super Wham	5	qt/a	8-10"byg						
	Clincher	4	oz/a	8-10"byg						
11	Super Wham	5	qt/a	4-6"byg	88	91	83	97	81	119.6
	Clincher	6	oz/a	4-6"byg						
	Storm	1.5	pt/a	3-4"brdlf						
	Agridex	1	% v/v	3-4"brdlf						

University of Arkansas

Propanil (Super Wham) plus Cyhalofop (Clincher) for Control of Resistant Barnyardgrass

Trial ID: Stut 08-05
Location: Stuttgart, Ark.

Study Director: Dr. Robert Scott; Drew Ellis

Weed Code				ECHCG	ECHCG	ECHCG	ECHCG	ECHCG		
Rating Date				2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05	28/Jun/05	RICE	
Rating Data Type				Control	Control	Control	Control	Control	Yield	
Rating Unit				%	%	%	%	%	BU/AC	
Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage						
12	Storm	1.5	pt/a	3-4"brdlf	30	45	21	57	75	96.8
	Agridex	1	% v/v	3-4"brdlf						
	Super Wham	5	qt/a	8-10"byg						
	Clincher	6	oz/a	8-10"byg						
13	Super Wham	5	qt/a	4-6"byg	86	88	87	88	57	146.8
	Clincher	8	oz/a	4-6"byg						
	Storm	1.5	pt/a	3-4"brdlf						
	Agridex	1	% v/v	3-4"brdlf						
14	Storm	1.5	pt/a	3-4"brdlf	6	43	28	60	70	116.8
	Agridex	1	% v/v	3-4"brdlf						
	Super Wham	5	qt/a	8-10"byg						
	Clincher	8	oz/a	8-10"byg						
15	Storm	1.5	pt/a	3-4"brdlf	6	35	19	38	38	69.5
	Agridex	1	% v/v	3-4"brdlf						
	Super Wham	3	qt/a	8-10"byg						
	Clincher	3	oz/a	8-10"byg						
LSD (P=.05)					19	18	19	19	23	34.2

University of Arkansas

Table 8. Propanil (Super Wham) plus Clomazone (Command) for Control of Resistant Barnyardgrass

Trial ID: STUT 09-05
Location: Stuttgart, Ark.

Study Dir.: Dr. Robert Scott, Extension Weed Specialist; Drew Ellis

Objectives:

To evaluate control of propanil-resistant barnyardgrass with Super Wham and Command.

Conclusions: Barnyardgrass control was generally better with Command plus the grass herbicides Ricestar (fenoxaprop) and Clincher (cyhalofop) than with Super Wham. Control with Super Wham was poor (average of 60% 10 days after application and 15% 28 days after application). Although the addition of Command increased barnyardgrass control over that with Super Wham alone, control remained inadequate, and rice yields were reduced compared to rice treated with Ricestar and Clincher.

CROP AND WEED DESCRIPTION

Crop: ORYSI Oryza sativa	Rice, seeded, dried paddy	
Variety: Wells	Planting date: 27/Apr/05	
Planting method: drilled	Rate: 90 lb/A	Plots flushed weekly from planting until flood
Row Spacing: 7 in.	Seedbed: smooth	Permanent flood: June 13

Weed Code	Common Name	Scientific Name
EGHCG	Barnyardgrass	Echinochloa crus-galli

SITE AND DESIGN

Plot Width: 6 FT	Plot Length: 18 FT
Replications: 4	Study Design: Randomized complete block

SOIL DESCRIPTION

% Sand: 8	% OM: 0.94	Texture: SILT LOAM
% Silt: 75	pH: 5.8	Soil Name: DEWITT
% Clay: 16	CEC: 14.3	Fert. Level: ADEQUATE

APPLICATION DESCRIPTION

	A
Application Date:	23/May/05
Time of Day:	9:30 PM
Application Method:	SPRAY
Application Timing:	3-4 leaf ECHCG
Application Placement:	BROFOL
Air Temperature, Unit:	79 F
% Relative Humidity:	81
Wind Velocity, Unit:	1 MPH
Dew Presence (Y/N):	Y
Soil Temperature, Unit:	79 F
Soil Moisture:	INADEQUAT
% Cloud Cover:	0

WEED STAGE AT APPLICATION

	A
Weed Code:	EGHCG
Stage Majority:	4-leaf
Height, Unit:	4 in.

APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	32
Pressure Unit:	PSI
Nozzle Type:	FLAT FAN
Nozzle Size:	110015 DG
Nozzle Spacing, Unit:	20 IN
Boom Height, Unit:	15 IN
Ground Speed, Unit:	3 MPH
Carrier:	water
Spray Volume:	10
Volume Unit:	GPA
Propellant:	CO2

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Propanil-Resistant Barnyardgrass Control with Super Wham (propanil) and clomazone (Command)

Trial ID: STUT 09-05
Location: Stuttgart, Ark.

Study Dir.: Dr. Robert Scott; Drew Ellis

						ECHCG	ECHCG	ECHCG	ECHCG	
						2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05	RICE
						Control	Control	Control	Control	Yield
						%	%	%	%	BU/AC
						10 DA-A	15 DA-A	22 DA-A	28 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit					
<u>TREATMENTS APPLIED TO 3- TO 4-LEAF BARNYARDGRASS</u>										
1	Untreated Check					19	3	12	0	12.6
2	Super Wham (propanil)	4	SC	3	qt/a	63	42	40	20	-- ^z
3	Super Wham	4	SC	4	qt/a	65	51	36	11	28.1
4	Command (clomazone)	3	ME	3	oz/a	80	74	67	51	68.2
	Super Wham	4	SC	3	qt/a					
5	Command	3	ME	4	oz/a	73	66	67	50	95.4
	Super Wham	4	SC	3	qt/a					
6	Command	3	ME	5	oz/a	78	71	66	64	81.4
	Super Wham	4	SC	3	qt/a					
7	Command	3	ME	3	oz/a	71	69	68	43	70.5
	Super Wham	4	SC	4	qt/a					
8	Command	3	ME	4	oz/a	74	70	73	76	86.7
	Super Wham	4	SC	4	qt/a					
9	Command	3	ME	5	oz/a	79	75	63	59	88.4
	Super Wham	4	SC	4	qt/a					
10	Ricestar (fenoxaprop)	0.58	EC	17	oz/a	90	95	96	97	168.9
	Agridex (crop oil)	1	L	1	% v/v					
11	Clincher (cyhalofop)	2.38	EC	15	oz/a	84	92	97	100	161.7
	Agridex	1	L	1	% v/v					
12	Command	3	ME	3	oz/a	88	96	92	95	149.0
	Ricestar	0.58	EC	17	oz/a					
	Agridex	1	L	1	% v/v					
13	Command	3	ME	4	oz/a	91	98	98	99	181.6
	Ricestar	0.58	EC	17	oz/a					
	Agridex	1	L	1	% v/v					
14	Command	3	ME	3	oz/a	87	91	96	98	164.4
	Clincher	2.38	EC	15	oz/a					
	Agridex	1	L	1	% v/v					
15	Command	3	ME	4	oz/a	90	98	100	100	119.1
	Clincher	2.38	EC	15	oz/a					
	Agridex	1	L	1	% v/v					
LSD (P=.05)						11	15	19	24	55.6

^z Data not available.

University of Arkansas

Table 9. Efficacy of IR5878 in a clomazone (Command) Program in Rice

Trial ID: STUT 01-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Objective: To evaluate efficacy of IR5878 applied alone and with other postemergence herbicides for weed control in a rice weed management program with Command.

Conclusions: Early post applications of clomazone + IR5878 controlled northern jointvetch (AESVI), hemp sesbania (SEBEX), and pitted morningglory (IPOLA) until after permanent flood. Preflood applications of IR5878 with or without propanil increased northern jointvetch control over control with clomazone applied PRE. Control of hemp sesbania and pitted morningglory tended to be somewhat better with IR5878 + propanil applied preflood than with IR5878 applied alone preflood. However, pitted morningglory control with propanil + bensulfuron (Duet) was not as good as control with propanil alone (Super Wham) when combined with IR5878. Reduced rates of both IR5878 (0.0131 lb/A) and propanil (0.74 lb/A) were ineffective for controlling the weeds in this experiment. Although penoxsulam had good activity on northern jointvetch, control of pitted morningglory and hemp sesbania was poor. Only treatments containing halosulfuron controlled yellow nutsedge. Only clomazone applied alone PRE and penoxsulam applied alone preflood reduced rice yields to the level of the untreated check plots.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	AESVI	Northern jointvetch	Aeschynomene virginica
2.	SEBEX	Hemp sesbania	Sesbania exaltata
3.	IPOLA	Morningglory, pitted	Ipomoea lacunosa
4.	CYPES	Yellow nutsedge	Cyperus esculentus

Crop: ORYSI RICE, PADDY (DRY SEEDED + IRR) **Variety:** WELLS **Rate:** 90 LB/A
Planting Date: 27/Apr/05 **Planting Method:** DRILLED
Row Spacing: 7 IN **Seed Bed:** SMOOTH
Soil Moisture: DRY **Emergence Date:** 9/May/05

SITE AND DESIGN

Plot Width: 6 FT **Plot Length:** 18 FT **Reps:** 4 **Tillage Type:** CONVENTIONAL
Study Design: Randomized complete block **Flush:** weekly from planting until flood June 13

SOIL DESCRIPTION

% Sand: 8 %	OM: 0.94	Texture: SILT LOAM
% Silt: 75%	pH: 5.8	Soil Name: DEWITT SILT LOAM
% Clay: 16%	CEC: 14.3	Fert. Level: ADEQUATE

APPLICATION DESCRIPTION

	A	B	C
Application Date:	29/Apr/05	17/May/05	6/Jun/05
Time of Day:	7:00am	3:00pm	9:00pm
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPOST	PREFLD
Applic. Placement:	BROSOL	BROFOL	BROFOL
Air Temp., Unit:	70 F	85 F	82 F
% Relative Humidity:	67	75	80
Wind Velocity, Unit:	4 mph	3 MPH	4 MPH
Dew Presence (Y/N):	N	N	N
Soil Temp.:	70 F	78 F	89 F
Soil Moisture:	INADEQUAT	Very Wet	ADEQUATE
% Cloud Cover:	85	0	60

EPOST, early postemergence; PREFLD, preflood

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop Code, Stage:	ORYSI	ORYSI	ORYSI
Stage:		2-leaf , 4 inches	

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	AESVI	AESVI	AESVI 6-8
Stage Scale:		cotyl-1 leaf	6-8 leaf
Weed 2 Code, Stage:	SEBEX	SEBEX	SEBEX
Stage Scale:		1-2 leaf	6-8 leaf
Weed 3 Code, Stage:	IPOLA	IPOLA	IPOLA
Stage Scale:		cotyl-1 leaf	7-8 leaf
Weed 4 Code, Stage:	CYPES	CYPES	CYPES
Stage Scale:		2-4 leaf	6-8 leaf

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	Backpack	Backpack	Backpack
Operating Pressure:	28	28	28
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	80015	80015	80015
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN
Nozzles/Row:	3	3	3
Boom Length, Unit:	40 IN	40 IN	40 IN
Boom Height, Unit:	17 IN	17 IN	17 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	water	water	water
Spray Volume, Unit:	10 GPA	10 GPA	10 GPA
Propellant:	CO2	CO2	CO2

University of Arkansas

Efficacy of IR5878 in a clomazone (Command) Program in Rice

Trial ID: STUT 01-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					AESVI	AESVI	AESVI	AESVI
Rating Data Type					Control	Control	Control	Control
Rating Unit					%	%	%	%
Rating Date					24/May/05	2/June/05	7/June/05	20/June/05
Trt-Eval Interval					7 DA-B	16 DA-B	21 DA-B	14 DA-C
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg				
1	Untreated				0	0	0	0
2	Clomazone (clomazone) + IR5878 + Kinetic (adjuvant)	0.3 0.053 0.2	lb ai/a lb ai/a % v/v	PRE Preflood Preflood	0	0	93	100
3	Clomazone IR5878 + Kinetic	0.3 0.0656 0.2	lb ai/a lb ai/a % v/v	EPOST EPOST EPOST	86	99	80	100
4	Clomazone fb IR5878 + Kinetic + Propanil (Super Wham)	0.3 0.053 0.2 4	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	0	0	72	100
5	Clomazone fb IR5878 + Kinetic + Propanil	0.3 0.0656 0.2 4	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	20	0	85	100
6	Clomazone fb IR 5878 Propanil Kinetic	0.3 0.0131 0.74 0.1	lb ai/a lb ai/a lb ai/a % v/v	PRE Preflood Preflood Preflood	0	0	16	100
7	Clomazone fb IR5878 + Kinetic + Propanil + bensulfuron (Duet)	0.3 0.053 0.2 4.03	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	0	0	90	100
8	Clomazone fb IR5878 + Kinetic + Propanil + bensulfuron (Duet)	0.3 0.0656 0.2 4.03	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	0	0	66	100
9	Penoxsulam (Grasp) Agridex (crop oil)	0.0313 2.5	lb ai/a % v/v	Preflood Preflood	0	0	100	100
10	Clomazone	0.3	lb ai/a	PRE	0	0	13	9
11	Clomazone + Halosulfuron (Permit)	0.3 0.063	lb ai/a lb ai/a	EPOST EPOST	81	99	91	100
12	Clomazone fb Halosulfuron + Propanil	0.3 0.063 4	lb ai/a lb ai/a lb ai/a	PRE Preflood Preflood	0	0	29	100
LSD (P=.05)					16	0.8	15	2

University of Arkansas

Efficacy of IR5878 in a clomazone (Command) Program in Rice

Trial ID: STUT 01-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					AESVI	SEBEX	SEBEX	SEBEX
Rating Data Type					Control	Control	Control	Control
Rating Unit					%	%	%	%
Rating Date					28/Jun/05	24/May/05	2/Jun/05	7/Jun/05
Trt-Eval Interval					22 DA-C	7 DA-B	16 DA-B	21 DA-B
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg				
1	Untreated				5	0	0	0
2	Clomazone (clomazone) + IR5878 + Kinetic (adjuvant)	0.3 0.053 0.2	lb ai/a lb ai/a % v/v	PRE Preflood Preflood	100	0	0	53
3	Clomazone IR5878 + Kinetic	0.3 0.0656 0.2	lb ai/a lb ai/a % v/v	EPOST EPOST EPOST	100	89	100	96
4	Clomazone fb IR5878 + Kinetic + Propanil (Super Wham)	0.3 0.053 0.2 4	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	100	0	0	59
5	Clomazone fb IR5878 + Kinetic + Propanil	0.3 0.0656 0.2 4	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	100	0	0	56
6	Clomazone fb IR 5878 Propanil Kinetic	0.3 0.0131 0.74 0.1	lb ai/a lb ai/a lb ai/a % v/v	PRE Preflood Preflood Preflood	100	0	0	23
7	Clomazone fb IR5878 + Kinetic + Propanil + bensulfuron (Duet)	0.3 0.053 0.2 4.03	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	100	0	0	46
8	Clomazone fb IR5878 + Kinetic + Propanil + bensulfuron (Duet)	0.3 0.0656 0.2 4.03	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	100	0	0	15
9	Penoxsulam (Grasp) Agridex (crop oil)	0.0313 2.5	lb ai/a % v/v	Preflood Preflood	100	0	0	4
10	Clomazone	0.3	lb ai/a	PRE	3	0	0	0
11	Clomazone + Halosulfuron (Permit)	0.3 0.063	lb ai/a lb ai/a	EPOST EPOST	100	94	100	100
12	Clomazone fb Halosulfuron + Propanil	0.3 0.063 4	lb ai/a lb ai/a lb ai/a	PRE Preflood Preflood	100	0	0	14
LSD (P=.05)					4	2	1	26

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Efficacy of IR5878 in a clomazone (Command) Program in Rice

Trial ID: STUT 01-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code	SEBEX	SEBEX	SEBEX	IPOLA
Rating Data Type	Control	Control	Control	Control
Rating Unit	%	%	%	%
Rating Date	14/Jun/05	20/Jun/05	28/Jun/05	24/May/05
Trt-Eval Interval	8 DA-C	14 DA-C	22 DA-C	7 DA-B

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	SEBEX Control %	SEBEX Control %	SEBEX Control %	IPOLA Control %
1	Untreated				0	3	0	0
2	Clomazone (clomazone) + IR5878 + Kinetic (adjuvant)	0.3 0.053 0.2	lb ai/a lb ai/a % v/v	PRE Preflood Preflood	40	83	100	0
3	Clomazone IR5878 + Kinetic	0.3 0.0656 0.2	lb ai/a lb ai/a % v/v	EPOST EPOST EPOST	96	93	94	74
4	Clomazone fb IR5878 + Kinetic + Propanil (Super Wham)	0.3 0.053 0.2 4	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	98	99	98	0
5	Clomazone fb IR5878 + Kinetic + Propanil	0.3 0.0656 0.2 4	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	100	100	89	0
6	Clomazone fb IR 5878 Propanil Kinetic	0.3 0.0131 0.74 0.1	lb ai/a lb ai/a lb ai/a % v/v	PRE Preflood Preflood Preflood	51	78	28	0
7	Clomazone fb IR5878 + Kinetic + Propanil + bensulfuron (Duet)	0.3 0.053 0.2 4.03	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	99	96	98	0
8	Clomazone fb IR5878 + Kinetic + Propanil + bensulfuron (Duet)	0.3 0.0656 0.2 4.03	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	95	100	92	0
9	Penoxsulam (Grasp) Agridex (crop oil)	0.0313 2.5	lb ai/a % v/v	Preflood Preflood	21	65	15	0
10	Clomazone	0.3	lb ai/a	PRE	0	3	0	0
11	Clomazone + Halosulfuron (Permit)	0.3 0.063	lb ai/a lb ai/a	EPOST EPOST	100	100	100	66
12	Clomazone fb Halosulfuron + Propanil	0.3 0.063 4	lb ai/a lb ai/a lb ai/a	PRE Preflood Preflood	93	99	95	0
LSD (P=.05)					17	13	16	7

University of Arkansas

Efficacy of IR5878 in a clomazone (Command) Program in Rice

Trial ID: STUT 01-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					IPOLA	IPOLA	IPOLA	IPOLA
Rating Data Type					Control	Control	Control	Control
Rating Unit					%	%	%	%
Rating Date					2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05
Trt-Eval Interval					16 DA-B	21 DA-B	8 DA-C	14 DA-C
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg				
1	Untreated				0	0	0	0
2	Clomazone (clomazone) + IR5878 + Kinetic (adjuvant)	0.3 0.053 0.2	lb ai/a lb ai/a % v/v	PRE Preflood Preflood	0	24	69	87
3	Clomazone IR5878 + Kinetic	0.3 0.0656 0.2	lb ai/a lb ai/a % v/v	EPOST EPOST EPOST	92	86	95	95
4	Clomazone fb IR5878 + Kinetic + Propanil (Super Wham)	0.3 0.053 0.2 4	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	0	68	95	100
5	Clomazone fb IR5878 + Kinetic + Propanil	0.3 0.0656 0.2 4	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	0	74	95	100
6	Clomazone fb IR 5878 Propanil Kinetic	0.3 0.0131 0.74 0.1	lb ai/a lb ai/a lb ai/a % v/v	PRE Preflood Preflood Preflood	0	31	64	80
7	Clomazone fb IR5878 + Kinetic + Propanil + bensulfuron (Duet)	0.3 0.053 0.2 4.03	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	0	35	74	91
8	Clomazone fb IR5878 + Kinetic + Propanil + bensulfuron (Duet)	0.3 0.0656 0.2 4.03	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	0	37	62	88
9	Propanil + bensulfuron (Duet) Penoxsulam (Grasp) Agridex (crop oil)	0.0313 2.5	lb ai/a % v/v	Preflood Preflood	0	0	8	19
10	Clomazone	0.3	lb ai/a	PRE	0	0	0	0
11	Clomazone + Halosulfuron (Permit)	0.3 0.063	lb ai/a lb ai/a	EPOST EPOST	94	92	100	100
12	Clomazone fb Halosulfuron + Propanil	0.3 0.063 4	lb ai/a lb ai/a lb ai/a	PRE Preflood Preflood	0	29	63	90
LSD (P=.05)					2	29	25	18

University of Arkansas

Efficacy of IR5878 in a clomazone (Command) Program in Rice

Trial ID: STUT 01-05
 Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					IPOLA	CYPES	CYPES	CYPES
Rating Data Type					Control	Control	Control	Control
Rating Unit					%	%	%	%
Rating Date					28/Jun/05	24/May/05	2/Jun/05	7/Jun/05
Trt-Eval Interval					22 DA-C	7 DA-B	16 DA-B	21 DA-B
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg				
1	Untreated				100	0	0	0
2	Clomazone (clomazone) + IR5878 + Kinetic (adjuvant)	0.3 0.053 0.2	lb ai/a lb ai/a % v/v	PRE Preflood Preflood	100	0	0	0
3	Clomazone IR5878 + Kinetic	0.3 0.0656 0.2	lb ai/a lb ai/a % v/v	EPOST EPOST EPOST	100	0	66	61
4	Clomazone fb IR5878 + Kinetic + Propanil (Super Wham)	0.3 0.053 0.2 4	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	100	0	0	36
5	Clomazone fb IR5878 + Kinetic + Propanil	0.3 0.0656 0.2 4	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	100	0	0	43
6	Clomazone fb IR 5878 Propanil Kinetic	0.3 0.0131 0.74 0.1	lb ai/a lb ai/a lb ai/a % v/v	PRE Preflood Preflood Preflood	100	0	0	11
7	Clomazone fb IR5878 + Kinetic + Propanil + bensulfuron (Duet)	0.3 0.053 0.2 4.03	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	100	0	0	0
8	Clomazone fb IR5878 + Kinetic + Propanil + bensulfuron (Duet)	0.3 0.0656 0.2 4.03	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	100	0	0	0
9	Penoxsulam (Grasp) Agridex (crop oil)	0.0313 2.5	lb ai/a % v/v	Preflood Preflood	100	0	0	0
10	Clomazone	0.3	lb ai/a	PRE	100	0	0	0
11	Clomazone + Halosulfuron (Permit)	0.3 0.063	lb ai/a lb ai/a	EPOST EPOST	100	0	81	76
12	Clomazone fb Halosulfuron + Propanil	0.3 0.063 4	lb ai/a lb ai/a lb ai/a	PRE Preflood Preflood	100	0	0	68
LSD (P=.05)					NS	NS	4	5

University of Arkansas

Efficacy of IR5878 in a clomazone (Command) Program in Rice

Trial ID: STUT 01-05
Location: Stuttgart, Ark.

Study Dir.: Drew Ellis; Ron Talbert

Weed Code					CYPES	CYPES	CYPES	
Rating Data Type					Control	Control	Control	Rice yield
Rating Unit					%	%	%	BU/AC
Rating Date					14/Jun/05	20/Jun/05	28/Jun/05	
Trt-Eval Interval					8 DA-C	14 DA-C	22 DA-C	
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg				
1	Untreated				0	0	0	115.8
2	Clomazone (clomazone) + IR5878 + Kinetic (adjuvant)	0.3 0.053 0.2	lb ai/a lb ai/a % v/v	PRE Preflood Preflood	12	14	4	168.4
3	Clomazone IR5878 + Kinetic	0.3 0.0656 0.2	lb ai/a lb ai/a % v/v	EPOST EPOST EPOST	53	10	0	188.1
4	Clomazone fb IR5878 + Kinetic + Propanil (Super Wham)	0.3 0.053 0.2 4	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	64	20	0	191.0
5	Clomazone fb IR5878 + Kinetic + Propanil	0.3 0.0656 0.2 4	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	70	45	15	181.6
6	Clomazone fb IR 5878 Propanil Kinetic	0.3 0.0131 0.74 0.1	lb ai/a lb ai/a lb ai/a % v/v	PRE Preflood Preflood Preflood	10	8	0	166.0
7	Clomazone fb IR5878 + Kinetic + Propanil + bensulfuron (Duet)	0.3 0.053 0.2 4.03	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	36	26	9	181.5
8	Clomazone fb IR5878 + Kinetic + Propanil + bensulfuron (Duet)	0.3 0.0656 0.2 4.03	lb ai/a lb ai/a % v/v lb ai/a	PRE Preflood Preflood Preflood	45	30	24	167.2
9	Penoxsulam (Grasp) Agridex (crop oil)	0.0313 2.5	lb ai/a % v/v	Preflood Preflood	0	0	0	134.4
10	Clomazone	0.3	lb ai/a	PRE	0	0	0	162.3
11	Clomazone + Halosulfuron (Permit)	0.3 0.063	lb ai/a lb ai/a	EPOST EPOST	100	100	100	201.2
12	Clomazone fb Halosulfuron + Propanil	0.3 0.063 4	lb ai/a lb ai/a lb ai/a	PRE Preflood Preflood	93	95	99	172.1
LSD (P=.05)					13	11	9	38.0

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Table 10. Imazethapyr (Newpath) in Conventional and Stale Seedbed Systems

Trial ID: STUT 11-05 **Study Dir.:** Ron Talbert, Drew Ellis, Brian Ottis
Location: Stuttgart, Ark.

Objective: 1) Evaluate barnyardgrass control with Newpath for optimal control based upon barnyardgrass growth stage in silt loam
 2) Evaluate rice tolerance at each application timing
 3) Compare barnyardgrass control in a conventional and stale seedbed production system

Conclusions: By mid-June, barnyardgrass and broadleaf signalgrass were controlled 90 to 100% regardless of imazethapyr treatment or tillage practice (stale seedbed or conventional tillage). Rice yields did not differ among treatments.

CROP AND WEED DESCRIPTION

Weed Code	Common Name	Scientific Name
ECHCG	barnyardgrass	Echinochloa crus-galli (L.) Beauv.
BRAPP	broadleaf signalgrass	Brachiaria platyphylla (Griseb.) Nash

Crop: ORYSI Rice, Paddy (Dry-seeded) **Variety:** CL161
Planting Date: 5/May/05 **Planting Method:** DRILLED **Plots flushed weekly from planting until flood**
Rate: 90 LB/A **Depth:** 1 IN **Permanent flood:** June 13
Row Spacing: 7 in **Seed Bed:** SMOOTH/TRASHY

SITE AND DESIGN

Plot Width: 6 FT **Plot Length:** 18 FT **Reps:** 4
Tillage Type: CONV./STALE SEEDBED **Study Design:** randomized complete block

SOIL DESCRIPTION

% Sand: 8 %	OM: 0.94	Texture: silt loam
% Silt: 75	pH: 5.8	Soil Name: Dewitt
% Clay: 16	CEC: 14.3	Fert. Level: adequate

APPLICATION DESCRIPTION

	A	B	C	D	E	F	G
Application Date:	15/Apr/05	6/May/05	12/May/05	2/Jun/05	13/Jun/05	13/Jun/05	20/Jun/05
Time of Day:	7:30 AM	8:00 AM	9:00AM	5:45AM	9:00PM	9:00PM	9:00 PM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	14-DPP	PPI	PRE	2LF	4LF	5-6LF	7 LF
Applic. Placement:	BROSOI	BROSOI	BROSOI	BROFOL	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	71 F	62 F	84 F	75 F	80 F	80 F	83 F
% Relative Humidity:	70	70	86	76	92	92	86
Wind Velocity, Unit:	3 S	0.5 S	0 MPH	4 MPH	0 MPH	0 MPH	0 MPH
Dew Presence (Y/N):	Y	N	N	N	Y	Y	N
Soil Temp., Unit:	68 F	55 F	70 F	70 F	91 F	91 F	98 F
Soil Moisture:	adequate	inadequat	excessive	adequate	excessive	excessive	excessive
% Cloud Cover:	25	0	0	95	0	0	0

CROP STAGE AT EACH APPLICATION

	A	B	C	D	E	F	G
Crop Code:	ORYSI	ORYSI	ORYSI	ORYSI	ORYSI	ORYSI	ORYSI
Stage Scale:	14-DPP	PPI	PRE	2 LEAF	4 LF	5-6 LF	7 LF
Height, Unit:				2 IN	6 IN	8 IN	12 IN

WEED STAGE AT EACH APPLICATION

	A	B	C	D	E	F	G
Weed 1 Code, Stage:	ECHCG	ECHCG	ECHCG	ECHCG	ECHCG	ECHCG	ECHCG
Stage Scale:	14-DPP	PPI	PRE	2 LF	3 LF	4 LF	6-7 LF
Weed 2 Code, Stage:	BRAPP	BRAPP	BRAPP	BRAPP	BRAPP	BRAPP	BRAPP
Stage Scale:	14-DPP	PPI	PRE	2 LF	3 LF	4 LF	6-7 LF

APPLICATION EQUIPMENT

	A	B	C	D	E
Appl. Equipment:	Backpack	Backpack	Backpack	Backpack	Backpack
Operating Pressure:	23 PSI	23 PSI	23 PSI	23 PSI	23 PSI
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	110015 DG	110015 DG	80015 DG	80015 DG	80015 DG
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN	20 IN
Boom Length, Unit:	40 IN	40 IN	40 IN	40 IN	40 IN
Boom Height, Unit:	15 IN	15 IN	15 IN	15 IN	15 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH	3 MPH
Incorporation Equip.:		POWER TIL			
Hours to Incorp.:		0.5			
Incorp. Depth, Unit:		2 IN			
Carrier:	WATER	WATER	WATER	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA	10 GPA	10 GPA	10 GPA
Propellant:	CO2	CO2	CO2	CO2	CO2

	F	G
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	23 PSI	23 PSI
Nozzle Type:	FLAT FAN	FLAT FAN
Nozzle Size:	80015 DG	80015 DG
Nozzle Spacing, Unit:	20 IN	20 IN
Boom Length, Unit:	40 IN	40 IN
Boom Height, Unit:	15 IN	15 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA
Propellant:	CO2	CO2

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Imazethapyr (Newpath) in Conventional and Stale Seedbed Systems

Trial ID: STUT 11-05
 Location: Stuttgart, Ark.

Study Dir.: Ron Talbert, Drew Ellis, Brian Ottis

Weed Code	ECHCG	ECHCG	ECHCG	ECHCG
Rating Data Type	Control	Control	Control	Control
Rating Unit	%	%	%	%
Rating Date	2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05
Trt-Eval Interval	21 DA-C	5 DA-D	12 DA-D	7 DA-E,F

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code	ECHCG Control %	ECHCG Control %	ECHCG Control %	ECHCG Control %
1	Untreated check (stale)					0	0	0	0
2	Untreated check (conventional)					0	0	0	0
3	Stale seedbed					96	94	100	100
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
4	Conventional					77	98	100	100
	Newpath	0.0625	lb ai/a	PPI	B				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
5	Stale seedbed					95	95	99	95
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	4 LEAF	E				
	AG-98	0.25	% v/v	4 LEAF	E				
6	Conventional					100	91	93	98
	Newpath	0.0625	lb ai/a	PPI	B				
	Newpath	0.0625	lb ai/a	4 LEAF	E				
	AG-98	0.25	% v/v	4 LEAF	E				
7	Stale seedbed					100	98	99	94
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	5-6 LEAF	F				
	AG-98	0.25	% v/v	5-6 LEAF	F				
8	Conventional					100	98	98	100
	Newpath	0.0625	lb ai/a	PPI	B				
	Newpath	0.0625	lb ai/a	5-6 LEAF	F				
	AG-98	0.25	% v/v	5-6 LEAF	F				
9	Stale seedbed					100	96	97	100
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	7 LEAF	G				
	AG-98	0.25	% v/v	7 LEAF	G				
10	Conventional					100	96	96	95
	Newpath	0.0625	lb ai/a	PPI	B				
	Newpath	0.0625	lb ai/a	7 LEAF	G				
	AG-98	0.25	% v/v	7 LEAF	G				
11	Stale seedbed					95	95	100	98
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
12	Conventional					99	91	100	100
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				

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Imazethapyr (Newpath) in Conventional and Stale Seedbed Systems

Trial ID: STUT 11-05
 Location: Stuttgart, Ark.

Study Dir.: Ron Talbert, Drew Ellis, Brian Ottis

Weed Code	ECHCG	ECHCG	ECHCG	ECHCG
Rating Data Type	Control	Control	Control	Control
Rating Unit	%	%	%	%
Rating Date	2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05
Trt-Eval Interval	21 DA-C	5 DA-D	12 DA-D	7 DA-E,F

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code	ECHCG Control %	ECHCG Control %	ECHCG Control %	ECHCG Control %
13	Stale seedbed					98	95	98	100
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	4 LEAF	E				
	AG-98	0.25	% v/v	4 LEAF	E				
14	Conventional					100	100	99	100
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	4 LEAF	E				
	AG-98	0.25	% v/v	4 LEAF	E				
15	Stale seedbed					100	100	100	100
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	5-6 LEAF	F				
	AG-98	0.25	% v/v	5-6 LEAF	F				
16	Conventional					100	100	100	100
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	5-6 LEAF	F				
	AG-98	0.25	% v/v	5-6 LEAF	F				
17	Stale seedbed					95	90	100	100
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	7 LEAF	G				
	AG-98	0.25	% v/v	7 LEAF	G				
18	Conventional					85	90	100	100
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	7 LEAF	G				
	AG-98	0.25	% v/v	7 LEAF	G				
19	Stale seedbed					0	97	100	97
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
	Newpath	0.0625	lb ai/a	4 LEAF	E				
	AG-98	0.25	% v/v	4 LEAF	E				
20	Conventional					0	99	99	100
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
	Newpath	0.0625	lb ai/a	4 LEAF	E				
	AG-98	0.25	% v/v	4 LEAF	E				
21	Stale seedbed					0	90	100	100
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
	Newpath	0.0625	lb ai/a	5-6 LEAF	F				
	AG-98	0.25	% v/v	5-6 LEAF	F				
22	Conventional					0	96	100	100
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
	Newpath	0.0625	lb ai/a	5-6 LEAF	F				
	AG-98	0.25	% v/v	5-6 LEAF	F				

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Imazethapyr (Newpath) in Conventional and Stale Seedbed Systems

Trial ID: STUT 11-05
 Location: Stuttgart, Ark.

Study Dir.: Ron Talbert, Drew Ellis, Brian Ottis

Weed Code	ECHCG	ECHCG	ECHCG	ECHCG
Rating Data Type	Control	Control	Control	Control
Rating Unit	%	%	%	%
Rating Date	2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05
Trt-Eval Interval	21 DA-C	5 DA-D	12 DA-D	7 DA-E,F

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code				
23	Stale seedbed					0	96	100	99
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
	Newpath	0.0625	lb ai/a	7 LEAF	G				
	AG-98	0.25	% v/v	7 LEAF	G				
24	Conventional					0	95	100	100
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
	Newpath	0.0625	lb ai/a	7 LEAF	G				
	AG-98	0.25	% v/v	7 LEAF	G				
LSD (P=.05)						14	11	5	3

University of Arkansas

Imazethapyr (Newpath) in Conventional and Stale Seedbed Systems

Trial ID: STUT 11-05
 Location: Stuttgart, Ark.

Study Dir.: Ron Talbert, Drew Ellis, Brian Ottis

Weed Code	BRAPP	BRAPP	BRAPP	BRAPP
Rating Data Type	Control	Control	Control	Control
Rating Unit	%	%	%	%
Rating Date	2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05
Trt-Eval Interval	21 DA-C	5 DA-D	12 DA-D	7 DA-E,F

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code				
1	Untreated check (stale)					0	0	0	0
2	Untreated check (conventional)					0	0	0	0
3	Stale seedbed					98	95	100	100
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
4	Conventional					80	99	100	100
	Newpath	0.0625	lb ai/a	PPI	B				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
5	Stale seedbed					95	100	99	96
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	4 LEAF	E				
	AG-98	0.25	% v/v	4 LEAF	E				
6	Conventional					100	96	88	88
	Newpath	0.0625	lb ai/a	PPI	B				
	Newpath	0.0625	lb ai/a	4 LEAF	E				
	AG-98	0.25	% v/v	4 LEAF	E				
7	Stale seedbed					100	90	98	92
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	5-6 LEAF	F				
	AG-98	0.25	% v/v	5-6 LEAF	F				
8	Conventional					100	97	98	100
	Newpath	0.0625	lb ai/a	PPI	B				
	Newpath	0.0625	lb ai/a	5-6 LEAF	F				
	AG-98	0.25	% v/v	5-6 LEAF	F				
9	Stale seedbed					99	91	100	100
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	7 LEAF	G				
	AG-98	0.25	% v/v	7 LEAF	G				
10	Conventional					99	96	97	94
	Newpath	0.0625	lb ai/a	PPI	B				
	Newpath	0.0625	lb ai/a	7 LEAF	G				
	AG-98	0.25	% v/v	7 LEAF	G				
11	Stale seedbed					97	100	85	97
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
12	Conventional					99	95	100	100
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				

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Imazethapyr (Newpath) in Conventional and Stale Seedbed Systems

Trial ID: STUT 11-05
 Location: Stuttgart, Ark.

Study Dir.: Ron Talbert, Drew Ellis, Brian Ottis

Weed Code						BRAPP	BRAPP	BRAPP	BRAPP
Rating Data Type						Control	Control	Control	Control
Rating Unit						%	%	%	%
Rating Date						2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05
Trt-Eval Interval						21 DA-C	5 DA-D	12 DA-D	7 DA-E,F
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code				
13	Stale seedbed					98	94	100	100
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	4 LEAF	E				
	AG-98	0.25	% v/v	4 LEAF	E				
14	Conventional					100	100	100	100
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	4 LEAF	E				
	AG-98	0.25	% v/v	4 LEAF	E				
15	Stale seedbed					100	100	100	100
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	5-6 LEAF	F				
	AG-98	0.25	% v/v	5-6 LEAF	F				
16	Conventional					100	100	100	100
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	5-6 LEAF	F				
	AG-98	0.25	% v/v	5-6 LEAF	F				
17	Stale seedbed					98	90	100	100
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	7 LEAF	G				
	AG-98	0.25	% v/v	7 LEAF	G				
18	Conventional					83	90	100	95
	Newpath	0.0625	lb ai/a	PRE	C				
	Newpath	0.0625	lb ai/a	7 LEAF	G				
	AG-98	0.25	% v/v	7 LEAF	G				
19	Stale seedbed					0	90	100	99
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
	Newpath	0.0625	lb ai/a	4 LEAF	E				
	AG-98	0.25	% v/v	4 LEAF	E				
20	Conventional					0	100	100	100
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
	Newpath	0.0625	lb ai/a	4 LEAF	E				
	AG-98	0.25	% v/v	4 LEAF	E				
21	Stale seedbed					0	93	100	100
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
	Newpath	0.0625	lb ai/a	5-6 LEAF	F				
	AG-98	0.25	% v/v	5-6 LEAF	F				
22	Conventional					0	96	100	100
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
	Newpath	0.0625	lb ai/a	5-6 LEAF	F				
	AG-98	0.25	% v/v	5-6 LEAF	F				

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Imazethapyr (Newpath) in Conventional and Stale Seedbed Systems

Trial ID: STUT 11-05
 Location: Stuttgart, Ark.

Study Dir.: Ron Talbert, Drew Ellis, Brian Ottis

Weed Code	BRAPP	BRAPP	BRAPP	BRAPP
Rating Data Type	Control	Control	Control	Control
Rating Unit	%	%	%	%
Rating Date	2/Jun/05	7/Jun/05	14/Jun/05	20/Jun/05
Trt-Eval Interval	21 DA-C	5 DA-D	12 DA-D	7 DA-E,F

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code				
23	Stale seedbed					0	95	100	98
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A				
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
	Newpath	0.0625	lb ai/a	7 LEAF	G				
	AG-98	0.25	% v/v	7 LEAF	G				
24	Conventional					0	95	100	100
	Newpath	0.0625	lb ai/a	2 LEAF	D				
	AG-98	0.25	% v/v	2 LEAF	D				
	Newpath	0.0625	lb ai/a	7 LEAF	G				
	AG-98	0.25	% v/v	7 LEAF	G				
LSD (P=.05)						15	10	11	6

University of Arkansas

Imazethapyr (Newpath) in Conventional and Stale Seedbed Systems

Trial ID: STUT 11-05
 Location: Stuttgart, Ark.

Study Dir.: Ron Talbert, Drew Ellis, Brian Ottis

Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

Rice yield
 BU/AC

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code	Rice yield BU/AC
1	Untreated check (stale)					87.6
2	Untreated check (conventional)					71.5
3	Stale seedbed					130.2
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	2 LEAF	D	
	AG-98	0.25	% v/v	2 LEAF	D	
4	Conventional					101.0
	Newpath	0.0625	lb ai/a	PPI	B	
	Newpath	0.0625	lb ai/a	2 LEAF	D	
	AG-98	0.25	% v/v	2 LEAF	D	
5	Stale seedbed					93.6
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	4 LEAF	E	
	AG-98	0.25	% v/v	4 LEAF	E	
6	Conventional					108.4
	Newpath	0.0625	lb ai/a	PPI	B	
	Newpath	0.0625	lb ai/a	4 LEAF	E	
	AG-98	0.25	% v/v	4 LEAF	E	
7	Stale seedbed					96.4
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	5-6 LEAF	F	
	AG-98	0.25	% v/v	5-6 LEAF	F	
8	Conventional					98.9
	Newpath	0.0625	lb ai/a	PPI	B	
	Newpath	0.0625	lb ai/a	5-6 LEAF	F	
	AG-98	0.25	% v/v	5-6 LEAF	F	
9	Stale seedbed					117.3
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	7 LEAF	G	
	AG-98	0.25	% v/v	7 LEAF	G	
10	Conventional					110.0
	Newpath	0.0625	lb ai/a	PPI	B	
	Newpath	0.0625	lb ai/a	7 LEAF	G	
	AG-98	0.25	% v/v	7 LEAF	G	
11	Stale seedbed					123.0
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	PRE	C	
	Newpath	0.0625	lb ai/a	2 LEAF	D	
	AG-98	0.25	% v/v	2 LEAF	D	
12	Conventional					138.9
	Newpath	0.0625	lb ai/a	PRE	C	
	Newpath	0.0625	lb ai/a	2 LEAF	D	
	AG-98	0.25	% v/v	2 LEAF	D	

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Imazethapyr (Newpath) in Conventional and Stale Seedbed Systems

Trial ID: STUT 11-05
Location: Stuttgart, Ark.

Study Dir.: Ron Talbert, Drew Ellis, Brian Ottis

Rating Data Type
Rating Unit
Rating Date
Trt-Eval Interval

Rice yield
BU/AC

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code	
13	Stale seedbed					146.2
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	PRE	C	
	Newpath	0.0625	lb ai/a	4 LEAF	E	
	AG-98	0.25	% v/v	4 LEAF	E	
14	Conventional					119.9
	Newpath	0.0625	lb ai/a	PRE	C	
	Newpath	0.0625	lb ai/a	4 LEAF	E	
	AG-98	0.25	% v/v	4 LEAF	E	
15	Stale seedbed					92.4
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	PRE	C	
	Newpath	0.0625	lb ai/a	5-6 LEAF	F	
	AG-98	0.25	% v/v	5-6 LEAF	F	
16	Conventional					111.8
	Newpath	0.0625	lb ai/a	PRE	C	
	Newpath	0.0625	lb ai/a	5-6 LEAF	F	
	AG-98	0.25	% v/v	5-6 LEAF	F	
17	Stale seedbed					116.7
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	PRE	C	
	Newpath	0.0625	lb ai/a	7 LEAF	G	
	AG-98	0.25	% v/v	7 LEAF	G	
18	Conventional					113.4
	Newpath	0.0625	lb ai/a	PRE	C	
	Newpath	0.0625	lb ai/a	7 LEAF	G	
	AG-98	0.25	% v/v	7 LEAF	G	
19	Stale seedbed					108.9
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	2 LEAF	D	
	AG-98	0.25	% v/v	2 LEAF	D	
	Newpath	0.0625	lb ai/a	4 LEAF	E	
	AG-98	0.25	% v/v	4 LEAF	E	
20	Conventional					107.0
	Newpath	0.0625	lb ai/a	2 LEAF	D	
	AG-98	0.25	% v/v	2 LEAF	D	
	Newpath	0.0625	lb ai/a	4 LEAF	E	
	AG-98	0.25	% v/v	4 LEAF	E	
21	Stale seedbed					128.2
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	2 LEAF	D	
	AG-98	0.25	% v/v	2 LEAF	D	
	Newpath	0.0625	lb ai/a	5-6 LEAF	F	
	AG-98	0.25	% v/v	5-6 LEAF	F	
22	Conventional					123.4
	Newpath	0.0625	lb ai/a	2 LEAF	D	
	AG-98	0.25	% v/v	2 LEAF	D	
	Newpath	0.0625	lb ai/a	5-6 LEAF	F	
	AG-98	0.25	% v/v	5-6 LEAF	F	

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Imazethapyr (Newpath) in Conventional and Stale Seedbed Systems

Trial ID: STUT 11-05
 Location: Stuttgart, Ark.

Study Dir.: Ron Talbert, Drew Ellis, Brian Ottis

Weed Code
 Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

Rice yield
 BU/AC

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code	Rice yield BU/AC
23	Stale seedbed					119.9
	Roundup UltraMax	1.0	lb ai/a	14-DPP	A	
	Newpath	0.0625	lb ai/a	2 LEAF	D	
	AG-98	0.25	% v/v	2 LEAF	D	
	Newpath	0.0625	lb ai/a	7 LEAF	G	
	AG-98	0.25	% v/v	7 LEAF	G	
24	Conventional					122.9
	Newpath	0.0625	lb ai/a	2 LEAF	D	
	AG-98	0.25	% v/v	2 LEAF	D	
	Newpath	0.0625	lb ai/a	7 LEAF	G	
	AG-98	0.25	% v/v	7 LEAF	G	
LSD (P=.05)						NS

University of Arkansas

Table 11. Evaluation of Conventional Herbicide Programs in Two Tillage Systems

Trial ID: STUT 10-05
Location: Stuttgart, Ark.

Study Dir.: Talbert, Ellis, Ottis

Objective: To evaluate conventional herbicide programs in stale-seedbed and conventional tillage systems.

Conclusions: Control of barnyardgrass and broadleaf signalgrass was generally >95% with treatments containing Command (clomazone) or Facet (quinclorac) applied 14 days preplant (DPP) in stale seedbed or PRE in conventional tillage or with Command applied delayed PRE (DPRE) in either tillage system, and rice yields were not reduced. Facet was not effective DPRE unless it was combined with Prowl (pendimethalin). Rice yields with Facet applied DPRE alone were reduced. Control of barnyardgrass and broadleaf signalgrass, however, was excellent with Facet plus Prowl applied DPRE and with clomazone treatments followed by Stam (propanil) early POST (EPOST) until at least 1 week after permanent flood. Delaying herbicide treatment until EPOST generally resulted in poorer control than applying DPRE and PRE treatments and following with Stam EPOST.

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	ECHCG	barnyardgrass	Echinochloa crus-galli
2.	BRAPP	broadleaf signalgrass	Brachiaria platyphylla

Crop: ORYSI rice, paddy (dry-seeded+irr) **Variety:** Wells
Planting Date: 5/May/05 **Planting Method:** drilled
Rate: 90 LB/A **Depth:** 0.75 in **Row Spacing:** 7 IN **Plots flushed weekly until flood**
Seed Bed: smooth/trashy **Soil Moisture:** adequate **Permanent flood June 13**

SITE AND DESIGN

Plot Width: 6 FT **Plot Length:** 18 FT **Reps:** 4
Tillage Type: CONV./STALE SEEDBED **Study Design:** randomized complete block

SOIL DESCRIPTION

% Sand: 8 % **OM:** 0.94 **Texture:** SILT LOAM
% Silt: 75 **pH:** 5.8 **Soil Name:** DEWITT Permanent flood: June 13
% Clay: 16 **CEC:** 14.3 **Fert. Level:** ADEQUATE
Overall Moisture Conditions: wet-wet-dry

APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	15/Apr/05	6/May/05	11/May/05	2/Jun/05
Time of Day:	7:30 AM	8:00 am	9:00 pm	5:45AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	14-DPP	PRE	DPRE	EPOST
Applic. Placement:	BROSOL	BROSOL	BROSOL	BROFOL
Air Temp., Unit:	71 F	62 F	84 F	75 F
% Relative Humidity:	70	70	86	76
Wind Velocity, Unit:	3 S	0.5 S	0.5 S	4 MPH
Dew Presence (Y/N):	Y	N	N	N
Water Hardness:	N/A	N/A	N/A	N/A
Soil Temp., Unit:	65 F	55 F	70 F	70 F
Soil Moisture:	ADEQUATE	INADEQUAT	EXCESSIVE	ADEQUATE
% Cloud Cover:	25	0	0	95

CROP STAGE AT EACH APPLICATION

	A	B	C	D
CropCode:	ORYSI	ORYSI	ORYSI	ORYSI
Stage:	14-DPP	PRE	DPRE	EPOST
Height, Unit:				8 IN

WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code:	ECHCG	ECHCG	ECHCG	ECHCG
Stage:	14-DPP	PRE	DPRE	3-4 LF
Weed 2 Code:	BRAPP	BRAPP	BRAPP	BRAPP
Stage:	14-DPP	PRE	DPRE	3-4 LF

APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	Backpack	Backpack	Backpack	Backpack
Operating Pressure:	23 PSI	23 PSI	23 PSI	23 PSI
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	11015 DG	11015 DG	80015 DG	80015 DG
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN
Boom Length, Unit:	40 IN	40 IN	40 IN	40 IN
Boom Height, Unit:	15 IN	15 IN	17 IN	17 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA	10 GPA	10 GPA
Propellant:	CO2	CO2	CO2	CO2

University of Arkansas

Evaluation of Conventional Herbicide Programs in Two Tillage Systems

Trial ID: STUT 10-05
Location: Stuttgart, Ark.

Study Dir.: Talbert, Ellis, Ottis
Investigator: Ron Talbert

Weed Code					ECHCG	ECHCG	ECHCG
Rating Data Type					Rice bleach	Control	Control
Rating Unit					%	%	%
Rating Date					24/May/05	2/Jun/05	7/Jun/05
Trt-Eval Interval					13 DA-C	22 DA-C	5 DA-D
						14/Jun/05	12 DA-D

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code	Rice bleach %	ECHCG Control %	ECHCG Control %	ECHCG Control %
1	Stale Seedbed Untreated					0	11	0	0
2	Conventional-till untreated					0	9	8	5
3	Stale seedbed					0	100	100	100
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Command (clomazone)	0.4	lb ai/a	14-DPP	A				
	Stam (propanil)	3	lb ai/a	EPOST	D				
4	Conventional					4	100	100	93
	Command	0.4	lb ai/a	PRE	B				
	Stam	3	lb ai/a	EPOST	D				
5	Stale seedbed					3	100	98	96
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Command	0.8	lb ai/a	14-DPP	A				
	Stam	3	lb ai/a	EPOST	D				
6	Conventional					16	100	100	94
	Command	0.8	lb ai/a	PRE	B				
	Stam	3	lb ai/a	EPOST	D				
7	Stale seedbed					0	100	95	100
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Facet	0.25	lb ai/a	14-DPP	A				
	Stam	3	lb ai/a	EPOST	D				
8	Conventional					2	100	100	97
	Facet	0.25	lb ai/a	PRE	B				
	Stam	3	lb ai/a	EPOST	D				
9	Stale seedbed					7	100	98	97
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Command	0.4	lb ai/a	DPRE	C				
	Stam	3	lb ai/a	EPOST	D				
10	Conventional					6	100	100	98
	Command	0.4	lb ai/a	DPRE	C				
	Stam	3	lb ai/a	EPOST	D				
11	Stale seedbed					12	99	97	95
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Command	0.8	lb ai/a	DPRE	C				
	Stam	3	lb ai/a	EPOST	D				
12	Conventional					6	100	100	92
	Command	0.8	lb ai/a	DPRE	C				
	Stam	3	lb ai/a	EPOST	D				
13	Stale seedbed					0	95	85	97
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Prowl (pendimethalin)	1	lb ai/a	DPRE	C				
	Stam	3	lb ai/a	EPOST	D				
14	Conventional					0	100	95	89
	Prowl	1	lb ai/a	DPRE	C				
	Stam	3	lb ai/a	EPOST	D				
15	Stale seedbed					0	38	63	70
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Facet (quinclorac)	0.25	lb ai/a	DPRE	C				

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Evaluation of Conventional Herbicide Programs in Two Tillage Systems

Trial ID: STUT 10-05
 Location: Stuttgart, Ark.

Study Dir.: Talbert, Ellis, Ottis
 Investigator: Ron Talbert

Weed Code						Rice bleach	ECHCG	ECHCG	ECHCG
Rating Data Type						%	Control	Control	Control
Rating Unit						%	%	%	%
Rating Date						24/May/05	2/Jun/05	7/Jun/05	14/Jun/05
Trt-Eval Interval						13 DA-C	22 DA-C	5 DA-D	12 DA-D
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code				
16	Conventional Facet	0.25	lb ai/a	DPRE	C	0	41	60	75
17	Stale seedbed Roundup UltraMax	1	lb ai/a	14-DPP	A	0	98	100	95
	Prowl	1	lb ai/a	DPRE	C				
	Facet	0.25	lb ai/a	DPRE	C				
18	Conventional Prowl	1	lb ai/a	DPRE	C	0	91	100	100
	Facet	0.25	lb ai/a	DPRE	C				
19	Stale seedbed Roundup UltraMax	1	lb ai/a	14-DPP	A	0	78	78	95
	Command	0.4	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
20	Conventional Command	0.4	lb ai/a	EPOST	D	7	69	82	95
	Stam	3	lb ai/a	EPOST	D				
21	Stale seedbed Roundup UltraMax	1	lb ai/a	14-DPP	A	0	51	54	74
	Command	0.8	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
22	Conventional Command	0.8	lb ai/a	EPOST	D	1	76	65	77
	Stam	3	lb ai/a	EPOST	D				
23	Stale seedbed Roundup UltraMax	1	lb ai/a	14-DPP	A	0	53	51	24
	Prowl	1	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
24	Conventional Prowl	1	lb ai/a	EPOST	D	0	56	60	62
	Stam	3	lb ai/a	EPOST	D				
25	Stale seedbed Roundup UltraMax	1	lb ai/a	14-DPP	A	4	74	66	81
	Facet	0.25	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
26	Conventional Facet	0.25	lb ai/a	EPOST	D	0	64	73	98
	Stam	3	lb ai/a	EPOST	D				
27	Stale seedbed Roundup UltraMax	1	lb ai/a	14-DPP	A	0	45	65	73
	Facet	0.19	lb ai/a	EPOST	D				
	Prowl	1	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
28	Conventional Facet	0.19	lb ai/a	EPOST	D	0	54	73	100
	Prowl	1	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
LSD (P=.05)						6	23	24	20

University of Arkansas

Evaluation of Conventional Herbicide Programs in Two Tillage Systems

Trial ID: STUT 10-05
Location: Stuttgart, Ark.

Study Dir.: Talbert, Ellis, Ottis
Investigator: Ron Talbert

Weed Code	ECHCG	BRAPP	BRAPP	BRAPP
Rating Data Type	Control	Control	Control	Control
Rating Unit	%	%	%	%
Rating Date	20/Jun/05	2/Jun/05	7/Jun/05	14/Jun/05
Trt-Eval Interval	18 DA-D	22 DA-C	5 DA-D	12 DA-D

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code	ECHCG	BRAPP	BRAPP	BRAPP
1	Stale Seedbed Untreated					0	10	0	0
2	Conventional-till untreated					10	9	8	6
3	Stale seedbed					100	100	100	100
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Command (clomazone)	0.4	lb ai/a	14-DPP	A				
	Stam (propanil)	3	lb ai/a	EPOST	D				
4	Conventional					95	100	100	100
	Command	0.4	lb ai/a	PRE	B				
	Stam	3	lb ai/a	EPOST	D				
5	Stale seedbed					100	100	100	100
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Command	0.8	lb ai/a	14-DPP	A				
	Stam	3	lb ai/a	EPOST	D				
6	Conventional					97	100	100	100
	Command	0.8	lb ai/a	PRE	B				
	Stam	3	lb ai/a	EPOST	D				
7	Stale seedbed					100	100	95	100
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Facet	0.25	lb ai/a	14-DPP	A				
	Stam	3	lb ai/a	EPOST	D				
8	Conventional					95	100	100	100
	Facet	0.25	lb ai/a	PRE	B				
	Stam	3	lb ai/a	EPOST	D				
9	Stale seedbed					93	100	100	98
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Command	0.4	lb ai/a	DPRE	C				
	Stam	3	lb ai/a	EPOST	D				
10	Conventional					95	100	100	100
	Command	0.4	lb ai/a	DPRE	C				
	Stam	3	lb ai/a	EPOST	D				
11	Stale seedbed					95	90	93	96
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Command	0.8	lb ai/a	DPRE	C				
	Stam	3	lb ai/a	EPOST	D				
12	Conventional					100	100	100	100
	Command	0.8	lb ai/a	DPRE	C				
	Stam	3	lb ai/a	EPOST	D				
13	Stale seedbed					91	87	84	89
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Prowl (pendimethalin)	1	lb ai/a	DPRE	C				
	Stam	3	lb ai/a	EPOST	D				
14	Conventional					100	98	95	99
	Prowl	1	lb ai/a	DPRE	C				
	Stam	3	lb ai/a	EPOST	D				
15	Stale seedbed					78	40	59	74
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Facet (quinclorac)	0.25	lb ai/a	DPRE	C				
16	Conventional					80	38	64	75
	Facet	0.25	lb ai/a	DPRE	C				

University of Arkansas

Evaluation of Conventional Herbicide Programs in Two Tillage Systems

Trial ID: STUT 10-05
 Location: Stuttgart, Ark.

Study Dir.: Talbert, Ellis, Ottis
 Investigator: Ron Talbert

Weed Code						ECHCG	BRAPP	BRAPP	BRAPP
Rating Data Type						Control	Control	Control	Control
Rating Unit						%	%	%	%
Rating Date						20/Jun/05	2/Jun/05	7/Jun/05	14/Jun/05
Trt-Eval Interval						18 DA-D	22 DA-C	5 DA-D	12 DA-D
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code				
17	Stale seedbed					100	96	98	100
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Prowl	1	lb ai/a	DPRE	C				
	Facet	0.25	lb ai/a	DPRE	C				
18	Conventional					100	90	100	100
	Prowl	1	lb ai/a	DPRE	C				
	Facet	0.25	lb ai/a	DPRE	C				
19	Stale seedbed					92	78	82	96
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Command	0.4	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
20	Conventional					95	69	85	100
	Command	0.4	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
21	Stale seedbed					78	54	56	71
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Command	0.8	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
22	Conventional					63	76	63	72
	Command	0.8	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
23	Stale seedbed					30	58	45	26
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Prowl	1	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
24	Conventional					60	62	61	65
	Prowl	1	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
25	Stale seedbed					63	71	63	90
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Facet	0.25	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
26	Conventional					84	64	74	99
	Facet	0.25	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
27	Stale seedbed					73	40	65	68
	Roundup UltraMax	1	lb ai/a	14-DPP	A				
	Facet	0.19	lb ai/a	EPOST	D				
	Prowl	1	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
28	Conventional					100	53	75	99
	Facet	0.19	lb ai/a	EPOST	D				
	Prowl	1	lb ai/a	EPOST	D				
	Stam	3	lb ai/a	EPOST	D				
LSD (P=.05)						24	24	24	21

University of Arkansas

Evaluation of Conventional Herbicide Programs in Two Tillage Systems

Trial ID: STUT 10-05
 Location: Stuttgart, Ark.

Study Dir.: Talbert, Ellis, Ottis
 Investigator: Ron Talbert

Weed Code
 Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

BRAPP
 Control
 %
 20/Jun/05
 18 DA-D

Rice yield
 BU/AC

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg	Appl Code	BRAPP Control %	Rice yield BU/AC
1	Stale Seedbed Untreated					0	44.4
2	Conventional-till untreated					10	54.8
3	Stale seedbed					100	126.4
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Command (clomazone)	0.4	lb ai/a	14-DPP	A		
	Stam (propanil)	3	lb ai/a	EPOST	D		
4	Conventional					99	141.2
	Command	0.4	lb ai/a	PRE	B		
	Stam	3	lb ai/a	EPOST	D		
5	Stale seedbed					100	143.3
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Command	0.8	lb ai/a	14-DPP	A		
	Stam	3	lb ai/a	EPOST	D		
6	Conventional					100	156.6
	Command	0.8	lb ai/a	PRE	B		
	Stam	3	lb ai/a	EPOST	D		
7	Stale seedbed					100	138.9
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Facet	0.25	lb ai/a	14-DPP	A		
	Stam	3	lb ai/a	EPOST	D		
8	Conventional					95	117.4
	Facet	0.25	lb ai/a	PRE	B		
	Stam	3	lb ai/a	EPOST	D		
9	Stale seedbed					95	155.9
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Command	0.4	lb ai/a	DPRE	C		
	Stam	3	lb ai/a	EPOST	D		
10	Conventional					100	134.4
	Command	0.4	lb ai/a	DPRE	C		
	Stam	3	lb ai/a	EPOST	D		
11	Stale seedbed					100	157.1
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Command	0.8	lb ai/a	DPRE	C		
	Stam	3	lb ai/a	EPOST	D		
12	Conventional					100	148.5
	Command	0.8	lb ai/a	DPRE	C		
	Stam	3	lb ai/a	EPOST	D		
13	Stale seedbed					89	125.1
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Prowl (pendimethalin)	1	lb ai/a	DPRE	C		
	Stam	3	lb ai/a	EPOST	D		
14	Conventional					98	110.0
	Prowl	1	lb ai/a	DPRE	C		
	Stam	3	lb ai/a	EPOST	D		
15	Stale seedbed					75	86.2
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Facet (quinclorac)	0.25	lb ai/a	DPRE	C		
16	Conventional					79	96.3
	Facet	0.25	lb ai/a	DPRE	C		

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Evaluation of Conventional Herbicide Programs in Two Tillage Systems

Trial ID: STUT 10-05
 Location: Stuttgart, Ark.

Study Dir.: Talbert, Ellis, Ottis
 Investigator: Ron Talbert

Weed Code	BRAPP	
Rating Data Type	Control	Rice yield
Rating Unit	%	BU/AC
Rating Date	20/Jun/05	
Trt-Eval Interval	18 DA-D	

Trt No.	Treatment Name	Rate	Unit	Grow Stg	Appl Code	BRAPP Control %	Rice yield BU/AC
17	Stale seedbed					100	152.6
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Prowl	1	lb ai/a	DPRE	C		
	Facet	0.25	lb ai/a	DPRE	C		
18	Conventional					97	133.3
	Prowl	1	lb ai/a	DPRE	C		
	Facet	0.25	lb ai/a	DPRE	C		
19	Stale seedbed					95	137.6
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Command	0.4	lb ai/a	EPOST	D		
	Stam	3	lb ai/a	EPOST	D		
20	Conventional					96	157.8
	Command	0.4	lb ai/a	EPOST	D		
	Stam	3	lb ai/a	EPOST	D		
21	Stale seedbed					79	21.5
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Command	0.8	lb ai/a	EPOST	D		
	Stam	3	lb ai/a	EPOST	D		
22	Conventional					63	103.2
	Command	0.8	lb ai/a	EPOST	D		
	Stam	3	lb ai/a	EPOST	D		
23	Stale seedbed					30	97.1
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Prowl	1	lb ai/a	EPOST	D		
	Stam	3	lb ai/a	EPOST	D		
24	Conventional					60	122.1
	Prowl	1	lb ai/a	EPOST	D		
	Stam	3	lb ai/a	EPOST	D		
25	Stale seedbed					69	146.4
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Facet	0.25	lb ai/a	EPOST	D		
	Stam	3	lb ai/a	EPOST	D		
26	Conventional					100	146.2
	Facet	0.25	lb ai/a	EPOST	D		
	Stam	3	lb ai/a	EPOST	D		
27	Stale seedbed					93	127.8
	Roundup UltraMax	1	lb ai/a	14-DPP	A		
	Facet	0.19	lb ai/a	EPOST	D		
	Prowl	1	lb ai/a	EPOST	D		
	Stam	3	lb ai/a	EPOST	D		
28	Conventional					100	142.7
	Facet	0.19	lb ai/a	EPOST	D		
	Prowl	1	lb ai/a	EPOST	D		
	Stam	3	lb ai/a	EPOST	D		
LSD (P=.05)						21	47

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Table 12. Evaluation of Potential Allelopathic Properties of Several Rice Cultivars

Trial ID: STUT 02-05 **Study Dir.:** Talbert, Gealy, Ellis, Black
Location: Stuttgart, Ark.

Objective: To evaluate rice varietal differences in allelopathic ability on barnyardgrass.

Conclusions: The interaction of cultivars and herbicide treatment was not significant for barnyardgrass control or rice yield, so potential allelopathic effects of specific cultivars were not discerned. Cultivars, averaged over herbicide treatments, also had no differential effect on barnyardgrass control. Averaged over cultivars, barnyardgrass was controlled better and rice yield was higher with Command (clomazone) applied delayed PRE (DPRE) followed by a pre-flood application of Stam (propanil) + Permit (halosulfuron) than by Bolero (thiobencarb) applied DPRE. The highest rice yields among cultivars, averaged over herbicide treatment, were from XL8 at 14 or 30 seed/ft², Francis, and XP710 at 14 seed/ft².

CROP AND WEED DESCRIPTION

Weed Code	Common Name	Scientific Name	
ECHCG	Barnyardgrass	Echinochloa crus-galli	
Crop:	ORYSI Rice, Paddy (Dry-seeded + irrigation)	Variety:	Various
Planting Date:	29/Apr/05	Planting Method:	Drilled
Row Spacing:	7 In	Soil Moisture:	Slightly dry
		Depth:	1.5 IN
		Emergence Date:	9/May/05
		Flushed weekly from planting until flood June 13	

SITE AND DESIGN

Plot Width: 6 FT **Plot Length:** 18 FT **Reps:** 4 **Study Design:** Factorial on randomized complete block

SOIL DESCRIPTION

% Sand:	8 %	OM:	0.94	Texture:	silt loam
% Silt:	75	pH:	5.93	Soil Name:	Dewitt
% Clay:	16	CEC:	14.3	Fert. Level:	good

APPLICATION DESCRIPTION

	A	B
Application Date:	6/May/05	6/Jun/05
Time of Day:	8:00AM	9:00pm
Application Method:	SPRAY	SPRAY
Application Timing:	DPRE	Preflood
Applic. Placement:	BROSOL	BROFOL
Air Temp., Unit:	62 F	82 F
% Relative Humidity:	70	80
Wind Velocity, Unit:	0.5 MPH	4 MPH
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	55 F	89 F
Soil Moisture:	ADEQUATE	ADEQUATE
% Cloud Cover:	0	60

WEED STAGE AT EACH APPLICATION

	A	B
Weed Code:	ECHCG	ECHCG
Stage Scale:	preemergence	2-3 tiller

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	28	28
Nozzle Type:	FLAT FAN	FLAT FAN
Nozzle Size:	80015	80015
Nozzle Spacing, Unit:	20 IN	20 IN
Nozzles/Row:	3	3
Boom Length, Unit:	40 IN	40 IN
Boom Height, Unit:	17 IN	17 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	10 GPA	10 GPA
Propellant:	CO2	CO2

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Evaluation of Potential Allelopathic Properties of Several Rice Cultivars

Trial ID: STUT 02-05
 Location: Stuttgart, Ark.

Study Dir.: Talbert, Gealy, Ellis, Black

Weed Code	ECHCG	ECHCG	ECHCG	
Rating Data Type	Control	Control	Control	Rice Yield
Rating Unit	%	%	%	BU/AC
Rating Date	7/Jun/05	14/Jun/05	20/Jun/05	
Trt-Eval Interval	32 DA-A	8 DA-B	14 DA-B	

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg
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TABLE OF A MEANS (CULTIVARS)

1	PI 312777			59	81	80	65.5
2	Saber			54	73	70	109.9
3	Rexmont			54	72	62	87.3
4	Drew			47	70	71	123.3
5	XL8 (14 seed/sq ft)			62	72	69	166.4
6	XL8 (30 seed/sq ft)			44	81	78	147.9
7	Francis			64	79	74	150.0
8	4593			51	75	79	118.8
9	XP710 (14 seed/sq ft)			51	62	69	170.1
10	STg 96L-26-093			61	74	78	120.1
11	L-30-117			60	78	72	106.7
	LSD (0.05)			NS	NS	NS	27.1

TABLE OF B MEANS (HERBICIDES)

1	Untreated				23	48	31	121.9
2	Bolero (thiobencarb)	2	lb ai/a	DPRE	49	75	87	111.9
3	Command (clomazone)	0.4	lb ai/a	DPRE	94	100	100	138.8
3	Stam (propanil)	3	lb ai/a	preflood				
3	Permit (halosulfuron)	0.047	lb ai/a	preflood				
	LSD (0.05)				11	8	6	14.2

TABLE OF AB MEANS (CULTIVAR X HERBICIDE INTERACTION)

1	PI 312777				25	60	40	95.0
1	Untreated							
2	Saber				15	40	20	90.7
1	Untreated							
3	Rexmont				20	40	15	75.0
1	Untreated							
4	Drew				15	45	20	116.6
1	Untreated							
5	XL8 (14 seed/sq ft)				20	40	30	172.1
1	Untreated							
6	XL8 (30 seed/sq ft)				25	55	35	151.5
1	Untreated							
7	Francis				20	50	35	160.8
1	Untreated							
8	4593				30	60	40	115.3
1	Untreated							
9	XP710 (14 seed/sq ft)				20	40	35	157.8
1	Untreated							

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Evaluation of Potential Allelopathic Properties of Several Rice Cultivars

Trial ID: STUT 02-05
 Location: Stuttgart, Ark.

Study Dir.: Talbert, Gealy, Ellis, Black

Weed Code					ECHCG	ECHCG	ECHCG	
Rating Data Type					Control	Control	Control	Rice Yield
Rating Unit					%	%	%	BU/AC
Rating Date					7/Jun/05	14/Jun/05	20/Jun/05	
Trt-Eval Interval					32 DA-A	8 DA-B	14 DA-B	
Trt No.	Treatment Name	Rate	Rate Unit	Grow Stg				
10	STg 96L-26-093				30	45	35	117.0
1	Untreated							
11	L-30-117				30	55	40	88.7
1	Untreated							
1	PI 312777				53	83	100	32.0
2	Bolero (thiobencarb)	2	lb ai/a	DPRE				
2	Saber				49	79	90	107.5
2	Bolero (thiobencarb)	2	lb ai/a	DPRE				
3	Rexmont				46	76	71	81.5
2	Bolero (thiobencarb)	2	lb ai/a	DPRE				
4	Drew				51	66	93	116.1
2	Bolero (thiobencarb)	2	lb ai/a	DPRE				
5	XL8 (14 seed/sq ft)				70	76	76	158.3
2	Bolero (thiobencarb)	2	lb ai/a	DPRE				
6	XL8 (30 seed/sq ft)				31	89	98	127.8
2	Bolero (thiobencarb)	2	lb ai/a	DPRE				
7	Francis				74	86	87	128.1
2	Bolero (thiobencarb)	2	lb ai/a	DPRE				
8	4593				24	65	97	99.1
2	Bolero (thiobencarb)	2	lb ai/a	DPRE				
9	XP710 (14 seed/sq ft)				35	48	73	172.2
2	Bolero (thiobencarb)	2	lb ai/a	DPRE				
10	STg 96L-26-093				53	78	100	101.9
2	Bolero (thiobencarb)	2	lb ai/a	DPRE				
11	L-30-117				50	80	76	106.1
2	Bolero (thiobencarb)	2	lb ai/a	DPRE				
1	PI 312777				100	100	100	69.5
3	Command (clomazone)	0.4	lb ai/a	DPRE				
3	Stam (propanil)	3	lb ai/a	preflood				
3	Permit (halosulfuron)	0.047	lb ai/a	preflood				
2	Saber				100	100	100	131.5
3	Command (clomazone)	0.4	lb ai/a	DPRE				
3	Stam (propanil)	3	lb ai/a	preflood				
3	Permit (halosulfuron)	0.047	lb ai/a	preflood				
3	Rexmont				97	100	100	105.3
3	Command (clomazone)	0.4	lb ai/a	DPRE				
3	Stam (propanil)	3	lb ai/a	preflood				
3	Permit (halosulfuron)	0.047	lb ai/a	preflood				
4	Drew				75	100	100	137.3
3	Command (clomazone)	0.4	lb ai/a	DPRE				
3	Stam (propanil)	3	lb ai/a	preflood				
3	Permit (halosulfuron)	0.047	lb ai/a	preflood				
5	XL8 (14 seed/sq ft)				96	100	100	168.7
3	Command (clomazone)	0.4	lb ai/a	DPRE				
3	Stam (propanil)	3	lb ai/a	preflood				
3	Permit (halosulfuron)	0.047	lb ai/a	preflood				
6	XL8 (30 seed/sq ft)				75	99	100	164.6
3	Command (clomazone)	0.4	lb ai/a	DPRE				
3	Stam (propanil)	3	lb ai/a	preflood				
3	Permit (halosulfuron)	0.047	lb ai/a	preflood				

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Evaluation of Potential Allelopathic Properties of Several Rice Cultivars

Trial ID: STUT 02-05
 Location: Stuttgart, Ark.

Study Dir.: Talbert, Gealy, Ellis, Black

Weed Code	ECHCG	ECHCG	ECHCG	
Rating Data Type	Control	Control	Control	Rice Yield
Rating Unit	PERCENT	PERCENT	PERCENT	BU/AC
Rating Date	7/Jun/05	14/Jun/05	20/Jun/05	
Trt-Eval Interval	32 DA-A	8 DA-B	14 DA-B	

Trt No.	Treatment Name	Rate	Unit	Grow Stg	ECHCG Control	ECHCG Control	ECHCG Control	Rice Yield
7	Francis				98	100	100	161.2
3	Command (clomazone)	0.4	lb ai/a	DPRE				
3	Stam (propanil)	3	lb ai/a	preflood				
3	Permit (halosulfuron)	0.047	lb ai/a	preflood				
8	4593				99	100	100	142.1
3	Command (clomazone)	0.4	lb ai/a	DPRE				
3	Stam (propanil)	3	lb ai/a	preflood				
3	Permit (halosulfuron)	0.047	lb ai/a	preflood				
9	XP710 (14 seed/sq ft)				97	99	99	180.2
3	Command (clomazone)	0.4	lb ai/a	DPRE				
3	Stam (propanil)	3	lb ai/a	preflood				
3	Permit (halosulfuron)	0.047	lb ai/a	preflood				
10	STg 96L-26-093				100	100	100	141.6
3	Command (clomazone)	0.4	lb ai/a	DPRE				
3	Stam (propanil)	3	lb ai/a	preflood				
3	Permit (halosulfuron)	0.047	lb ai/a	preflood				
11	L-30-117				100	100	100	125.2
3	Command (clomazone)	0.4	lb ai/a	DPRE				
3	Stam (propanil)	3	lb ai/a	preflood				
3	Permit (halosulfuron)	0.047	lb ai/a	preflood				
LSD (0.05) for cultivar X herbicide interaction					NS	NS	NS	NS

Appendix Table. Climatological data for Stuttgart, 2006.

Day	April			May			June			July			August		
	Temp.		Precip in.	Temp.		Precip in.	Temp.		Precip in.	Temp.		Precip in.	Temp.		Precip in.
	Max F	Min F		Max F	Min F		Max F	Min F		Max F	Min F		Max F	Min F	
1	61	42		64	41		81	71		99	67	1.35	95	68	
2	71	43	0.08	74	42		86	71		83	68	0.20	95	70	
3	78	42		64	41		86	73		90	71		96	70	
4	72	53		68	42		92	72		94	73		95	72	
5	79	56		72	43		94	77		94	74		96	72	
6	77	54	0.60	76	47		95	79		90	71	0.93	98	71	
7	70	52		80	48		100	80		80	71	0.09	96	69	
8	70	51	0.12	84	58		96	78	1.12	88	69	0.1	93	70	
9	75	53	0.14	82	59	0.04	92	76		90	72		95	70	
10	79	58		80	60	0.01	87	78		89	71	0.03	96	73	
11	64	50	1.48	85	61		93	77		91	70	0.03	97	70	
12	68	48	3.25	91	65		94	75	0.24	82	67	0.18	97	72	
13	61	47	0.01	92	67		93	74		93	69		99	73	
14	69	47		87	69	0.01	92	78		93	72		97	73	
15				80	57		97	78		94	71		97	71	
16				73	52		97	78		91	71	0.31	96	72	
17				74	52		92	78		89	71	0.03	98	72	0.40
18				79	55		79	71	0.13	90	72	0.18	97	73	
19				89	64		92	69		89	73		99	73	
20	80	57		90	68		95	71		94	74		97	74	
21	83	60		94	61		98	75		96	75		100	75	
22	86	65	0.50	85	62		99	77		97	71		100	73	
23				92	70	0.03	101	77		97	72		99	74	
24				92	69		103	81		98	75	0.25	100	70	0.35
25	85	40		91	62		104	83		99	76		95	72	
26	58	40	1.24	83	59		105	83		97	75		100	76	
27	72	47		86	63		105	84		96	75		100	76	
28	72	54		87	61	0.03	90	80	0.07	91	69	0.01	79	68	1.61
29	86	54		87	66	0.02	103	79		84	64	0.12	87	67	2.37
30	55	49	0.20	74	64	0.17	106	82		88	63		79	70	1.00
31				80	64					90	67		87	74	

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