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Herbicide Evaluation for Weed Control

University of Tennessee Agricultural Experiment Station

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Department of
Plant and Soil Science

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TOBACCO EXPERIMENT STATION

WEST TENNESSEE EXPERIMENT STATION

HERBICIDE EVALUATIONS FOR WEED CONTROL IN FIELD CROPS

This report is a summary of the herbicide evaluations for weed control in field crops during 1980. The information in this report is NOT FOR PUBLICATION and this report is not considered to be a publication, or the endorsement, or recommendation of any product(s). These data may be used in decision-making as to future uses of these herbicides but are not to be used in any type of commercial releases.

Many of the uses of herbicides contained herein have not been authorized by Federal and State Environmental Protection Agencies and are not recommended by the University of Tennessee Institute of Agriculture.

We would like to acknowledge the technical support of the following individuals who assisted with this research: Mr. Gordon Percell at West Tennessee Experiment Station, Mr. Reid Evans at Middle Tennessee Experiment Station, Mr. Marshall Smith at Ames Plantation, Mr. Don Gibson at Milan Experiment Station, and Mr. Fitzroy Bullock, Mr. Mike Kennedy, Mr. Jerry Freeny, and Mr. Steve Williams, (graduate students at Knoxville), and Mr. Dan Stikes (an undergraduate student at Knoxville). Also special thanks are extended the Experiment Station superintendents and field plot crews where this research was conducted.

In addition, we are especially grateful for the excellent cooperation and support in the form of herbicides used in these trials and grants-in-aid to provide partial funding on these experiments from the following commercial cooperators: American Cyanamid, American Hoechst Co., BASF, Chevron, Ciba-Giegy Corp., Diamond Shamrock, Dow Chemical, E. I. Dupont, Elanco, Fisons Corp., FMC Corp., Hercules, Hope Corp., 3 M Co., Mobay Corp., Mobil, Monsanto, Olin, PPG Industries, Rhone-Poulene Inc., Rohm and Haas, Sandoz Inc., Shell Chemical Co., Shell Development, Stauffer Chemical Co., Union Carbide, Uniroyal and Vesicol Chemical Company.

Last, but certainly not least, we would like to thank our secretaries, Ms. Angie Bouchard, Mrs. Sue Gardner, and Mrs. Diane Newell for typing this report.

Table 1. Procedures and Techniques Used in Herbicide Trials.

Experimental Design: Experiments were arranged as randomized complete blocks with at least three replications of plots 3-4 rows wide by 30-60 feet long with one untreated border row in most instances.

Herbicide Application: Treatments were applied with CO_2 sprayers equipped with either 8002 or 8003 tee jet nozzles at 30 psi applying 20 gpa and operated at 3 or 4 mph except where otherwise indicated. Incorporation was with a power driven tillrovator set to cut 3 inches deep.

Weed and Crop Ratings: Weed control was rated on a scale of 0 to 100 percent with 100 representing complete control. A control rating of 70 is considered commercially acceptable. Crop injury, stand reduction, and vigor reduction were also rated on a scale of 0 to 100, where 0 represents no injury and 100 represents death. An injury rating of 30 or above is <u>not</u> considered commercially acceptable.

Cultivation: Plots were not cultivated unless otherwise indicated.

Organic Matter: Most studies were conducted on mineral soils with 1.0 + .5% organic matter.

Fertilization: Applied in accordance with soil tests for area and crop.

Harvesting: Corn - Hand Picked

Cotton - Machine Harvested

Grain Sorghum - Combined at Ames Plantation, hand harvested at Knoxville

Soybeans - Combined

Table 2. Abbreviations Used in Report

a.i. = Active ingredient
Angr = Annual grass
B.C. = Broadcast
Begr = Common bermudagrass
Bhpl = Broadleaf plantain
Blsg = Broadleaf signalgrass
Blwe = Broadleaf weeds
Bu/A = Bushels per acre
Cawe = Carpetweed
CIR = Crop injury rating
Clgc = Clammy ground cherry
Cocb = Common cocklebur
Cocw = Common chickweed
Colq = Common lambsquarters
Conv = Conventional
Copu = Common purslane
Corw = Common ragweed
Cpds = Compounds
CSR = Crop stand reduction
C.V. = Coefficient of variability
CVR = Crop vigor reduction
DAT = Days after treatment
DNA = Dinitroanaline type herbicides
Elmg = entire leaf morningglory
EP = Early postemergence
EPOD = Early postemergence, directed
Fapa = Fall panicum
Fipw = field pepperweed
GPA = Gallons per acre
Gogr = goosegrass
Hebi = henbit
HVMW = Honeyvine milkweed
I.F. = in furrow
Ilmg = Ivyleaf morningglory
in = inches
Jiwe = jimsonweed
Jogr = johnsongrass
Lacg = Large crabgrass
Lath = Ladysthumb
lb/A = Pounds per acre
LP = Late postemergence
LY = Layby
LSD = Least significant difference
Mg = Morningglory
Mgsp = Morningglory species
MOA = Method of application
MP = Mid-postemergence
mph = miles per hour
ns = nonsignificant
O.M. = Organic matter
OTS = Overtop of Standing Wheat
NT = notillage
P = Probability
Pesw = Pennsylvania smartweed
Pimg = Pitted morningglory
POD = Postemergence, directed
POE = Early post
PPI = Preplant incorporated
PRE = Preemergence
Precip = Precipitation in inches
Prsi = Prickly sida
psi = Pounds per square inch
qt/A = Quarts per acre
RH = Relative humidity
Rrpw = Redroot pigweed
Sipo = sicklepod
Smcg = Smooth crabgrass
Spsp = Spotted spurge
SS = Solid seeded
Surf = Surfactant
T = Trace of rain
Tamg = Tall morningglory
TM = Tank mixture
WF = Weed free
Yens = Yellow nutsedge

AMES PLANTATION

Route 1

Grand Junction, Tennessee, 38039

Station Superintendent - Dr. James M. Anderson

"Research at the Ames Plantation is made possible because The University of Tennessee is a beneficiary of a perpetual trust under the terms of the will of the late Julia C. Ames"

CLIMATIC DATA PERTAINING TO THE AMES EXPERIMENT STATION

Ames, TN

1980

Date	April			May			June			July			August		
	Temperature			Temperature			Temperature			Temperature			Temperature		
	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)
1	52	33		73	46		86	68	.6	92	69		100	72	
2	72	39		75	53		86	68		97	74		97	72	
3	79	50		76	51		88	71		98	77		95	73	
4	67	44	.01	75	49		89	67		97	74		89	72	
5	59	34		79	49		92	69		95	73		92	72	
6	65	39		80	50		91	71		96	73		93	72	
7	72	51		83	55		92	71		99	74		98	69	
8	76	56	2.03	83	47	.57	90	71	.06	100	75		101	70	
9	65	47		68	39		81	52		101	75		100	69	.38
10	65	39		71	41		77	51		100	77		100	70	
11	73	47		81	52		86	55		99	77		96	71	
12	68	53	2.77	81	68		80	46		102	75		94	70	.04
13	54	40	.68	76	60		83	57		101	76		96	70	
14	44	36	.93	82	56		90	51		103	74		100	70	.71
15	43	34	.04	70	52	.03	92	63		105	72		95	70	
16	63	37		71	54	.25	92	72		104	75		93	73	
17	72	46		78	60	.33	90	64		104	75		94	72	
18	77	50	.52	80	63	.06	80	64	.12	103	75		95	73	
19	70	49		85	62		84	65		101	66		95	72	
20	76	49		75	61	.68	88	64	.03	101	71		98	72	
21	79	54		78	55		81	62		98	71	.02	98	72	
22	82	49		79	58	.38	87	63		84	70	1.41	90	62	
23	88	55		69	60	.12	88	71		79	68	.75	99	61	
24	85	59		75	58	.02	90	67	.91	87	64		90	62	
25	82	50	.53	83	62		83	65	.04	88	64		90	63	
26	61	46	.32	86	60		90	66		92	67		94	67	
27	63	49	.04	85	54		92	66		94	70		98	67	
28	61	47	.23	85	56		93	68		87	66		94	65	
29	71	44		88	62		96	74		90	63		74	66	.26
30	67	44		86	67	.21	82	66	.29	94	65		88	67	
31				82	65					100	65		93	70	

H-510-80-A-Ct-Low pH. Influence of Long Term Herbicide Usage on Cotton (Low pH). Ames Plantation, Tennessee, 1980.

Treatment	Rate (Lb/A ai)	MOA	Lint Yield, Lb/A.[2/] pH 5.0 Total	pH 5.0 First	pH 5.0 %	pH 6.5 Total	pH 6.5 First	pH 6.5 %	Avg.
1. Cotoran 80W	1.5	PRE	497	443	89	498	449	90	498
2. Treflan 4E	.75	PPI	533	492	92	491	448	91	512
3. Treflan 4E + Cotoran 80W	.75 + 1.5	PPI+PRE	576	530	92	505	459	91	540
4. Treflan 4E + Cotoran 80W + MSMA 6E	.75 + 1.5 + 2.0	PPI+PRE+POE	255**	200**	78	266**	207**	78	261
5. Check	---	---	554	509	92	556	505	91	555
		Avg.	483	435	90	463	414	89	

Variety: Hancock
Planted: 5-6-80
Treated: 5-6-80 PPI and PRE's
7-7-80 MSMA
Plot Size: 5-40" rows x 60' long
Design: RCB splot plot 3 reps
Rainfall: 1st 7 DAT: 1st 30 DAT:

Soil Type: Loring silt loam
% O.M.: ca. 1% pH: See above
Fertilization: 60-60-60 + .5 B
Sprayer: 8003 tips; 30 psi; 4 mph; 20 gpa
Incorporation: disc 2-3" and do-all

[1/] Terraclor Super X 12.5%G at 10 lb./A. in furrow at planting; Demosan T (2-way) seed treatment
The same treatments have been applied to the same plots in 1977, 1978, and 1979.

[2/] Values with a column followed by ** are significantly different at P≤.01.

H-510-80-A-Ct-LT-Low pH Influence of Long Term Herbicide Usage on Cotton (Low pH). Ames Plantation, Tenn. 1977-80.

Treatment	Rate Lb/A ai	MOA	1977 Lint lb/A	1977 %lst*	1977 %GT**	1978 Lint lb/A	1978 %lst	1978 %GT	1979 Lint lb/A	1979 %lst	1979 %GT	1980 Lint lb/A	1980 %lst	1980 %GT	Avg. 1977-80 Lint lb/A	Avg. 1977-80 %lst	Avg. 1977-80 %GT
									pH 5.0								
1. Cotoran 80W	1.5	PRE	782a	72	33	960ab	73	37	509abc	79	35	497a	89	35	687	78	35
2. Treflan 4E	.75	PPI	733a	64	33	832abc	60	38	396c	73	34	533a	92	35	624	72	35
3. Treflan 4E + Cotoran 80W	.75 + 1.5	PPI + PRE	738a	67	33	814abc	59	36	459c	79	35	576a	92	38	647	74	36
4. Treflan 4E + Cotoran 80W + MSMA 6E	.75 + 1.5 + 2.0	PPI + PRE + POE	662a	62	32	567c	60	33	566abc	81	35	255b	78	31	513	70	33
5. Check	-	-	777a	64	34	1072a	72	37	508bc	79	35	554a	92	37	728	77	36
									pH 6.5								
1. Cotoran 80W	1.5	PRE	-	-	-	-	-	-	647ab	79	36	498a	90	33			
2. Treflan 4E	.75	PPI	-	-	-	-	-	-	548abc	85	36	491a	91	30			
3. Treflan 4E + Cotoran 80W	.75 + 1.5	PPI + PRE	-	-	-	-	-	-	510bc	79	34	505a	91	33			
4. Treflan 4E + Cotoran 80W + MSMA 6E	.75 + 1.5 + 2.0	PPI + PRE + POE	-	-	-	-	-	-	716a	83	35	266b	78	32			
5. Check	-	-	-	-	-	-	-	-	540abc	75	34	556a	91	34			

Average lint yield for two pH levels across herbicide treatments

	1979	1980
pH 5.0	487b	483a
pH 6.5	592a	463a

*%lst = Percent of total lint yield obtained during first picking.

**%GT = Percent gin turnout

H-510-80-A-Ct-LT-HIpH. Influence of Long-Term Herbicide Usage on Cotton (Hi pH). Ames Plantation, Grand Junction, Tennessee, 1980.

Treatment[1/]	Rate (LB/A AI)	MOA	Lint, Lb./A. Harvest Total	Lint, Lb./A. Harvest First	Percent First Harvest
1. Cotoran 80W	1.5	PRE	617 a	576 a	93
2. Treflan 4E	.75	PPI	555 a	515 a	93
3. Treflan 4E + Cotoran 80W	.75 + 1.5	PPI+PRE	604 a	555 a	92
4. Treflan 4E + Cotoran 80W + Bueno 6E	.75 + 1.5 + 2.0	PPI+PRE+POE	379 b	269 b	71
5. Check	—	—	605 a	562 a	93
		C.V.	7.3	7.7	

Variety: Hancock
Planted: May 6
Treated: May 6 PPI & PRE's;MSMA on 7-7
Plot size: 10-40" rows x 60' long
Design: RCB with 3 reps
Rainfall: 1st 7 DAT:
1st 30 DAT:

Soil type: Memphis silt loam

1/ Terraclor Super X 12.5G at 10 lb/A in furrow at planting. Demosan T (2-way) seed treatment.
Applications made to same plots in 1977, 1978, 1979 and 1980.

H-510-80-A-Ct-LT-HIpH. Influence of Long-Term Herbicide Usage on Cotton (Hi pH). Ames Plantation, Grand Junction, TN. 1977-1980.

Treatment	Rate lb/A ai	MOA	1977 Lint lb/A	1977 %lst*	1977 %GT**	1978 Lint lb/A	1978 %lst	1978 %GT	1979 Lint lb/A	1979 %lst	1979 %GT	1980 Lint lb/A	1980 %lst	1980 %GT	Four-year avg. 1977 - 1980 Lint lb/A	Four-year avg. 1977 - 1980 %lst	Four-year avg. 1977 - 1980 %GT
1.Cotoran 80W	1.5	PRE	1032a	76	34	1345b	70	37	609c	78	34	617a	93	34	901	79	35
2.Treflan 4E	.75	PPI	1194a	83	34	1325b	69	37	668c	76	34	555a	93	34	936	80	35
3.Treflan 4E + Cotoran 80W	.75 + 1.5	PPI + PRE	1191a	81	34	1435a	65	37	680bc	75	34	604a	92	34	978	78	35
4.Treflan 4E + Cotoran 80W + Bueno 6E	.75 + 1.5 + 2.0	PPI + PRE + POE	1040a	74	33	1235c	56	34	790a	83	34	379b	71	31	861	71	33
5.Check	-	-	1190a	85	34	1444a	72	36	751ab	81	34	605a	93	33	998	83	34

*%lst = Percent of total lint yield obtained during first picking.

**%GT = Percent gin turnout

H-570-80-A-3 EFFECTS OF MSMA AND PIX ON YIELD AND MATURITY OF 6 COTTON VARIETIES GROWN AT AMES PLANTATION, TENNESSEE[1] IN 1980

MSMA Rates	Yield Lint Pounds Per Acre Avg.	MSMA Treatments only Total Lbs.	1st Harvest %	Turnout %	MSMA + Pix, 20 gms ai/A. Total Lbs.	1st Harvest %	Turnout %
Check	667 a	696	92	32.8	637	92	32.2
1 lb. early[2]	639 ab	661	91	33.1	617	90	32.4
2 lbs. early	624 ab	641	86	32.3	608	85	31.9
1 lb. early + 1 lb. late[3]	527 bc	521	84	30.2	532	89	29.5
2 lbs. late	331 c	332	70	29.6	329	74	29.0

1. Memphis silt loam (2% to 5% slopes).
2. Applied when cotton was 4 inches tall.
3. Applied when cotton was 12 inches tall.

Variety	Yield Lint Pounds Per Acre Check	1E	2E	1+1	2L	Avg.
Stoneville 213	800	643	752	586	362	629
Stoneville 213 + Pix	765	657	685	545	382	607
Stoneville 825	704	733	734	444	331	589
Stoneville 825 + Pix	657	660	729	491	338	575
Deltapine 61	565	701	613	599	340	564
Deltapine 61 + Pix	539	600	648	567	327	536
Coker 304	703	618	563	541	387	562
Coker 304 + Pix	649	582	532	571	352	537
Deltapine 55	789	597	556	514	385	568
Deltapine 55 + Pix	606	608	455	560	363	518
Hancock	613	675	625	442	188	509
Hancock + Pix	608	595	600	461	211	495

Planted on May 2, harvested October 3 and October 20, 1980.

MSMA BY PIX BY VARIETIES ANALYSIS OF VARIANCE

Source	df	F
MSMA	4	50.31**
error a	8	
%CV Main Plot	20.8	
Varieties	5	2.16
Varieties x MSMA	20	1.08
error b	50	
%CV Sub-Plot	19.8	
Pix	1	14.48**
Pix x varieties	5	---
Pix x MSMA	4	3.86**
Pix x varieties x MSMA	20	1.86*
error c	60	
%CV Sub-Sub-Plot	8.0	

Significance at first harvest: MSMA 58.15**; Pix x variety x MSMA 1.78*

TN-510-80-A-GS-1 - Preemergence Weed Control in Grain Sorghum, Ames Plantation, 1980, Grand Junction, TN.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Grain Sorghum Response CIR %	Grain Sorghum Response Yield Bu/A	Weed Response, % Control[1] Lacg 7/8	Lacg 7/15	Fapa 7/8	Cawe 7/8	Ilmg 7/15
1	Atrazine	2.0	Pre	3	47.1 ab	100	94	94	100	100
2	Dual + Atrazine(Bicep)	1.5 + 1.2	Pre	0	49.6 ab	100	98	100	100	99
3	Dual + Milogard (Milocep)	1.5 + 1.2	Pre	0	36.4 a-c	100	99	100	100	99
4	Lasso + Atrazine	1.5 + 1.2	Pre	0	42.0 a-c	100	98	99	100	100
5	Lasso + Milogard	1.5 + 1.2	Pre	0	43.9 a-c	99	95	99	100	96
6	Milogard	2.0	Pre	0	39.7 a-c	68	17	63	100	90
7	NC-23804	1.0	Pre	0	47.1 ab	95	92	92	99	32
8	NC-23804	2.0	Pre	0	50.6 ab	99	98	98	100	66
9	NC-23804	3.0	Pre	0	56.5 a	99	97	97	100	65
10	NC-23804 + X-77	1.0	POT	13	28.2 c	---	13	---	---	43
11	NC-23804 + X-77	2.0	POT	12	35.8 bc	---	5	---	---	20
12	Dual + Atrazine (Bicep) + X-77	1.5 + 1.2	POT	10		---	7	---	---	20
13	Lasso + Atrazine + X-77	1.5 + 1.2	POT	18	39.2 a-c	---	12	---	---	54
14	Prowl + Atrazine	1.0 + 1.2	Pre	0	44.1 a-c	100	98	99	100	99
15	Weed Free Check	-----	---			100		100	100	
16	Weedy Check	-----	---			0		0	0	
				N.S.						

[1] Lacq = Large Crabgrass; Fapa = Fall Panicum; Cawe = Carpetweed

Variety: Funks G 522 BR
Date of Planting: June 11
Soil Type: Loring Silt Loam

Plot Size: 8 x 30'

Date of Application: June 11
Temperature: 80-85
Soil Moisture: Dry
Sprayer: CO_2 Back Pack
Nozzle Type: TeeJet 8003
gpa: 20
psi: 30

H-510-80-A-S-Basagran. Aerial Application of Basagran for Cocklebur Control in soybeans. Ames Plantation, Grand Junction Tennessee. 1980.

	Treatment	Rate(Lb/A AI)	Yield, Bu/A.
1.	Basagran 4L + Citowett Surfactant	.33 + 0.5%	33.5 b
2.	Basagran 4L + Citowett Surfactant	.48 + 0.5%	37.2 a
3.	Basagran 4L + Citowett Surfactant	.75 + 0.5%	37.8 a
4.	Blazer 2S	.5	36.2 ab

Variety: Centennial
Planted: May 27
Treated: June 26
Plot size: Approximately 15 Acres
Design: RCB with 3 replications
Sprayer: 5 gal. per acre w/ Cessna airplane

Other recommended practices for high level of soybean production were used with the only variable that of Basagran for cocklebur control.

Harvested: November 12 5 rows (38" spacing) by 250' long.

H-510-80-A-S-HXN. Herbicide by Nematicide Interaction Study on Soybeans. Ames Plantation, Grand Junction, TN. 1980.

Treatment[1/]	Rate (LB/A AI)	MOA	Variety	Yield Bu/A. @ 13%	Subplot (Nematicides across Herbicides) Bu/A. @ 13%
1. Temik 15G	1.0	IF	Forrest	25.4 abc	26.0 a-d
2. Temik 15G	2.0	IF	Forrest	26.7 ab	25.6 a-d
3. Furadan 10G	1.0	IF	Forrest	25.3 abc	25.4 a-d
4. Furadan 10G	2.0	IF	Forrest	26.8 ab	25.8 a-d
5. Nemacur 15G	1.0	IF	Forrest	24.5 abc	24.9 a-d
6. Nemacur 15G	2.0	IF	Forrest	22.5 bcd	23.3 cd
7. BAS 263 10G	0.4	IF	Forrest	24.5 abc	23.1 d
8. Vydate 10G	2.0	IF	Forrest	26.4 ab	24.8 a-d
9. Temik 15G	2.0	8" BAND	Forrest	26.5 ab	27.2 ab
10. Furadan 10G	2.0	8" BAND	Forrest	28.3 a	27.6 a
11. Furadan 4F	2.0	8" BAND	Forrest	25.1 abc	25.3 a-d
12. Nemacur 15G	2.0	8" BAND	Forrest	26.8 ab	26.3 a-c
13. BAS 263 10G	0.8	8" BAND	Forrest	25.5 abc	24.7 a-d
14. Vydate 10G	6.0	8" BAND	Forrest	25.3 abc	23.5 cd
15. Check	-	-	Forrest	23.9 abc	24.5 b-d
16. Check	-	-	Essex	21.3 cd	19.9 e
17. Check	-	-	Bedford	24.3 abc	24.1 cd
18. Temik 15G + Lexone 4L	1.0 + 0.5	IF + PRE	Forrest	26.6 ab	
19. Temik 15G + Lexone 4L	2.0 + 0.5	IF + PRE	Forrest	24.5 abc	
20. Furadan 10G + Lexone 4L	1.0 + 0.5	IF + PRE	Forrest	25.4 abc	
21. Furadan 10G + Lexone 4L	2.0 + 0.5	IF + PRE	Forrest	24.8 abc	
22. Nemacur 15G + Lexone 4L	1.0 + 0.5	IF + PRE	Forrest	25.3 abc	
23. Nemacur 15G + Lexone 4L	2.0 + 0.5	IF + PRE	Forrest	24.1 abc	
24. BAS 263 10G + Lexone 4L	0.4 + 0.5	IF + PRE	Forrest	21.7 cd	
25. Vydate 10G + Lexone 4L	2.0 + 0.5	IF + PRE	Forrest	23.1 bc	
26. Temik 15G + Lexone 4L	2.0 + 0.5	8" BAND + PRE	Forrest	28.0 a	
27. Furadan 10G + Lexone 4L	2.0 + 0.5	8" BAND + PRE	Forrest	26.9 ab	
28. Furadan 4F + Lexone 4L	2.0 + 0.5	8" BAND + PRE	Forrest	25.5 abc	
29. Nemacur 15G + Lexone 4L	2.0 + 0.5	8" BAND + PRE	Forrest	25.9 abc	
30. BAS 263 10G + Lexone 4L	0.8 + 0.5	8" BAND + PRE	Forrest	23.8 abc	
31. Vydate 10G + Lexone 4L	6.0 + 0.5	8" BAND + PRE	Forrest	21.7 cd	
32. Check + Lexone 4L	0.5	PRE	Forrest	25.2 abc	
33. Check + Lexone 4L	0.5	PRE	Essex	18.5 d	
34. Check + Lexone 4L	0.5	PRE	Bedford	24.1 abc	
		C.V.		10.7%	

See next page. . .

Main Plot
No Lexone - - 25.2a
Lexone 0.5 Pre 24.4a

Values within a column not followed by the same small letter are significantly different at P = 0.05, according to Duncan's Multiple Range Test.

HIGHLAND RIM

EXPERIMENT STATION

Rt. 6, Box 121

SPRINGFIELD, TENNESSEE, 37172

Superintendent - Mr. Lawson M. Safley

CLIMATIC DATA PERTAINING TO THE HIGHLAND RIM EXPERIMENT STATION

Springfield, TN

1980

	April			May			June			July			August		
	Temperature			Temperature			Temperature			Temperature			Temperature		
Date	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)
1	51	40		62	45		80	69	.01	83	62		99	72	
2	67	41		69	44		86	69		90	65		95	73	
3	78	52		72	44		87	72		97	69	.9	94	73	
4	67	44	.01	74	45		86	66		80	70	.8	87	9	.09
5	49	31		78	46		84	61		92	72		89	67	.37
6	60	33		81	51		90	65		92	68	.29	89	68	.35
7	68	42	.07	82	51		89	73		94	69		93	67	
8	74	52	.62	74	48	.13	90	68	.11	94	72		95	67	
9	71	46	.10	66	37		76	45		97	67		97	71	
10	64	41		67	40		76	47		97	78		99	71	
11	68	43		78	49		83	53		93	75		99	71	
12	70	49	.18	75	64		72	49		97	75		96	68	.45
13	57	39	.14	82	65		81	51		100	75		87	65	
14	50	38	1.12	82	51	1.06	87	63		95	69		90	65	
15	44	34	.02	66	45		90	66		97	69		90	69	
16	58	34		72	45		90	68		102	76		90	69	.01
17	59	38		68	58	1.73	79	56		103	77		95	70	
18	76	43		65	60	.61	78	57	.62	94	63		97	73	
19	71	41		82	61	.29	82	55		95	64		92	72	.16
20	75	44		78	60	1.29	87	59		100	66		94	72	
21	77	46		75	52		77	51		98	70		98	71	
22	78	47		78	49		84	57		94	68	.5	98	64	
23	85	53		76	60	.86	89	63		76	66	.16	87	59	
24	85	51		75	61	.20	85	67		84	60	.80	87	59	
25	76	38	.11	77	58	.03	75	60		84	61		90	59	
26	53	40	.06	80	60		85	60	1.66	90	63	.58	93	67	
27	64	46	.17	78	50		89	65		91	69	.57	93	67	
28	60	45	.03	82	50		94	65		85	66	.44	94	66	
29	64	45	.02	87	61		95	68	.42	80	61	.02	96	68	.08
30	53	45	.03	87	63	.91	82	65	.77	88	61		85	66	.11
31				88	66					93	69		89	66	

TN-510-80-H-S-1 - Weed Control in Soybeans Emphasis Preplant Incorporated Herbicides, Highland Rim Experiment Station, 1980 Springfield, Tennessee.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Soybean Response Yield bu/A	Weed Response, % Control[1] Lacg 6/27	Fapa 6/27	Rrpw 6/27	Cawe 6/27
1	Devrinol	1.0	PPI	16.7 ab	97	97	97	97
2	Devrinol	2.0	PPI	20.2 ab	97	98	99	99
3	Prowl + Blazer	1.0 + 0.5	PPI + POT	31.2 a	96	99	100	100
4	Prowl + Sencor	1.0 + 0.38	PPI	26.8 a	99	99	100	100
5	Sencor + Sencor	0.25 + 0.25	PPI + Pre	12.8 b	95	95	100	100
6	Tolban + Blazer	0.75 + 0.5	PPI + POT	24.6 ab	96	96	99	98
7	Tolban + Sencor	0.75 + 0.38	PPI	27.7 a	99	99	100	100
8	Treflan + Blazer	0.75 + 0.5	PPI + POT	21.6 ab	97	98	98	99
9	Treflan + Sencor	0.75 + 0.38	PPI	18.5 ab	99	99	99	99
10	Vernam + Blazer	2.5 + 0.5	PPI + POT	29.0 a	95	97	99	100
11	Vernam + Devrinol	2.5 + 1.0	PPI	19.4 ab	98	97	99	98
12	Weed Free Check	-----	---	29.5 a	100	100	100	100
13	Weedy Check	-----	---	16.5 a	0	0	0	0

[1] Weed abbreviations: Lacg = Large Crabgrass; Fapa = Fall Panicum; Rrpw = Redroot Pigweed; Cawe = Carpetweed.

Variety: Essex
Date of Planting: May 27, 1980
Soil Type:
Plot Size: 10 x 30'

Date of Application: May 27, 1980
Temperature: 75
Soil Moisture: Fair
Sprayer: CO_2 Back pack
Nozzle: Tee Jet 8003
Spray Volume: 20 gpa
Pressure: 30 psi

TN-510-80-H-S-1 - Preemergence Weed Control in Soybeans, Highland Rim Experiment Station, 1980, Springfield, Tennessee.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	State	Soybean Response Yield bu/A	Weed Response, % Control[1] Lacg 6/27	Fapa 6/27	Smcg 6/27	Rrpw 6/27	Cawe 6/27
1	Devrinol	1.0	Pre	17.2bcd	60	60	68	62	90
2	Devrinol	2.0	Pre	14.5bcd	53	57	17	47	47
3	Dual + Blazer	2.0 + 0.5	Pre + POT	22.2abc	90	80	83	77	83
4	Dual + Lexone	2.0 + 0.5	Pre	24.0ab	81	83	93	76	92
5	Dual + Lorox	2.0 + 0.75	Pre	19.9abc	73	79	88	69	86
6	Lasso + Blazer	2.0 + 0.5	Pre + POT	20.4abc	92	91	92	93	93
7	Lasso + Dyanap	2.0 + 1.5 + 3.0	Pre	23.6abc	89	88	82	90	99
8	Lasso + Lexone	2.0 + 0.5	Pre	19.0abc	91	92	93	96	98
9	Lasso + Lorox	2.0 + 0.75	Pre	17.2bcd	92	89	98	86	99
10	Lexone	0.38	Pre	13.6cd	50	53	67	52	65
11	Lexone	0.5	Pre	9.1d	47	47	88	50	88
12	Lorox	0.75	Pre	16.8bcd	60	60	65	73	89
13	Lorox	0.88	Pre	15.4bcd	69	65	88	76	94
14	Weed Free Check	----	---	27.7a	100	100	100	100	100
15	Weedy Check	----	---	13.6cd	0	0	0	0	0

[1] Weed abbreviations: Lacg = Large Crabgrass; Fapa = Fall Panicum; Smcg = Smooth Crabgrass; Rrpw = Redroot Pigweed; Cawe = Carpetweed.

Variety: Essex
Date of Planting: May 27, 1980
Soil Type:
Plot Size: 10 x 30'

Date of Application: May 27, 1980
Temperature: 75
Soil Moisture: Fair
Sprayer: Back Pack CO_2
Nozzle: Tee Jet 8003
Spray Volume: 20 gpa
Pressure: 30 psi

TN-510-80-H-To-1 - Weed Control in Tobacco, Highland Rim Experiment Station, 1980 Springfield, Tennessee.

Trt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Tobacco Response Crop Injury	Weed Response % Control Lacg 7/9	Smcg 7/9	Hoe Time hr/A
1	Balan	1.2	PPI	3.3	95.0	97.7	12.8
2	Paarlan	1.5	PPI	6.7	99.7	100.0	7.6
3	Prowl	1.0	PPI	6.7	100.0	100.0	5.0
4	Prowl	1.0	Pre	3.3	96.0	100.0	14.9
5	Tillam	4.0	PPI	6.7	100.0	100.0	6.9
6	Tillam + Devrinol	4.0 + 1.0	PPI	15.0	100.0	100.0	5.2
7	Weed Free Check			0	100.0	100.0	15.3
8	Devrinol	1.0	POT	6.7	63.3	68.3	38.4
9	Devrinol	2.0	POT	6.7	88.0	73.3	52.1
10	Cultivated + Devrinol	1.0	LY	5.0	---	---	18.1
11	Dual	1.5	POT	0	88.3	94.3	29.8
12	Dual	2.0	POT	7.5	87.5	96.5	33.5
13	Cultivated + Dual	1.5	LY[1]	0	100.0	100.0	27.4
14	Dual + Enide	1.5 + 4.0	POT	8.3	97.3	85.0	27.4
15							
16	Enide	4.0	POT	5.0	93.3	26.7	38.7
17	Enide	6.0	POT	0	91.7	31.7	42.3
18	Cultivated + Prowl	1.0	LY	----	---	---	26.1
19	Weed Free Check			0	99.0	99.0	11.0
20	Weedy Check			0	0	0	74.5

[1] Hoe Time take July 10, 1980.

Variety - Modole
Date of Planting - June 5, 1980
Plot Size - 10.5 x 36'
Soil Type -
pH -

Postemerge Date of Appl. - 6/5/80
Temperature - 80°
Soil Moisture - Dry
Sprayer - Hand carried CO_2
Nozzle Type - Tee Jet 8003
gpa - 20
Pressure - 30 psi

Preemerge Date of Appl. - 6/5/80
Temperature - 80°
Soil Moisture - Dry
Sprayer - Hand carried CO_2
Nozzle Type - Tee Jet 8003
gpa - 20
Pressure - 30 psi

KNOXVILLE EXPERIMENT STATION

P. O. BOX 1071

Knoxville, Tennessee 37901

Superintendent - Dr. John Hodges III

CLIMATIC DATA PERTAINING TO THE KNOXVILLE EXPERIMENT STATION

Knoxville, TN

1980

Date	April			May			June			July			August		
	Temperature			Temperature			Temperature			Temperature			Temperature		
	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfal (in.)
1	57	41		62	40	.10	84	66		89	58		97	77	
2	70	44		69	47		85	69		91	67		90	66	.07
3	76	49	.18	75	50		86	71		95	69	.45	92	75	
4	78	49		75	51		87	67		85	70	.48	92	73	
5	65	39		78	50		87	64		90	71		91	69	.10
6	61	36		81	55	.03	87	66		95	67	.58	92	71	
7	67	50		79	56		87	74		92	67		95	70	
8	73	54	.14	77	54	.07	91	76		90	65		98	73	
9	75	49		69	42		88	52		95	75		99	74	
10	67	48		66	42		76	56		96	77		99	74	
11	69	41	.54	78	46		84	58		95	75	.04	100	76	
12	76	55	.28	83	64		79	55		95	71		95	70	3.0
13	63	50	1.61	85	70		84	59		97	75	.55	88	68	
14	71	52	.05	83	66		86	64		97	79		91	70	
15	54	36	.02	74	54	.01	90	70		98	74		96	74	
16	53	40		78	60		92	76		96	75		93	74	
17	61	36		74	59	.08	82	62	.03	101	74		92	70	.15
18	68	42		67	58	2.08	80	64	.03	101	71		92	72	.97
19	74	45		81	64		83	61		96	72		87	74	
20	76	49		81	61	.38	86	66		98	74		92	70	.10
21	78	51		70	58	.71	81	64		97	72		90	70	
22	77	47		79	59		86	64		95	71	.08	95	73	
23	81	60		75	61	.23	89	67		84	69	.26	89	70	
24	89	62	.01	74	60	.25	86	67	.02	84	68		87	68	
25	82	53	.47	77	63	.03	80	63	0.67	89	68		87	66	
26	73	50	.15	76	60		77	63		94	73	.03	88	67	
27	73	57		80	54		87	66		88	69	.16	89	66	
28	67	46	.03	82	58		93	69		89	69	1.20	91	66	
29	64	48	.10	85	64		91	75		88	69		91	71	
30	54	42		86	65		80	68		88	66		86	69	.31
31				86	69					91	69		85	67	

TN-510-80-K-AL - 2,4-D and Dicamba to kill Alfalfa, Knoxville Plant Science Farm, 1980, Knoxville, TN.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Alfalfa Response % Kill
Treatments Applied April 18			
1	Banvel	0.125	55
2	Banvel	0.25	60
3	Roundup	0.5	92
4	Roundup	1.0	99
5	2,4-D LV Ester	0.5	95
6	2,4-D LV Ester	1.0	100
Treatments Applied May 1			
7	Roundup	0.5	0
8	Roundup	1.0	20
9	2,40D LV Ester	0.5	73
10	2,4-D LV Ester	1.0	90
11	Check		0

Variety: Saranac
Date of Planting: Fall 1976
Soil Type: Etowah Silt Loam
Plot Size: 2 x 30'

Date of 1st Appl: 4-18-80
Stage of Growth: 8-12 in.
Temperature: 68-72F
Time of Day: 11:30-12:30

Date of 2nd Appl: 5-1-80
Stage of Growth: 16-18 in.
Temperature: 68F
Time of Day: 2:15 p.m.

TN-510-80-K-Cr-1 - Preemergence and Postemergence Weed Control in Corn, Knoxville Plant Science Farm, 1980, Knoxville, Tennessee.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Yield bu/A	Weed Response, % Control[1] Angr 9/15	Anmg 9/15
Preemergence						
1	Atrazine	2.0	Pre	99.3 ab	13	66
2	Dual + Atrazine	1.5 + 1.2	Pre	104.3 ab	91	63
3	Dual	2.0	Pre	76.9 abc	98	60
4	Lasso	2.0	Pre	55.1 cd	43	30
5	Lasso + Altrazine	1.5 + 1.2	Pre	104.0 ab	83	60
6	Mon 097 + Atrazine	1.5 + 1.2	Pre	97.3 ab	60	63
7	Prowl + Atrazine	1.0 + 1.2	Pre	114.2 ab	65	60
8	XRM 4377	2.0	Pre	39.9 cd	0	0
9	Weedy Check	-----	---	21.9 d	0	0
Postemergence						
10	Bladex	2.0	POT	111.6 ab	85	95
11	Dual + Atrazine	2.0 + 1.2	POT	95.8 ab	95	93
12	Lasso + Atrazine	2.0 + 1.2	POT	101.0 ab	99	98
13	Prowl + Atrazine	1.0 + 1.2	POT	120.6 a	98	95
14	Weed Free Check	-----		104.9 ab	68	66
15	Weedy Check	-----		17.8 d	0	0

[1] Weed Abbreviations: Angr = Annual Grasses; and Anmg = Annual Morningglory.

Variety: Pioneer 3147
Planting Date: May 7, 1980
Soil Type: Statler loam
Plot Size: 13 x 30'
Harvest Date: Oct. 8, 1980

Date of Preemergence: May 7
Temperature: 70-75
Soil Moisture: Dry
Sprayer: CO_2 Back Pack
Nozzle: Tee Jet 8003
Spray Volume: 20 gpa
Pressure: 30 psi

Date of Postemergence: May 21, 1980
Corn Stage: 3½ - 4 leaf
Soil Moisture: Excellent
Temperature: 75

TN-510-80-K-Cr-4 - Weed Control in Reduced Tillage Corn, Knoxville Plant Science Farm, 1980, Knoxville, Tennessee.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Corn Response Yield bu/A	Weed Response, % Control[1] Lacg 9/15	Rrpw 9/15	Anmg 9/15
1	Atrazine + Princep + Paraquat	1.0 + 1.0 + 0.5	127.7	98	100	67
2	Atrazine + Princep + Paraquat	1.5 + 1.5 + 0.5	111.9	94	100	100
3	Atrazine + Surfactant	3.0	117.9	94	100	67
4	Dual + Atrazine + Paraquat	2.0 + 1.5 + 0.5	129.6	100	100	93
5	Dual + Bladex + Paraquat	2.0 + 1.75 + 0.5	121.5	100	99	91
6	Dual + Princep + Paraquat	2.0 + 1.5 + 0.5	118.6	100	100	97
7	Lasso + Atrazine + Paraquat	2.0 + 1.5 + 0.5	128.8	93	100	82
8	Lasso + Bladex + Paraquat	2.0 + 1.75 + 0.5	119.7	99	98	97
9	Mon 097 + Atrazine + Paraquat	2.0 + 1.5 + 0.5	118.3	98	100	67
10	Paraquat Check	0.5	83.3	73	13	
11	Weedy Check	-----	83.0	0	0	0
			N.S.			

[1] Weed Abbreviations: Lacg = Large Crabgrass; Rrpw = Redroot Pigweed; and Anmg = Annual Morningglory.

Variety: Pioneer 3147
Date of Planting: May 19, 1980
Plot Size: 13 x 30'
Soil Type: Statler Loam
Date Harvested: October 8

Date of Application: May 16, 1980 (Bladex sprayed 5/21 - corn had not emerged)
Temperature: 75
Soil Moisture: Heavy rainfall following application
Sprayer Type: CO_2 Back Pack
Spray Volume: 20 gpa
Pressure: 30 psi

TN-510-80-K-Cr-S - Weed Control in Corn Planted in Wheat Stubble Mulch, Knoxville Plant Science Farm, 1980, Knoxville, TN.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Corn Response # Plt/20'	Corn Response Yield bu/A	Weed Response, % Control Lacg[1] 9/15
Wheat Stubble Chemically Killed						
1	Aatrex + Lasso + Paraquat + Surf.	1.5 + 2.0 + 0.5	Pre	11.0	43.5	94
2	Aatrex + Dual + Paraquat + Surf.	1.5 + 2.0 + 0.5	Pre	12.0	40.8	97
3	Bladex + Lasso + Paraquat + Surf.	1.5 + 2.0 + 0.5	Pre	11.3	44.7	88
4	Bladex + Dual + Paraquat + Surf.	1.5 + 2.0 + 0.5	Pre	5.0	27.5	92
5	Weed free Check[2]+ Paraquat + Surf.	0.5	---	8.0	25.8	7
6	Weedy Check + Paraquat + Surf.	0.5	---	8.0	28.8	33
Wheat Stubble Mowed						
7	Aatrex + Lasso + Paraquat + Surf.	1.5 + 2.0 + 0.5	Pre	4.7	33.0	81
8	Aatrex + Dual + Paraquat + Surf.	1.5 + 2.0 + 0.5	Pre	8.3	59.1	89
9	Bladex + Lasso + Paraquat + Surf.	1.5 + 2.0 + 0.5	Pre	7.3	48.9	30
10	Bladex + Dual + Paraquat + Surf.	1.5 + 2.0 + 0.5	Pre	4.0	13.9	87
11	Weed free Check[2]+ Paraquat + Surf.	0.5	---	3.0	25.5	10
12	Weedy check + Paraquat + Surf.	0.5	---	5.3	17.8	17
Wheat Stubble Disked						
13	Aatrex + Lasso	1.5 + 2.0	Pre	17.7	47.4	88
14	Aatrex + Dual	1.5 + 2.0	Pre	13.0	58.2	89
15	Bladex + Lasso	1.5 + 2.0	Pre	16.0	45.5	92
16	Bladex + Dual	1.5 + 2.0	Pre	14.7	63.0	99
17	Weed Free Check[2]	-----	---	12.3	33.3	48
18	Weedy check + Paraquat + Surf.	0.5	---	14.3	27.7	3

1 Lacg =Large Crabgrass

2 Weed Free Checks were not weed free. They were weeded once about 6 weeks after planting.

3 Yields extremely low due to drought.

Variety: Pioneer 3147
Date of Planting: May 19, 1980
Plot Size: 10 x 30'
Soil Type: Etowah Silt Loam
Date Harvested: Oct. 8, 1980

Date of Application: May 21 (3-5p.m.)
Temperature: 75-80°
Soil Moisture: Excellent
Sprayer Type: CO_2 Back Pack
Spray Volume: 20 gpa
Pressure: 30 psi

N-510-80-K-Cr-8 - Eradicane Persistence in Corn, Knoxville Plant Science Farm, 1980, Knoxville, Tennessee.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Corn Response Yield Bu/A	Weed Response, % Control[1,2] Gogr	Rrpw	Prsi
1	Eradicane	3.0	PPI	Due to drought	99	99	97
2	Eradicane	4.0	PPI	no yield was	99	99	98
3	Eradicane + Extender	3.0	PPI	taken	98	99	98
4	Eradicane + Extender	4.0	PPI		100	98	98
5	Weedy Check	---			0	0	0

[1] Weed abbreviations are: Gogr = goosegrass; Rrpw = redroot pigweed; Prsi = prickly sida.

[2] Extended drought inhibited germination and growth of many weeds and allowed for no difference between treatments.

Variety: Silver Queen
Date of Planting: June 13, 1980
Soil Type: Statler Loam

Plot size: 7 x 30'

Date of Application: June 13, 1980
Temperature:
Soil Moisture: Dry, Irrigated after Planting
Sprayer: CO_2 Backpack
Nozzle: Tee Jet 8003
Spray Volumn: 20 gpa
Pressure: 30 psi

TN-510-80-S-GS-3 - Preemergence Weed Control in Grain Sorghum Planted Under Reduced Tillage Conditions, Knoxville Plant Science Farm, 1980, Knoxville, Tennessee.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Grain Sorghum Response		Weed Response, % Control			
				Vigor Reduc.	Yield	Gogr 8/11	Corw 8/11	Mgsp 8/11	Rrpw 8/11
1	Aatrex + Paraquat + Surf.	2.0 + 0.5	Pre	0	No yield was taken because of extensive bird damage.	100	100	93	100
2	Dual + Aatrex + Paraquat + Surf.	1.5 + 1.2 + 0.5	Pre	0		100	100	90	100
3	Dual + Aatrex + Roundup	1.5 + 1.2 + 1.0	Pre	0		100	100	96	100
4	Dual + Milogard + Paraquat + Surf.	1,5 + 1,2 + 0.5	Pre	0		100	97	81	100
5	Dual + Milogard + Roundup	1.5 + 1.2 + 1.0	Pre	0		100	100	58	100
6	Lasso + Aatrex + Paraquat + Surf.	1.5 + 1.2 + 0.5	Pre	0		100	100	100	100
7	Lasso + Milogard + Paraquat + Surf.	1.5 + 1.2 + 0.5	Pre	0		99	99	42	100
8	Paraquat + Surf.	0.5	Pre	0		18	23	42	85
9	Prowl + Aatrex + Paraquat + Surf.	1.0 + 1.2 + 0.5	Pre	0		100	100	99	100
10	Weed Free Check	---	---	0		100	100	100	100
11	Weedy Check	---	---	0		0	0	0	0

Weed Abbreviations are:
Gogr = Goosegrass
Corw = Common Ragweed
Mgsp = Morningglory Species
Rrpw = Redroot Pigweed

Variety: Herbishield treated with Concep
Date of Planting: June 13
Soil Type: Statler Loam

Plot Size: 8 x 30'

Date of application: June 13, 1980
Temperature: 80-85°F
Soil Moisture: Dry
Sprayer: CO_2 Back Park
Nozzle Type: Tee Jet 8003
gpa: 20
Pressure: 30
Surfactant: X-77 at 0.5% v/v

TN-510-80-K-S1b - Preemergence (Preplant Incorporated Herbicides) Weed Control in Soybeans, Knoxville Plant Science Farm, 1980, Knoxville, Tennessee.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Soybean Response Yield bu/A	Weed Response, % Control[1] Corw 9/15	Rrpw 9/15	Angr 9/15
1	Basalin + Blazer	0.75 + 0.5	PPI + POT	17.2abc	60	98	83
2	Basalin + Sencor	0.75 + 0.38	PPI	20.2ab	89	99	98
3	Devrinol	1.0	PPI	19.7abc	91	66	100
4	Devrinol	2.0	PPI	12.8bc	78	83	100
5	Prowl + Blazer	1.0 + 0.5	PPI + POT	22.0ab	30	93	100
6	Prowl + Sencor	1.0 + 0.38	PPI	19.9abc	79	99	100
7	Sencor + Sencor	0.25 + 0.25	PPI + Pre	18.1abc	98	99	85
8	Tolban + Blazer	0.75 + 0.5	PPI + POT	20.6abc	50	92	100
9	Tolban + Sencor	0.75 + 0.38	PPI	23.9a	79	98	100
10	Treflan + Blazer	0.75 + 0.5	PPI + POT	13.6bc	50	99	97
11	Treflan + Sencor	0.75 + 0.38	PPI	14.5abc	72	98	97
12	Vernam + Blazer	2.5 + 0.5	PPI + POT	17.2abc	60	73	58
13	Vernam + Devrinol	2.5 + 1.0	PPI	14.8abc	60	93	50
14	Weed Free Check	-----	---	23.6a	95	59	58
15	Weedy Check	-----	---	12.3c	0	0	0

[1] Weed Abbreviations: Corw = Common Ragweed; Rrpw = Redroot Pigweed; Angr = Annual grasses.

Variety: Essex
Date of Planting: May 30, 1980
Soil Type: Statler Loam

Plot Size: 10 x 28'

Date of Application: May 30, 1980
Temperature: 82-85 F
Soil Moisture: Dry
Sprayer: CO_2 Back Pack
Nozzle: Tee Jet 8003
gpa: 20
Pressure: 30psi

TN-510-80-K-S1a - Preemergence Weed Control in Soybeans, Knoxville Plant Science Farm, 1980, Knoxville, TN.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Soybean Response Yield Bu/A	Weed Response, % Control[1] Anmg 6/23	Gogr 6/23	Rrpw 6/23
1	Devrinol	1.0	Pre	8.4 ab	0	27	0
2	Devrinol	2.0	Pre	3.3 b	0	52	25
3	Dual + (Blazer)[2]	2.0 + 0.5	Pre + (POT)	21.9 a	0	33	32
4	Dual + Lorox	2.0 + 0.75	Pre	15.0 ab	70	97	100
5	Dual + Sencor	2.0 + 0.5	Pre	19.2 a	78	97	83
6	Lasso + (Blazer)[2]	2.0 + 0.5	Pre + (POT)	16.4 ab	64	99	99
7	Lasso + Dyanap	2.0 + 1.5 + 3.0	Pre	9.1 ab	74	85	83
8	Lasso + Sencor	2.0 + 0.5	Pre	16.1 ab	83	98	99
9	Lasso + Lorox	2.0 + 0.75	Pre	20.8 a	92	99	93
10	Lorox	0.75	Pre	12.2 ab	35	48	60
11	Lorox	0.88	Pre	21.6 a	53	58	67
12	Sencor	0.38	Pre	11.9 ab	86	77	99
13	Sencor	0.50	Pre	18.6 a	81	83	92
14	Weed Free Check	-----	---	21.7 a	33	0	25
15	Weedy Check	-----	---	7.7 b	0	0	0

[1] Weed Abbreviations: Anmg = Annual morningglory; Gogr = Goosegrass; Rrpw = Redroot pigweed. Ratings madeJune 23, 1980.

[2] No weed control ratings were made after Blazer applications, but soybean yield may have been affected by weed control.

[3] Soybean yields were low and variable as a result of drough.

Variety: Essex
Date of Planting: June 2, 1980
Soil Type: Statler Loam

Plot Size: 10 x 25'

Date of Application: 6-2-80
Temperature: 80°F
Soil Moisture: Dry
Sprayer: CO_2 Back Pack
Nozzle: Tee Jet 8003
gpa: 20
Pressure: 30 psi

Date of Post Application: 6-23
Stage: Soybean - 2 trifoliolate
Morningflory - 1-5 in., 2-6 leaves
Pigweed - 1-5 in.

TN-487-80-K-S-16 - Weed Control in Soybeans (S110), Knoxville Plant Science Farm,1980, Knoxville, TN.

Tmt. No.	Herbicide Treatment	Rate lb/a a.i.	Stage	Soybean Response Yield bu/A	Weed Response, % Control[1] Rrpw 8/11	Prsi 8/11	Angr 8/11	Yens 8/11	Ilmg 8/11
Conventional Tillage									
1	Metribuzin	0.5	Pre	10.9 ab	100	99	95	80	79
2	Metribuzin	1.0	Pre	10.9 ab	100	100	90	90	82
3	Metribuzin + Metolachlor	0.5 + 2.0	Pre	16.8 a	100	97	99	95	97
4	Weed Free Check	-----		14.2 a	100	100	100	100	100
5	Weedy Check	-----		9.5 ab	0	0	0	0	12
No-Tillage									
6	Metribuzin + Paraquat	0.5 + 0.5	Pre	18.9 a	99	96	85	89	70
7	Metribuzin + Paraquat	1.0 + 0.5	Pre	16.9 a	100	98	90	97	96
8	Metribuzin + Metolachlor + Paraquat	0.5 + 2.0 + 0.5	Pre	13.8 ab	100	92	95	99	83
9	Weed Free Check	-----		11.3 ab	50	50	50	50	50
10	Weedy Check	-----		5.7 b	0	0	0	0	0

[1] Weed abbreviations are: Rrpw: Redroot pigweed; Prsi = Prickly Sida: Angr = Annual grass; Yens = Yellow nutsedge; Ilmg = Ivyleaf morningglory.

Variety: Essex
Date of Planting: June 30, 1980
Soil Type: Statler & Huntington Loam

Plot Size: 15 x 30'

Date of Application: June 30, 1980
Temperature:
Soil Moisture: Dry - Irrigated 3/4" after herbicide application
Sprayer: CO_2 Back Pack
Nozzle: TeeJet 8003
gpa: 20
Pressure: 30

H-510-80-K-S-8 - Metribuzin Toxicity to Soybeans and Persistence Study #2, Knoxville Plant Science Farm, 1980, Knoxville, TN.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Soybean Response: Fresh Wt.[1] Grams	Soybean Response: Dry Wt.[1] Grams	Soybean Response: Stand Count Plants/20' row	Soybean Response: Yield Bu/A	Weed Response, % Control[2]: Anmg 8/21	Angr 8/21	Spsp 8/21
1	Metribuzin	0.5	Pre	68.6 a	20.5 e	145 a	8.9 ab	70	75	100
2	Metribuzin	1.0	Pre	58.6 abc	16.6 cde	136 ab	9.0 ab	85	99	100
3	Metribuzin	1.5	Pre	47.3 abcd	14.3 bcde	93 abc	5.2 cd	97	100	100
4	Metribuzin	2.0	Pre	27.2 de	9.1 ab	46 cd	3.7 e	65	94	99
5	Metribuzin	3.0	Pre	40.9 bcde	8.1 a	57 abcd	5.2 cde	97	99	100
6	Metribuzin	4.0	Pre	22.9 e	12.6 abc	2 d	.5 f	99	100	100
7	Metribuzin + ARD 54	0.5 + 1.0	Pre	50.8 abc	16.0 cde	174 a	8.5 ab	97	93	88
8	Metribuzin + ARD 54	1.0 + 1.0	Pre	53.2 abc	13.8 abcde	139 a	9.0 ab	96	100	100
9	Metribuzin + ARD 54	1.5 + 1.0	Pre	40.2 bcde	12.2 abc	104 abc	6.5 cd	97	100	100
10	Metribuzin + ARD 1675	0.5 + 1.0	Pre	61.2 abc	14.9 bcde	144 a	9.9 a	82	100	100
11	Metribuzin + ARD 1675	1.0 + 1.0	Pre	54.5 abc	16.7 cde	131 abc	7.8 abc	95	100	100
12	Metribuzin + ARD 1675	1.5 + 1.0	Pre	37.6 cde	12.0 abc	104 abc	5.2 cde	74	99	100
13	Metribuzin + ARD 1714	0.5 + 1.0	Pre	55.2 abc	16.2 cde	135 ab	7.6 abc	65	100	99
14	Metribuzin + ARD 1714	1.0 + 1.0	Pre	41.7 bcde	14.6 bcde	108 abc	7.9 ab	94	100	100
15	Metribuzin + ARD 1714	1.5 + 1.0	Pre	41.6 bcde	10.5 abc	93 abc	4.6 de	82	100	100
16	Metribuzin + DC 671	0.5 + 1.0	Pre	51.5 abc	15.3 bcde	136 ab	8.5 ab	84	99	100
17	Metribuzin + DC 671	1.0 + 1.0	Pre	47.5 abcd	13.2 abcd	116 abc	8.2 ab	92	99	100
18	Metribuzin + DC 671	1.5 + 1.0	Pre	45.9 abcd	14.8 bcde	122 abc	8.3 ab	90	100	100
19	Weed Free Check	-----	---	67.4 a	19.5 de	160 a	9.5 a	100	100	100
19a	Weed Free Check	-----	---	60.2 abc	16.5 cde	153 a	9.5 a	100	100	100

[1] Weight per 10 plants.

[2] Weed Abbreviations: Anmg = Annual Morningglory; Angr = Annual grasses; and Spsp = Spotted Spurge.

Variety: Essex
Date of Planting: June 20, 1980
Soil Type: Statler Silt Loam
pH:
Plot Size: 8 x 30'

Date of Application: June 23, 1980
Temperature: 75
Soil Moisture: Dry
Sprayer: CO_2 Back Pack
Nozzle: Tee Jet 8003
gpa: 20
Pressure: 30psi

TN-510-80-K-S-11 - Weed Control in No-till Soybeans Planted in Wheat Stubble
Knoxville Plant Science Farm, 1980 Knoxville, Tennessee.

TMT NO	Herbicide Treatment	Rate lb/A a.i.	Soybean Response Yield Bu/A	Weed Response, % Control Angr 8/15	Yens 8/15	Corw 8/15
Treatments Applied May 16						
1	Surflan	1.25		35	35.8	16.7
2	Surflan	2.50		56.7	38.3	73.3
3	Surflan + Banvel	1.25 + 0.125		33.3	8.3	100
4	Surflan + 2, 4-D	1.25 + 0.5		33.3	25	66.3
Surflan applied May 16, other treatments June 26						
5	Surflan + Lexone	1.25 + 0.38		46.7	38.3	65.8
6	Surflan + Lexone + Paraquat	1.25 + 0.38 + 0.5		81.7	86.7	100
7	Surflan + Lorox	1.25 + 0.75		55.9	63	100
8	Surflan + Lorox + Paraquat	1.25 + 0.75 + 0.5		55.9	63	100
Treatments Applied June 26						
9	Dual + Lexone + Paraquat	2.0 + 0.38 + 0.5		61.7	75	100
10	Dual + Lorox + Paraquat	2.0 + 0.75 + 0.5		85.8	79.2	100
11	Lasso + Lexone + Paraquat	2.0 + 0.38 + 0.5		29.2	63.3	100
12	Lasso + Lorox + Paraquat	2.0 + 0.75 + 0.5		33.3	55.8	100
13	Lexone + Paraquat	0.38 + 0.5		0	83.3	100
14	Lorox + Paraquat	0.75 + 0.5		26.7	70	100
15	Weedy Check			0	0	0

No yield was taken due to extreme drought

[1]Weed abbreviations: Angr= Annual grass, Yens = yellow nutsedge; Corw = common ragweed

Variety: Essex
Planting Date: June 26
Soil Type: Statler fine sandy loam
Plot size: 13 x 25'

May 16 - 100% cloud cover
Temperature - low 70s
Humidity - high
Wheat stage - Early kernel formation
Sprayer - Hand carried CO_2
Pressure - 30 psi
Spray Volume - 20 gpa
Wheat harvested - June 18

June 26:
Temperature: 75
Sprayer: Hand carried CO_2
Pressure: 30 psi
Spray Volume: 20 gpa

MIDDLE TENNESSEE EXPERIMENT STATION

Box 160

SPRING HILL, TENNESSEE 37174

Superintendent - Dr. Joe W. High, Jr.

CLIMATIC DATA PERTAINING TO MIDDLE TENNESSEE EXPERIMENT STATION

Spring Hill, TN

1980

	April			May			June			July			August		
	Temperature			Temperature			Temperature			Temperature			Temperature		
Date	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)
1	52	37		64	47		84	66		85	61		96	70	
2	69	40		71	47		86	70		89	66		92	69	
3	76	45		74	49		87	70		95	70		91	70	
4	68	46	.03	73	45		86	67		90	67	.15	85	68	
5	55	30		78	50		87	62		92	70		89	68	2.15
6	62	32		79	48		89	65		93	73		89	69	
7	68	45		83	51		90	67		95	67		92	67	
8	74	56	1.44	84	50		91	70		94	68		94	68	
9	74	43	.40	68	41		79	47		95	72		95	69	
10	68	40		66	35		74	48		97	74		97	69	
11	69	38		77	43		84	55		94	73		96	72	
12	74	49	1.22	78	64		75	50		97	73		93	70	
13	58	40	.45	78	65		82	54		100	75		89	65	
14	53	38	1.28	82	54	.18	87	57		95	68		92	65	
15	47	35	.04	68	49		90	62		98	67		93	68	2.15
16	59	35		73	49		91	72		102	70		92	68	.14
17	62	32		69	62	2.54	86	61	.77	103	70		92	70	
18	72	45		67	57	3.04	78	62		96	62		93	72	.18
19	75	43		83	58	1.08	81	57		96	62		91	69	
20	78	48		77	59	.97	86	59		100	70		94	70	
21	79	48		75	52		80	58		96	69		95	68	
22	80	45		79	55		87	57		92	68	1.00	97	63	
23	84	52		66	50	.96	89	63		74	67	3.03	86	62	
24	87	33		76	61	.54	80	66	.06	83	63	.04	86	62	
25	85	45	.29	72	61		79	67	.04	85	64		89	59	
26	53	43	.37	80	61		88	64		90	66	.04	90	60	
27	62	48	.02	80	50		91	64		89	67	.21	91	63	
28	58	44	.03	82	52		89	65		85	66	.16	91	63	
29	68	46		87	61		94	67	.20	83	60		91	63	
30	57	46	.03	88	63	.49	77	--	3.15	88	61		85	64	.02
31				83	62					94	66		90	65	

TN-510-80-M-Cr-1 - Preemergence Weed Control in Corn Emphasis Tall Morningglory, Middle Tennessee Experiment Station, Springfield, Tennessee, 1980.

Trt. No.	Herbicide Treatment	Rate lb/A a.i.	Corn Response Yield bu/A	Weed Response, % Control Anmg 6/16	7/30	9/19
1	Atrazine + Bladex	1.0 + 2.0	76.0 abcd	99	76	79
2	Atrazine + Simazine	1.0 + 2.0	69.4 abcd	100	84	85
3	Dual + Atrazine	1.5 + 1.2	87.0 ab	97	74	76
4	Dual + Atrazine	1.5 + 1.87	90.0 ab	100	76	81
5	Dual + Atrazine	2.0 + 1.5	63.2 bcd	96	70	69
6	Dual + Bladex	2.0 + 2.0	41.7 de	58	31	18
7	Dual + 2,4-D	2.0 + 0.5	92.5 ab	99	76	76
8	Dual + Dicamba	2.0 + 0.25	68.6 abcd	89	78	69
9	Lasso + Atrazine	2.0 + 1.5	100.1 a	100	78	66
10	Lasso + Atrazine	2.0 + 1.2	77.9 abc	95	69	65
11	Weed Free Check	---	46.6 cde	100	100	100
12	Weedy Check	---	14.0 e	0	0	0

Plots - Six 40" rows x 30'
Planted - 'Pioneer Brand 3147' on 5-2-80
Sprayed - Preemergence cpds on 5-5-80
Sprayer - Tractor Mounted Boom 20 gpa
8-11 a.m.
air temp - 74° clear
soil temp 84° wind 0-1 mph
RH 49% Soil - Dry

Sprayed - Post emerge cpds on 6-5-80
80" Hand boom 20 gpa
Corn 5" to 20" tall; biggest Morningglory beginning to vine
10-11 a.m. Clear, Sunny
Air Temp - 84° Wind 2-3 mph
Soil Temp - 97° Soil - Dry
RH 52%

H-510-80-MJogr Comp. Johnsongrass Competition and Timing of Control in Soybeans. Middle Tennessee Experiment Station, Spring Hill, Tennessee. 1980

Treatment	9-16-80 % Control Jogr	Soybean Dry Wt. (kg/ha)	Jogr Dry Wt. (kg/ha)	Plant/ m^2	Culms/ m^2	Yield[b] Bu/A@ 13%
1. Weedy Check	0 c	4694	2676 a	4.7 a	23.5 a	19.2 cd
2. Weed Free Check	100 a	7567	---	0.0 b	0.0 b	27.2 abc
3. Maintain Weed Free for 3 wks. after planting	77 b	5912	369 c	1.3 b	5.4 b	23.4 abcd
4. Maintain Weed Free for 4 wks. after planting	96 ab	6451	29 c	0.3 b	0.3 b	26.6 abc
5. Maintain Weed Free for 5 wks. after planting	98 a	5181	26 c	0.4 b	0.4 b	27.5 abc
6. Maintain Weed Free for 6 wks. after planting	99 a	6554	8 c	0.6 b	0.6 b	24.0 abcd
7. Maintain Weed Free for 7 wks. after planting	100 a	6464	1 c	0.1 b	0.1 b	27.6 ab
8. Maintain Weed Free for 8 wks. after planting	100 a	6926	1 c	0.0 b	0.0 b	25.2 abc
9. Maintained Weed Free after 4 wks. to Harvest	100 a	6361	---	0.0 b	0.0 b	23.6 abcd
10. Maintained Weed Free after 5 wks. to Harvest	100 a	5912	---	0.0 b	0.0 b	28.9 a
11. Maintained weed free after 6 wks. to Harvest	100 a	5656	---	0.0 b	0.0 b	29.2 a
12. Maintained Weed Free after 7 wks. to Harvest	100 a	6733	---	0.0 b	0.0 b	24.1 abc
13. Maintained Weed Free after 8 wks. to Harvest	100 a	5592	---	0.0 b	0.0 b	22.1 abcd
14. Maintained Weed Free after 10wks. to Harvest	99 a	4720	---	0.0 b	0.0 b	19.7 bcd
15. BAS 9052 (1.5E) + AtPlus oil conc at 4 wks. after planting	99 a	6092	0 c	0.0 b	0.0 b	23.0 abcd
16. BAS 9052 (1.5E) + AtPlus oil conc at 5 wks. after planting	99 a	5707	19 c	0.4 b	1.6 b	21.3 abcd
17. BAS 9052 (1.5E) + AtPlus oil conc at 7 wks. after planting	87 ab	3835	174 c	0.4 b	1.7 b	21.3 abcd
18. BAS 9052 (1.5E) + AtPlus oil conc at 8 wks. after planting	94 ab	4258	476 c	2.3 b	5.4 b	21.5 abcd
19. BAS 9052 (1.5E) + AtPlus oil conc at 10wks. after planting	77 b	5130	1538 b	6.4 a	26.0 a	16.7 d
C.V.	13	27				20

a/ Herbicide rate of 1.0 lb/A ai plus o.5% oil conc.

b/ Harvested: October 21, 1980

Variety: Essex

Planted: 6-10-80

Treated:

Plot Size: 3-38" rows x 25' long

Design: RCB with 4 reps

Soil type: Maury silt loam

pH: 6.6 %O.M. P - high, K - high

Fertilization: None

Sprayer:

CO_2 hand boom

3 - 8002 nozzles - 60"

30 psi, 20 gpa, across 25' in 6.6 sec.

Sprayed 3 times with Basagran for broadleaf control

	Date	Treatment Tilled
3wks	7-3	2,3,4,5,6,7,8
4wks	7-9	2,4,5,6,7,8,9
5wks	7-17	2,5,6,7,8,9,10
7wks	7-30	2,7,8,9,10,11,12
8wks	8-8	2,8,9,10,11,12,13
10wks	8-22	2,9,10,11,12,13,14
13wks	9-9	2,9,10,11,12,13,14

	Date	Treatment Sprayed
4wks	7-9	15
5wks	7-18	16
7wks	7-30	17
8wks	8-8	18
10wks	8-22	19

H-510-80-M-S-MG. Morningglory Control in Soybeans. Middle Tennessee Experiment Station, Spring Hill, Tenn.

Treatment 1/	Rate (LB/A AI)	MOA	Percent Tall Morningglory Control 7-30-80	9-16-80	Bu/A @ 13%
1. Tolban 4E	1.5	PPI	64 c	75 b	22.3 bc
2. Treflan 4E	0.75	PPI	51 cd	54 b-d	27.3 b
3. Prowl 4E	1.0	PPI	51 cd	63 bc	25.1 bc
4. Basalin 4E	0.75	PPI	41 de	44 c-e	24.3 bc
5. Tolban 4E + Blazer 2LCS	0.75 + 0.5	PPI + EP	88 ab	73 b	21.6 bc
6. Basalin 4E + Basagran 4L +Basagran 4L	0.75 + 0.75 + 0.75	PPI + EP + MP	87 b	69 b	24.3 bc
7. Basagran 4L + Basagran 4L	0.75 + 0.75	EP + MP	54 cd	30 ef	23.4 bc
8. Blazer 2LCS	0.5	EP	58 c	33 d-f	20.5 bcd
9. Basagran 4L + Blazer 2LCS	0.5 + .25	EP	35 e	10 fg	19.0 cd
10. Basagran 4L + Blazer 2LCS	0.75 + 0.5	EP	62 c	22 c-g	20.9 bc
11. Weed Free Check	----	----	100 a	100 a	34.0 a
12. Weedy Check	----	----	0 f	0 g	13.8 d
		C.V.	19	40	24

Morningglory Control in Soybeans
Planted 6-3-80, Essex Soybean
4 - 38" rows
Soils pH - 6.9 P - High, K - High

PPI tmts 6-3-80
10 - 11 am
Air temp 84°
Soil temp 96°
RH 55%
Wind 7 - 9 mph
Clear, sunny
Soil surface - dry
Double disk after spray
CO_2 - tractor boom (8002)

Early Post 7-7-80
8:30 - 9:30 am
Air temp 83°
Soil temp 91°
Rh 74°
Wind 0- 2 mph
Clear, sunny
Soil surface dry
bean - 5th trifoliate or less
MG - 12" vines to just emerged
CO_2 tractor boom (8002)

Mid Post 7-17-80
8 - 9 am
Air Temp 86°
Soil Temp 94°
RH 61%
Wind 0 - 2 mph
Clear, sunny
Soil - Very Dry
Bean - 9th trifoliate or less
MG - vining
CO_2 tractor boom (8002)

The first row of each plot was cultivated during early season to reduce the number of MG vining between plots.
Area fertilize 60 lbs K/A on 6-2-80
Cultivated weed free checks 6-20-80, 7-8-80, 7-11-80, and 7-30-80

Harvested: Nov. 11, 1980

MILAN EXPERIMENT STATION

205 ELLINGTON DRIVE

MILAN, TENNESSEE 38358

Superintendent - Mr. Tom C. McCutchen

Station Superintendent - Tom C. McCutchen

Daily Maximum and Minimum Air Temperatures and Precipitation for the Milan Experiment Station during the Growing Season 1980

	APRIL				MAY				JUNE			
	Temperature		Precipitation		Temperature		Precipitation		Temperature		Precipitation	
	Max.	Min.	South Tract	North Tract	Max.	Min.	South Tract	North Tract	Max.	Min.	South Tract	North Tract
1					72	50			89	71		
2					75	44			91	74		
3					75	44			93	75		
4					79	44			90	70		
5	62	32			82	50			96	70		
6	69	36			83	50			96	72		
7	74	58			78	52			96	75		
8	64	53			77	42			83	59	.44	.38
9	62	44			70	33			80	52		
10	69	37			81	38			89	50		
11	68	54			82	70			78	55		
12	58	49			74	59	1.10	1.12	84	44		
13	49	40			75	60			90	52		
14	42	37			70	54			94	58		
15	62	37			72	50			95	68		
16	68	34			76	60	.46	.46	86	65		
17	75	41			76	68	.13	.13	78	62		
18	73	46			84	59			84	63		
19	75	40			75	64			92	60	.42	.55
20	77	40			77	57			80	60		
21	82	52			80	53			86	62		
22	86	46			67	62	.50	.60	90	60		
23	84	58			74	61			88	68	4.05	3.60
24	78	56			80	60			83	69		
25	56	42	.70	.80	84	64	.11	.48	90	66		
26	59	50	.20	.20	86	61			92	68		
27	60	50			86	52			96	70		
28	68	47			90	56			96	75		
29	64	44			86	62			86	70	2.00	2.05
30	69	46			84	70			88	69		
31					84	68						

Station Superintendent - Tom C. McCutchen

Daily Maximum and Minimum Air Temperatures and Precipitation for the Milan Experiment Station during the Growing Season 1980

	JULY				AUGUST				SEPTEMBER			
	Temperature		Precipitation		Temperature		Precipitation		Temperature		Precipitation	
	Max.	Min.	South Tract	North Tract	Max.	Min.	South Tract	North Tract	Max.	Min.	South Tract	North Tract
1	98	70			99	76			94	72		
2	100	74	.30	.52	98	77			81	74		
3	90	74	.30	.56	92	75	.15	.11				
4	96	76			90	74						
5	97	76			90	76	T	T				
6	100	75	T	T	98	72						
7	100	73			100	69						
8	102	80			101	70			96	---		
9	101	78			100	70			96	63		
10	100	81			100	72			84	52		
11	103	80			99	76			82	45		
12	103	77			94	71			94	52		
13	100	76			92	66			98	72		
14	101	74			96	71			96	65		
15	104	76			95	74	.40	.60	86	60		
16	104	75			96	71			90	62		
17	99	73			92	70			70	62	1.65	1.60
18	100	68			92	76	.05	.40	79	52		
19	100	63			92	72			88	52		
20	98	76			93	70			86	70		
21	90	72			94	70			87	72	1.25	1.80
22	81	70	.64	.68	90	60			89	75		
23	90	68			89	58			74	62	.58	.44
24	89	62			89	59			76	62	.15	.15
25	93	62			88	58			72	62	.27	.25
26	94	70			92	60			75	52		
27	89	69			89	60			65	50		
28	90	66			92	66			65	55	.15	.16
29	95	60			88	65			76	60		
30	100	66			90	67			69	54	T	T
31	101	69			94	72						

Station Superintendent - Tom C. McCutchen

Daily Maximum and Minimum Air Temperatures and Precipitation for the Milan Experiment Station during the Growing Season 1980

OCTOBER

	Temperature		Precipitation	
	Max.	Min.	South Tract	North Tract
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17			1.90	1.90
18				
19				
20				
21				
22				
23				
24			.78	.64
25				
26				
27			1.10	1.25
28				
29				
30				
31				

H-510-80-MES-CT-HE. Herbicide Evaluation on Cotton. Milan Experiment Station, Milan, Tennessee. 1980.

Treatment	Rate (LB/A AI)	MOA	Percent Injury or Control 5-30-80 CIR	Gogr	Cocb	Ivy leaf Mg
Preemergence						
1. PPG 225 (2E)	1.0	PRE	3 fg	63 a-c	53 bc	75 ab
2. PPG 225 (2E)	2.0	PRE	35 ab	100 a	97 a	99 a
3. PPG 844 (2E)	.75	PRE	22 b-d	96 ab	55 bc	92 a
4. PPG 844 (2E)	1.5	PRE	43 a	100 a	97 a	100 a
5. EL5219(4L)	1.0	PRE	0 g	97 a	10 d	58 ab
6. EL5219(4L) + Cotoran 80W	.75 + 1.5	PRE	3 fg	98 a	76 ab	72 ab
7. EL5219(4L) + Zorial 80W	.75 + 1.5	PRE	20 c-e	100 a	95 a	97 a
8. MBR 22359(2E) + Cotoran 80W	1.5 + 1.5	PRE	8 d-g	98 a	97 a	95 a
9. MBR 22359(2E) + Cotoran 80W	3.0 + 1.5	PRE	8 d-g	100 a	98 a	100 a
10. Dual 8E + Cotoran 80W	2.0 + 1.5	PRE	37 a	98 a	95 a	98 a
11. Dual 8E	2.0	PRE	32 a-c	97 ab	10 d	37 b-d
12. NC-20484(4F)	1.0	PRE	0 g	65 a-c	17 d	53 a-c
13. NC-20484(4F) + Cotoran 80W	1.0 + 1.0	PRE	7 d-g	95 ab	90 a	95 a
14. Nortron(3.2E) + Cotoran 80W	1.5 + 1.5	PRE	3 fg	100 a	97 a	100 a
15. Nortron(3.2E)	2.0	PRE	0 g	90 a-c	27 cd	32 b-d
16. Cotoran 80W	1.5	PRE	8 d-g	97 ab	92 a	92 a
17. Zorial 80W	1.5	PRE	18 c-f	100 a	95 a	98 a
18. NC-24649(50W)	1.5	PRE	2 g	58 c	32 cd	35 b-d
19. NC-24649(50W) + Nortron(3.2E)	1.0 + 1.5	PRE	0 g	60 bc	3 d	7 cd
20. NC-24649(50W) + NC-20484(4F)	1.0 + .75	PRE	5 e-g	88 a-c	20 cd	57 ab
21. Prowl 4L + Cotoran 80W	1.0 + 1.5	PRE	10 d-g	97 ab	96 a	98 ab
22. Weedy Check	---	PRE	0 g	0 d	0 d	0 d
		C.V.	67	22	32	36
Preplant Incorporated						
23. S-734(75W) + Cotoran 80W	.75 + 1.5	PPI + PRE	15 b	100 a	92 a	98 a
24. S-734(75W) + Cotoran 80W	1.0 + 1.5	PPI + PRE	8 b	100 a	91 a	98 a
25. S-734(75W) + Cotoran 80W	1.5 + 1.5	PPI + PRE	27 a	100 a	87 a	97 a
26. Treflan 4E + NC-24649(50W)	.75 + 1.0	PPI + PRE	0 c	100 a	8 b	93 a
27. Treflan 4E + Cotoran 80W	.75 + 1.5	PPI + PRE	8 b	100 a	89 a	97 a
28. Weedy Check	---	---	0 c	0 b	0 b	0 b
		C.V.	45	0	15	3

Variety: Stoneville 213
Planted: May 7, 1980
Treated: May 7-PRE'S and PPI'S(May 28) Fertilization:
Plot size: 2-40" rows by 30' (POST) Sprayer: 8003 tips; 4 mph;
Design: RCB with 3 replications 30 psi; 20 gpa.

Soil type: Collins silt loam
%O.M.: pH:

H-510-80-MES-CT-HE. Herbicide Evaluation on Cotton (Postemergence). Milan Experiment Station, Milan, Tennessee 1980.

Treatment (Postemergence)	Rate(LB/A AI)	MOA	Percent Injury or Control 8-11-80 CIR	Cocb
29. BAS 486 (50W)	.75	EP	10	68 a
30. BAS 486 (50W)	1.5	EP	15	95 a
31. BAS 486 (50W) + BAS 9052 (1.5E)	.75 + .2	EP	12	0 b
32. PPG-844 (2EC)	.25	POD	25	57 a
33. PPG-225 (2EC)	1.0	POD	27	93 a
34. Weedy Check	---	---	0	0 b
		C.V.		45

Variety: Stoneville 213
Planted: May 7
Treated: May 7 (Pre's and PPI's) May 28
Plot size: 2-40" rows x 30' long
Design: RCB with 3 replications
Soil type: Collins silt loam
% O.M.: pH:
Fertilization: 0-30-60
Sprayer: 8003 tips; 4 mph; 30 psi; 20 gpa

H-510-80-MES-Ct-NT. Preemergence Herbicide Evaluation in No-Till Cotton. Milan Experiment Station, Milan, TN 1980

	Treatment[1]	Tillage	Rate Lb/A ai	MOA	Lint Yield[2/] First harvest (Lb/A)	(%)	Total (Lb/A)
1	Paraquat 2S + Prowl 4E + Cotoran 80W + X-77	No-Till	0.5+1.0+1.5+0.5%	PRE	313 b	68	469 b
2	Paraquat 2S + Dual 8E + Cotoran 80W + X-77	No-Till	0.5+1.5+1.5+0.5%	PRE	297 b	59	503 b
3	Prowl 4E + Cotoran 80W	Conv.	1.0+1.5	PRE	917 a	94	973 a
4	Dual 8E + Cotoran 80W	Conv.	1.5+1.5	PRE	951 a	94	1014 a
					C.V. =		8%

Variety: Hancock
Planted: May 6, 1980
Treated: May 6, 1980
Plot Size: 4 - 40" rows x 60'
Soil Type: Memphis silt loam
% O.M.: ca.1% pH: 6.3
Fertilization: 30-60-60 lb/A on 11-14 + 45 lb N on 6-4-80
Sprayer: 8003 tips; 20 gpa; 30 psi; 4 mph.
Rainfall: 1st 7 DAT:
1st 30 DAT:

1/ Terraclor Super-X 12.5G at 10 lb/A in-furrow and Demosan T (2-way treated seed).

2/ Values within a column followed by the same letter(s) are not significantly different at P≤.05 according to Duncan's multiple range test.

Harvested: September 10; October 2, 1980.

H-510-80-MES-Ct-LT. Influence of Long Term Herbicide Usage on Cotton. Milan Experiment Station, Milan, TN 1980

Treatment[1]	Rate (Lb/A ai)	MOA	Lint Yield[3] First Harvest (Lb/A)	First Harvest (%)	Total (Lb/A)	1977-80 4-Yr Avg.
1. Cotoran 80W	1.5	PRE	548 a	86	638 a	804
2. Treflan 4E	.75	PPI	420 a	80	522 a	724
3. Treflan 4E + Cotoran 80W	1.5 + .75	PPI+PRE	464 a	80	581 a	767
4a Bueno 6E (MSMA)[2]	2.0	POE	152 a	64	236 b	501
4b Control	---	---	504 a	85	594 a	785
		C.V.	41%		30%	

[1] Each treatment has been applied to the same plot in 1977, 1978, 1979, and 1980. Demosan T (2-way) seed treatment. Terraclor Super-X 12.5G at 10 lb/A in-furrow.

[2] Applied only to the extreme right four of each control plot.

[3] Values within a column for by the same letter(s) are not significantly different at P≤ .05 according to Duncan's Multiple Range Test.

Variety: Hancock
Planted and treated: April 29, 1980
Plot size: 12 - 40" rows x 60' long
Design: RCB with 4 reps
Soil type: Grenada silt loam, 2-5% slopes
% O.M.: ca.1% pH: 6.1
Fertilization: 60-60-60 + 0.5 B/A; 2 T/A Limestone
Sprayer: Hiboy
Incorporation: Disc
Harvested: September 10, 1980; October 2, 1980

H-510-80-MES-Ct-N-SERVE. Effect of Nitrification Inhibitors and Treflan on Cotton. Milan Experiment Station, Milan, Tennessee. 1980

Treatment [1]	Rate (LB/A AI)	MOA	Plants/A	Vigor	Lint Yield (Lb/A) Harvest[2] Total	First	Percent First Harvest
1. Treflan 4E	.75	PPI	54396 a[3]	5.8 a	587a	464a	79
2. Dual 8E	1.5	PRE	50230 a	6.3 a	686a	530a	77
3. Dwell 4E	0.5	PPI	47535 a	7.0 a	614a	455a	74
4. Terraclor Super X 12.5G	1.25	IF[a]	51292 a	7.3 a	644a	458a	71
5. Treflan 4E + Dwell 4E	.75 + 0.5	PPI-TM	45983 a	7.0 a	676a	523a	77
6. Treflan 4E + Terraclor Super X 12.5G	.75 + 0.25	PPI+IF	48760 a	6.5 a	632a	477a	75
7. Dual 8E + Dwell 4E	1.5 + 0.5	PRE+PPI	44105 a	5.0 a	612a	388a	63
8. Dual 8E + Terraclor Super X 12.5G	1.5 + 1.25	PRE+IF	54396 a	6.3 a	639a	494a	77
9. Control	---	---	53497 a	7.3 a	669a	496a	74
		C.V.	20	25	19	20	

[1] Cotoran 80W at 1.0 lb/A ai applied Preemergence over entire experiment. [a] IF = In-furrow.

Variety: Coker 304
Planted: April 30, 1980
Treated: April 30, 1980
Plot Size: 4-40" rows by 50' long
Design: RCB with 4 reps
Soil type: Grenada silt loam
% O.M.:cal % pH: 7.5
Fertilization: 60-60-60 +B

Sprayer:

[2] First harvest on Sep. 10, 1980 and second Oct. 2, 1980

[3] Values within a column followed by the same letter are not significantly different at $P<.05$ according to the F test.

H-510-80-MES-DPE-POE. Screening of diphenylethers on broadleaf weeds. Milan Experiment Station. 1980

Treatment	Rate(lb/A ai)	%, Weed Control - Aug. 23, 1980							Mean	Mean
		Cocb	Prsi	Rrpw	Pimg	Tamg	Ilmg	Elmg	All Mg. sp.	All Weeds
1. Blazer 2LCS	0.5	91 a*	60 ab	100 a	99 a	80 a	74 a	80 ab	83 a	83 ab
2. Tackle 2S	0.5	73 b	28 bc	100 a	86 a	60 ab	53 ab	58 bc	64 b	65 c
3. Basagran 4S + X-77	0.75 + 0.5%	100 a	75 a	71 b	90 a	41 b	34 b	34 c	50 c	64 c
4. RH-0043 2S + AG-98	.125 + .125%	95 a	54 ab	100 a	81 a	54 ab	55 ab	63 abc	64 d	72 bc
5. RH-0043 2S + AG-98	.25 + .125%	98 a	85 a	98 a	99 a	74 ab	73 a	89 ab	84 a	88 a
6. RH-0265 2S + AG-98	.125 + .125%	64 b	58 ab	86 ab	83 a	49 ab	45 ab	61 abc	60 bc	64 c
7. RH-0265 2S + AG-98	.25 + .125%	95 a	86 a	100 a	100 a	60 ab	65 a	90 a	79 a	85 a
8. Check	----	0 c	0 c	0 c	0 b	0 c	0 c	0 d	0 e	0 d
Means across herbicides for each Mg. species**					91 a	60 bc	57 c	68 b		

Date treated: 8-13-80
Weed Size:
- Ivyleaf morningglory - 12 leaves; 4-inch runners
- Pitted morningglory - 9 leaves; 12-inch runners
- Entireleaf morningglory - 12 leaves; 5-inch runners
- Tall morningglory - 6 leaves; 4-inch runners
- Common cocklebur - 6 leaves; 4 inches tall
- Prickly sida - 4 inches tall
- Redroot pigweed - 2-3 inches tall

Sprayer: CO_2 hand carried with 8003 flat fan tips; 30 psi, 4 mph, and 20 gpa.

*Values in columns followed by same small letter are not significantly different ($P < 0.05$) according to Duncan's New Multiple Range Test.

**Values in row followed by same small letter are not significantly different ($P < 0.05$) according to Duncan's New Multiple Range Test.

H-510-80-MES-SOR-NT. Evaluation of Bicep for Weed Control in No-tilled Sorghum. Milan Experiment Station, Milan, Tennessee. 1980.

Treatment	Rate (LB/A AI)	% Injury or Control 7-15-80 CIR	Lacg	Corw
1. Bicep 4.5F + Paraquat 2S + X-77	2.25 + 0.5 + 0.5%	0	100 a	100
2. Bicep 4.5F + Paraquat 2S + X-77	3.37 + 0.5 + 0.5%	0	100 a	100
3. Bicep 4.5F + Paraquat 2S + X-77	4.5 + 0.5 + 0.5%	0	100 a	100
4. Bicep 4.5F + Roundup 4S	2.25 + 2.0	0	100 a	99
5. Bicep 4.5F + Roundup 4S	3.37 + 2.0	0	100 a	100
6. Bicep 4.5F + Roundup 4S	4.5 + 2.0	0	100 a	100
7. Aatrex 4L + Paraquat 2S + X-77	2.0 + 0.5 + 0.5%	0	100 a	100
8. Paraquat 2S + X-77	0.5 + 0.5%	0	93 a	0
	C.V.		5	1

Variety: Funks G-522GBR (Concep treated)
Planted: June 28, 1980
Treated: June 28, 1980
Plot size: 4-20" rows by 30' long
Design: RCB with 4 replications
Soil type: Loring silt loam
pH: %O.M.:
Fertilization:
Sprayer: 8003 tips; 4 mph; 30 psi; 20 gpa

H-510-80-MES-MEF. Metribuzin Safeners in Soybeans. Milan Experiment Station, Milan, Tennessee. 1980.

Treatment[1/]	Rate(LB/A AI)	MOA	% Injury or Control 6-13-80 CIR	Cocb	Yield Bu/A @13%
1.Metribuzin 4L	0.5	PRE	4 d	80 a	8.7 a
2.Metribuzin 4L + PC 671(3.2F)	0.5 + 0.8	PRE	11 b-d	98 a	10.0 a
3.Metribuzin 4L + PC 671(3.2F)	0.5 + 1.6	PRE	4 d	93 a	8.9 a
4.Metribuzin 4L + ARD-54	0.5 + 1%	PRE	8 b-d	81 a	8.3 a
5.Metribuzin 4L + ARD-54	0.5 + 2%	PRE	5 cd	99 a	7.7 a
6.Metribuzin 4L + ARD-1714	0.5 + 2%	PRE	8 b-d	83 a	7.1 a
7.Metribuzin 4L + ARD-1675	0.5 + 2%	PRE	11 b-d	86 a	10.5 a
8.Metribuzin 4L	1.0	PRE	20 a-d	93 a	8.6 a
9.Metribuzin 4L + PC 671(3.2F)	1.0 + 0.8	PRE	10 b-d	90 a	9.0 a
10.Metribuzin 4L + PC 671(3.2F)	1.0 + 1.6	PRE	23 a-c	86 a	6.9 a
11.Metribuzin 4L + ARD-54	1.0 + 1%	PRE	33 a	93 a	7.7 a
12.Metribuzin 4L + ARD-54	1.0 + 2%	PRE	30 a	96 a	10.9 a
13.Metribuzin 4L + ARD-1714	1.0 + 2%	PRE	25 ab	98 a	7.8 a
14.Metribuzin 4L + ARD- 1675	1.0 + 2%	PRE	20 a-d	94 a	9.3 a
		C.V.		22	46

1/ Treflan 4EC at 0.75 lb/A PPI.

Variety: Bedford
Planted: May 28, 1980
Treated: May 28, 1980
Plot size: 3 rows(2 treated) by 30' long
Design: RCB with 4 replications
Soil type: Loring silt loam
%O.M: c.a. 1.2% pH: 6.9
Fertilization: 0-30-60
Sprayer: 8003 tips; 4 mph; 30 psi; 20 gpa.
2/ Was not sprayed
3/ Was treated with 1.5 lb/A ai.
Harvested: 10/30/80

H-510-80-MES-ST. Effect of Soil Manipulation on Cotoran Phytotoxicity to Soybeans. Milan Experiment Station, Milan, Tennessee 1980

Treatment[a]	Rate (lb/A ai)	Tillage	# Wks after Tmt to Soybean Pltng	CIR (%) '79	CIR (%) '80	Yield,bu/A '79	Yield,bu/A '80	13% Avg
1. Check	-	Disc[b]	3	0	0	52.8	28.7	40.8
2. Check	-	Disc	6	0	0	54.1	42.4	48.3
3. Check	-	Disc	9	0	0	46.3	22.2	34.3
4. Check	-	NT	3	0	0	52.6	30.3	41.5
5. Check	-	NT	6	0	3	54.5	36.0	45.3
6. Check	-	NT	9	0	0	38.8	25.2	32.0
7. Cotoran 80W	1.0	Disc	3	17	3	46.2	33.6	39.9
8. Cotoran 80W	1.0	Disc	6	3	0	55.7	42.0	48.9
9. Cotoran 80W	1.0	Disc	9	2	0	42.1	29.3	35.7
10. Cotoran 80W	1.0	NT	3	0	0	52.1	38.7	45.4
11. Cotoran 80W	1.0	NT	6	5	7	49.3	39.8	44.6
12. Cotoran 80W	1.0	NT	9	0	7	40.4	29.6	35.0
13. Cotoran 80W	1.5	Disc	3	32	38	32.7	32.0	32.4
14. Cotoran 80W	1.5	Disc	6	10	15	50.7	34.6	42.7
15. Cotoran 80W	1.5	Disc	9	7	0	41.1	26.7	33.9
16. Cotoran 80W	1.5	NT	3	17	17	46.1	41.7	43.9
17. Cotoran 80W	1.5	NT	6	8	21	52.3	40.4	46.4
18. Cotoran 80W	1.5	NT	9	2	3	40.9	32.3	36.6
19. Cotoran 80W	3.0	Disc	3	80	100	16.8	0	9.4
20. Cotoran 80W	3.0	Disc	6	62	50	7.3	16.1	11.7
21. Cotoran 80W	3.0	Disc	9	18	27	30.8	19.1	25.0
22. Cotoran 80W	3.0	NT	3	70	86	12.1	3.0	7.6
23. Cotoran 80W	3.0	NT	6	53	57	25.0	6.4	15.7
24. Cotoran 80W	3.0	NT	9	13	62	37.1	12.4	24.8

Yield Summary, Bu/A.

	1979	1980	Avg 79-80
Tillage			
Disc	38.9 b	27.2 a	33.0
No-Till	41.8 a	27.9 a	34.9
Cotoran Rates			
0	49.7 a	30.8 a	40.0
1.0	47.6 a	35.5 a	41.6
1.5	44.0 a	34.6 a	39.3
3.0	20.1 b	9.5 b	14.8
Wks after tmt. to Plant.			
3	37.7 b	26.0 b	31.9
6	43.6 a	30.1 a	36.9
9	39.7 ab	24.6 b	32.2

[a]Entire area treated with Treflan PPI at 0.75 lb/A ai to applying Cotoran 80W preemergence at indicated rates

[b]All disc treatments planted w/conventional planter.

Variety: Forrest
Planted: May 21 3 wk
Jun 10 6 wk
July 1 9 wk
Treated: April 29

Soil Type: Collins silt loam
% O.M.: c.a. 1% pH: 7.1
Fertilization: 0-30-60
Design: RCB split plot

H-510-80-MES-S-EG. Effect of three consecutive annual applications (1977-79) of Cotoran Rates with and without Treflan to cotton on No-till Soybeans grown in rotation.

Treatment[a]	Rate (LB/A AI)	MOA	Yield, Bu/A
1. Control	-	-	14.6
2. Cotoran 80W	.75	PRE	14.2
3. Cotoran 80W	1.0	PRE	17.8
4. Cotoran 80W	1.25	PRE	15.7
5. Cotoran 80W	1.5	PRE	13.7
6. Cotoran 80W	3.0	PRE	15.1
7. Treflan 4E	.75	PPI	15.0
8. Treflan 4E + Cotoran 80W	.75 + .75	PPI + PRE	11.4
9. Treflan 4E + Cotoran 80W	.75 + 1.0	PPI + PRE	13.6
10. Treflan 4E + Cotoran 80W	.75 + 1.25	PPI + PRE	16.5
11. Treflan 4E + Cotoran 80W	.75 + 1.5	PPI + PRE	12.8
12. Treflan 4E + Cotoran 80W	.75 + 3.0	PPI + PRE	15.5
		LSD .05	n.s.

Variety: Essex
Planted: May 5, 1980
Treated: Three previous years
Plot Size: 8-20" rows x 30' long
Design: RCB split plot
Soil Type: Eroded Grenada silt loam
% O.M.: ca. 1% pH: 6.1
Fertilization: P & K test high
Sprayer: N/A
Harvested: 10-9-80

[a]These herbicides were applied in 1977, 1978, and 1979 to the same plots. Roundup 4S at 2.0 lb/A plus Lasso 4E at 2 lb/A was applied at planting. Basagran 4L at 0.75 lb/A POE for broadcast weeds.

H-510-80-MES-S-NT-HE. Herbicide Evaluations in No-Tilled Double-cropped Soybeans. Milan Experiment Station, Milan, Tennessee. 1980

Treatment [a]	Rate LB/A	Percent Injury or Control 7-15-80 CIR	Cocb	Lacg	Ilmg	Yield Bu/A@13%
1. Lasso 4E + Lorox 50W + Paraquat 2S + X-77	2.5 + 1.0 + 0.5 + 0.5%	1 d	15 cd	98 a	96 a	20.9 a-c
2. Lasso 4E + Sencor/Lexone 4L + Paraquat 2S + X-77	2.5 + .5 + 0.5 + 0.5%	3 d	29 a-c	94 a	98 a	18.3 a-c
3. Dual 8E + Lorox 50W + Paraquat 2S + X-77	2.0 + 1.0 + 0.5 + 0.5%	6 d	28 a-c	93 a	98 a	23.4 a
4. Dual 8E + Sencor/Lexone 4L + Paraquat 2S + X-77	2.0 + 0.5 + 0.5 + 0.5%	5 d	41 a-c	96 a	95 a	22.3 a-c
5. Surflan 4AS + Sencor 4L + Paraquat 2S + X-77	1.0 + .33 + 0.5 + 0.5%	41 ab	64 ab	90 a	98 a	17.6 a-c
6. Surflan 4AS + Lorox 50W + Paraquat 2S + X-77	1.0 + .75 + 0.5 + 0.5%	55 a	73 a	96 a	98 a	17.2 a-c
7. Prowl 4E + Lorox 50W + Paraquat 2S + X-77	1.0 + 1.0 + 0.5 + 0.5%	18 cd	73 a	74 a	94 a	17.8 a-c
8. Prowl 4E + Sencor/Lexone 4L + Paraquat 2S + X-77	1.0 + 0.5 + 0.5 + 0.5%	0 d	15 cd	95 a	96 a	20.1 a-c
9. Lasso 4E + Dyanap 3E + Paraquat 2S + X-77	2.5 + 4.5 + 0.5 + 0.5%	13 cd	63 ab	91 a	98 a	19.5 a-c
10. Lasso 4E + Paraquat 2S + X-77	2.5 + 0.5 + 0.5%	0 d	24 a-c	74 a	88 a	18.5 a-c
11. Dual 8E + Paraquat 2S + X-77	2.0 + 0.5 + 0.5%	0 d	0 d	90 a	97 a	23.5 a
12. Prowl 4E + Paraquat 2S + X-77	1.0 + 0.5 + 0.5%	3 d	44 a-c	70 a	90 a	17.4 a-c
13. Surflan 4AS + Paraquat 2S + X-77	1.0 + 0.5 + 0.5%	30 bc	45 a-c	70 a	95 a	16.0 bc
14. Lorox 50W + Paraquat 2S + X-77	1.0 + 0.5 + 0.5%	6 d	64 ab	93 a	96 a	19.4 a-c
15. Sencor/Lexone 4L + Paraquat 2S + X-77	0.5 + 0.5 + 0.5%	1 d	68 ab	90 a	98 a	17.9 a-c
16. Paraquat 2S + X-77	0.5 + 0.5%	13 cd	29 a-c	0 b	0 b	14.6 c
	C.V.		76	33	24	20

Variety: Essex
Planted: June 28, 1980
Treated: June 28, 1980-PRE; July 10- POT
Plot Size: 8-20" row x 30' long
Design: RCB with 4 reps
Soil Type: Loring silt loam
% O.M.: pH: 6.8
Fertilization: 30-60-60 (11-6-79)
Sprayer: 8003 ; 30 psi; 4 mph; 20 gpa
Harvested: Oct. 23, 1980

[a]Entire experiment treated with 1.0 lb/A ai Basagran on July 10.

H-510-80-MES-NT-SURFLAN. Evaluation of Surflan for No-Till Double-Cropped Soybeans. Milan Experiment Station, Milan, TENNESSEE. 1980.

Treatment	Rate (LB/A AI)	MOA	% Injury or Control 7-15-80 CIR	Lacg	Wheat yield (Bu/A @ 14%)	Soybean Yld Bu/A @13%
1. Surflan 4AS + Sencor/Lexone 50W + Paraquat 2S + X-77	1.0 0.33 + 0.5 + 0.5%	OTS - WHEAT PRE TM	0	100 a	54.4	26.5
2. Surflan 4AS + Sencor/Lexone 50W + Paraquat 2S + X-77	1.25 0.33 + 0.5 + 0.5%	OTS - WHEAT PRE TM	0	100 a	50.6	24.9
3. Surflan 4AS + Sencor/Lexone 50W + Paraquat 2S + X-77	1.0 + .33 + 0.5 + 0.5%	PRE TM	5	100 a	60.4	27.5
4. Surflan 4AS + Lorox 50W + Paraquat 2S + X-77	1.0 + .75 + 0.5 + 0.5%	PRE TM	25	100 a	56.9	26.1
5. Lasso 4E + Lorox 50W + Paraquat 2S + X-77	2.0 + .75 + 0.5 + 0.5%	PRE TM	4	98 a	57.8	24.7
6. Paraquat 2S + X-77	0.5 + 0.5%	PRE	0	68 b	57.8	20.0
					LSD .05= n.s. LSD .10 n.s.	N.S. 4.2
					C.V. = 8.6%	13.6%

Variety: Essex (Soys); Arthur (Wheat)
Planted: Wheat (Nov 15)
Treated: Surflan OTS (Mar 27)
Plot Size: 8-20" rows by 30' long
Design: RCB with 4 reps
Soil type: Henry silt loam
%O.M.: pH:
Fertilization: 30-60-60 on 11-15
60#N as 46% urea on 2-28
Sprayer: Hiboy 8003 tips, 30 psi
20 gpa; 4 mph.
Location: N-41 North track
Harvested: Wheat 6-16-80; Soybeans 10-21-80
OTS = Overtop of standing wheat

H-510-80-MES-S-Cocb. Postemergence Cocklebur Control in Drilled Soybeans. Milan Experiment Station, Milan, TN. 1980.

	Treatment [1]	Rate	Percent Injury or Control 6-13-80 CIR	6-13-80 Cocb	7-24-80 CIR	7-24-80 Cocb	Yield Bu/A
1	Basagran 4L + X-77	0.75 + 0.5	1 e	99 a	0 a	100 a	10.8 bc
2	Blazer 2S	0.25	15 c-d	70 d	4 a	55 c	7.3 cd
3	Blazer 2S	0.50	25 a-c	97 ab	6 a	96 a	10.6 bc
4	Blazer 2S	0.75	25 a-c	95 ab	1 a	98 a	11.4 ab
5	Blazer 2S	1.0	30 a	98 ab	6 a	100 a	12.2 ab
6	Blazer 2S + Basagran 4L	0.5 + 0.5	19 b-d	100 a	5 a	100 a	12.0 ab
7	Blazer 2S + 2,4-DB 2S	.38 + 0.06	18 b-d	96 ab	14 a	99 a	11.2 a-c
8	Blazer 2S + 2,4-DB 2S	.50 + 0.06	28 ab	97 ab	13 a	100 a	13.0 ab
9	Basagran 4L + 2,4-DB 2S	0.50 + 0.06	11 d	99 a	11 a	99 a	12.1 ab
10	Dyanap 3E	3.0	26 ab	86 bc	13 a	95 ab	10.4 bc
11	Dyanap 3E + 2,4-DB 2S	1.5 + 0.06	25 a-c	78 cd	5 a	100 a	12.2 ab
12	Dyanap 3E + Basagran 4L	1.5 + 0.5	20 a-d	90 ab	0 a	100 a	10.8 bc
13	2,4-DB 2S	0.06	10 d-e	28 e	19 a	84 b	11.1 bc
14	Weed Free Check	--	0 e	100 a	3 a	93 ab	12.1 ab
15	Weedy Check	--	0 e	0 f	0 a	0 d	5.5 d
16	Weed Free Check 40" rows	--	0 e	100 a	0 a	100 a	15.3 a
		C.V.	41	9		9	22

[1] Treflan 0.75 lb/A A.I. PPI for grass control over entire experiment

Variety: Bedford
Planted: May 28
Treated: June 5
Plot Size: 13.3 x 40'
Design: RCB with 4 reps
Soil type: Memphis silt loam
% O.M.: ca. 1% pH: 6.6
Fertilization:
Sprayer: CO_2-30 psi, 8003 tips, 4 mph, 20 gpa
Cocklebur size 3", soybean stage V3
Harvested: 10-30-80

H-510-80-MES-SSS. Weed Control in Solid Seeded Soybeans. Milan Experiment Station, Milan, Tennessee. 1980

Treatment 1/	Rate (LB/A AI)	CIR	Percent Injury or Control 7-10-80 Rrpw	Cocb	Gogr	Pimg	Yield Bu/A@13%
1. Basalin 4E	.75	5	74 ab	58 a-d	96	73 a	11.3 d
2. Sencor 4L	.38	3	80 ab	41 b-e	88 a	80 a	10.8 d
3. Basagran 4L	.75	3	48 bc	30 de	68 a	0 b	10.4 d
4. Blazer 2E	.5	3	24 c	35 c-e	23 b	23 b	11.3 d
5. Basalin 4E + Sencor 4L	.75 + .5	1	88 ab	70 a-d	99 a	83 a	13.3 cd
6. Basalin 4E + Basagran 4L + X-77	.75 + .75 +0.5	13	100 a	100 a	78 a	99 a	18.2ab
7. Basalin 4E + Blazer 2LCS	.75 + .5	10	100 a	99 a	96 a	100 a	16.6abc
8. Basalin 4E + Basagran 4L + Blazer 2LCS	.75 + .75 +0.5	6	98 a	81 ab	100 a	83 a	14.9 bcd
9. Basalin 4E + Sencor 4L + Basagran 4L	.75 + .38 + .75	0	100 a	100 a	93 a	88 a	17.8abc
10. Basalin 4E + Sencor 4L + Blazer 2LCS	.75 + .38 +0.5	9	100 a	100 a	98 a	100 a	17.7abc
11. Basalin 4E + Sencor 4L + Basagran 4L + Blazer 2LCS	.75 + .38 + .75 +0.5	8	100 a	100 a	97 a	100 a	18.6ab
12. Weed Free Check	---	0	100 a	99 a	98 a	99 a	18.7ab
13. Weedy Check	---	5	0 c	0 e	0 b	0 b	10.8 d
14. Weed Free Check (40" rows)	---	0	100 a	100 a	100 a	100 a	20.3a
	C.V.		34	39	32	36	20

1/ All Basalin and Sencor PPI
All others postemergence at V3 stage

Variety: Bedford
Planted: May 28, 1980
Treated: PPI: May 28, 1980 Post: June 13
Plot Size: 13.3' x 30' long
Design: RCB with 4 reps
Soil type: Loring silt loam
% O.M.: ca. 1.2% pH: 6.9
Fertilization: 0-30-60
Sprayer: 8003 tip; 30 psi, 4 mph; 20 gpa.
Incorporation: Triple K harrow
Harvested: 10/31/80

H-510-80-MES-S-F. Furadan-Treflan tank mixtures for Drilled Soybeans. Milan Experiment Station, Milan, Tennessee. 1980.

Treatment[1/]	Rate(LB/A AI)	MOA	7-15-80 Leaf Burn	7-28-80 Brown cyst Pt. Soil	Yield Bu/A @13%
1. Furadan 4F	2.0	PPI	0 b	132	17.9
2. Furadan 4F	4.0	PPI	0 b	150	21.5
3. Furadan 4F	6.0	PPI	0 b	132	24.5
4. Furadan 4F + Treflan 4E	2.0 + .75	PPI TM	0 b	36	23.7
5. Furadan 4F + Treflan 4E	4.0 + .75	PPI TM	0 b	162	28.5
6. Furadan 4F + Treflan 4E	6.0 + .75	PPI TM	0 b	48	24.8
7. Furadan 4F + Treflan 4E + Sencor 4L	2.0 + .75+.38	PPI TM	23 a	90	26.1
8. Furadan 4F + Treflan 4E + Sencor 4L	4.0 + .75+.38	PPI TM	25 a	126	29.6
9. Furadan 4F + Treflan 4E + Sencor 4L	6.0 + .75+.38	PPI TM	26 a	108	28.6
10. Treflan 4E	.75	PPI	0 b	74	24.9
		C.V.		63	26
		LSD .05		N.S.	N.S.

[1/] Basagran 4L or Balzer 2LCS may be applied for broadleaf control.

Variety: Essex in 7" rows
Planted:
Treated:
Plot size: 8' (6.33' treated) by 30' long
Design: RCB with 4 replications
Soil type:
% O.M.: pH:
Fertilization:
Sprayer: 8003 tips; 4 mph; 30 psi; 20 gpa
Incorporation: Tillrovater

Nematode Counts: (Brown cyst/pint of soil)
Pretreatment: March 27- Reps I & II = 168
Reps III & IV=432

Harvested: 10-23-80

H-510-80-MES-Jogr comp. Johnsongrass Competition and Timing of Control in Soybeans. Milan Experiment Station, Milan, Tennessee. 1980

Treatment	9-19-80 Jogr. % Control	Soybean Dry Wt. (kg/m^2)	Jogr. Plants/m^2	Jogr. Dry Wt. (kg/ha	Yield Bu/A @ 13%
1. Weedy Check	0 d	.48 fg	9.61 a	2229 a	4.4 f
2. Weed Free Check	100 a	.82 ab	-	-	10.7 a-c
3. Maintain Weed Free for 3 wks. after planting	15 d	.73 b-e	4.89 b-d	673 c	7.1 e
4. Maintain Weed Free for 4 wks. after planting	64 c	.65 c-e	6.14 bc	307 d	8.5 c-e
5. Maintain Weed Free for 5 wks. after planting	79 b	.80 a-c	5.15 b-d	120 d	8.8 b-e
6. Maintain Weed Free for 6 wks. after planting	95 a	.78 a-c	1.38 ef	23 d	10.3 a-d
7. Maintain Weed Free for 7 wks. after planting	98 a	.85 ab	2.33 d-f	37 d	11.1 ab
8. Maintain Weed Free for 8 wks. after planting	99 a	.89 a	-	-	10.7 a-c
9. Maintained Weed Free after 3 wks. to Harvest	100 a	.80 a-c	-	-	10.5 a-d
10. Maintained Weed Free after 4 wks. to Harvest	100 a	.88 a	-	-	11.1 ab
11. Maintained Weed Free after 5 wks. to Harvest	100 a	.80 a-c	-	-	11.2 ab
12. Maintained Weed Free after 6 wks. to Harvest	100 a	.74 a-d	-	-	11.5 a
13. Maintained Weed Free after 7 wks. to Harvest	100 a	.72 b-e	-	-	10.4 a-d
14. Maintained Weed Free after 8 wks. to Harvest	100 a	.59 e-g	-	-	8.2 de
15. BAS 9052 (1.5E) + AtPlus oil conc[a] 3 wks. after planting	90 ab	.80 a-c	5.48 b-d	114 d	10.7 a-c
16. BAS 9052 (1.5E) + AtPlus oil conc at 4 wks. after planting	99 a	.82 ab	3.64 c-e	60 d	10.8 a-c
17. BAS 9052 (1.5E) + AtPlus oil conc at 5 wks. after planting	99 a	.74 a-d	.36 f	38 d	10.6 a-c
18. BAS 9052 (1.5E) + AtPlus oil conc at 6 wks. after planting	65 c	.60 d-f	5.87 bc	746 c	7.9 e
19. BAS 9052 (1.5E) + AtPlus oil conc at 7 wks. after planting	59 c	.65 c-e	7.64 ab	1412 b	7.9 e
20. BAS 9052 (1.5E) + AtPlus oil conc at 8 wks. after planting	80 b	.45 g	6.56 bc	1222 b	6.5 ef
C.V.	10	13	40	40	15.6

[a] Herbicide rate of 1.0 lb/A ai plus 0.5% oil conc.

Variety: Bedford
Planted: May 19, 1980
Treated:
Plot size: 3-40" rows x 25' long
Design: RCB with 4 reps
Soil type: Loring silt loam
pH: 7.0 %O.M.:
Fertilization: 0-30-60
Sprayer: 8003 tips; 4 mph; 30 psi; 20 gpa
Harvested: 10-31-80

PLATEAU EXPERIMENT STATION

CROSSVILLE, TENNESSEE 38555

Superintendent - Dr. Robert O. Freeland

CLIMATIC DATA PERTAINING TO THE PLATEAU EXPERIMENT STATION

Crossville, TN

1980

Date	April			May			June			July			August		
	Temperature			Temperature			Temperature			Temperature			Temperature		
	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)
1	48	33		60	40		80	62		79	50		93	67	
2	68	40		64	40		80	61		88	59		90	62	
3	73	47		69	48		83	63		92	63	.64	90	62	
4	68	45	.12	69	50		82	62		83	65	.18	87	62	.05
5	52	25		75	51		82	58		88	67		87	60	.21
6	55	29		75	47		83	61		90	66		88	62	
7	63	39		76	48	.09	85	67		88	59		91	64	
8	68	51	.08	76	48	.07	86	69		90	60		94	63	
9	69	36	.22	63	38		76	42		94	65		94	63	
10	60	35		63	36		71	46		95	67		96	65	
11	62	37		72	43		79	48		92	68	.06	93	66	
12	71	47	.62	81	61		70	45		93	68		91	64	.31
13	60	39	.08	80	63		79	50		98	68		87	59	
14	62	38	.94	75	56	.49	81	58		95	67		89	59	
15	45	30	.07	68	44		86	58		96	67		94	65	
16	51	30	.01	74	46		87	60	.01	97	69		89	63	
17	57	31		67	57	.75	80	54		101	66		90	65	
18	68	40		65	58	.96	80	55	.12	98	60		92	66	
19	71	42		78	55	.05	79	50		95	63		86	63	1.22
20	73	41		78	57	.37	82	57		96	68		88	63	.10
21	74	47		71	48	.02	70	53		92	66		91	65	
22	75	41		22	52		82	55		90	65		92	62	.02
23	80	53		69	58	.35	83	64	.38	80	63	.10	84	59	
24	82	53		73	57	.48	77	60	.33	81	61		84	57	
25	78	46	.12	74	57	.59	73	61	.04	88	60		85	57	
26	60	45	.36	74	58		82	58		91	64	1.41	85	58	
27	70	51	1.2	76	48		84	59		90	64		87	56	
28	53	42	.02	81	56		91	61		81	63	.55	89	59	
29	58	42	.05	83	60		90	63	.53	81	60		92	62	
30	50	38		83	59	.18	76	62		83	58		79	60	.33
31				80	62					89	63		81	62	

TN-510-80-P-Cr-1 - Control of Fall Panicum in Corn, Plateau Experiment Station, 1980, Crossville, TN.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Corn Response[1] Yield bu/A	Weed Response, % Control[2] Fapa 8/7	Rrpw 8/7
1	Atrazine + Simazine	1.0 + 1.0	Pre	37.4	42	17
2	Atrazine + Simazine	1.25 + 1.25	Pre	34.8	27	45
3	Atrazine + Simazine	1.5 + 1.5	Pre	32.0	17	32
4	Dual + Atrazine (Bicep)	1.25 + 1.0	Pre	29.6	33	37
5	Dual + Atrazine (Bicep)	1.5 + 1.2	Pre	36.2	10	13
6	Dual + Atrazine (Bicep)	1.87 + 1.5	Pre	36.9	27	87
7	Dual + Atrazine	1.75 + 1.2	Pre	37.4	33	16
8	Dual + Atrazine	2.0 + 1.2	Pre	36.0	30	50
9	Lasso + Atrazine	1.75 + 1.2	Pre	29.4	31	67
10	Lasso + Atrazine	2.0 + 1.2	Pre	30.8	33	60
11	MON 097 + Atrazine	1.75 + 1.2	Pre	38.5	0	27
12	NON 097 + Atrazine	2.0 + 1.2	Pre	32.7	37	20
13	Prowl + Atrazine	1.0 + 1.2	Pre	36.7	37	10
14	Prowl + Atrazine	1.5 + 1.2	Pre	32.9	23	47
15	Prowl + Atrazine	2.0 + 1.2	Pre	43.7	43	17
16	Prowl + Atrazine	1.25 + 1.2	Pre	39.5	30	48
17	Weed Free Check	----------	---	50.1	75	47
18	Weedy Check	----------	---	18.3	10	17
				N.S.		

[1] Corn yield extremely low and variable because of drought.

[2] Weed abbreviations: Fapa = Fall Panicum; Rrpw = Redroot Pigweed

Variety: Pioneer 3147
Date of Planting: May 30, 1980
Soil Type: Hartsell Silt Loam
pH: 7.2
Plot Size: 13.3 x 35'

Date of Herbicide Application: 6/4/80
Temperature: 80°
Soil Moisture: Dry
Sprayer: CO_2 Back pack
Nozzle: Tee^{2}Set 8003
gpa: 20
Pressure: 30 psi

TN-501-80-P-S-1 - Preemergence (Preplant Incorporated Herbicides), Weed Control in Soybeans, Plateau Experiment Station, 1980, Crossville, TN.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Soybean Response Yield bu/A	Weed Response, % Control Fapa 8/7	Rrpw 8/7	Colq 8/7
1	Basalin + Blazer	0.75 + 0.5	PPI + POT	25.3	86	98	100
2	Basalin + Sencor	0.75 + 0.38	PPI	24.6	85	47	95
3	Devrinol	1.0	PPI	11.3	17	23	38
4	Devrinol	2.0	PPI	21.9	64	70	73
5	Prowl + Blazer	1.0 + 0.5	PPI + POT	25.3	95	88	88
6	Prowl + Sencor	1.0 + 0.38	PPI	17.1	92	75	89
7	Sencor + Sencor	0.25 + 0.25	PPI + PRE	22.2	60	28	64
8	Tolban + Blazer	0.75 + 0.5	PPI + POT	21.2	72	81	58
9	Tolban + Sencor	0.75 + 0.38	PPI	26.3	51	85	73
10	Treflan + Blazer	0.75 + 0.5	PPI + POT	25.3	95	95	93
11	Treflan + Sencor	0.75 + 0.38	PPI	18.8	47	78	83
12	Vernam + Blazer	2.5 + 0.5	PPI + POT	27.3	75	91	58
13	Vernam + Devrinol	2.5 + 1.0	PPI	24.6	81	81	73
14	Weed Free Check			20.8	75	80	75
15	Weedy Check			10.3	75	0	0

[1] Weed control data recorded on August 7. Fapa = fall panicum; Rrpw = Redroot pigweed; Colq = Common lambquarters

Variety: Essex
Date of Planting: June 3, 1980
Soil Type:

Plot Size: 12 x 30'
Date of Harvest: November 12, 1980

TN-510-80-P-S-1 - Preemergence (Surface Applied Herbicides) Weed Control in Soybeans[1], Plateau Experiment Station, 1980, Crossville, TN.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Weed Response, % Control[2,3] Fapa 8/7	Rrpw 8/7	Colq 8/7
1	Devrinol	1.0	Pre	0	22	0
2	Devrinol	2.0	Pre	15	15	0
3	Dual + Blazer	2.0 + 0.5	Pre + POT	23	22	25
4	Dual + Lexone	2.0 + 0.5	Pre	0	0	0
5	Dual + Lorox	2.0 + .075	Pre	0	0	0
6	Lasso + Blazer	2.0 + 0.5	Pre + POT	10	33	33
7	Lasso + Dyanap	2.0 + 1.5 + 3.0	Pre	0	0	15
8	Lasso + Lexone	2.0 + 0.5	Pre	5	5	0
9	Lasso + Lorox	2.0 + 0.75	Pre	23	33	20
10	Lexone	0.38	Pre	0	0	0
11	Lexone	0.5	Pre	0	0	0
12	Lorox	0.75	Pre	5	0	5
13	Lorox	0.88	Pre	0	0	0
14	Weed Free Check			31	15	20
15	Weedy Check			0	0	0

1 No yield was taken because no rain occurred for 6+ weeks following planting and none of the herbicides were activated.

2 Weed control extremely poor because no rain occurred for 6+ weeks following herbicide application.

3 Weed abbreviations: Fapa = Fall panicum; Rrpw = Redroot Pigweed; Colq = Common Lambs Quarter

Variety: Essex
Date of Planting: June 3, 1980
Soil Type:
pH:
Plot Size: 12 x 30'

Date of Application: June 3, 1980
Temperature:
Soil Moisture:
Sprayer: CO_2 Back Pack
Nozzle: Tee-Jet 8003
gpa: 20
Pressure: 30

TOBACCO - EXPERIMENT STATION
ROUTE 5
GREENEVILLE, TENNESSEE 37743

Superintendent - Dr. Donald D. Howard

CLIMATIC DATA PERTAINING TO THE TOBACCO EXPERIMENT STATION

Greenville, TN

1980

Date	April			May			June			July			August		
	Temperature			Temperature			Temperature			Temperature			Temperature		
	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)	Max. (F°)	Min. (F°)	Rainfall (in.)
1	55	41		62	39		83	61	.02	83	52		94	66	
2	68	38		69	40		85	58		87	57		85	64	.11
3	75	41		73	45		85	61		93	65	1.39	89	65	
4	74	48	.26	76	42		85	64	.01	82	67	.62	92	66	
5	74	37		78	43		83	57		83	66		89	65	.73
6	57	29		80	47		85	60		90	69	.24	89	64	
7	68	35		78	45	.05	85	64		89	59		92	65	
8	68	55		77	50	.04	89	69		88	59		93	67	
9	77	42	.31	65	35		83	44		92	62		94	66	
10	65	49		64	36		74	46		92	68	.14	96	66	
11	66	33		75	51		80	54		90	68	.49	69	67	
12	75	45	.08	81	57		80	48		91	67		94	68	.42
13	60	54	.18	85	60		83	56		93	68		86	60	
14	71	55	.23	84	60		83	56		92	71		90	62	
15	70	39	.01	75	48		87	59		93	70		94	66	
16	47	35	.05	78	52		90	15		94	69		93	69	.05
17	57	28		73	58		81	57	.86	96	69		90	69	
18	66	35		69	56	.91	80	59	.21	67	66		90	66	.07
19	72	37		80	56	.03	80	58		92	69		85	68	.75
20	75	40		82	59	.57	84	58		95	70		85	66	1.23
21	76	41		70	54	.61	80	57		97	70		90	65	.63
22	76	35		77	53		86	56		92	65	.27	91	66	.21
23	78	45		80	57	.01	87	64		88	68	.06	86	63	
24	85	48		81	61	.61	85	64	.24	84	63		85	66	
25	81	52	.05	74	58	.74	73	62	.31	89	65		85	61	
26	74	51	.53	74	60	.04	72	60	0.8	94	71	.07	87	58	
27	74	54	.62	80	45		85	60		88	63		87	59	
28	65	37	.04	80	47		90	63		89	66	1.05	89	59	
29	58	42	.23	84	52		92	65		85	65		89	62	
30	54	44	.46	86	59		83	64		87	60		89	65	.03
31				85	60					89	62		85	62	.04

H-510-80-T-AL - Herbicides on Established Alfalfa[1], Tobacco Experiment Station, Greeneville, Tennessee 1980.

Herbicide Treatment	Rate lb/A a.i.	Weed Response, % Control	
		Cocw	Angr
Metribuzin	0.5	95	0
Paraquat	0.33	95	33
Simazine	1.0	95	0
Terbacil	0.75	95	17
Weedy Check	----	0	0

[1] No injury to alfalfa was apparent on any plots.

Variety: Williamsburg

Planting Date: 3 year old stand

Plot Size: 7 x 25

Soil Type: Cumberland Silt Loam

pH: 6.9

Replications: 3

Preemergence Application: 2/29/80

Temperature: Soil - 39; Air - 32

Sprayer: CO_2 Backpack

Gallons/Acre: 20

Pressure: 30 psi

H-510-80-T-A-4 - Summer Weed Control in Alfalfa, Tobacco Experiment Station, Greeneville, TN 1980.

Tmt. No.	Treatments	Rate lb/A a.i.	Alfalfa Response vigor reduc. (%)	Alfalfa Response Yield[1] (lb/A)	Annual Grass control (%)
Application after 1st Cutting					
1	Balan	1.12	0	1291cde	60
2	Dual	2.0	0	1571e	50
3	Lasso	2.0	0	1495e	50
4	Paraquat	0.25	50	828ab	40
5	Paraquat	0.5	50	740a	40
6	Preemerge	3.0	0	1350cde	75
7	Prowl	1.0	0	1334cde	40
8	Sencor	0.5	20	1291cde	60
9	Surflan	1.0	0	1452de	50
10	Surflan + Sencor	1.0 + 0.5	10	1146cd	70
11	Weedy Check	—	0	1463de	0
Application after 2nd Cutting[2]					
12	Balan			1520fgh	
13	Dual			1549fgh	
14	Dual + Paraquat			1280fg	
15	Lasso			1684gh	
16	Lasso + Paraquat			1221f	
17	Paraquat			1415fgh	
18	Paraquat			1251fg	
19	Preemerge			1732h	
20	Prowl			1587fgh	
21	Prowl + Paraquat			1495fgh	
22	Sencor			1425fgh	
23	Surflan			1533fgh	
24	Surflan + Paraquat			1358fgh	
25	Surflan + Sencor			1425fgh	
26	Weedy Check			1469fgh	

[1] Alfalfa yield = lb/A on air dry basis.
[2] Due to drought no injury ratings or weed control ratings were made.

Date of Application: May 15 after 1st cutting; June 16 after 2nd cutting
Stage of Growth at Time of 1st Application: Active regrowth of 2-4 in.
Stage of growth at Time of 2nd Application: Little to none because of drought.
Soil Type: Cumberland Silt Loam GPA: 20
Plot Size: 8 x 30 PSI: 30
Replications: 3
Sprayer: CO_2 Back Pack
pH: 6.9
Variety: Williamsburg

TN-510-80-T-P CONTROL OF TALL IRONWEED & YELLOW CROWNBEARD IN PASTURES USING RUB-ON TYPE APPLICATORS. TOBACCO EXPERIMENT STATION. GREENEVILLE, TN., 1980.

TYPE OF APPLICATION	HERBICIDE	RATE	% CONTROL	
			TALL IRONWEED	YELLOW CROWNBEARD
ROPEWICK	2,4-D + DICAMBA	2X	20	
	GLYPHOSATE	2X	20	
SPONGE BAR	2,4-D + DICAMBA	2X	20	
	GLYPHOSATE	1X		95
	GLYPHOSATE	2X	60	95

Glyphosate mixed at a 1:4 ratio

Dicamba + 2,4-D mixed at 1:4 ratio

Herbicides were applied on Sept. 12, 1980 and evaluated on Oct. 2, 1980.

TN-510-80-T-P CONTROL OF HORSENETTLE IN PASTURES USING RUB-ON TYPE APPLICATORS. TOBACCO EXPERIMENT STATION. GREENEVILLE, TN., 1980.

TYPE OF APPLICATOR	HERBICIDE	RATE	HEIGHT	HORSENETTLE CONTROL %	GRASS INJURY
ROPEWICK	GLYPHOSATE	2X	2 IN	85	MODERATE
SPONGE BAR	DICAMBA + 2,4-D	2X	2 IN	70	NONE
	GLYPHOSATE	2X	2 IN	90	SEVERE
	GLYPHOSATE	2X	4 IN	45	LIGHT

Glyphosate mixed at a 1:4 ratio

Dicamba + 2,4-D mixed a 1:4 ratio

Herbicides were applied on Sept. 12, 1980 and evaluated on Oct. 2, 1980.

TN-510-80-7-S-1a - Preplant Incorporated and Post Emergence Herbicides for Weed Control in Soybeans, Tobacco Experiment Station, 1980, Greeneville, TN.

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Stage	Yield bu/A	Weed Response, % Control Angr[1] 7/29	Blwe[1] 7/29
1	Balalin + Blazer	0.75 + 0.5	PPI + POT	44.9	87	72
2	Balalin + Sencor	0.75 + 0.38	PPI	47.7	87	90
3	Devrinol	1.0	PPI	49.6	77	73
4	Devrinol	2.0	PPI	41.9	94	94
5	Prowl + Blazer	1.0 + 0.5	PPI + POT	47.7	90	87
6	Prowl + Sencor	1.0 + 0.38	PPI	46.1	92	94
7	Sencor + Sencor	0.25 + 0.25	PPI + PRE	53.3	98	98
8	Tolban + Blazer	0.75 + 0.5	PPI + POT	48.7	95	93
9	Tolban + Sencor	0.75 + 0.38	PPI	57.6	90	96
10	Treflan + Blazer	0.75 + 0.5	PPI + POT	59.7	96	94
11	Treflan + Sencor	0.75 + 0.38	PPI	55.9	96	94
12	Vernam + Blazer	2.5 + 0.5	PPI + POT	52.0	95	93
13	Vernam + Devrinol	2.5 + 1.0	PPI	58.4	93	90
14	Weed Free Check	-----	-----	52.5	100	100
15	Weedy Check	-----	-----	50.5	0	0
				N.S.		

[1] Weed abbreviations: Angr = Annual grass (large crabgrass and goosegrass) and Blwe = Broadleaf weeds (carpetweed, ragweed and pigweed).

Variety: Essex
Date of Planting: June 9, 1980
Soil Type: Cumberland Silt Loam
Plot Size: 14 x 30'

Date of Application: June 9, 1980
Temperature: 80°F
Soil Moisture: Dry
Sprayer: CO_2 Backpack
Nozzle: Tee Jet 8003
Spray Volume: 20 gpa
Pressure: 30 psi

TN-510-80-T-S-1b - Preemergence (Surface applied herbicides) Weed Control in Soybeans, Tobacco Experiment Station, 1980 Greeneville, Tennessee

Tmt. No.	Herbicide Treatment	Rate lb/A a.i.	Soybean Response Stage	Soybean Response Yield Bu/A	Weed Response, % Control[1] Angr 7/29	Rrpw 7/29	Cawe 7/29
1	Devrinol	1.0	Pre	47.6	80	52	50
2	Devrinol	2.0	Pre	46.4	93	90	95
3	Dual + Blazer	2.0+0.5	Pre	36.8	98	93	100
4	Dual + Lorox	2.0+0.75	Pre	48.3	97	100	98
5	Dual + Sencor	2.0+0.5	Pre	45.9	99	100	100
6	Lasso + Blazer	2.0+0.5	Pre	44.7	98	92	100
7	Lasso + Dyanap	2.0+1.5 + 3.0	Pre	46.0	97	99	99
8	Lasso + Sencor	2.0 + 0.5	Pre	43.2	99	100	100
9	Lasso + Lorox	2.0 + 0.75	Pre	50.8	97	99	100
10	Lorox	0.75	Pre	46.7	78	97	99
11	Lorox	0.88	Pre	47.2	85	97	100
12	Sencor	0.38	Pre	51.1	85	97	95
13	Sencor	0.50	Pre	46.9	93	99	99
14	Weed Free Check	---	---	46.4	100	100	100
15	Weedy Check	---	---	44.0	0	0	0
				N.S.			

Weed Abbreviations: Angr = Annual grass; Rrpw = Redroot pigweed; and Cawe = Carpetweed.

Variety - Essex
Date of Planting - June 9, 1980
Soil type - Cumberland Silt Loam
PH : approx. 6.0
Plot Size - 14 x 30 feet

Date of Application - June 9, 1980
Temperature - 80
Soil Moisture - dry
Sprayer - CO_2 Backpack
Nozzle - TeeJet 8003
Spray Volume - 20 gpa
Pressure - 30 psi

TN-510-80-T-To-1 - Weed Control in Tobacco, Tobacco Experiment Station, Greeneville, Tennessee, 1980.

Herbicide Treatment	Rate lb/A a.i.	Stage	Hoe Time (hr/A) 6-30-80	Hoe Time (hr/A) 7-16-80	Tobacco Response: Crop Injury (%)	Tobacco Response: Blossom Count (#/row)	Yield lb/A	Weed Response, % Control[1,2]: Rrpw	Cawe	Hebi	Lacg	Gogr	Fapa	Colq
Balan	1.2	PPI	4.3	5.6	20	10.0	2427	60	96	96	98	98	98	---
Devrinol	1.0	POT	5.6	3.9	0	12.3	2545	97	100	63	100	100	100	100
Devrinol	2.0	POT	4.6	3.4	0	13.7	2418	97	100	63	100	100	100	100
Dual	1.5	POT	3.2	4.7	22	9.7	2665	100	100	100	100	100	100	100
Dual	2.0	POT	3.9	4.1	45	7.7	1926	100	100	100	100	100	100	100
Cultivated + Dual	1.5	LY	6.1	2.3	--	15.7	2583	---	---	---	---	---	---	---
Dual + Enide	1.5 + 2.0	POT	3.5	2.5	33	10.3	2876	100	100	100	100	100	100	100
Dual + Enide	1.5 + 3.0	POT	3.8	3.3	47	3.0	2006	100	100	100	100	100	100	100
Enide	4.0	POT	11.9	2.8	0	12.0	2553	63	88	57	95	98	95	0
Paarlan	1.5	PPI	8.2	2.5	2	16.0	2832	92	96	80	97	61	45	-
Prowl	1.0	PPI	9.1	5.7	5	11.3	2757	95	98	94	92	64	97	-
Prowl	1.0	PRE	9.4	3.0	0	13.3	2462	85	93	96	88	59	98	90
Cultivated + Prowl	1.0	LY	8.6	3.6	--	14.3	2265	--	--	--	--	--	--	--
Tillam + Devrinol	4.0 + 1.0	PPI	6.9	6.5	5	14.3	2778	95	98	92	96	98	97	--
Weed Free Check			9.4	6.9	0	15.3	2539	100	100	100	100	100	100	100
Weedy Check			24.7	4.7	0	6.0	2270	0	0	0	0	0	0	0
2EGoal	0.5	PPI		8.6	5	----	2786	89	90	58	40	--	--	--
2EGoal	.75	PPI		6.3	0		2839	98	94	68	50	--	--	--
Dual	1.5	PPI		6.1	10		2174	90	65	95	95	--	--	--
							N.S.							

[1]Weed control ratings made on June 17, 1980.

[2]Weed abbreviation: Rrpw = redroot pigweed; Cawe = carpet weed; Hebi = henbit; Lacq = large crabgrass; Gogr = goosegrass; Fapa = Fall panicum; Colq = common lambsquarter.

Variety: Virginia 509
Date of Planting: May 14, 15, 1980
Soil Type: Cumberland Silt Loam
pH:
Plot Size: 10½ x 36'

Date of application: May 14, 15
Soil Moisture:
Nozzle: Tee Jet 8003
Pressure: 30 psi

Temperature: 75°F
Sprayer: CO_2
Spray Volume: 20 gpa

WEST TENNESSEE EXPERIMENT STATION

JACKSON, TENNESSEE

38301

Station Superintendent - Dr. James F. Brown

Climatic Data from the Climatology Station at the
West Tennessee Experiment Station, Jackson, TN
During the 1980 Growing Season

	APRIL					MAY				
	Air Temp.		Soil Temp. 2"		Precip.	Air Temp.		Soil Temp. 2"		Precip.
	Max.	Min.	Max.	Min.	In.	Max.	Min.	Max.	Min.	In.
1	52	39	55	46		70	52	75	53	
2	71	44	69	47		74	49	75	56	
3	79	51	70	51	0.23	75	48	77	57	
4	67	44	65	49	0.38	75	46	75	55	
5	58	34	63	44		79	51	73	56	
6	64	39	69	45		83	51	83	58	
7	71	47	67	43		83	56	84	59	
8	72	43	68	56	1.53	83	50	86	59	
9	64	42	62	51		69	40	86	54	
10	64	39	65	47		71	44	84	53	
11	71	50	69	50	T	81	51	83	56	
12	69	46	58	52	1.21	81	69	82	67	
13	52	41	55	48	0.58	76	64	75	66	0.86
14	44	36	49	44	1.10	82	55	80	62	0.23
15	45	35	45	41	0.05	68	57	77	58	0.03
16	62	40	61	42		70	57	73	58	0.17
17	70	46	70	47		77	60	74	61	0.18
18	76	57	67	49	0.14	79	60	80	65	0.07
19	73	50	70	51		84	68	84	66	T
20	76	44	74	51		75	60	77	67	0.07
21	79	52	79	54		76	56	81	64	
22	82	50	76	56		79	60	82	63	0.06
23	88	54	80	57		67	61	69	65	0.25
24	86	59	80	60		74	58	75	63	
25	81	44	81	57	0.30	80	64	81	64	
26	57	43	60	55	0.78	84	61	85	68	
27	59	49	63	55	0.07	86	53	88	63	
28	61	48	64	52	T	85	58	92	65	
29	69	46	71	52		88	67	94	68	
30	65	45	68	53		87	69	89	73	
						85	68	87	71	
					6.37					1.92

Climatic Data from the Climatology Station at the
West Tennessee Experiment Station, Jackson, TN
During the 1980 Growing Season

	JUNE					JULY				
	Air Temp.		Soil Temp. 2"		Precip.	Air Temp.		Soil Temp. 2"		Precip.
	Max.	Min.	Max.	Min.	In.	Max.	Min.	Max.	Min	In.
1	82	67	85	71		86	71	94	74	
2	89	65	92	72		95	76	95	76	
3	88	73	95	75		96	75	100	79	
4	89	69	93	75		91	72	96	79	
5	91	72	95	76		93	75	97	79	
6	91	71	99	77		94	75	101	81	
7	92	73	98	77		95	74	105	81	
8	92	70	100	78	0.42	97	78	106	82	
9	78	53	88	65		98	77	107	83	
10	71	53	88	64		97	79	116	84	
11	87	59	95	67		97	78	105	84	
12	78	47	94	64		99	75	107	84	
13	83	54	95	66		100	75	107	84	
14	88	60	98	69		98	75	107	84	
15	91	67	97	73		101	71	107	85	
16	92	76	97	75		101	79	108	86	
17	87	62	97	72	0.61	101	76	109	85	
18	76	65	81	71		97	72	108	83	
19	82	63	88	70		97	64	108	80	
20	87	61	96	71	1.40	98	74	108	81	
21	78	61	83	69		95	73	106	84	
22	79	63	91	68		86	72	97	80	0.51
23	87	68	94	70	0.56	78	67	83	75	2.00
24	86	67	87	73	2.35	85	63	88	71	
25	82	67	86	73		86	64	90	72	
26	88	68	92	72		89	69	97	74	
27	91	69	93	75		91	73	96	76	
28	92	68	97	76		87	68	93	75	0.54
29	93	76	99	76		85	64	92	72	
30	79	66	84	73	3.80	92	70	97	74	
						31	95	72	102	77
					9.14					3.05

Climatic Data from the Climatology Station at the
West Tennessee Experiment Station, Jackson, TN
During the 1980 Growing Season

	AUGUST					SEPTEMBER				
	Air Temp.		Soil Temp. 2"		Precip.		Air Temp.		Soil Temp. 2"		Precip.
D	Max.	Min.	Max.	Min.	In.	D	Max.	Min.	Max.	Min.	In.
1	98	74	104	80		1	94	74	100	80	
2	94	76	104	82		2	96	72	101	80	
3	93	74	100	82		3	87	66	89	74	0.12
4	87	73	94	79	0.03	4	92	68	100	73	
5	94	75	95	80		5	95	67	101	74	0.20
6	90	72	97	78		6	93	67	97	74	
7	95	71	105	79		7	95	71	102	75	
8	97	72	107	81		8	96	67	103	78	
9	98	72	109	83		9	98	66	105	78	
10	97	72	108	83		10	98	71	104	76	
11	96	74	106	84		11	87	51	100	70	
12	94	71	104	80	0.13	12	88	58	98	70	
13	92	69	104	80		13	95	64	101	72	
14	97	72	107	80		14	95	69	97	78	
15	95	73	107	82		15	96	64	102	76	
16	93	73	104	82		16	89	65	98	75	
17	93	72	104	81		17	99	62	98	72	1.31
18	96	74	105	82		18	72	56	77	67	.02
19	92	73	99	81		19	81	56	85	64	
20	97	72	106	82		20	89	60	90	65	
21	97	71	107	82		21	87	72	88	73	.64
22	98	62	106	77		22	88	71	85	75	.11
23	90	65	102	76		23	91	69	89	75	.60
24	89	63	102	76		24	75	60	80	70	.69
25	93	63	104	76		25	80	64	84	69	.73
26	94	64	104	76		26	71	55	75	62	.08
27	95	68	102	77		27	69	54	75	61	
28	93	67	99	77		28	65	55	67	60	.16
29	93	65	100	76	T	29	64	57	65	61	.30
30	86	68	97	76		30	67	61	69	64	T
31	93	71	100	77							
					.16						4.96

Climatic Data from the Climatology Station at the
West Tennessee Experiment Station, Jackson, TN
During the 1980 Growing Season

OCTOBER

D	Air Temp. Max.	Air Temp. Min.	Soil Temp. 2" Max.	Soil Temp. 2" Min.	Precip. In.
1	70	55	70	63	
2	80	60	81	62	
3	73	46	75	56	
4	61	41	68	53	
5	68	37	73	48	
6	61	33	71	47	
7	68	38	74	47	
8	78	49	78	51	
9	82	59	83	58	
10	88	56	86	62	
11	86	47	85	59	
12	72	37	80	52	
13	64	32	76	48	
14	70	38	75	47	
15	76	44	77	49	
16	80	53	80	55	
17	79	46	81	60	.02
18	76	58	73	67	1.29
19	76	54	81	60	
20	64	36	72	49	
21	70	40	72	49	
22	77	47	75	50	
23	77	47	75	54	
24	75	48	75	53	.49
25	64	37	65	47	.16
26	57	34	65	45	
27	59	42	66	44	.20
28	63	50	59	52	1.13
29	60	37	60	46	
30	49	31	56	41	
31	56	28	61	40	
				TOTAL	3.29

H-510-80-W-Ct-Bermudagrass. Control of Common Bermudagrass in Cotton. West Tennessee Experiment Station, Jackson, Tennessee. 1980

	Treatment[1]	Rate (lb/A AI)		Percent Vigor[2]/Reduction or Control[2] 6-9-80 CVR	6-9-80 Begr	7-14-80 Begr	Lint cotton[2] Lb/Acre
1.	BAS 9052(1.53E) + Oil Conc.	0.5 + 1%	EP	5	95 a	96 a	781 a
2.	BAS 9052(1.53E) + Oil Conc.	.75 + 1%	EP	8	96 a	95 ab	807 a
3.	BAS 9052(1.53E) + Oil Conc.	1.0 + 1%	EP	11	97 a	96 ab	719 a
4.	MBR 22359(2E)	1.5	PRE	6	90 a	81 bcd	796 a
5.	MBR 22359(2E)	3.0	PRE	15	98 a	96 ab	806 a
6.	MBR 18337(2E)	1.5	PRE	11	95 a	94 ab	783 a
7.	MBR 18337(2E)	3.0	PRE	6	97 a	98 a	715 a
8.	MBR 22359(2E) + Surf WK	1.0 + .25%	EP	10	58 c	75 d	527 b
9.	MBR 18337(2E) + Surf WK	1.0 + .25%	EP	5	76 b	78 cd	827 a
10.	KK80(4E) + Surf WK	0.5 + .25%	EP	3	94 a	95 ab	806 a
11.	KK80(4E) + Surf WK	1.0 + .25%	EP	9	96 a	90 abc	744 a
12.	Dowpon M 74W + X-77	3.7 + 0.5%	POD	4	0 d	90 abc	772 a
	LSD .05			n.s.			
	C.V.			73.0	10.68	9.8	C.V. = 13.4%

[1]/Entire experimental area treated preemergence with Prowl 4E + Cotoran 80W (1.0 + 1.0 lb./A ai)

Variety: Stoneville 213
Planted: April 22, 1980
Treated: PRE- April 24 ; EP- May 29 POD- June 9, 1980
Plot Size: 3 each 40" rows (2 treated) by 30' long
Design: RCB with 4 reps
Soil Type: Memphis silt loam
% O.M.: 2.15 pH: 5.7 (Mar. 1980)
Fertilization: 30-0-0 + 0.5 Boron H-P; H-K3 T/A Lime
Sprayer: 8003 tips; 30 psi; 4 mph; 20 gpa
Terraclor Super X at 10 lb/A in furrow at planting
Cultivation: June 10

H-510-80-W-FXH. Interaction of fungicide with herbicides on cotton. West Tennessee Experiment Station, Jackson, Tennessee. 1980.

Treatment [1]	Rates (LB/A AI)	MOA	Plants/A. 5-13-80	Plants/A. 5-27-80	Vigor Rating 6-16-80	% Open 9-5-80	Yield Harvest [2] Lbs.Lint/A. Total	Yield Harvest [2] Lbs.Lint/A. First Harvest	% First
1. Check	0	-	31,168b-e [3]	30,664b-d	5.7b-e	73b-d	581a	515a-d	89
2. Terrazole 5G	.25	IF	31,237c-e	29,919b-d	5.6c-e	81a-c	483a	432b-d	89
3. Terraclor 10G	1.0	IF	30,162c-e	28,486cd	5.1e	66d	573a	489b-d	85
4. Terraclor 10G + Ridomil 5G	1.0 + 0.1	IF	33,243b-e	32,383a-d	5.7b-e	81a-c	500a	454b-d	91
5. Terraclor Super X 12.5G	1.25	IF	34,748a-e	33,128a-d	5.2e	77a-d	573a	501b-d	87
6. Dwell 4E	0.5	PPI BC	34,103a-e	32,383a-d	5.3e	74a-d	531a	464b-d	87
7. Check + Treflan 4E	0 + 0.75	PPI	28,586c-e	26,136d	5.5de	74a-d	560a	496b-d	89
8. Terrazole 5G + Treflan 4E	.25 + 0.75	IF+PPI	29,446c-e	27,569cd	4.8e	76a-d	436a	387d	89
9. Terraclor 10G + Treflan 4E	1.0 + 0.75	IF+PPI	27,368e	26,251d	4.7e	68cd	513a	438b-d	85
10. Terraclor 10G + Ridomil 5G + Treflan 4E	1.0 + 0.1 + .75	IF+BC+PPI	33,960a-e	32,039b-d	4.7e	74a-d	543a	483b-d	89
11. Terraclor Super X 12.5G + Treflan 4E	1.25+ 0.1 + .75	IF+PPI	28,300de	28,600cd	4.8e	68cd	543a	467b-d	86
12. Dwell 4E + Treflan 4E	0.5 + 0.75	PPI+PPI	33,816a-e	29,804b-d	5.3e	71b-d	477a	416cd	87
13. Check + Dual 8E	0 + 1.5	PRE	30,091c-e	30,263b-d	7.1a	80a-c	697a	647a	93
14. Terrazole 5G + Dual 8E	.25 + 1.5	IF+PRE	40,121ab	37,083ab	6.6a-c	75a-d	627a	570ab	91
15. Terraclor 10G + Dual 8E	1.0 + 1.5	IF+PRE	36,969a-c	34,790a-c	6.9a	87a	589a	545a-c	92
16. Terraclor 10G + Ridomil 5G + Dual 8E	1.0 + 0.1 + 1.5	IF+BC+PRE	41,697a	39,433a	6.7ab	83ab	588a	545a-c	93
17. Terraclor Super-X 12.5G + Dual 8E	1.25 + 1.5	IF+PRE	36,682a-d	34,848a-c	6.8a	78a-d	583a	525a-d	90
18. Dwell 4E + Dual 8E	0.5 + 1.5	PPI+PRE	34,461a-e	32,097b-d	6.5a-d	79a-c	575a	524a-d	91
		CV%	18.3	17.1	13.7	12.5	21.9	21.1	

Variety: Hancock (15 lb acid delinted Demosan T(2-way)treated seed/A).
Planted: April 23, 1980
Treated April 23, 1980
Plot Size: 2-40" row x 40' long
Design: RCB split plot; 6 reps
Soil type: Dexter loam
%O.M.: pH: 5.9 (Mar. 1980)
Sprayer: 8003 30 psi, 4 mph; 20 gpa
Fertilization: 60-60-60 + 0.5 lb/ac Boron; 2T/A limestone

[1] Cotoran 80W at 1.0 lb/A ai Preemergence plus 0.5 lb/A Boron applied on April 23, 1980.
[2] First harvest made on 9-12; 2nd harvest on 10-7-80.
[3] Values within a column not followed by the same small letter are significantly different at P=0.05, according to Duncan's Multiple Range Test.
[4] See Ftnte 3. These letters refer only to columns within the Main Plot Analysis.
[5] See Ftnte 3. These letters refer only to columns within the Sub Plot Analysis

	Plants/A. 5-13-80	Plants/A. 5-27-80	Vigor Rating 6-16-80	% Open 9-5-80	Yield Harvest [2] Lbs.Lint/A. Total	Yield Harvest [2] Lbs.Lint/A. First Harvest	% First
Main Plot Analysis							
Check	32,610ab [4]	31,161ab	5.4b	72b	540b	476b	88
Treflan	30,246b	28,400b	4.9c	75b	512b	448b	87
Dual	36,670a	34,752a	6.8a	80a	610a	559a	92
C.V.	25.1	26.4	11.5		14.9	16.1	
Sub Plot Analysis							
1.Check	30,282b [5]	29,021b	6.1a	76a	613a	553a	90
2.Terrazole 5G	33,601ab	31,524ab	5.6a	77a	515a	463a	90
3.Terraclor 10G	31,500b	29,842b	5.6a	74a	558a	491a	88
4.Terraclor 10G + Ridomil 5G	36,300a	34,619a	5.7a	79a	543a	494a	91
5.Terraclor SX	33,243ab	32,192ab	5.6a	74a	566a	498a	88
6.Dwell	34,127ab	31,428ab	5.7a	75a	528a	468a	89
C.V.	17.2	15.4	14.0		21.9	21.1	
HerbicideXFungic.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	

H-570-80-W-9 EFFECTS OF MSMA AND PIX ON YIELD, MATURITY, AND GIN TURNOUT OF 6 COTTON VARIETIES GROWN AT JACKSON[1], TENNESSEE IN 1980

MSMA Rates	Yield Lint Pounds Per Acre: Avg.	MSMA Treatments only: Total Lbs.	MSMA Treatments only: 1st Harvest %	MSMA Treatments only: Turnout %	MSMA + Pix, 20 gms ai/A.: Total Lbs.	MSMA + Pix, 20 gms ai/A.: 1st Harvest %	MSMA + Pix, 20 gms ai/A.: Turnout %
Check	576 a	590	96	32.6	563	96	31.4
1 lb. early[2]	564 a	567	94	31.8	561	95	31.2
2 lbs. early	545 a	548	94	32.6	543	95	32.0
1 lb. early + 1 lb. late[3]	506 a	508	93	31.1	505	95	30.3
2 lbs. late	385 b	388	92	30.4	382	94	28.8

1. Dexter silt loam (2% to 5% slopes).
2. Early application occurred when cotton was 4 inches high.
3. Late application occurred when cotton was 14 to 17 inches high.
4. Planted April 23, harvested September 30 and October 9, 1980.

Variety	Yield Lint Pounds Per Acre: Check	1E	2E	1+1	2L	Avg.
Stoneville 825	606	752	630	531	293	562
Stoneville 825 + Pix	636	641	618	535	250	536
Deltapine 55	641	610	600	554	375	556
Deltapine 55 + Pix	632	504	620	499	365	524
Stoneville 213	655	522	513	555	481	545
Stoneville 213 + Pix	634	584	467	542	395	524
Coker 304	643	498	523	413	457	507
Coker 304 + Pix	601	530	538	453	473	519
Deltapine 61	607	548	473	496	401	505
Deltapine 61 + Pix	574	635	471	502	412	519
Hancock	387	473	549	497	319	445
Hancock + Pix	420	471	542	498	396	465

MSMA BY VARIETY BY PIX STUDY AT JACKSON

Source	df	F
MSMA	4	13.36**
error a	8	
%CV Main Plot	25.3	
Varieties	5	1.28
Varieties x MSMA	20	1.04
error b	50	
%CV Sub-Plot	22.7	
Pix	1	0.89
Pix x varieties	5	2.65*
Pix x MSMA	4	0.011
Pix x varieties x MSMA	20	2.44**
error c	60	
%CV Sub-Sub-Plot	7.6	

H-510-80-W-Jogr. The Effects of BAS 9052 Postemergence on Johnsongrass at various stages of growth. West Tennessee Experiment Station, Jackson, TN. 1980.

Treatments	Johnsongrass Stage of Growth	% Control Johnsongrass (9-5-80)
1. BAS 9052 + Oil Conc. + 1%	12"	48 cd
2. BAS 9052(.25 lb) + 1%	24" (early boot)	66 bc
3. BAS 9052(.25 lb) + 1%	36" (flowering)	85 ab
4. BAS 9052(.25 lb) + 1%	48"	8 f
5. BAS 9052(.50 lb) + 1%	12"	71 ab
6. BAS 9052(.50 lb) + 1%	24"	81 ab
7. BAS 9052(.50 lb) + 1%	36"	88 ab
8. BAS 9052(.50 lb) + 1%	48"	28 def
9. BAS 9052(.75 lb) + 1%	12"	87 ab
10. BAS 9052(.75 lb) + 1%	24"	84 ab
11. BAS 9052(.75 lb) + 1%	36"	91 a
12. BAS 9052(.75 lb) + 1%	48"	29 de
13. Untreated Check	"	0 f
	C.V.	22

Planted (Jogr.): June 18, 1980
Fertilization: 50-0-0
Plot size: 10 ft. x 20 ft.
Soil type: Memphis silt loam
Sprayer: CO_2, 8003 tips, 4 mph, 30 psi, 20 gpa

H-510-80-W-S-CT. Effect of Three Consecutive Annual Applications(1977-79) of Cotoran-Rates with and without Treflan to Cotton on Soybeans grown in Rotation. West Tennessee Experiment Station, Jackson, Tennessee. 1980.

Treatment[1/]	Rate (LB/A AI)	Yield bu/A @13%
1. Fluometuron	0	22.2
2. Fluometuron	0.75	19.6
3. Fluometuron	1.00	18.7
4. Fluometuron	1.25	25.4
5. Fluometuron	1.5	23.7
6. Fluometuron	3.0	18.3
7. Trifluralin	0.75	21.6
8. Trifluralin + Fluometuron	0.75 + 0.75	19.3
9. Trifluralin + Fluometuron	0.75 + 1.0	23.2
10. Trifluralin + Fluometuron	0.75 + 1.25	19.7
11. Trifluralin + Fluometuron	0.75 + 1.5	19.6
12. Trifluralin + Fluometuron	0.75 + 3.0	18.9
	LSD .05	n.s.
	C.V.	16.8%

[1/] Entire area treated with Dual 8E(1.5 lb/A ai)Pre. Basagran POE at 0.75 lb/A ai if needed.

Variety: Essex (Kalo Triple Noctin L hopper box)
Planted: April 24, 1980
Plot Size: 4-40" rows by 30' long
Design: RCB with 4 replications
Soil type: Memphis silt loam
pH: 6.7 %O.M.: 0.97
Fertilization: high-P; high-K

H-510-80-W-S-PPI. Herbicide Evaluation for Weed Control in Soybeans(Preplant Incorporated). West Tennessee (DPE) Agricultural Experiment Station, Jackson, Tennessee. 1980.

Treatment	Rate(LB/A AI)	MOA	Percent Injury or Control 6 - 16 - 80 CIR	Cocb	Rrpw	Jiwe	Blsg	8-6-80 Jogr	Cocb	Yield Bu/A@13%
1. MC 10108 (2EC)	.75	PPI	5	85 a	97 abc	84 abc	81 e	63 a-e	70 a-e	12.8 ab
2. MC 10108 (2EC)	1.0	PPI	10cd	86 a	98 ab	88 abc	86 b-e	70 a-d	77 a-d	11.6 b
3. MC 10108 (2EC) + Treflan 4E	.75 + .75	PPI TM	10cd	78 a	98 ab	96 ab	97 a-c	74 a-d	66 a-e	9.6 b
4. MC 10108 (2EC) + Treflan 4E	1.0 + .75	PPI TM	25ab	69 a	98 ab	93 abc	95 a-d	51 b-e	20 de	10.7 b
5. Goal 2E + Dual 8E	0.5 + 1.5	PPI TM	3d	90 a	98 ab	95 ab	93 a-e	20 e	56 a-e	12.1 b
6. Goal 2E + Dual 8E	.75 + 1.5	PPI TM	13bcd	53 a	100 a	100 a	99 ab	56 a-e	35 b-e	9.2 b
7. EL 5219 (3EC)	1.0	PPI	21abc	61 a	94 abc	63 c	85 c-e	26 de	35 b-e	12.0 b
8. EL 5219 (3EC) + Sencor 4L	.75 + .38	PPI TM	1d	68 a	95 abc	95 ab	95 a-d	83 a-c	36 b-e	13.0 ab
9. RH 8817 (2E)	.75	PPI	5d	85 a	100 a	89 abc	84 de	55 a-e	90 ab	12.0 b
10. RH 8817 (2E)	1.0	PPI	13bcd	75 a	93 abc	88 abc	83 de	90 ab	88 abc	12.4 b
11. S-734 (75W) + Sencor 4L	1.0 + .38	PPI TM	14bcd	66 a	84 c	81 abc	90 a-e	33 de	33 c-e	10.4 b
12. S-734 (75W) + Sencor 4L	1.5 + .38	PPI TM	29a	59 a	85 bc	81 abc	90 a-e	49 b-e	23 de	9.5 b
13. Treflan 4E + Sencor 4L	.75 + .38	PPI TM	3d	69 a	93 abc	66 bc	90 a-e	38 c-e	60 a-e	12.8 ab
14. Treflan 4E	.75	PPI	4d	56 a	85 bc	93 abc	94 a-e	36 c-e	18 e	9.7 b
15. Weed Free Check	---	---	0d	100 a	100 a	100 a	100 a	100 a	100 a	17.2 a
16. Weedy Check	---	---	0d	0 b	0 d	0 d	0 f	0 e	0 e	8.4 b
	C.V.		86	44	9	22	9	53	66	25

Variety: Bedford
Planted: May 21, 1980
Treated: May 21, 1980
Plot size: 3-40" rows (2 treated) by 30' long
Design: RCB with 4 replications
Soil type: Collins silt loam
% O.M.: 1.1 pH: 6.8
Fertilization: 0-40-40
Sprayer:8003 tips; 30 psi; 4 mph; 20 gpa
Incorporation: Tillrovater 2" deep
Cultivated: June 19
Harvested: Nov. 7, 1980

H-510-80-W-S-PRE. (DPE) Herbicide Evaluation for Weed Control in Soybeans (Preemergence). West Tennessee Experiment Station, Jackson, Tennessee. 1980.

Treatment[1]	Rate(LB/A AI)	MOA	Percent Injury or Control[3] 6 - 16 - 80 CIR	Sdlng Jogr.	Cocb[2]	Rhiz. Jogr.	8 - 6 - 80 Jogr.	Cocb	Yield[3] Bu/A @13%
1. PPG-844 (2EC)	0.5	PRE	9	29 d	74abc	5 de	28 c-e	79 a-c	11.4 a-d
2. PPG-844 (2EC)	.75	PRE	21	23 de	90ab	5 de	70 a-c	95 ab	11.4 a-d
3. PPG-844 (2EC)	1.5	PRE	21	64 bc	97a	11 de	64 a-d	95 ab	10.9 b-d
4. RH 8817 (2E) + Dual 8E	.38 + 1.5	PRE	26	93 a	61bcd	29 b-e	63 a-d	76 a-c	11.5 a-d
5. RH 8817 (2E) + Dual 8E	.62 + 1.5	PRE	28	86 ab	78abc	15 b-e	40 c-e	68 a-d	10.4 b-d
6. Goal 2E + Dual 8E	.38 + 1.5	PRE	33	98 a	36def	10 de	49 b-e	41 c-g	9.2 cd
7. CP 55097 8E	1.5	PRE	0	84 ab	8fg	3 e	30 c-e	23 e-g	8.2 cd
8. CP 55097 8E + Sencor 4L	1.5 + .38	PRE	3	88 ab	58cd	0 e	56 a-d	53 c-f	9.6 cd
9. RH 0043 (2E)	1.0	PRE	21	46 cd	90ab	13 c-e	92 ab	97 ab	15.6 a
10. RH 0043 (2E)	2.0	PRE	19	80 ab	97a	16 b-e	85 ab	100 a	14.3 ab
11. MBR 22359 (2E) + Sencor 4L	1.0 + .38	PRE	3	88 ab	14efg	40 bc	96 a	15 fg	7.7 cd
12. MBR 22359 (2E) + Sencor 4L	2.0 + .38	PRE	4	93 a	23efg	33 b-d	96 a	31 d-g	8.9 cd
13. MBR 22359 (2E) + Sencor 4L	3.0 + .38	PRE	18	98 a	33def	43 b	99 a	15 fg	6.9 d
14. Lasso 4L + DPX 6573 (50W)	2.0 + 1.0	PRE	5	96 a	83abc	0 e	24 de	47 c-f	11.2 a-d
15. Lasso 4L + DPX 6573 (50W)	2.0 + 1.5	PRE	6	95 a	89ab	0 e	32 c-e	65 a-d	11.9 a-c
16. Dual 8E + Lexone 4L	2.0 + .38	PRE	6	94 a	43de	3 e	36 c-e	56 b-d	8.4 cd
17. Weed Free Check	---	---	0	100 a	100a	100 a	100 a	100 a	11.0 a-d
18. Weedy Check	---	---	0	0 e	0g	0 e	0 e	0 f	6.7 d
	C.V. %			21	31	96	45		27

Variety: Bedford
Planted: May 21, 1980
Treated: May 21, 1980
Plot size: 3-40" rows (2 treated) by 30'

Design: RCB with 4 replications
Soil Type: Collins silt loam
% O.M.: 1.1 pH: 6.8
Fertilization: 0-40-40 Sprayer: 8003 tips, 4 mph 30 psi, 20 gpa

1/ Nemacur 1.0 lb/a ai banded

Cultivated: June 19

2 Treatments 1-17 provided excellent common lambsquarters, redroot pigweed, broadleaf signalgrass, and large crabgrass control.

3 Values within a column followed by the same letter are not significantly different at $P < .05$ according to Duncan's Multiple Range Test.

H-510-80-W-S-POE (DPE). Herbicide Evaluation for Weed Control in Soybeans(Postemergence). West Tennessee Experiment Station, Jackson, Tennessee. 1980.

Treatment[1]	Rate(LB/A AI)	MOA	% Injury or Control[2] 6-17-80 CIR	Cocb	Yield[2] Bu/A @13%
1. Tackle 2AS + Basagran 4L	0.5 + .25	POE	5 b-d	97 a	5.8 ab
2. Tackle 2AS + Basagran 4L + X-77	0.5 + .25 +.25%	POE	9 ab	94	4.7 a-d
3. Tackle 2AS + Basagran 4L	0.5 + 0.5	POE	8 a-c	99 a	6.3 a
4. Tackle 2AS + Basagran 4L + X-77	0.5 + 0.5 +.25%	POE	10 ab	99 a	5.7 a-c
5. Tackle 2AS	0.5	POE	6 a-d	86	3.9 b-d
6. Tackle 2AS	.75	POE	10 ab	89	4.4 a-d
7. Tackle 2AS	1.0	POE	9 ab	96	5.0 a-d
8. Tackle + X-77	0.5 + .25%	POE	9 ab	84	4.4 a-d
9. Tackle + X-77	.75 + .25%	POE	13 a	91	3.7 b-d
10. Tackle + X-77	1.0 + .25%	POE	13 a	96	4.6 a-d
11. Blazer 2LCS	0.5	POE	13 a	88	3.5 cd
12. Basagran 4L + X-77	1.0 + .5%	POE	1 cd	100 a	4.5 a-d
13. Weed Free Check	---	---	0 d	100 a	6.5 a
14. Weedy Check	---	---	0 d	0	2.7 d
	C.V.				29

[1] Entire experiment treated with Treflan 4EC (0.5 lb/A ai).

Variety: Forrest
Planted: May 15, 1980
Treated: June 4(cocklebur 3") Soybeans-V2
Plot size: 3-40" rows(2 treated) x 30' long
Design: RCB with 4 replications
Soil type: Collins silt loam
% O.M.: 1% pH: 6.9
Fertilization: 0-40-40
Sprayer: 8003 tips; 4 mph; 30 psi; 20 gpa
Harvested: Nov. 7, 1980

Values within a column followed by the same letter are not significantly different at P<.05 according to Duncan's Multiple Range Test.

M-510-80-W-S-JG-POE. Postemergence johnsongrass control in Soybeans. West Tennessee Experiment Station, Jackson, Tennessee. 1980

Treatments[1]	Rate (LB/A AI)	MOA	Percent Injury or Control 6-23-80 CIR	Angr	Jogr	7-11-80 CIR	Angr	Jogr	Yield Bu/A @ 13%
1. Vistar 2S + X-77	.25 + 0.5%	EP	28b	28 bc	60 d	45 b	0 e	45 e	9.8 g
2. Vistar 2S + X-77 + Vistar 2S + X-77	.25 + 0.5% + .25 + 0.5%	EP + MP	31a	10 cd	69 d	53 a	0 e	91 a-c	10.8 e-g
3. BAS 9052(1.53EC) + O.C.[2]	.3 + 1%	EP	0c	91 a	93 ab	0 c	86 a	74 cd	13.8 b-f
4. BAS 9052(1.53EC) + O.C.	.4 + 1%	EP	0c	96 a	97 a	0 c	79 ab	90 a-d	12.8 c-g
5. BAS 9052(1.53EC) + O.C.	.5 + 1%	EP	0c	98 a	99 a	0 c	73 ab	95 ab	13.1 b-g
6. BAS 9052(1.53EC) + O.C.	.5 + 1%	MP				0 c	98 a	98 a	13.6 b-f
7. BAS 9052(1.53EC) + O.C.	.75 + 1%	MP				0 c	100 a	99 a	16.4 a-c
8. BAS 9052(1.53EC) + O.C.	1.0 + 1%	MP				0 c	100 a	99 a	15.5 a-d
9. BAS 9052(1.53EC) + O.C. +	.5 + 1% +	MP +				0 c	98 a	96 ab	16.5 ab
10. BAS 9052(1.53EC) + O.C. +	.5 + 1% +	MP +				0 c	99 a	97 ab	16.4 a-c
11. Ro 13-8895 3EC + X-77	.5 + 0.5%	EP	0c	96 a	95 a	0 c	91 a	88 a-d	13.7 b-f
12. Ro 13-8895 3EC + X-77 + Ro 13-8895 3EC + X-77	.5 + 0.5% + .5 + 0.5%	EP + MP	0c	76 a	89 a-c	0 c	99 a	97 ab	16.1 a-c
13. Ro 13-8895 3EC + X-77	.5 + 0.5%	MP				0 c	98 a	98 a	17.8 a
14. Ro 13-8895 3EC + X-77	1.0 + 0.5%	MP				0 c	100 a	98 a	15.7 a-c
15. KK-80(4E) + Surf W.K.	.5 + .25%	EP	3c	3 d	68 d	0 c	19 de	33 e	12.0 d-g
16. KK-80(4E) + Surf W.K.	.75 + .25%	EP	3c	25 b-d	80 c	0 c	36 cd	73 cd	14.1 b-e
17. KK-80(4E) + Surf W.K.	1.0 + .25%	EP	0c	45 b	83 bc	0 c	56 bc	79 b-d	13.7 b-f
18. KK-80(4E) + Surf W.K. + KK-80(4E) + Surf W.K.	0.5 + .25% + 0.5 + .25%	EP + MP	0c	8 cd	65 d	0 c	88 a	93 ab	16.2 a-c
19. Weed Free Check	----	--	0c	100 a	100 a	0 c	100 a	100 a	14.7 a-d
20. Weedy Check	----	--	0c	0 d	0 e	0 c	0 e	0 f	10.3 fg
		C.V.	55	46	14.5%	32%	23.2%	13.7%	15.3%

[1] All treatments applied to an area previously treated with Lasso 4E + Sencor 4L at 2.0 + .38 lb/A ai.

[2] AtPlus Oil Concentrate

Variety: Forrest
Planted: May 9, 1980
Treated: June 12-EP; June 25-MP
Other pesticides: Nemacur 1.5 lb/A ai banded, Molynoctin L.

Sprayed: 8003 tips, 30 psi, 4 mph, 20 gpa.

Plot size: 3-40" rows (2 treated) by 30"
Design: RCB with 4 replications
Soil type: Collins silt loam pH: % O.M.: 1.03
Fertilization: 0-40-40
Harvested: Nov. 7, 1980

H-510-80-W-S-JG-POE-2. Postemergence Johnsongrass Control in Soybeans; Hwy 45E, Fairview, Madison County, TN 1980

Treatment	Rate	Percent Injury or Control 10/9/80 CIR	Jogr	Yield Bu/A@13%
1. BAS 9052 (1.53EC) + Agridex Oil Surf.	.25 + .5%	0	96 a	26.5 ab
2. BAS 9052 (1.53EC) + Agridex Oil Surf.	.5 + .5%	0	96 a	29.1 ab
3. BAS 9052 (1.53EC) + Agridex Oil Surf.	.75 + .5%	0	99 a	33.8 a
4. RO 13-8895 (3EC) + Agridex Oil Surf.	.25 + .5%	0	91 a	20.8 b
5. RO 13-8895 (3EC) + Agridex Oil Surf.	.5 + .5%	0	97 a	28.3 ab
6. RO 13-8895 (3EC) + Agridex Oil Surf.	.75 + .5%	0	99 a	30.1 ab
7. CGA-82725 (2.1EC) + Agridex Oil Surf.	.75 + .5%	0	100 a	22.2 ab
8. CGA-82725 (2.1EC) + Agridex Oil Surf.	1.0 + .5%	0	100 a	26.2 ab
9. CGA-82725 (2.1EC) + Agridex Oil Surf.	1.5 + .5%	0	100 a	29.4 ab
10. Vistar 2 (2S) + Agridex Oil Surf.	.25 + .5%	0	76 b	28.2 ab
11. Weed Free Check	---	0	100 a	27.9 ab
12. Weedy Check	---	0	0 c	9.5 c

Variety: Bedford
Planted: July 10, 1980
Treated: Aug. 1, 1980 Blazer 0.5 lb/A ai applied Aug. 4, 1980
JG- 12-15" high at application
Harvested: Nov. 6, 1980

H-510-80-W-NT-JG. Systems for Johnsongrass Control in No-till Soybeans. West Tennessee Experiment Station, Jackson, Tennessee. 1980.

Treatment[1]	Rate (LB/A AI)	MOA	Percent Injury or Control 7-10-80 CVR	Colq/ Rrpw	Gogr Lacg	Sdlg. Jogr	8-5-80 Jogr	Gogr Lacg	Yield Bu/A@13%
1. Check	--	-	3 c	0 c	0 b	0 e	0	25 c	5.7 f
2. Check + BAS 9052(1.53E) + O.C.[2]	0.5 + 1%	POE	3 c	0 c	0 b	0 e	92 a	98 a	12.9 a-c
3. Lasso 4E + BAS 9052(1.53E) + O.C.	3.0 + 0.5 + 1%	PRE + POE	5 c	60 ab	83 a	64 a-d	94 a	99 a	12.9 a-c
4. Dual 8E + BAS 9052(1.53E) + O.C.	2.0 + 0.5 + 1%	PRE + POE	6 c	83 a	90 a	94 ab	97 a	98 a	11.5 a-f
5. MON 097(8E) + BAS 9052(1.53E) + O.C.	2.0 + 0.5 + 1%	PRE + POE	13 bc	84 a	85 a	85 a-c	91 a	99 a	12.7 a-c
6. Surflan 4AS + BAS 9052(1.53E) + O.C.	1.0 + 1.0 + 1%	PRE + POE	28 ab	91 a	93 a	93 ab	93 a	98 a	10.1 a-f
7. Check + KK-80 4E + Surf. W.K.	1.0 + .25%	POE	10 c	0 c	0 b	0 e	43 b	79 ab	8.9 b-f
8. Lasso 4E + KK-80 4E + Surf. W.K.	3.0 + 1.0 + .25%	PRE + POE	1 c	68 ab	66 a	43 de	46 b	93 a	10.4 a-f
9. Dual 8E + KK-80 4E + Surf. W.K.	2.0 + 1.0 + .25%	PRE + POE	6 c	96 a	97 a	94 ab	55 b	99 a	11.8 a-e
10. MON 097(8E) + KK-80 4E + Surf. W.K.	2.0 + 1.0 + .25%	PRE + POE	14 bc	84 a	78 a	81 a-c	40 b	98 a	10.2 a-f
11. Surflan 4AS + KK-80 4E + Surf. W.K.	1.0 + 1.0 + .25%	PRE + POE	30 a	68 ab	94 a	85 a-c	45 b	99 a	9.7 b-f
12. Check + Ro 13-8895(3E) + X-77	1.0 + .5%	POE	0 c	0 c	0 b	0 e	91 a	98 a	11.9 a-e
13. Lasso 4E + Ro 13-8895(3E) + X-77	3.0 + 1.0 + 0.5%	PRE + POE	5 c	79 a	83 a	88 a-c	89 a	98 a	12.2 a-c
14. Dual 8E + Ro 13-8895(3E) + X-77	2.0 + 1.0 + 0.5%	PRE + POE	5 c	88 a	95 a	93 ab	90 a	100 a	15.8 a
15. MON 097(8E) + Ro 13-8895(3E) + X-77	2.0 + 1.0 + .5%	PRE + POE	5 c	60 ab	66 a	61 a-d	84 a	99 a	14.5 ab
16. Surflan 4AS + Ro 13-8895(3E) + X-77	1.0 + 1.0 + .5%	PRE + POE	40 a	93 a	96 a	96 a	93 a	99 a	11.9 a-d
17. Lasso 4E	3.0	PRE	0 c	63 ab	74 a	58 cd	0 c	85 ab	7.2 c-f
18. Dual 8E	2.0	PRE	9 c	80 a	90 a	93 ab	0 c	91 a	9.0 b-f
19. MON 097(8E)	2.0	PRE	15 bc	83 a	79 a	59 b-d	0 c	60 b	6.0 ef
20. Surflan 4AS	1.0	PRE	31 a	91 a	94 a	94 ab	10 c	94 a	6.2 d-f
		C.V.		37	25	31	24	19	33

[1] Each treatment received Paraquat 2S + X-77(0.5 + 0.5%) Pre after planting. Basagran 1.0 lb./A. was applied on June 15 for broadleaf weed control.

[2] AtPlus oil concentrate.

Variety: Essex
Planted: June 10 POE July 10
Treated: Paraquat June 12; PRE June 12
Plot Size: 8-10' rows by 30' long
Design: RCB with 4 replications

Soil type: Vicksburg/Collins silt loam (0-2% slp)
%O.M.: pH:
Fertilization: 60-40-40 applied 3-27-80
Sprayer: 8003; 30 psi; 4 mph; 20 gpa
Harvested: Nov. 5, 1980

H-510-80-W-NT-JG-2. Systems for Johnsongrass Control in No-till Soybeans, West Tennessee Experiment Station, Jackson, Tennessee. 1980.

Treatment	Rate Lb/A AI	% Injury or Control 8-13-80 CIR	Lacg	Jogr	Yield Bu/A@ 13%
1. BAS 9052(1.5EC) + Oil Conc.	0.5 + .5%	0 c	78 a	97 a	9.3 ab
2. Ro 13-8895(3EC) + X-77	0.5 + .5%	0 c	43 b	95 ab	7.4 a-c
3. Ro 13-8895(3EC) + X-77	1.0 + .5%	0 c	70 a	95 ab	10.6 a
4. MBR 22359(2EC) + X-77	1.0 + .5%	23 b	0 c	21 c	5.1 c
5. MBR 22359(2EC) + X-77	2.0 + .5%	35 a	5 c	29 c	4.4 c
6. Vistar 2S + X-77	.25 + .5%	8 c	0 c	22	5.9 bc
7. CGA 82725(2.1E) + X-77	1.0 + .5%	0 c	44 b	91 ab	6.5 bc
8. Roundup(Rope Wick) 4S	1:2 (1 time)	0 c	0 c	81 b	7.2 a-c
9. Roundup(Rope Wick) 4S	1:2 (2X opp. dir)	0 c	0 c	91 ab	6.2 bc
10. Check	--	0 c	0 c	0 d	5.2 c
	C.V.	76	48	14	32

Variety: Essex
Planted: June 10
Treatment: July 10; Aug 4- Wick applications

Soil type: Grenada silt loam
Design: RCB with 4 replications
Fertilization: 60-40-40 on 3-27-80
Sprayer 8003; 30 psi, 4 mph, 20 gpa
Harvested: Nov. 6, 1980

H-510-80-W-S-JGS NO-TILL SOYBEAN YIELDS FROM SELECTED JOHNSONGRASS CONTROL SYSTEMS[1], JACKSON, TN.

Preemergence Herbicides	Postemergence Herbicides				
	None	BASF 9052 (0.5 lb/A)	KK 80 (1.0 lb/A)	Ro 138895 (1.0 lb/A)	Average Yield
		(Bu/A)	(Bu/A)	(Bu/A)	(Bu/A)
None	5.7 f	12.9 a-c	8.9 b-f	11.9 a-e	9.8 (a)
Lasso, 3.0 lb/A	7.2 c-f	12.9 a-c	10.4 a-f	12.2 a-c	10.7 (a)
Dual (2.0 lb/A)	9.0 b-f	11.5 a-f	11.8 a-e	15.8 a	12.0 (a)
Mon 097 (2.0 lb/A)	6.0 ef	12.7 a-c	10.2 a-f	14.5 ab	10.8 (a)
Surflan (1.0 lb/A)	6.2 df	10.1 a-f	9.7 b-f	11.9 a-d	9.5 (a)
Average	6.8 (c)	12.0 (ab)	10.2 (b)	13.3 (a)	

[1] The entire experiment area received an application of Paraquat plus Ortho X-77 (0.5 lb/A ai + 0.5% v/v) immediately after planting to kill existing vegetation. Also, Basagran(1.0 lb/A ai) was applied postemergence to kill broadleaf weeds.

[2] Yields followed by the same letters are not significantly different at $P<.05$ according to Duncan's Multiple Range Test. Letters within parentheses refer only to average values within their respective row or column.

H-510-80-W-TN-Jogr Threshold. Threshold population of Johnsongrass in soybeans. West Tennessee Experiment Station, Jackson, TN, 1980. 10" rows.

Treatment	Jogr Plants per Acre	Jogr Plants per Hectare	Jogr Dry Matter/ lbs/Acre	Jogr Dry Matter/ kg/Hectare	Culms per Plot	Culms per Acre	Culms per Hectare	Yield @ 13% Bu/A	Yield @ 13% kg/ha
1	0	0	0 c	0	0 c	0	0	33.2	2231
2	436	1076	126 c	141	9.4 c	4095	10119	31.5	2117
3	872	2152	182 c	204	17.7 c	7710	19051	30.0	2016
4	1744	4304	370 c	414	31.3 c	13634	33690	28.2	1895
5	3488	8608	856 b	959	72.1 b	31407	77607	26.3	1767
6	5232	12912	746 b	836	66.3 b	28880	71362	26.5	1781
7	6540	16140	961 b	1076	80.7 b	35153	86863	24.6	1653
8	13080	32280	1363 a	1527	115.7 a	50399	124536	26.0	1747
C.V.			59%		55%			22%	

Variety: Forrest
Planted: May 19, 1980
Plot size: 8-10" rows x 30' long
Design: RCB with 7 replications
Soil type: Collins silt loam
%O.M.: 1.0 pH: 6.9
Fertilization: 0-40-40
Harvested: 4 center rows x 30' long on 10-22-80

H-510-80-W-TN-JOGR. Threshold population of Johnsongrass in Soybeans. West Tennessee Experiment Station, Jackson, TN, 1980. 40" rows

Treatment	30' row	Jogr Plants per Acre	Jogr Plants per Hectare	Jogr Dry Matter/ lbs/Acre	Jogr Dry Matter/ kg/Hectare	Culms per Plot	Culms per Acre	Yield @ 13% Bu/A	Yield @ 13% kg/ha
1	0	0	0	0 c	0	0 c	0	36.4 a	2446
2	1	436	1076	164 c	184	7.6 c	3314	33.1 ab	2224
3	2	872	2152	221 bc	247	10.6 c	4617	35.7 a	2399
4	4	1744	4304	390 bc	437	26.4 bc	11500	35.9 a	2412
5	8	3488	8608	646 b	724	47.0 b	20473	35.5 a	2386
6	12	5232	12912	1183 a	1325	78.4 a	34151	30.6 ab	2056
7	15	6540	16140	1152 a	1290	76.2 a	33193	28.7 ab	1929
8	30	13080	32280	1342 a	1503	97.0 a	42253	26.7 b	1794
	C.V. (%)			50%		47%		16%	

Variety: Forrest
Planted: May 15, 1980
Plot size: 3-40" rows by 30' long
Design: RCB with 5 replications
Soil type: Collins silt loam
%O.M.: 1% pH: 6.9
Fertilization: 0-40-40
Harvested: 1-40" row by 30' long: 10-22-80

H-510 -80-W-S-DB SOYBEAN CULTIVAR RESPONSE TO FOLIAR APPLIED 2,4-DB
Jackson, TN 1979 - 1980

Herbicide Treatments Across Cultivars

Treatment	Rate Lb/A ai	Soybean Stage	Bu/A @ 13% 1979	1980
Check			55.2 a	11.8 a
2,4-DB	.03	V4	52.4 a	-
2,4-DB	.06	V4	52.1 a	17.9 a
2,4-DB	.12	V4	53.1 a	19.3 a
Alanap + DB	1.0 + .06	V4	-	17.6 a
Blazer + DB	.5 + .06	V4	-	18.9 a
2,4-DB	.03	V6	52.7 a	-
2,4-DB	.06	V6	50.3 ab	17.1 a
2,4-DB	.12	V6	47.5 ab	15.6 a
2,4-DB	.20	V6	42.6 b	18.2 a
Alanap + DB	1.0 + .06	V6	-	19.4 a
Blazer + DB	.5 + .06	V6	-	16.7 a
	C.V.		9.6%	29.6%

Cultivars Across Herbicide Treatments

Essex	50.2 a	16.9 bc
Forrest	50.6 a	19.2 a
Bedford	51.4 a	17.7 b
Nathan	-	16.7 c
C.V.	7.6%	10.7%

Stages of Soybean Growth Across Herbicides and Varieties

V4	-	18.4 a
V6	-	17.2 b

Analysis of Variance

Source	Significance (F)	
Replications	N.S.	N.S.
Herbicides	**	N.S.
Cultivars	N.S.	**
Stages		*
Herbicides x Cultivars	*	*

Values within a column under the major heading followed by the same letter (s) are not significantly different at $P < .05$ according to Duncan's New Multiple Range Test.

H-510-80-W-S-DB. Soybean Cultivar Tolerance to 2,4-DB. West Tennessee Experiment Station, Jackson, Tennessee. 1980

	Rate LB/A AI)	Cultivar	6-17-80 CIR	7-11-80 CIR	Yield, Bu/A 13%
			(% Injury)		
1. V4 Check		Essex	0 h	0 f	16.3 b-e
2. V4 Check		Forrest	0 h	0 f	17.3 a-e
3. V4 Check		Bedford	0 h	0 f	15.0 c-e
4. V4 Check		J-74-51	0 h	0 f	12.8 de
5. V4 2,4-DB	.06	Essex	5 gh	1 ef	17.9 a-d
6. V4 2,4-DB	.06	Forrest	13 fg	0 f	19.8 a-c
7. V4 2,4-DB	.06	Bedford	13 fg	0 f	18.1 a-c
8. V4 2,4-DB	.06	J-74-51	18 ef	0 f	15.8 b-e
9. V4 2,4-DB	.12	Essex	18 ef	3 def	17.2 a-e
10. V4 2,4-DB	.12	Forrest	18 ef	0 f	22.4 a
11. V4 2,4-DB	.12	Bedford	30 cd	0 f	18.7 a-c
12. V4 2,4-DB	.12	J-74-51	25 de	1 ef	18.9 a-c
13. V4 Alanap+2,4-DB	1.0 +.06	Essex	15 f	0 f	19.0 a-c
14. V4 Alanap+2,4-DB	1.0 +.06	Forrest	20 ef	3 def	18.9 a-c
15. V4 Alanap+2,4-DB	1.0 +.06	Bedford	33 bcd	1 ef	16.1 b-e
16. V4 Alanap+2,4-DB	1.0 +.06	J-74-51	33 bcd	5 c-f	16.4 b-e
17. V4 Blazer+2,4-DB	0.5 +.06	Essex	30 cd	1 ef	17.6 a-e
18. V4 Blazer+2,4-DB	0.5 +.06	Forrest	35 abc	0 f	21.0 ab
19. V4 Blazer+2,4-DB	0.5 +.06	Bedford	43 a	3 def	19.1 a-c
20. V4 Blazer+2,4-DB	0.5 +.06	J-74-51	40 ab	1 ef	17.8 a-e
21. V6 2,4-DB	.06	Essex	--	1 ef	17.2 a-e
22. V6 2,4-DB	.06	Forrest	--	18 ab	18.7 a-c
23. V6 2,4-DB	.06	Bedford	--	14 b	15.6 c-e
24. V6 2,4-DB	.06	J-74-51	--	11 bc	17.0 b-e
25. V6 2,4-DB	.12	Essex	--	6 c-f	13.0 e
26. V6 2,4-DB	.12	Forrest	--	13 b	17.0 b-e
27. V6 2,4-DB	.12	Bedford	--	13 b	16.6 b-e
28. V6 2,4-DB	.12	J-74-51	--	10 c	16.0 b-e
29. V6 2,4-DB	.2	Essex	--	9 cd	16.2 b-e
30. V6 2,4-DB	.2	Forrest	--	10 c	19.6 a-c
31. V6 2,4-DB	.2	Bedford	--	9 cd	19.1 a-c
32. V6 2,4-DB	.2	J-74-51	--	8 cde	17.8 a-e
33. V6 Alanap+2,4-DB	1.0 +.06	Essex	--	1 ef	18.7 a-c
34. V6 Alanap+2,4-DB	1.0 +.06	Forrest	--	18 ab	19.7 a-c
35. V6 Alanap+2,4-DB	1.0 +.06	Bedford	--	23 a	20.0 a-c
36. V6 Alanap+2,4-DB	1.0 +.06	J-74-51	--	11 bc	19.3 a-c
37. V6 Blazer+2,4-DB	0.5 +.06	Essex	--	5 c-f	15.8 b-e
38. V6 Blazer+2,4-DB	0.5 +.06	Forrest	--	15 b	17.6 a-e
39. V6 Blazer+2,4-DB	0.5 +.06	Bedford	--	9 cd	18.4 a-c
40. V6 Blazer+2,4-DB	0.5 +.06	J-74-51	--	16 b	15.1 c-e
		C.V.	56	66	17

1/ Entire area treated with Treflan at 0.75 lb/A ai preplant incorporated. Cultivated and handweeded to maintain weed free. Nemacur 1.5 lb/a ai banded.

Varieties: Essex, Forrest, Bedford, J-74-51
Planted: April 29, 1980
Treated: June 3-V4; June 18-V6
Plot size: 2-40" rows by 25' long

Design: RCB split-split plot design
Soil type: Memphis silt loam 0-2% sl.
%O.M.: 0.89 pH: 6.7, P-high, K-high

H-510-80-W-S-MG. Morningglory Control in Soybeans. West Tennessee Experiment Station, Jackson, Tennessee. 1980.

Treatment [1]	Rate (LB/A AI)	MOA	Percent Injury or Control 6-9-80 CIR	PiMg	Tamg	Yield [4] Bu/A@ 13%
1. Tolban 4E	1.5	PPI	9	63 b	55 e	6.4 a
2. Treflan 4E	0.75	PPI	2	85a	73 cd	8.3 a
3. Prowl 4E	1.0	PPI	0	68 b	48 e	8.3 a
4. Basalin 4E	0.75	PPI	8	64 b	30 f	7.7 a
5. Tolban 4E + Blazer 2LCS	0.75 + 0.5	PPI + EP	10	95a	93ab	7.5 a
6. Basalin 4E + Basagran 4L + Basagran 4L	0.75 + 0.75 + 0.75	PPI + EP + MP	12	93a	83 bc	6.6 a
7. Basagran 4L + Basagran 4L	0.75 + 0.75	EP + MP	3	63 b	48 e	7.8 a
8. Blazer 2LCS	0.5	EP	11	89a	90ab	8.2 a
9. Basagran 4L + Blazer 2LCS	0.5 + .25	EP	9	88a	65 de	7.9 a
10. Basagran 4L + Blazer 2LCS	0.75 + 0.5	EP	10	96a	96ab	6.8 a
11. Weed Free Check	---	---	0	100a	100a	8.1 a
12. Weedy Check	---	---	0	0 c	0 g	5.7 a
		C.V.		19	21	29

[1] Dual 8E preemergence at 1.5 lb/A ai over entire experiment.

Variety: Bedford
Planted: May 1, 1980
Treated: May 1, 1980-PPI's ; May 28, 1980-EP[2] Jne 9-MP[3]
Plot Size: 4-40" rows by 25' long
Design: RCB with 6 reps
Soil Type: Grenada silt loam
% O.M.: 1.55 pH: 6.1
Fertilization: High-P; High-K
Incorporation: tillrovator
Sprayer: 8003 ; 4 mph; 30 psi; 20 gpa

[2] Soybean-V3 Morningglory- 1st true leaf stage
[3] Soybeans-V5; regrowth-vining

[4] Values within a column followed by the same letter are not significantly different at P<.05 according to Duncan's Multiple Range Test.

H-510-80-W-Sipo. Sicklepod Control in Soybeans. West Tennessee Experiment Station, Jackson, Tenn. 1980.

Treatment[1/]	Rate(LB/A AI)	MOA	6-17-80 No. plants per $30m^2$	7-11-80 % Control	Yield Bu/A@13%
1. Lasso 4E	2.5	PRE	10 ab	71 abc	24.5 a
2. Lasso 4E	3.0	PRE	10 ab	80 abc	19.8 a
3. Lasso 4E	4.0	PRE	17 abcd	55 bcde	20.8 a
4. Lasso 4E + Sencor/Lexone 4L	2.0 + .38	PRE	11 ab	81 abc	20.2 a
5. Lasso 4E + Sencor/Lexone 4L	4.0 + .38	PRE	12 ab	88 ab	22.1 a
6. Lasso 4E + Sencor/Lexone 4L	2.5 + 0.5	PRE	19 abcd	64 bcd	22.0 a
7. Dual 8E	2.5	PRE	30 cd	28 ef	19.9 a
8. Dual 8E	3.0	PRE	33 d	31 de	23.5 a
9. Dual 8E	4.0	PRE	13 abc	64 bcd	21.4 a
10. Dual 8E + Sencor/Lexone 4L	1.5 + .38	PRE	14 abc	73 abc	18.7 a
11. Dual 8E + Sencor/Lexone 4L	3.0 + .38	PRE	6 a	83 abc	21.5 a
12. Dual 8E + Sencor/Lexone 4L	2.5 + 0.5	PRE	24 bcd	51 cde	20.0 a
13. Sencor/Lexone 4L	0.5	PRE	16 abc	79 abc	23.4 a
14. Weed Free Check	---	---	0 a	100 a	21.6 a
15. Weedy Check	---	---	19 abcd	0 f	21.3 a
	C.V.				17

[1/] Entire experiment treated with 0.75 lb/A ai Treflan PPI plus Basagran POE at 0.75 lb/A ai when needed.

Variety: Forrest
Planted: May 15, 1980
Treated: May 16, 1980
Plot Size: 3 rows (2 treated) by 30' long
Design: RCB with 4 reps
Soil type: Collins silt loam
%O.M.: pH:
Fertilization: 0-40-40 + 0.5 oz Molybdenum
Sprayer: 8003 tips, 4 mph, 30 psi, 20 gpa
Soil surface very wet at application of treatments
Harvested: Nov. 3, 1980

H-510-80-W-Sipo. Sicklepod Control in Soybeans (Postemergence). West Tennessee Experiment Station, Jackson, Tennessee. 1980.

Treatment 1/	Rate(LB/A AI)	Sipo Stage	Percent Injury or Control 2/ 6-17-80 CIR	6-17-80 Sipo	7-11-80 CIR	7-11-80 Sipo	No. sipo Plants/30m^2	Yield Bu/A@13
1.Toxaphene 6EC + Oil Conc + Toxaphene 6EC + Oil Conc	2.0 + 0.5% + 2.0 + 0.5%	cotyledon + 7 days later	0c	21 c	0 e	59 bcd	26 abcd	14.8a
2.Toxaphene 6EC + Oil Conc	3.0 + 0.5%	cotyledon	0c	8 cd	3 de	21 de	37 abc	14.2a
3.Toxaphene 6EC + Oil Conc + Toxaphene 6EC + Oil Conc	4.0 + 0.5% + 4.0 + 0.5%	cotyledon + 7-10 d. later	3c	20 c	0 e	55 cd	25 bcd	18.4a
4.Toxaphene 6EC + Oil Conc + Toxaphene 6EC + Oil Conc	4.0 + 0.5% + 2.0 + 0.5%	cotyledon + 7-10 d. later	0c	20 c	5 de	50 cd	25 bcd	14.3a
5.Toxaphene 6EC + Oil Conc + Toxaphene 6EC + Oil Conc + Basagran 4L	2.0 + 0.5% 2.0 + 0.5%+ .75	cotyledon + 7-10 d. later	0c	9 cd	0 e	50 cd	21 cd	18.5a
6.Toxaphene 6EC + Oil Conc + Toxaphene 6EC + Oil Conc + Blazer 2LCS	2.0 + 0.5% + 2.0 + 0.5% + .5	cotyledon + 7-10 d. later	0c	8 cd	18 bc	59 bcd	41 abc	16.2a
7.Toxaphene 6EC + Oil Conc + Toxaphene 6EC + Oil Conc + 2.4-DB(2S)	2.0 + 0.5% + 2.0 + 0.5% + .06	cotyledon + 7-10 d. later	0c	23 bc	25 ab	40 d	46 ab	13.3a
8.Sencor/Lexone 4L + 2,4 DB(2S)	0.25 + .2	SB-V4 sipo 4-6"(POD)	13b	89 a	3 de	95 ab	12 de	15.7a
9.Lorox 4L + 2,4 DB (2S)	0.5 + .2	SB-V4 sipo 4-6"(POD)	21a	89 a	3 de	81 abc	37 abc	20.2a
10.Toxaphene 6EC + Oil Conc + Alanap 2L + 2,4-DB(2S)+ Agridex	3.0 + 0.5% + 1.0 + .06 + .5%	cotyledon + 14-21 d. later	0c	20 c	30 a	35 de	43 abc	12.6a
11.Toxaphene 6EC + Oil Conc + Amiben 2S + 2,4-DB(2S)	3.0 + 0.5% 1.0 + .06	cotyledon + 14-21 d. later	0c	16 cd	23 ab	38 d	32 abcd	18.6a
12.Blazer 2LCS	0.5	cotyledon	24a	40 b	13 cd	23 de	40 abc	14.7a
13.Blazer 2LCS + Blazer 2LCS	0.5 + 0.5	cotyledon + 7-10 d. later	24a	28 bc	11 cd	59 bcd	49 a	20.0a
14.Weed Free Check	---	---	0c	100 a	0 e	100 a	0 e	18.8a
15.Weedy Check	---	---	0c	0 d	3 de	0 e	40 abc	17.5a
		C.V.%			74%	45%	44%	31

1/Treflan 1.5 lb/A ai PPI over entire experiment. Basagran .75 Post for Cocklebur.(May 27. 1980

Variety: Forrest
Planted: May 15
Treated: June 12 (cotyledon stage); June 25-2nd application
Plot Size: 3-40" rows

Design: RCB with 4 replications
Soil Type: Collins-Henry silt loam
% O.M.: 1% pH: 7.0
Fertilization: 0-40-40 Sprayer: 8003 tips, 4 mph
Harvested: Nov. 4, 1980 30 psi, 20 gpa

2/ Values within a column followed by the same small letter are not significantly different (P<.05) according

H-510-80-W-S-HXN Herbicide by Nematicide Interaction Study on Soybeans. West Tennessee Experiment Station, Jackson, TN. 1980.

Treatment[1/]	Rate (LB/A AI)	MOA	Variety	6-16-80 CIR	Plant hgt. (in.)	Yield Bu/A @ 13%	Yield Bu/A @ 13% Nematicides across herbicides (subplots)
1. Temik 15G	1.0	IF	Essex	5 g-i	44 b-d	21.2 a-c	19.5 ab
2. Temik 15G	2.0	IF	Essex	5 g-i	43 b-e	20.7 a-c	20.1 ab
3. Furadan 10G	1.0	IF	Essex	4 hi	38.5 f-i	17.1 a-d	17.8 ab
4. Furadan 10G	2.0	IF	Essex	8 e-i	42.5 b-f	18.5 a-d	18.2 ab
5. Nemacur 15G	1.0	IF	Essex	5 g-i	39 e-i	21.1 a-c	21.6 a
6. Nemacur 15G	2.0	IF	Essex	6 g-i	41.8 b-g	20.0 a-c	18.2 ab
7. BAS 263 10G	0.4	IF	Essex	9 d-i	40.5 c-h	19.4 a-c	18.7 ab
8. Vydate 10G	2.0	IF	Essex	9 d-i	39.5 e-h	18.8 a-d	17.4 ab
9. Temik 15G	2.0	8" BAND	Essex	0 i	43.8 b-d	20.1 a-c	19.5 ab
10. Furadan 10G	2.0	8" BAND	Essex	13 b-h	40.8 c-h	20.6 a-c	19.8 ab
11. Furadan 4F	2.0	8" BAND	Essex	8 e-i	41 b-h	21.1 a-c	19.0 ab
12. Nemacur 15G	2.0	8" BAND	Essex	0 i	41 b-h	18.7 a-d	17.9 ab
13. BAS 263 10G	0.8	8" BAND	Essex	10 c-i	42 b-g	20.1 a-c	20.3 a
14. Vydate 10G	6.0	8" BAND	Essex	13 b-h	38 ghi	21.6 ab	21.1 a
15. Check	-	-	Essex	19 b-f	37.5 hi	19.0 a-d	18.3 ab
16. Check	-	-	Bedford	25 ab	49.5 a	15.8 cd	14.6 b
17. Temik 15G + Lexone 4L	1.0 + 0.5	IF + PRE	Essex	6 ghi	45 b	17.8 a-d	
18. Temik 15G + Lexone 4L	2.0 + 0.5	IF + PRE	Essex	10 c-i	44.5 bc	19.5 a-c	
19. Furadan 10G + Lexone 4L	1.0 + 0.5	IF + PRE	Essex	8 e-i	38.5 f-i	18.6 a-d	
20. Furadan 10G + Lexone 4L	2.0 + 0.5	IF + PRE	Essex	20 b-e	42.5 b-f	18.0 a-d	
21. Nemacur 15G + Lexone 4L	1.0 + 0.5	IF + PRE	Essex	10 c-i	41.0 b-h	22.1 a	
22. Nemacur 15G + Lexone 4L	2.0 + 0.5	IF + PRE	Essex	6 g-i	42.8 b-e	16.4 a-d	
23. BAS 263 10G + Lexone 4L	0.4 + 0.5	IF + PRE	Essex	21 a-d	40.5 c-h	18.1 a-d	
24. Vydate 10G + Lexone 4L	2.0 + 0.5	IF + PRE	Essex	23 abc	38.5 f-i	15.9 b-d	
25. Temik 15G + Lexone 4L	2.0 + 0.5	8" BAND + PRE	Essex	6 ghi	44.5 bc	19.0 a-d	

Continued on next page

H-510-80-W-S-HXNHerbicide by Nematicide Interaction Study on Soybeans. West Tennessee Experiment Station, Jackson, TN. 1980. Continued

Treatment[1/]	Rate(LB/A AI)	MOA	Variety	6-16-80 CIR	Plant hgt. (in.)	Yield Bu/A @ 13%	Yield Bu/A @ 13% Nematicides across herbicides (subplots)
26. Furadan 10G + Lexone 4L	2.0 + 0.5	8" BAND + PRE	Essex	16 b-g	42.5 b-f	19.0 a-d	
27. Furadan 4F + Lexone 4L	2.0 + 0.5	8" BAND + PRE	Essex	15 b-h	41.5 b-h	17.0 a-d	
28. Nemacur 15G + Lexone 4L	2.0 + 0.5	8" BAND + PRE	Essex	11 b-i	40 d-h	17.2 a-d	
29. BAS 263 10G + Lexone 4L	0.8 + 0.5	8" BAND + PRE	Essex	11 b-i	42.3 b-f	20.4 a-c	
30. Vydate 10G + Lexone 4L	6.0 + 0.5	8" BAND + PRE	Essex	31 a	39 e-i	20.6 a-c	
31. Check + Lexone 4L	0.5	PRE	Essex	20 b-e	35.3 i	17.6 a-d	
32. Check + Lexone 4L	0.5	PRE	Bedford	25 ab	50 a	13.5 d	
			C.V.	59	5.6	17	

1/ Entire area treated with Lasso 4E PRE at 2.0 lb/A. Variety is Essex except where Bedford. Planted May 8, 1980. Treated May 8, 1980; Plot size: 2-40" rows x 30' long; Design: RCB split plot; Soil type: Memphis silt loam Rainfall: 1st 7:1.12, 1st 30:1.92; %O.M.: 1.14%; pH: 6.1; Fertilized: High-P, High-K; Spray: 20 gpa, 8003 tips, 30 psi, 4 mph.

Yield (bu/A) (Herbicides across all Nematicides): No herbicide= 19.6a, Lexone 0.5 lb/A= 18.1a

2/ Values within a column not followed by the same small letter are significantly different at P = 0.05, according to Duncan's Multiple Range Test.

H-510-80-GC Ground cherry Control in soybeans in Hardeman County (Tigoner Farm), Middleton, Tennessee.

Treatment	Rate Lb/A AI	MOA	Percent Injury or Control 6-11-80 CIR	Clgc	Cocb	Corw	7-15-80 Clgc	Prsi	Corw
1. Blazer 2LCS	.25	POE	10 c	79 a	88 b	95 a	100 a	36 b	88 a
2. Blazer 2LCS	.38	POE	16 b	89 a	100 a	99 a	99 a	45 b	96 a
3. Blazer 2LCS	.50	POE	21 b	89 a	100 a	100 a	99 a	23 b	96 a
4. Blazer 2LCS	.75	POE	33 a	96 a	100 a	100 a	100 a	25 b	100 a
5. Basagran 4L + Vistar 2S + X-77	.75 + .25 + .5%	POE	6 c	10 b	100 a	95 a	59 b	97 a	8 b
6. Basagran 4L + Blazer 2LCS	.75 + .5	POE	20 b	88 a	100 a	100 a	100 a	83 a	100 a
		C.V.	21	14	2	3	15	26	19

Variety: Essex

Treated: June 4, 1980
Plot size: 4-20" rows x 40' long
Replications: 4

WEED CONTROL IN BELL PEPPERS - 1980

Variety: Keystone Resistant Giant

Transplanted: May 9, 1980

Treatment: PPI - May 8, 1980
POST[3] - May 29, 1980
POST[4] - May 29, 1980
POST[5] - June 24, 1980

Irrigation: 2"/A - 6/5, 3"/A - 7/11

Harvest: July 9 - August 1, 1980

Design: RCB w/4 reps
3 rows 10' long, plants 1' apart in 42" rows.

Fertilization: 400 lb 6-12-12 + 30 NH_4NO_3/A sidedress (applied 6/5/80).

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WEED CONTROL IN BELL PEPPER - 1980[1]

Treatment	Rate (lb ai/A)	MOA[2]	% Vigor Reduction		Percent Weed Control				No. Live Plants/Plot	
					Grass		Broadleaf			
			4 wks.[3]	8 wks.	4 wks.	8 wks.	4 wks.	8 wks.	4 wks.	8 wks.
Weedy check	---	---	10	35	0	0	0	0	9	9
Weed free check	---	---	0	0	100	100	100	100	9	9
Dacthal 75W	6.0	POT^3	0	0	72	60	80	70	9	9
Dacthal 75W	12.0	POT^3	0	5	85	70	90	75	9	8
Enide 50W	3.0	POT^3	0	0	90	50	75	50	9	9
Enide 50W	5.0	POT^3	0	5	100	90	75	70	9	9
Devrinol 50W	1.5	PPI	5	5	100	100	100	95	9	9
Prefar 4E	4.0	PPI	10	5	100	95	90	70	8	8
Prefar 4E	6.0	PPI	15	15	100	95	90	80	9	9
Treflan 4E	0.5	PPI	10	10	100	95	85	80	8	8
Treflan 4E	1.0	PPI	15	10	100	100	90	90	9	9
Sencor 4L	0.5	PPI_4	30	40	90	80	25	15	7	7
Sencor 4L	0.5	POT^4	75	100	100	100	100	100	2	1
Treflan 4E + Sencor 4L	0.5+0.5	PPI	100	100	100	95	100	50	1	0
Treflan 4E + Sencor 4L	0.5+0.5	PPI+ POT^5	10	80	95	100	100	100	9	2

[1]Means of 4 replications.

[2]Mode of Application: PPI_3 = Preplant incorporation.
POT^3 = Applied over transplants 3 weeks after transplanting. Cultivated to remove emerged weeds before application.
POT^4 = Applied over transplants 3 weeks after transplanting. No cultivation before application.
POT^5 = Applied over transplants 7 weeks after transplanting. No cultivation before application.

[3]Weeks after transplanting.

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WEED CONTROL IN BELL PEPPERS - 1980[1]

Treatment	Rate (lb ai/A)	MOA[2]	Marketable Fruit			Cull Fruit			Grand Total	Percent Marketable
			No. 1	No. 2	Total	End Rot	Sunscald	Small		
			tons/acre							
Weedy check	---	---	1.1	1.1	2.2	0.0	0.1	2.4	4.7	47
Weed-free check	---	---[3]	2.2	3.8	6.0	0.1	0.1	2.1	8.3	72
Dacthal 75W	6	POT[3]	2.0	3.1	5.1	0.2	0.2	1.8	7.2	71
Dacthal 75W	12	POT[3]	1.0	1.8	2.8	0.4	0.4	2.2	5.8	48
Enide 50W	3	POT[3]	1.1	2.0	3.1	0.1	0.1	2.3	5.6	55
Enide 50W	5	POT[3]	1.1	2.5	3.6	0.1	0.1	1.8	5.6	64
Devrinol 50W	1.5	PPI	2.3	3.7	6.0	0.1	0.1	1.8	8.0	75
Prefar 4E	4	PPI	1.2	1.6	2.8	0.2	0.1	1.7	4.8	58
Prefar 4E	6	PPI	1.7	3.3	5.0	0.2	0.2	2.3	7.7	65
Treflan 4E	0.5	PPI	1.0	2.5	3.5	0.1	0.1	1.6	5.3	66
Treflan 4E	1.0	PPI	1.5	2.8	4.3	0.1	0.1	1.6	6.1	70
Sencor 4L	0.5	PPI	0.9	1.8	2.7	0.2	0.1	1.5	4.5	60
Sencor 4L	0.5	POT[4]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Treflan 4E + Sencor 4L	0.5+0.5	PPI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Treflan 4E + Sencor 4L	0.5+0.5	PPI+POT[5]	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0
L.S.D. @ 0.05			0.7	1.5	2.2	NS	NS	NS	2.0	--

[1]Means of 4 replications.

[2]Mode of Application: PPI = Preplant incorporation.
POT[3] = Applied over transplants 3 weeks after transplanting. Cultivated to remove emerged weeds before application.
POT[4] = Applied over transplants 3 weeks after transplanting. No cultivation before application.
POT[5] = Applied over transplants 7 weeks after transplanting. No cultivation before application.

Weed Control in Lima Beans - 1980

Variety: Henderson

Fertilization: 400 lb. 6-12-12/A

Planted: May 20, 1980

Treated: PPI - May 20, 1980
PRE - May 20, 1980

Design: RCB w/3 replications.

Plot Size: 3 rows 15' long. Rows 3' apart, plants 2-3" apart.

Harvest: once over, hand, July 23-24, 1980

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WEED CONTROL IN LIMA BEANS - 1980[1]

Treatment	Rate (lb ai/A)	MOA[2]	% Vigor Reduction		Percent Weed Control				No. of Plants/10' of Row	Fresh Wt. of Plants /10' Row	Yield (T/A)	% Shell out
					Grass		Broadleaf					
			4 wks[3]	8 wks.	4 wks.	8 wks.	4 wks.	8 wks.				
Weedy check	---	---	22	40	0	0	0	0	52	3.0	0.6	29
Weed free, non-cult.	---	---	0	0	100	100	100	100	54	5.9	2.1	29
Cultivated check	---	---	0	0	100	90	100	97	56	5.6	2.0	29
Prowl 4E	0.50	PPI	5	15	100	85	88	70	39	4.5	1.6	31
Prowl 4E	0.75	PPI	10	20	100	90	91	85	39	4.0	1.2	25
Prowl 4E	0.75	PRE	5	25	100	90	72	65	45	3.8	1.2	29
Prowl 4E	1.00	PRE	0	5	100	95	93	80	47	5.4	2.1	31
Treflan 4E	0.50	PPI	5	15	95	95	88	75	44	3.9	1.4	25
Treflan 4E	0.75	PPI	5	10	100	95	82	70	40	3.7	1.7	27
L.S.D. @ 0.05			--	--	--	--	--	--	NS	1.4	0.6	--

[1]Means of 3 replication.
[2]Mode of Application: PPI - Preplant incorporation.
PRE - Preemergence.
[3]Weeks after seeding.

Weed Control in Southern Peas - 1980

Variety: Mississippi Silver

Fertilization: 400 lb 6-12-12/A

Planted: May 20, 1980

Treated: PPI - May 20, 1980
PRE - May 20, 1980

Design: RCB w/3 replications.

Plot Size: 3 rows 15' long. Rows 3' apart, plants 2-3" apart.

Harvest: once over, hand - July 24-25, 1980.

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WEED CONTROL IN SOUTHERN PEAS - 1980[1]

Treatment	Rate (lb ai/A)	MOA[2]	% Vigor Reduction		Percent Weed Control Grass		Broadleaf		No. of Plants/10' of Row	Fresh Wt. of Plants /10' Row	Yield (T/A)	% Shell out
			4 wks.[3]	8 wks.	4 wks.	8 wks.	4 wks.	8 wks.				
Weedy check	---	---	5	20	0	0	0	0	25	4.3	1.2	43
Weed free, non-cult.	---	---	0	0	100	100	100	100	30	8.9	2.6	61
Cultivated check	---	---	0	0	100	100	100	100	34	8.6	3.0	70
Prowl 4E	0.50	PPI	10	10	98	90	95	80	33	8.5	2.1	56
Prowl 4E	0.75	PPI	10	5	97	90	92	85	26	6.6	1.4	32
Prowl 4E	0.75	PRE	5	0	85	80	83	60	27	7.1	1.6	47
Prowl 4E	1.00	PRE	5	10	97	90	93	80	20	6.6	1.8	58
Treflan 4E	0.50	PPI	0	10	98	90	93	75	21	6.2	1.5	47
Treflan 4E	0.75	PPI	5	10	95	85	88	70	23	6.3	1.5	36
L.S.D. @ 0.05			--	--	--	--	--	--	10.7	2.0	0.5	--

[1]Means of 3 replications.
[2]Mode of Application: PPI - Preplant incorporation.
PRE - Preemergence.
[3]Weeks after seeding.

Weed Control in Sweet Potato - 1980

Variety: Centennial

Transplanted: May 28, 1980

Treatments: PPI - May 27, 1980
PRE - May 28, 1980
OT - June 5, 1980

Irrigation: 2" - 5/28, 2" - 6/6, 2" - 7/10, 2" - 8/7, 3" - 8/11, 3" - 8/22.

Harvest: September 8-9, 1980

Design: RCB w/4 reps
2 rows 20', 10 plants/row, rows 42" apart.

Fertilization: 400 lbs. 6-12-12

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WEED CONTROL IN SWEET POTATO - 1980[1]

Treatment	Rate (lb ai/A)	Mode Application[2]	No. Live Plants/Plot 4 wks.[3]	Percent Vigor Reduction 4 wks.	Percent Vigor Reduction 8 wks.	Percent Weed Control Grass 4 wks.	Percent Weed Control Grass 8 wks.	Percent Weed Control Broadleaf 4 wks.	Percent Weed Control Broadleaf 8 wks.
Weedy check	---	---	10.0	32	50	0	0	0	0
Weed-free check	---	---	10.0	0	0	100	100	100	100
Surflan 4E + Amiben 2E	1+2	POT	9.7	0	0	95	95	96	95
Vernam 4E	2	PPI	9.6	5	0	85	80	80	70
Surflan 4E	1	POT	10.0	5	0	90	85	85	85
Amiben 2E	4	POT	10.0	5	0	90	90	95	90
Lasso 4E	3	PRE	10.0	5	20	95	95	60	30
Enide 50W	6	POT	9.7	10	25	95	85	10	0
Dual 8E	3	PRE	9.3	20	30	98	90	75	70
Sencor 4L	0.5	PRE	2.8	90	90	85	40	85	20

[1]Means of 4 replications.
[2]Mode of Application: PPI - Preplant incorporation (3" depth), prior to ridge formation.
PRE - Apply prior to transplanting over formed ridges.
POT - Apply overtop transplants (1-2 weeks after transplanting).
[3]Weeks after transplanting.

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WEED CONTROL IN SWEET POTATO - 1980[1]

Treatment	Rate (lb ai/A)	Mode Application[2]	U. S. #1 Large	U. S. #1 Medium	U. S. #1 Small	U. S. #1 Total	Canner	Total Marketable	% U.S.#1	Culls	Grand Total
							Bu./A				
Weedy check	---	---	9.0	33.9	30.5	73.4	12.1	85.5	86	19.9	105.5
Weed-free check	---	---	73.5	64.4	35.8	173.7	42.6	216.3	80	136.0	352.3
Surflan 4E + Amiben 2E	1+2	POT	142.2	108.6	64.1	315.0	26.8	341.7	92	125.6	464.4
Vernam 7E	2	PPI	22.1	96.8	49.2	204.5	22.1	226.6	90	90.3	316.9
Surflan 4E	1	POT	68.8	96.2	35.8	200.8	29.3	230.0	87	101.5	331.5
Amiben 2E	4	POT	45.4	91.2	43.9	180.5	29.6	210.1	86	110.8	320.9
Lasso 4E	3	PRE	45.4	66.3	26.5	138.2	33.6	171.8	80	128.9	300.7
Enide 50W	6	POT	40.5	55.1	27.4	122.9	27.1	169.6	72	62.3	228.8
Dual 8E	3	PRE	24.9	53.2	17.1	98.4	24.3	119.5	82	76.6	196.1
Sencor 4L	0.5	PRE	0.0	12.8	13.4	26.2	10.6	36.7	71	32.4	68.8
L.S.D. @ 0.05			44.0	43.0	21.0	97.0	NS	99.0	--	48.0	116.0

[1]Means of 4 replications.
[2]Mode of Application: PPI - Preplant incorporation (3" depth) prior to ridge formation.
PRE - Apply prior to transplanting over formed ridges.
POT - Apply overtop transplants (1-2 weeks after transplanting).

WEED CONTROL IN TOMATO - 1980

Variety: Pink Red (formerly Redpak)

Seed Source: Harris

Transplanted: April 24, 1980

Treatments: PPI - April 23, 1980
POST[3] - May 15, 1980
POST[4] - May 15, 1980
Post[5] - June 12, 1980

Irrigation: None

Harvest: June 25 - July 11, 1980

Design: RCB w/4 reps.
1 row 20' long, plants 2' apart in 5' rows.

Fertilization: 400 lb. 6-12-12 + 30 lb NH_4NO_3/A sidedress(6/4/80).

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WEED CONTROL IN TOMATO - 1980[1]

Treatment	Rate (lb ai/A)	MOA[2]	% Vigor Reduction		Percent Weed Control				No. Live Plants/Plot	
					Grass		Broadleaf			
			4 wks.[3]	8 wks.	4 wks.	8 wks.	4 wks.	8 wks.	4 wks.	8 wks.
Weedy check	---		0	5	0	0	0	0	10.0	10.0
Weed free check	---		0	0	100	100	100	100	10.0	10.0
Enide 50W	5.0	POT^3	0	0	98	60	90	70	9.7	9.7
Enide 50W+Sencor 4L	5.0+0.25	POT^3+POT^5	0	0	90	60	100	90	10.0	10.0
Treflan 4E	0.5	PPI	0	5	90	90	95	90	9.5	9.5
Treflan 4E	1.0	PPI	0	0	84	85	90	90	9.7	9.7
Sencor 4L	0.25	PPI	0	0	20	20	85	70	9.5	9.5
Sencor 4L	0.5	PPI_4	0	0	41	20	60	50	9.3	9.3
Sencor 4L	0.25	POT^4	0	0	11	50	95	90	10.0	10.0
Sencor 4L	0.5	POT^4	0	5	10	70	95	95	9.5	9.5
Sencor 4L+Sencor 4L	0.5+0.5	PPI+POT^5	0	5	89	75	100	95	9.0	9.0
Treflan 4E+Sencor 4L	0.5+0.5	PPI	0	0	91	90	95	95	9.3	9.3
Treflan 4E+Sencor 4L	0.5+0.5	PPI+POT^5	0	0	99	95	100	100	9.7	9.7
Treflan 4E+Sencor 4L+ Sencor 4L	0.5+.25+ 0.25	PPI+POT^4 +POT^5	0	0	96	95	100	100	10.0	10.0
Devrinol 50W	1.0	PPI	0	0	86	85	95	95	10.0	10.0
Devrinol 50W	2.0	PPI	0	0	96	90	94	95	10.0	10.0
Devrinol 50W+Tillam 6E	1.0+4.0	PPI	0	0	95	95	96	96	10.0	10.0
Devrinol 50W+Sencor 4L	1.0+0.5	PPI+POT^5	0	0	98	95	98	95	10.0	10.0
Prowl 4E	1.0	PPI	0	5	93	80	96	90	9.7	9.7
L.S.D. @ 0.05			-	-	--	--	--	--	NS	NS

[1]Means of 4 replications.

[2]Mode of Application: PPI_3= Preplant incorporation.
POT^3= Applied over transplants 3 weeks after transplanting. Cultivated to remove emerged weeds before application.
POT^4= Applied over transplants 3 weeks after transplanting. No cultivation before application.
POT^5= Applied over transplants 7 weeks after transplanting. No cultivation before application.

[3]Weeks after transplanting.

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WEED CONTROL IN TOMATO - 1980[1]

Treatment	Rate (lb ai/A)	MOA[2]	Marketable Fruit No. 1	Marketable Fruit No. 2	Marketable Fruit Total	% Marketable Fruit by Wt.
			-----tons/acre-------			
Weedy check	---	---	2.3	3.8	6.1	77
Weed free check	---	---	2.2	4.0	6.2	68
Enide 50W	5.0	POT[3]	2.6	4.0	6.6	80
Enide 50W+Sencor 4L	5.0+0.25	POT[3]+POT[5]	3.0	4.2	7.2	82
Treflan 4E	0.5	PPI	2.3	4.2	6.5	70
Treflan 4E	1.0	PPI	2.2	3.8	6.0	77
Sencor 4L	0.25	PPI	1.9	3.7	5.6	67
Sencor 4L	0.5	PPI[4]	1.8	3.9	5.7	65
Sencor 4L	0.25	POT[4]	1.8	3.9	5.7	66
Sencor 4L	0.5	POT[4]	1.3	3.4	4.7	69
Sencor 4L+Sencor 4L	0.5+0.5	PPI+POT[5]	1.6	3.8	5.4	68
Treflan 4E+Sencor 4L	0.5+0.5	PPI[5]	2.3	4.0	6.3	76
Treflan 4E+Sencor 4L	0.5+0.5	PPI+POT[5]	2.1	4.4	6.5	76
Treflan 4E+Sencor 4L +Sencor 4L	0.5+0.25 + 0.25	PPI+POT[5] +POT[4]	2.2	4.1	6.3	75
Devrinol 50W	1.0	PPI	2.1	4.3	6.4	69
Devrinol 50W	2.0	PPI	2.5	4.1	6.6	72
Devrinol 50W + Tillam 6E	1.0+4.0	PPI	2.6	4.8	7.4	77
Devrinol 50W + Sencor 4L	1.0+0.5	PPI+POT[5]	2.0	4.4	6.4	74
Prowl 4E	1.0	PPI	2.4	4.1	6.5	76
L.S.D. @ 0.05			NS	NS	NS	--

[1]Means of 4 replications.

[2]Mode of Application: PPI = Preplant incorporation.
POT[3]= Applied over transplants 3 weeks after transplanting. Cultivated to remove emerged weeds before application.
POT[4]= Applied over transplants 3 weeks after transplanting. No cultivation before application.
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WEED CONTROL IN TOMATO - 1980[1]

Treatment	Rate (lb ai/A)	MOA[2]	Non-Marketable Yield			
			Blossom End-Rot	Catfaced	Other Culls	Total
			tons/acre			
Weedy check	---	---	0.3	0.1	1.4	1.8
Weed free check	---	---	0.7	0.0	2.2	2.9
Enide 50W	5.0	POT[3]	0.5	0.1	1.1	1.7
Enide 50W+Sencor 4L	5.0+0.25	POT[3]+POT[5]	0.2	0.4	1.1	1.7
Treflan 4E	0.5	PPI	0.5	0.2	2.1	2.8
Treflan 4E	1.0	PPI	0.3	0.3	1.2	1.8
Sencor 4L	0.25	PPI	0.6	0.1	2.1	2.8
Sencor 4L	0.5	PPI	0.9	0.2	2.0	3.1
Sencor 4L	0.25	POT[4]	1.1	0.2	1.7	3.0
Sencor 4L	0.5	POT[4]	0.5	0.1	1.6	2.2
Sencor 4L+Sencor 4L	0.5+0.5	PPI+POT[5]	0.9	0.2	1.4	2.5
Treflan 4E+Sencor 4L	0.5+0.5	PPI	0.4	0.2	1.4	2.0
Treflan 4E+Sencor 4L	0.5+0.5	PPI+POT[5]	0.4	0.1	1.6	2.1
Treflan 4E+Sencor 4L +Sencor 4L	0.5+0.25 +0.25	PPI+POT[4] +POT[5]	0.4	0.3	1.4	2.1
Devrinol 50W	1.0	PPI	0.8	0.4	1.7	2.9
Devrinol 50W	2.0	PPI	0.5	0.3	1.8	2.6
Devrinol 50W+Tillam 6E	1.0+4.0	PPI	0.3	0.3	1.7	2.3
Devrinol 50W+Sencor 4L	1.0+0.5	PPI+POT[5]	0.5	0.2	1.5	2.2
Prowl 4E	1.0	PPI	0.4	0.2	1.5	2.1
L.S.D. @ 0.05			NS	NS	NS	0.9

[1]Means of 4 replications.

[2]Mode of Application: PPI_3 = Preplant incorporation.
POT^3 = Applied over transplants 3 weeks after transplanting. Cultivated to remove emerged weeds before application.
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Index of Herbicides