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## Weed Control Investigations in Corn and Grain Sorghum, 1986

University of Tennessee Agricultural Experiment Station

G. N. Rhodes Jr.

R. M. Hayes

M. L. Thornton

G. A. Mitchell

*See next page for additional authors*

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## Authors

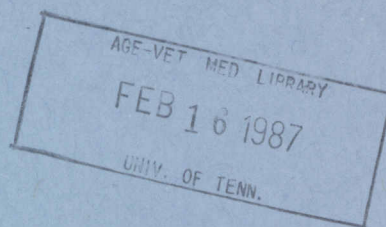
University of Tennessee Agricultural Experiment Station, G. N. Rhodes Jr., R. M. Hayes, M. L. Thornton, G. A. Mitchell, and D. D. Howard

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The University of Tennessee  
Agricultural Experiment Station

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Research Report 86-21  
December 1986

STACKS



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## Weed Control Investigations in Corn and Grain Sorghum, 1986

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*G. N. Rhodes, Jr., R. M. Hayes, M. L. Thornton,  
G. A. Mitchell, and D. D. Howard*

Department of Plant and Soil Science

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## GENERAL REMARKS

This report is a summary of weed control investigations in corn and grain sorghum conducted by the staff of the University of Tennessee, Department of Plant and Soil Science, in 1986. It contains results of individual experiments that are not summarized over time or location and, therefore, data should not be taken out of context for use in any type of commercial publication. These data may be used in decision-making as to future research and uses of individual herbicides. The use of any particular herbicide or formulation over another is not to be construed as an endorsement or recommendation of any specific product. These data are not to be used in any type of commercial activity or release without the express written approval of the Dean of the Agricultural Experiment Station.

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: Bobby McKee at the Knoxville Experiment Station; Don Gibson at the Milan Experiment Station; Roy Thompson at the Middle Tennessee Experiment Station; Ernest Neal at the Plateau Experiment Station; Jimmy Duncan, Ernest Merriweather and William Wynn at the West Tennessee Experiment Station; and John Oakes, graduate student at Knoxville. Also, special thanks are extended to the superintendents and field plot crews where this research was conducted.

We would also like to thank our secretaries, Ms. Cheryl Broome and Mrs. Gloria Duncan, for their assistance in the preparation of this report.

Last but certainly not least, we gratefully acknowledge the cooperation and support from the following chemical companies:  
American Cyanamid Co., BASF Corp., Chevron Chemical Co., Ciba-Geigy Corp., Dow Chemical Co., E.I. DuPont Corp., Helena Chemical Co., Hoechst-Roussel Agri-Vet Co., ICI Americas Inc., Monsanto Agricultural Products, PPG Industries Inc., Rhone Poulenc Inc., Riverside-Terra Corp., Sandoz Crop Protection Corp., Shell Chemical Co., Stauffer Chemical Co., and Union Carbide Agricultural Products Co.

## Procedures and Techniques Used in Herbicide Trials

Experimental Design: Most 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<sub>2</sub> sprayers equipped with either 8002 or 8003 flat fan nozzles at 30 psi applying 20 gpa and operated at 3 or 4 mph except where otherwise indicated.

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 not considered commercially acceptable.

Cultivation: Plots were not cultivated unless otherwise indicated.

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

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



## ABBREVIATIONS

A.I. = active ingredient  
Bu/A = bushels per acre  
C.O.C. = crop oil concentrate  
CRINJ OR CRINJU = crop injury  
DF = dry flowable  
E or EC = emulsifiable concentrate  
EPOST = early postemergence  
FL = flowable  
FT = feet  
G = granular  
GPA = gallons per acre  
IN = inches  
L = liquid  
N/A = not applicable  
O.M. = organic matter  
OPT = optimum  
PODIR = post-directed  
POT = postemergence  
PPI = preplant incorporated  
PRE = preemergence  
RCB = randomized complete block  
REPS = replications  
SC = soluble concentrate  
SL or SIL = silt loam  
WAP = weeks after planting  
W or WP = wettable powder

Weed name abbreviations are listed on individual experiment description forms.

KNOXVILLE EXPERIMENT STATION

P.O. Box 1071

Knoxville, TN 37901-1071

Superintendent - Dr. John Hodges, III

RAINFALL  
Knoxville Experiment Station  
Knoxville, TN 1986

Date	April	May	June	July	August	September
1	0	0	0	0	.21	.34
2	0	0	.05	.11	0	.87
3	0	0	0	1.54	0	1.41
4	0	0	.49	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	.03	0	0	0	.09	0
8	.70	.05	0	0	.24	0
9	.10	0	.16	0	.08	.01
10	0	0	.25	0	0	0
11	0	0	0	1.35	.46	0
12	0	.01	.07	0	.62	.40
13	0	0	0	.12	0	0
14	0	.10	0	.41	0	0
15	.04	0	0	.10	0	0
16	0	0	0	0	0	.25
17	0	0	0	0	.73	0
18	0	0	0	0	0	0
19	0	.10	0	0	0	0
20	0	.20	0	0	.04	.05
21	.50	0	0	0	0	0
22	.16	0	0	0	.05	0
23	0	.57	0	0	0	0
24	0	.53	0	0	0	.02
25	0	.28	0	0	0	0
26	0	0	0	0	0	0
27	0	.62	0	0	.56	0
28	0	.17	.08	0	.62	0
29	.41	.14	0	0	.05	0
30	0	0	.50	0	0	.01
31	-	0	-	0	0	-
Total	1.94	2.77	1.60	3.63	3.75	3.36

TEMPERATURE  
Knoxville Experiment Station  
Knoxville, TN 1986

	<u>April</u>		<u>May</u>		<u>June</u>		<u>July</u>		<u>August</u>		<u>Sept</u>	
Date	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	83	44	84	50	84	60	88	71	83	63	73	62
2	83	47	84	43	85	64	91	75	91	64	71	62
3	81	47	84	43	86	64	85	60	92	65	70	66
4	84	49	65	33	83	64	83	58	90	61	80	67
5	83	48	75	42	78	63	88	65	90	63	80	68
6	83	51	83	47	85	64	90	69	93	65	83	63
7	80	53	84	60	87	68	92	69	94	67	82	54
8	80	58	86	58	89	73	93	68	86	67	82	54
9	69	43	85	52	76	68	94	71	90	68	73	54
10	53	32	86	52	86	68	93	71	86	68	80	56
11	64	32	80	60	86	70	93	66	88	68	84	60
12	71	35	81	61	87	70	90	68	78	64	83	64
13	74	41	77	62	86	63	88	71	87	65	82	56
14	78	45	77	51	85	63	89	68	87	65	79	54
15	79	53	86	57	87	63	88	68	88	68	83	56
16	68	41	83	61	89	63	86	69	91	67	82	58
17	68	37	84	57	89	63	90	69	91	71	81	61
18	51	41	88	60	89	58	95	70	80	68	80	61
19	71	40	80	60	89	55	96	69	85	66	74	65
20	78	46	78	56	90	55	96	70	88	67	78	66
21	78	48	70	48	92	67	96	71	86	68	84	64
22	57	40	68	43	92	60	96	70	87	70	84	59
23	55	26	74	49	92	60	96	70	89	69	87	59
24	61	29	65	49	94	70	95	72	89	70	85	66
25	74	39	81	58	92	60	94	69	89	58	88	64
26	84	50	76	60	90	55	95	69	89	60	88	65
27	89	52	76	64	93	62	95	73	90	65	89	65
28	90	52	82	64	93	67	97	69	85	61	90	64
29	79	48	80	64	95	73	93	71	72	51	91	64
30	79	46	82	65	91	71	98	63	75	52	90	64
31	--	--	84	60	--	--	94	60	75	53	--	--

12-01-1986

# The University of Tennessee

EXPERIMENT DESCRIPTION FORM

## EVALUATION OF PREEMERGENCE HERBICIDES IN CORN

Conducted at KNOXVILLE, TN by G.N. RHODES, JR.  
Project TN-692-86-KPS-1 with cooperator FLANT SCI FIELD LAB

### Experimental Management

Date Planted 5-6-86 Variety PIONEER 3147 Row Width 36 IN  
Design RCB No. Reps. 4 Plot Size 3 ROWS \* 30FT  
Field Preparation and Plot Maintenance DISK, FIELD CULTIVATOR.

### Site Description

Season Moisture SEE RAINFALL TABLES  
Soil Texture LOAM  
Soil Series STATLER

% OM 1.0 pH 6.0

### Application Information

	1	2	3	4	5	6
Date Treated	5-6-86					
Time Treated	PM					
Cloud Cover	CLEAR					
Air Temperature	76					
Relative Humidity	60%					
Wind Speed/Direction	3 MPH-N					
Soil Temperature	78					
Soil/Leaf Surface Moisture	DRY					
Soil Subsurface Moisture	DRY					
Soil Tilth	FINE					
Crop Stage	PRE					
Pest Name, Stage & Density						
PANDI 2/FT	PRE					
SORHA 1/FT	PRE					
IPOLA, IPOHE 2/FT	PRE					
AMACH 1/FT	PRE					

### Application Equipment

Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	GPA	Carrier	PSI
1. CO2 BACKPACK	3	FLAT FAN	8002	19	19	6.3FT	20	WATER	41

### Comments

PANDI=FALL PANICUM; SORHA=SEEDLING JOHNSONGRASS; IPOLA=PITTED MORNINGGLORY;  
IPOHE=IVYLEAF MORNINGGLORY; AMACH=SMOOTH FIGWEED.

12-01-1986

## SUMMARY

**The University of Tennessee**  
**EVALUATION OF PREEMERGENCE HERBICIDES IN CORN**

Conducted at KNOXVILLE, TN by G.N. RHODES, JR.  
 Project TN-692-86-KPS-1 with cooperator FLANT SCI FIELD LAB

TRT. NUM.	PEST. NAME	FORM	RATE #ai/A	GROW. STAGE	CRINJ 6-7-86	PANDI 6-7-86	SORHA 6-7-86	IPOLA 6-7-86	IFOHE 6-7-86	AMACH 6-7-86
01	LA SSO MT	4.0L	2.0	PRE	0.0	100.0	98.3	30.0	28.8	100.0
02	LA SSO MT	4.0L	2.0	PRE	0.0	100.0	97.5	100.0	100.0	100.0
02	ATRAZINE	4.0L	1.5	PRE						
03	DUAL	8.0E	1.5	PRE	2.5	97.5	88.8	28.8	28.8	97.5
04	DUAL	8.0E	1.5	PRE	12.5	100.0	98.3	100.0	99.5	100.0
04	ATRAZINE	4.0L	1.5	PRE						
05	ATRAZINE	4.0L	1.5	PRE	0.0	100.0	70.0	100.0	100.0	100.0
06	SC-5676	7.0E	0.75	PRE	0.0	100.0	97.0	28.8	28.8	98.8
07	SC-5676	7.0E	1.0	PRE	0.0	99.5	95.8	32.5	27.5	100.0
08	SC-5676	7.0E	0.75	PRE	1.3	100.0	96.3	100.0	100.0	100.0
08	ATRAZINE	4.0L	1.5	PRE						
09	SC-0735	0.75W	0.5	PRE	2.5	100.0	100.0	98.3	98.3	100.0
10	SC-0735	0.75W	0.75	PRE	1.3	100.0	100.0	100.0	100.0	100.0
11	SC-0735	0.75W	0.5	PRE	2.5	100.0	98.8	98.8	98.8	100.0
11	ATRAZINE	4.0L	1.5	PRE						
12	SC-0774	0.75W	0.5	PRE	0.0	100.0	93.8	33.8	31.3	85.0
13	SC-0774	0.75W	0.75	PRE	1.3	100.0	94.5	62.5	47.5	100.0
14	SC-0774	0.75W	0.5	PRE	0.0	100.0	99.5	100.0	100.0	100.0
14	ATRAZINE	4.0L	1.5	PRE						
15	SC-0051	3.0E	1.0	PRE	1.3	97.5	76.3	93.8	92.5	99.3
16	SC-0051	3.0E	2.0	PRE	0.0	100.0	91.3	99.5	99.5	100.0
17	SC-0051	3.0E	1.0	PRE	0.0	100.0	83.8	100.0	100.0	100.0
17	ATRAZINE	4.0L	1.5	PRE						
18	WEEDY CK				0.0	0.0	0.0	0.0	0.0	0.0
LEAST SIGNIFICANT DIFF. (.05) =					4.082	2.394	7.921	10.46	8.754	8.050
STANDARD DEVIATION =					2.886	1.692	5.601	7.400	6.190	5.692
COEFF. OF VARIABILITY =					207.8	1.798	6.383	10.19	8.697	6.097

12-01-1986

## SUMMARY

**The University of Tennessee**  
**EVALUATION OF PREEMERGENCE HERBICIDES IN CORN**

Conducted at KNOXVILLE, TN by G.N. RHODES, JR.  
 Project TN-692-86-KPS-1 with cooperator PLANT SCI FIELD LAB

TRT. NUM.	PEST. NAME	FORM	RATE #ai/A	GROW. STAGE	CRINJ 7-12-86	PANDI 7-12-86	SORHA 7-12-86	IPOLA 7-12-86	IPOHE 7-12-86	AMACH 7-12-86
01	LASSO MT	4.0L	2.0	PRE	0	99.3	96.3	40.0	40.0	100.0
02	LASSO MT	4.0L	2.0	PRE	0	100.0	90.5	93.5	93.5	100.0
02	ATRAZINE	4.0L	1.5	PRE						
03	DUAL	8.0E	1.5	PRE	0	98.0	88.8	32.5	32.5	100.0
04	DUAL	8.0E	1.5	PRE	0	100.0	97.3	94.3	94.3	100.0
04	ATRAZINE	4.0L	1.5	PRE						
05	ATRAZINE	4.0L	1.5	PRE	0	96.8	45.0	96.5	96.5	100.0
06	SC-5676	7.0E	0.75	PRE	0	98.8	93.8	35.0	35.0	100.0
07	SC-5676	7.0E	1.0	PRE	0	96.8	85.5	35.0	35.0	100.0
08	SC-5676	7.0E	0.75	PRE	0	98.0	78.8	96.3	96.3	100.0
08	ATRAZINE	4.0L	1.5	PRE						
09	SC-0735	0.75W	0.5	PRE	0	100.0	91.8	94.3	94.3	100.0
10	SC-0735	0.75W	0.75	PRE	0	100.0	87.5	94.3	94.3	100.0
11	SC-0735	0.75W	0.5	PRE	0	99.5	93.3	94.8	94.8	100.0
11	ATRAZINE	4.0L	1.5	PRE						
12	SC-0774	0.75W	0.5	PRE	0	98.0	78.0	32.5	32.5	100.0
13	SC-0774	0.75W	0.75	PRE	0	97.5	81.8	45.0	45.0	100.0
14	SC-0774	0.75W	0.5	PRE	0	99.5	93.5	95.0	95.0	100.0
14	ATRAZINE	4.0L	1.5	PRE						
15	SC-0051	3.0E	1.0	PRE	0	94.8	52.5	88.8	88.8	100.0
16	SC-0051	3.0E	2.0	PRE	0	96.5	58.8	91.3	91.3	100.0
17	SC-0051	3.0E	1.0	PRE	0	97.5	65.0	94.8	94.8	100.0
17	ATRAZINE	4.0L	1.5	PRE						
18	WEEDY CK				0	0.0	0.0	0.0	0.0	0.0
LEAST SIGNIFICANT DIFF. (.05) =						2.488	16.33	11.79	11.79	3.300
STANDARD DEVIATION =						1.759	11.55	8.340	8.340	.0233
COEFF. OF VARIABILITY =						1.895	15.09	11.97	11.97	2.471

12-01-1986

SUMMARY

**The University of Tennessee**  
**EVALUATION OF PREEMERGENCE HERBICIDES IN CORN**

Conducted at KNOXVILLE, TN by G.N. RHODES, JR.  
 Project TN-692-86-KFS-1 with cooperator PLANT SCI FIELD LAB

TRT. NUM.	PEST. NAME	FORM	RATE #ai/A	GROW. STAGE	PANDI 10-1-86	SORHA 10-1-86	IFOLA 10-1-86	IFOHE 10-1-86	AMACH 10-1-86
01	LASSO MT	4.0L	2.0	PRE	96.0	90.0	7.5	7.5	100.0
02	LASSO MT	4.0L	2.0	PRE	96.3	91.3	91.3	88.8	100.0
02	ATRAZINE	4.0L	1.5	PRE					
03	DUAL	8.0E	1.5	PRE	93.0	78.8	0.0	0.0	100.0
04	DUAL	8.0E	1.5	PRE	97.8	92.5	93.8	93.8	100.0
04	ATRAZINE	4.0L	1.5	PRE					
05	ATRAZINE	4.0L	1.5	PRE	83.8	60.0	88.8	88.8	100.0
06	SC-5676	7.0E	0.75	PRE	96.0	88.8	7.5	7.5	100.0
07	SC-5676	7.0E	1.0	PRE	94.8	88.8	5.0	5.0	100.0
08	SC-5676	7.0E	0.75	PRE	96.8	87.5	88.8	88.8	100.0
08	ATRAZINE	4.0L	1.5	PRE					
09	SC-0735	0.75W	0.5	PRE	98.5	96.8	94.5	92.5	100.0
10	SC-0735	0.75W	0.75	PRE	96.8	93.8	94.3	94.3	100.0
11	SC-0735	0.75W	0.5	PRE	98.5	95.5	95.0	95.0	100.0
11	ATRAZINE	4.0L	1.5	PRE					
12	SC-0774	0.75W	0.5	PRE	95.5	90.0	0.0	0.0	100.0
13	SC-0774	0.75W	0.75	PRE	96.8	93.8	20.0	20.0	100.0
14	SC-0774	0.75W	0.5	PRE	96.8	93.8	84.3	84.3	100.0
14	ATRAZINE	4.0L	1.5	PRE					
15	SC-0051	3.0E	1.0	PRE	88.8	71.3	70.0	70.0	100.0
16	SC-0051	3.0E	2.0	PRE	91.3	76.3	93.0	90.5	100.0
17	SC-0051	3.0E	1.0	PRE	89.5	72.5	92.5	92.5	100.0
17	ATRAZINE	4.0L	1.5	PRE					
18	WEEDY CK				0.0	0.0	0.0	0.0	0.0
LEAST SIGNIFICANT DIFF. (.05)=					7.439	9.700	17.15	17.28	3.300
STANDARD DEVIATION					= 5.260	6.859	12.13	12.22	.0233
COEFF. OF VARIABILITY					= 5.894	8.450	21.28	21.59	2.471



12-01-1986

EXPERIMENT DESCRIPTION FORM

The University of Tennessee

EVALUATION OF POSTEMERGENCE HERBICIDES IN CORN

Conducted at KNOXVILLE, TN by G.N. RHODES, JR.  
Project TN-692-86-KPS-4 with cooperator PLANT SCI FIELD LAB

Experimental Management

Date Planted 5-6-86 Variety PIONEER 3147 Row Width 36 IN  
Design RCB No. Reps. 4 Plot Size 3 ROWS \* 30FT  
Field Preparation and Plot Maintenance DISK, FIELD CULTIVATOR.

Site Description

Season Moisture SEE RAINFALL TABLES  
Soil Texture LOAM  
Soil Series STATLER

% OM 1.0 pH 6.0

Application Information

	1	2	3	4	5	6
Date Treated	6-3-86					
Time Treated	PM					
Cloud Cover	100%					
Air Temperature	88					
Relative Humidity	66%					
Wind Speed/Direction	2 MPH-N					
Soil Temperature	94					
Soil/Leaf Surface Moisture	DRY					
Soil Subsurface Moisture	MOIST					
Soil Tilth	N/A					
Crop Stage	10-12 IN					
Pest Name, Stage & Density						
IPOLA 2/FT	2-4,6-LF					
IPOHG 2/FT	2-4,6-LF					

Application Equipment

Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Nozzle Boom Width	GPA	Carrier	PSI
1. CO2 BACKPACK	3	FLAT FAN	8002	19 IN	19 IN	6.3FT	20	WATER	41

Comments

IPOLA=PITTED MORNINGGLORY; IPOHG=ENTIRELEAF MORNINGGLORY. FOR THE 6-14-86 EVALUATION, THE FIRST ENTRY FOR EACH WEED REFERS TO 2-4 LEAF WEEDS, AND THE SECOND ENTRY FOR EACH WEED REFERS TO 6 LEAF WEEDS. SUBSEQUENT EVALUATIONS WERE FOR ALL SIZES. APPROXIMATELY 0.5 IN OF RAIN FELL 45 MIN FOLLOWING APPLICATION OF POSTEMERGENCE TREATMENTS, RESULTING IN REDUCED EFFICACY OF SOME TREATMENTS.

12-01-1986

## SUMMARY

# The University of Tennessee

## EVALUATION OF POSTEMERGENCE HERBICIDES IN CORN

Conducted at KNOXVILLE, TN by G.N. RHODES, JR.  
Project TN-692-86-KPS-4 with cooperator PLANT SCI FIELD LAB

TRT. NUM.	PEST. NAME	RATE FORM	GROW. STAGE	CRINJ 6-14-86	IPOLA 6-14-86	IPOLA 6-14-86	IPONG 6-14-86	IPONG 6-14-86	CRINJ 7-12-86	IPOLA 7-12-86	IPONG 7-12-86
01	2,4-D	4.0L 0.5	POT	1.3	96.3	81.3	90.0	77.5	0	96.8	96.8
01	X-77	P 0.25	POT								
02	BANVEL	4.0L 0.25	POT	1.3	68.8	45.0	67.5	42.5	0	87.5	87.5
02	X-77	P 0.25	POT								
03	MARKSMAN	3.2L 0.8	POT	1.3	98.3	90.8	98.3	87.5	0	90.5	90.5
03	X-77	P 0.25	POT								
04	MARKSMAN	3.2L 1.2	POT	1.3	100.0	97.5	100.0	97.5	0	98.0	98.0
04	X-77	P 0.25	POT								
05	BASAGRAN	4.0L .75	POT	0.0	53.8	26.3	52.5	26.3	0	35.0	35.0
05	C.D.C.	P 1.25	POT								
06	BASAGRAN	4.0L 0.25	POT	0.0	98.8	94.3	98.8	94.8	0	94.3	94.3
06	ATRAZINE	4.0L 0.5	POT								
06	C.D.C.	P 1.25	POT								
07	BASAGRAN	4.0L 0.5	POT	0.0	100.0	96.3	100.0	96.3	0	96.8	96.8
07	ATRAZINE	4.0L 0.5	POT								
07	C.D.C.	P 1.25	POT								
08	BUCTRIL	2.0E 0.25	POT	0.0	100.0	100.0	100.0	100.0	0	90.0	90.0
09	BUCTRIL	2.0E 0.38	POT	0.0	100.0	100.0	100.0	100.0	0	93.0	93.0
10	BUCT/ATR	3.0L .568	POT	0.0	100.0	100.0	100.0	100.0	0	93.5	93.5
11	BUCT/ATR	3.0L 0.75	POT	1.3	100.0	100.0	100.0	100.0	0	95.3	95.3
12	BUCT/ATR	3.0L 1.13	POT	1.3	100.0	100.0	100.0	100.0	0	96.8	94.5
13	DPX-6316	0.75W .008	POT	0.0	45.0	28.8	42.5	28.8	0	37.5	37.5
13	X-77	P 0.25	POT								
14	DPX-6316	0.75W .016	POT	0.0	63.8	45.0	61.3	35.0	0	42.5	42.5
14	X-77	P 0.25	POT								
15	DPX-6316	0.75W .024	POT	1.3	60.0	35.0	60.0	35.0	0	40.0	40.0
15	X-77	P 0.25	POT								
16	DPX-6316	0.75W .031	POT	1.3	66.3	42.5	66.3	37.5	0	42.5	42.5
16	X-77	P 0.25	POT								
17	WEEDFREE			0.0	100.0	100.0	100.0	100.0	0	100.0	100.0

12-01-1986

SUMMARY

# The University of Tennessee EVALUATION OF POSTEMERGENCE HERBICIDES IN CORN

Conducted at KNOXVILLE, TN by G.N. RHODES, JR.  
Project TN-692-86-KPS-4 with cooperator PLANT SCI FIELD LAB

TRY. PEST.	RATE	GROW.	CRINJ	IPOLA	IPOLA	IPOHG	IPOHG	CRINJ	IPOLA	IPOHG
NUM. NAME FORM	#ai/A	STAGE	6-14-86	6-14-86	6-14-86	6-14-86	6-14-86	7-12-86	7-12-86	7-12-86
=====										
18 WEEDY			0.0	0.0	0.0	0.0	0.0 0		0.0	0.0
LEAST SIGNIFICANT DIFF. (.05)=	2.286		7.451	9.692	8.582	8.530		11.92	11.99	
STANDARD DEVIATION	= 1.616		5.269	6.853	6.068	6.032		8.428	8.484	
COEFF. OF VARIABILITY	= 291.0		6.537	9.619	7.601	8.627		11.40	11.50	

12-01-1986

SUMMARY

**The University of Tennessee**  
**EVALUATION OF POSTEMERGENCE HERBICIDES IN CORN**

Conducted at KNOXVILLE, TN by G.N. RHODES, JR.  
 Project TN-692-86-KPS-4 with cooperator PLANT SCI FIELD LAB

TRT. NUM.	PEST. NAME	FORM	RATE #ai/A	GROW. STAGE	IFOLA 10-1-86	IFOHG 10-1-86
01	2,4-D	4.0L	0.5	POT	90.0	90.0
01	X-77	P	0.25	POT		
02	BANVEL	4.0L	0.25	POT	73.8	73.8
02	X-77	P	0.25	POT		
03	MARKSMAN	3.2L	0.8	POT	77.5	77.5
03	X-77	P	0.25	POT		
04	MARKSMAN	3.2L	1.2	POT	91.3	91.3
04	X-77	P	0.25	POT		
05	BASAGRAN	4.0L	.75	POT	31.3	31.3
05	C.O.C.	P	1.25	POT		
06	BASAGRAN	4.0L	0.25	POT	81.3	81.3
06	ATRAZINE	4.0L	0.5	POT		
06	C.O.C.	P	1.25	POT		
07	BASAGRAN	4.0L	0.5	POT	85.0	85.0
07	ATRAZINE	4.0L	0.5	POT		
07	C.O.C.	P	1.25	POT		
08	BUCTRIL	2.0E	0.25	POT	90.0	90.0
09	BUCTRIL	2.0E	0.38	POT	88.8	88.8
10	BUCT/ATR	3.0L	.568	POT	88.8	88.8
11	BUCT/ATR	3.0L	0.75	POT	90.0	90.0
12	BUCT/ATR	3.0L	1.13	POT	82.5	82.5
13	DPX-6316	0.75W	.008	POT	43.8	43.8
13	X-77	P	0.25	POT		
14	DPX-6316	0.75W	.016	POT	47.5	47.5
14	X-77	P	0.25	POT		
15	DPX-6316	0.75W	.024	POT	53.8	53.8
15	X-77	P	0.25	POT		
16	DPX-6316	0.75W	.031	POT	52.5	52.5
16	X-77	P	0.25	POT		
17	WEEDFREE				100.0	100.0

12-01-1986

SUMMARY

**The University of Tennessee**  
**EVALUATION OF POSTEMERGENCE HERBICIDES IN CORN**

Conducted at KNOXVILLE, TN by G.N. RHODES, JR.  
Project TN-692-86-KFS-4 with cooperator PLANT SCI FIELD LAB

TRT.	PEST.		RATE	GROW.	IPOLA	IPOHG
NUM.	NAME	FORM	#ai/A	STAGE	10-1-86	10-1-86

18	WEEDY				0.0	0.0
----	-------	--	--	--	-----	-----

LEAST SIGNIFICANT DIFF. (.05)=	12.63	12.63
STANDARD DEVIATION	= 8.934	8.934
COEFF. OF VARIABILITY	= 12.68	12.68

12-01-1986

EXPERIMENT DESCRIPTION FORM

**The University of Tennessee**

**EVALUATION OF POSTEMERGENCE HERBICIDES IN GRAIN SORGHUM**

Conducted at KNOXVILLE, TN by G.N. RHODES, JR.  
Project TN-692-86-KPS-2 with cooperator PLANT SCI FIELD LAB

Experimental Management

Date Planted 6-3-86 Variety FFR-321-DR Row Width 36 IN  
Design RCB No. Reps. 4 Plot Size 3 ROWS\*30 FT  
Field Preparation and Plot Maintenance DISK AND FIELD CULTIVATOR.

Site Description

Season Moisture SEE RAINFALL TABLES

Soil Texture LOAM

Soil Series STATLER

% OM 1.0 pH 6.0

Application Information

	1	2	3	4	5	6
Date Treated	6-23-86					
Time Treated	AM					
Cloud Cover	CLEAR					
Air Temperature	93					
Relative Humidity	63%					
Wind Speed/Direction	4 MPH-SW					
Soil Temperature	100					
Soil/Leaf Surface Moisture	DRY					
Soil Subsurface Moisture	DRY					
Soil Tilth	N/A					
Crop Stage	5-7 IN					
Pest Name, Stage & Density						
DIGSA 5/FT	2-5 LF					
AMACH 3/FT	4-5 LF					
IFOLA 1/FT	5-6 LF					
IPOHG 1/FT	4-5 LF					

Application Equipment

Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Nozzle Boom Width	GPA	Carrier	PSI
1. CO2 BACKPACK	3	FLAT FAN	8002	19	19	6.3FT	20	WATER	41

Comments

DIGSA=LARGE CRABGRASS; AMACH=SMOOTH PIGWEED; IFOLA=FITTED MORNINGGLORY; IPOHG= ENTIRELEAF MORNINGGLORY. TEST WAS HARVESTED ON 10-8-86.

12-01-1986

SUMMARY

**The University of Tennessee**  
**EVALUATION OF POSTEMERGENCE HERBICIDES IN GRAIN SORGHUM**

Conducted at KNOXVILLE, TN by G.N. RHODES, JR.  
 Project TN-692-86-KFS-2 with cooperator PLANT SCI FIELD LAB

TRT. NUM.	PEST. NAME	FORM	RATE #ai/A	GROW. STAGE	CRINJ 7-12-86	DIGSA 7-12-86	AMACH 7-12-86	IPOLA 7-12-86	IPOHG 7-12-86
01	SC-0051	3.0E	.25	POT	16.3	70.0	100.0	50.0	50.0
01	TWEEN-20	P	.25	POT					
02	SC-0051	3.0E	.5	POT	28.8	75.0	100.0	67.5	67.5
02	TWEEN-20	P	.25	POT					
03	SC-0051	3.0E	.75	POT	38.8	63.8	100.0	62.5	62.5
03	TWEEN-20	P	.25	POT					
04	TANDEM	4.0E	0.5	POT	1.3	73.8	100.0	100.0	100.0
04	ATRAZINE	0.90W	1.0	POT					
04	C.O.C.	P	1.25	POT					
05	TANDEM	4.0E	0.5	POT	2.5	81.3	100.0	99.5	99.5
05	ATRAZINE	0.90W	1.25	POT					
05	C.O.C.	P	1.25	POT					
06	TANDEM	4.0E	.75	POT	1.3	80.0	100.0	100.0	100.0
06	ATRAZINE	0.90W	1.0	POT					
06	C.O.C.	P	1.25	POT					
07	TANDEM	4.0E	0.75	POT	2.5	85.0	99.5	99.8	99.8
07	ATRAZINE	0.90W	1.25	POT					
07	C.O.C.	P	1.25	POT					
08	ATRAZINE	0.90W	1.0	POT	0.0	51.3	100.0	96.3	96.3
08	C.O.C.	P	1.25	POT					
09	ATRAZINE	0.90W	1.25	POT	0.0	47.5	100.0	99.5	99.5
09	C.O.C.	P	1.25	POT					
10	BAS-514	0.50W	0.5	POT	0.0	62.5	62.5	86.3	86.3
10	C.O.C.	P	1.25	POT					
11	BAS-514	0.50W	1.0	POT	1.3	56.3	62.5	91.8	91.8
11	C.O.C.	P	1.25	POT					
12	BAS-514	0.50W	1.0	POT	1.3	74.5	100.0	100.0	100.0
12	ATRAZINE	0.90W	1.25	POT					
12	C.O.C.	P	1.25	POT					
13	WEEDFREE				0.0	100.0	100.0	100.0	100.0
14	WEEDY				0.0	0.0	0.0	0.0	0.0
LEAST SIGNIFICANT DIFF. (.05)=					3.038	21.26	3.881	7.344	7.344
STANDARD DEVIATION					= 2.126	14.88	2.716	5.139	5.139
COEFF. OF VARIABILITY					= 31.75	22.62	3.105	6.239	6.239

12-01-1986

## SUMMARY

**The University of Tennessee**  
**EVALUATION OF POSTEMERGENCE HERBICIDES IN GRAIN SORGHUM**

Conducted at KNOXVILLE, TN by G.N. RHODES, JR.  
 Project TN-692-86-KPS-2 with cooperator PLANT SCI FIELD LAB

TRT. NUM.	PEST. NAME	FORM	RATE #ai/A	GROW. STAGE	CRINJ 8-2-86	DIGSA 8-2-86	AMACH 8-2-86	IFOLA 8-2-86	IFOHG 8-2-86	YIELD BU/A
01	SC-0051	3.0E	.25	POT	6.3	57.5	97.5	60.0	57.5	38.80
01	TWEEN-20	P	.25	POT						
02	SC-0051	3.0E	.5	POT	10.0	78.8	97.5	67.5	67.5	37.58
02	TWEEN-20	P	.25	POT						
03	SC-0051	3.0E	.75	POT	15.0	67.5	100.0	78.8	78.8	43.75
03	TWEEN-20	P	.25	POT						
04	TANDEM	4.0E	0.5	POT	0.0	87.0	100.0	99.5	99.5	42.75
04	ATRAZINE	0.90W	1.0	POT						
04	C.O.C.	P	1.25	POT						
05	TANDEM	4.0E	0.5	POT	0.0	92.5	100.0	100.0	100.0	41.75
05	ATRAZINE	0.90W	1.25	POT						
05	C.O.C.	P	1.25	POT						
06	TANDEM	4.0E	.75	POT	0.0	91.0	99.5	98.8	98.8	50.93
06	ATRAZINE	0.90W	1.0	POT						
06	C.O.C.	P	1.25	POT						
07	TANDEM	4.0E	0.75	POT	0.0	89.5	100.0	98.8	98.8	44.50
07	ATRAZINE	0.90W	1.25	POT						
07	C.O.C.	P	1.25	POT						
08	ATRAZINE	0.90W	1.0	POT	0.0	57.0	100.0	97.5	97.5	47.25
08	C.O.C.	P	1.25	POT						
09	ATRAZINE	0.90W	1.25	POT	0.0	61.3	100.0	98.0	98.0	34.97
09	C.O.C.	P	1.25	POT						
10	BAS-514	0.50W	0.5	POT	0.0	61.3	72.5	77.5	77.5	41.75
10	C.O.C.	P	1.25	POT						
11	BAS-514	0.50W	1.0	POT	0.0	62.5	82.5	94.3	94.3	49.65
11	C.O.C.	P	1.25	POT						
12	BAS-514	0.50W	1.0	POT	0.0	82.5	99.5	99.5	99.5	57.95
12	ATRAZINE	0.90W	1.25	POT						
12	C.O.C.	P	1.25	POT						
13	WEEDFREE				0.0	100.0	100.0	100.0	100.0	54.15
14	WEEDY				0.0	0.0	0.0	0.0	0.0	20.25
LEAST SIGNIFICANT DIFF. (.05)=					.9548	19.46	6.609	10.31	9.062	13.04
STANDARD DEVIATION					= .6681	13.62	4.625	7.215	6.341	9.125
COEFF. OF VARIABILITY					= 29.93	19.29	5.184	8.633	7.604	21.08



MIDDLE TENNESSEE EXPERIMENT STATION

Box 160

Spring Hill, TN 37174

Superintendent - Dr. Joe W. High, Jr.

RAINFALL  
Middle Tennessee Experiment Station  
Spring Hill, TN 1985

Date	April	May	June	July	August	September
1	0	0	0	0	.01	.19
2	0	.10	0	1.03	0	.44
3	0	0	0	.12	0	.26
4	.02	0	.52	0	0	.40
5	0	0	.17	0	0	.17
6	0	0	.28	0	0	0
7	.01	0	.41	.02	.05	0
8	.41	0	.30	0	.10	0
9	.16	0	0	0	0	0
10	0	0	0	.27	0	0
11	0	.03	0	0	.86	0
12	0	.02	.04	.32	0	.57
13	0	.12	0	.60	0	0
14	0	0	0	.10	0	0
15	.01	0	0	.08	0	0
16	0	0	0	.09	0	0
17	0	0	0	0	1.31	0
18	0	.06	0	0	0	0
19	0	.88	0	0	0	1.00
20	.15	.03	0	0	0	.04
21	.20	0	0	0	0	0
22	.10	0	0	0	0	.07
23	0	.02	0	0	0	0
24	0	0	0	0	0	0
25	0	.49	0	0	0	0
26	0	.20	0	.13	0	0
27	0	.62	0	.80	.02	.20
28	0	1.43	0	0	.82	0
29	.05	.58	.10	0	0	0
30	0	0	0	0	0	0
31	-	0	-	0	0	-
Total	1.11	4.58	1.82	3.56	3.17	3.34

TEMPERATURE  
Middle Tennessee Experiment Station  
Spring Hill, TN 1986

Date	April		May		June		July		August		Sept	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	84	43	88	48	85	62	90	67	96	70	66	62
2	81	51	74	44	87	64	94	67	91	66	70	64
3	85	53	70	44	84	63	80	63	83	58	82	67
4	82	52	65	31	85	63	83	56	88	59	85	69
5	80	61	78	39	74	64	88	59	89	55	86	68
6	78	57	84	52	80	66	91	65	94	60	79	54
7	85	57	83	59	80	68	94	66	91	63	82	54
8	81	59	89	58	85	72	94	66	95	63	79	54
9	73	42	89	59	88	70	94	67	88	66	74	51
10	59	34	88	52	86	70	92	69	92	65	86	51
11	67	34	86	59	87	68	94	73	93	64	82	67
12	74	38	77	60	86	68	91	59	86	62	86	62
13	78	42	82	57	83	61	91	65	84	62	77	52
14	81	47	84	58	79	60	89	67	87	62	77	51
15	76	40	86	67	86	59	93	67	91	65	84	55
16	65	39	84	63	86	58	87	61	93	66	85	62
17	52	36	87	59	90	61	95	68	85	71	85	61
18	57	35	87	66	88	57	93	71	85	67	85	61
19	73	44	76	55	83	56	97	71	86	65	78	63
20	77	53	67	49	91	62	97	70	86	64	85	63
21	70	43	66	39	91	60	101	71	86	64	88	64
22	57	38	69	42	93	64	94	68	87	68	87	64
23	56	25	73	47	95	65	92	66	91	67	85	63
24	64	31	78	59	94	62	96	66	90	68	88	67
25	77	43	84	61	88	64	99	66	84	62	89	66
26	87	48	78	63	87	56	95	61	90	62	88	58
27	87	46	70	64	94	60	99	70	93	68	89	62
28	87	50	79	65	95	66	93	68	91	64	90	64
29	79	43	76	64	83	71	97	70	71	49	93	66
30	81	44	85	63	89	68	96	68	71	51	93	66
31	--	--	85	61	--	--	97	68	78	60	--	--

12-01-1986

EXPERIMENT DESCRIPTION FORM

**The University of Tennessee**

**CORN HERBICIDE COMBINATIONS EVALUATION**

Conducted at SPRING HILL, TN by G.N.RHODES, JR.  
Project TN-692-B6-M-4 with cooperator MIDDLE TN EXPT STA

**Experimental Management**

Date Planted 4-29-86 Variety PIONEER 3147 Row Width 36 IN  
Design RCB No. Reps. 4 Plot Size 3 ROWS\*35 FT  
Field Preparation and Plot Maintenance DISK, FIELD CULTIVATOR.

**Site Description**

Season Moisture SEE RAINFALL TABLES  
Soil Texture SILT LOAM  
Soil Series MAURY

% OM 1.0 pH 6.0

**Application Information**

	1	2	3	4	5	6
Date Treated	4-29-86	6-6-86				
Time Treated	PM	AM				
Cloud Cover	CLEAR	50%				
Air Temperature	73	67				
Relative Humidity	48%	100%				
Wind Speed/Direction	1 MPH-N	CALM				
Soil Temperature	80	70				
Soil/Leaf Surface Moisture	DRY	WET				
Soil Subsurface Moisture	DRY	WET				
Soil Tilth	FINE	N/A				
Crop Stage	PPI&PRE	10 IN				
Pest Name, Stage & Density						
PHPBU 8/FT	PRE	3-4,7LF				
IPOHE 2/FT	PRE	3-4,7LF				

**Application Equipment**

	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	GFA	Carrier	FSI
1. CO2 BACKPACK		3	FLAT FAN	8002	19	19	6.3FT	20	WATER	41
2. CO2 BACKPACK		3	FLAT FAN	8002	19	19	6.3FT	20	WATER	41

**Comments**

PHPBU=TALL MORNINGGLORY; IPOHE=IVYLEAF MORNINGGLORY. FOR 6-17-86 EVALUATION, FIRST ENTRY FOR EACH SPECIES REFERS TO 3-4 LF WEEDS, AND SECOND EVALUATION FOR EACH SPECIES REFERS TO 7 LF WEEDS. THE FIRST SIGNIFICANT RAINFALL (0.88 IN) DID NOT OCCUR UNTIL 3 WEEKS AFTER PLANTING. CONSEQUENTLY, CORN EMERGENCE WAS VERY SLOW AND UNEVEN. CROP INJURY RATINGS WERE NOT TAKEN DUE TO VARIABLE CORN SIZE.

12-01-1986

SUMMARY

**The University of Tennessee**  
**CORN HERBICIDE COMBINATIONS EVALUATION**

Conducted at SPRING HILL, TN by G.N.RHODES, JR.  
 Project TN-692-86-M-4 with cooperators MIDDLE TN EXPT STA

TRT. NUM.	PEST. NAME	FORM	RATE #ai/A	GROW. STAGE	PHPBU 6-17-86	PHPBU 6-17-86	IPOHE 6-17-86	IPOHE 6-17-86	PHPBU 7-15-86	PHPBU 8-5-86
01	GENATE +	6.7E	4.0	FFI	86.3	86.3	86.3	86.3	82.5	80.0
01	ATRAZINE	4.0L	0.75	FFI						
01	PPG-1259	3.0L	0.1	FFI						
02	GENATE +	6.7E	4.0	FFI	92.5	92.5	92.5	92.5	83.8	86.3
02	ATRAZINE	4.0L	0.75	PRE						
02	PPG-1259	3.0L	0.1	PRE						
03	GENATE +	6.7E	4.0	PPI	56.3	56.3	56.3	56.3	20.0	33.8
03	COBRA	2.0E	0.4	PRE						
04	GENATE +	6.7E	4.0	PPI	98.0	98.0	98.0	98.0	96.0	93.8
04	EXTRAZIN	4.0L	3.0	PRE						
05	LISSO MT	4.0L	2.0	PRE	67.5	67.5	67.5	67.5	56.3	60.0
05	ATRAZINE	4.0L	0.75	PRE						
05	PPG-1259	3.0L	0.1	PRE						
06	EXTRAZIN	4.0L	3.0	PRE	89.5	89.5	89.5	89.5	83.8	83.8
07	LISSO MT	4.0L	2.0	PRE	88.8	88.8	88.8	88.8	86.3	86.3
07	EXTRAZIN	4.0L	3.0	PRE						
08	LISSO MT	4.0L	2.0	PRE	93.8	93.8	93.8	93.8	88.8	83.8
08	ATRAZINE	4.0L	1.5	PRE						
09	LISSO MT	4.0L	2.0	PRE	72.5	27.5	72.5	27.5	7.5	12.5
09	BASAGRAN	4.0L	0.75	POT						
09	C.O.C.		P 1.25	POT						
10	LISSO MT	4.0L	2.0	PRE	100.0	92.5	100.0	92.5	80.0	81.3
10	BASAGRAN	4.0L	0.5	POT						
10	ATRAZINE	4.0L	0.5	POT						
10	C.O.C.		P 1.25	POT						
11	LISSO MT	4.0L	2.0	PRE	100.0	90.0	100.0	90.0	78.8	80.5
11	BASAGRAN	4.0L	0.25	POT						
11	ATRAZINE	4.0L	0.5	POT						
11	C.O.C.		P 1.25	POT						
12	LISSO MT	4.0L	2.0	PRE	82.5	38.8	83.8	38.8	57.5	45.0
12	BANVEL	4.0L	0.25	POT						
12	X-77		P 0.25	POT						
13	LISSO MT	4.0L	2.0	PRE	100.0	97.3	100.0	97.3	90.5	88.8
13	MARKSMAN	3.2L	0.8	POT						
13	X-77		P 0.25	POT						

12-01-1986

## SUMMARY

**The University of Tennessee**  
**CORN HERBICIDE COMBINATIONS EVALUATION**

Conducted at SPRING HILL, TN by G.N.RHODES, JR.  
 Project TN-692-86-M-4 with cooperator MIDDLE TN EXPT STA

TRT. NUM.	FEST. NAME	FORM	RATE #ai/A	GROW. STAGE	PHPBU 6-17-86	PHPBU 6-17-86	IPOHE 6-17-86	IPOHE 6-17-86	PHPBU 7-15-86	PHPBU 8-5-86
14	LASSO MT	4.0L	2.0	PRE	98.3	81.3	98.3	77.5	87.5	85.0
14	2,4-D	4.0L	0.5	POT						
14	X-77	F	0.25	POT						
15	LASSO MT	4.0L	2.0	PRE	91.3	61.3	91.3	61.3	30.0	42.5
15	BUCTRIL	2.0E	0.25	POT						
16	LASSO MT	4.0L	2.0	PRE	95.0	62.5	95.0	62.5	42.5	53.8
16	BUCTRIL	2.0E	0.38	POT						
17	LASSO MT	4.0L	2.0	PRE	99.5	82.5	99.5	82.5	66.3	60.0
17	BUCT/ATR	3.0L	.568	POT						
18	LASSO MT	4.0L	2.0	PRE	100.0	93.8	100.0	93.8	81.3	82.5
18	BUCT/ATR	3.0L	0.75	POT						
19	LASSO MT	4.0L	2.0	PRE	100.0	97.0	100.0	97.0	91.3	90.0
19	BUCT/ATR	3.0L	1.13	POT						
20	WEEDY CK				0.0	0.0	0.0	0.0	0.0	0.0
LEAST SIGNIFICANT DIFF. (.05) =					10.01	12.31	10.03	12.39	17.11	14.60
STANDARD DEVIATION =					7.084	8.706	7.095	8.767	12.09	10.32
COEFF. OF VARIABILITY =					8.278	11.63	8.286	11.74	18.46	15.53

MILAN EXPERIMENT STATION

205 Ellington Drive

Milan, TN 38358

Superintendent - Mr. John F. Bradley

RAINFALL  
Milan Experiment Station  
Milan, TN 1986

Date	April	May	June	July	August	September		
1	1.35	.76	.15	0	0	.10		
2	0	0	.41	.29	0	0		
3	0	0	0	0	0	.69		
4	0	0	4.47	0	0	0		
5	0	0	1.60	0	0	0		
6	0	0	.24	0	0	0		
7	0	0	.15	}	.43	0		
8	1.40	0	0		.25	0		
9	0	0	}		0	0		
10	0	.31			}	0	0	
11	0	0				}	0	.08
12	0	.31					0	0
13	0	0	}	}	0	0		
14	0	0			.21	0	0	
15	0	0			0	0	0	
16	0	0	}	0	.24	0		
17	0	.47	0	0	0	.08		
18	0	0	0	0	0	1.25		
19	0	0	0	0	0	.43		
20	0	0	0	0	0	0		
21	.78	0	0	0	0	0		
22	0	.20	0	0	0	0		
23	0	0	.08	0	0	0		
24	0	0	0	0	0	0		
25	0	1.49	0	0	0	0		
26	0	0	0	1.92	0	0		
27	0	0	0	0	0	0		
28	.11	.67	0	0	0	0		
29	0	0	0	0	0	0		
30	.85	0	.35	0	0	0		
31	-	0	-	0	0	-		
Total	4.49	4.21	9.23	3.07	.92	2.63		



TEMPERATURE  
Milan Experiment Station  
Milan, TN 1986

Date	April		May		June		July		August		Sept	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	--	--	72	55	86	64	94	75	90	71	--	--
2	76	56	69	42	83	69	83	71	86	68	85	64
3	80	60	66	43	86	65	86	65	82	61	88	63
4	83	54	--	--	74	66	90	58	82	58	86	72
5	80	58	82	68	78	66	94	62	90	54	78	60
6	74	55	81	65	82	72	96	67	83	60	86	52
7	71	61	86	62	84	72	94	74	92	68	79	55
8	68	49	89	61	87	72	95	70	78	68	76	56
9	59	41	88	63	81	73	92	75	88	66	88	50
10	62	34	85	61	88	71	94	76	86	70	86	68
11	70	35	74	66	87	70	92	74	82	59	89	69
12	76	42	79	62	85	66	90	69	82	53	79	55
13	78	48	85	57	83	59	92	69	87	56	82	47
14	70	47	87	68	86	59	91	70	90	62	87	47
15	56	42	78	66	88	60	93	70	92	70	85	70
16	51	48	85	69	91	70	94	72	77	71	88	60
17	--	--	82	67	88	64	95	71	85	68	90	63
18	--	--	69	61	84	55	96	72	88	70	86	67
19	--	--	68	60	91	57	98	72	87	62	84	65
20	--	--	67	45	93	62	97	71	86	60	89	67
21	60	44	72	39	94	65	90	70	88	65	89	67
22	54	34	65	47	96	67	92	63	92	64	84	70
23	67	29	76	58	97	71	94	64	92	68	87	68
24	79	38	82	64	89	70	96	67	87	69	88	69
25	84	51	77	62	87	66	98	69	94	73	90	72
26	83	49	73	61	93	61	100	70	95	67	90	70
27	83	46	82	54	94	74	91	68	91	67	91	70
28	70	50	80	67	90	72	95	80	72	52	94	65
29	82	44	86	62	94	71	94	74	77	39	91	76
30	86	49	87	63	95	77	95	72	79	53	90	72
31	--	--	88	63	--	--	98	74	70	56	--	--

PROJ. NUM.:  
 FILE NAME: MPDIRCR6  
 WESTERN TENNESSEE AGRICULTURAL STATION

INTERIM DATA

UNITS: LBai/A  
 PRINTED: 10/21/86

# CORN POST DIRECTED HERBICIDES

RESEARCH BY: R.M. HAYES  
 COOPERATOR : JOHN BRADLEY  
 TOTAL REPS : 1  
 REPORTED BY: R.M. HAYES

COUNTY: GIBSON  
 LAST UPDATE: 10/21/86  
 EXPT. STATUS: 3  
 RELATED FILE: \*\*NONE\*\*

ST: TN COUNTRY: USA  
 INITIATED: 04/16/86  
 COMPLETED: 09/13/86  
 SOURCE: UNIVER.

PREVIOUS CROP: SOYBEANS  
 PREVIOUS TILL: NO-TILLAGE  
 FERTILITY: 150-80-80  
 MISC. 1: 150 N AS SIDEDRESSED ANHYDROUS AMMONIA  
 MISC. 2: FURADAN IN FURROW AT PLANTING

PLOT SIZE(LxW): 10.0x 30.0  
 SOIL TEXTURE: SILT LOAM  
 ROW WIDTH: 030  
 NUMBER OF REPS: 4  
 REPORT TYPE: INTERIM

PLANTING DATE: 04/16/86  
 HARVEST DATE : 09/12/86  
 RESIDUE TAKEN: N

CROP CULTIVAR: PIONEER 3184  
 SEASONAL RAINFALL DURING EXPERIMENT  
 EARLY: OPT MID: WET LATE: DRY

APPLICATION INFO	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
APPLICATION DATE	05/23/86	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J143/86	J 0/00	J 0/00	J 0/00	J 0/00
GEN. APPLIC TYPE	PODIR				
AIR/SOIL TEMP(F)	074/072	/	/	/	/
% REL. HUMIDITY	%				
WIND DIR/VELOC.	SW/01	/	/	/	/
ROOT/LEAF MOIST.	OPT/DRY	/	/	/	/
INCRP. EQUIP.					
INCRP. DEPTH in	.	.	.	.	.
SPRAYER TYPE	S&N SHIELD				
SPRAYER GPA/PSI	020.0/030	. /	. /	. /	. /
NOZZLE TYPE	OFFCENTER03				
RAIN / IRRIG. in					
0-24 hr/1-3 days	. / .	. / .	. / .	. / .	. / .
4-7 days/2nd wk	. / .	. / .	. / .	. / .	. / .
3rd / 4th week	. / .	. / .	. / .	. / .	. / .

SPEC.	DEN-	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
CODE	SITY	HTin/STG.	HTin/STG.	HTin/STG.	HTin/STG.	HTin/STG.
***** CROP *****						
ZEAMX	CORN	026/	/	/	/	/
***** PEST *****						
SORHA	JOHNSONGRASS	018/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/

CORN POST DIRECTED HERBICIDES

=====

EXPERIMENT COMMENTS

JOHNSONGRASS WAS FROM SEEDLING TO 18 INCHES TALL. CORN WAS FROM 24 TO 28 INCHES TALL.

KEY TO DATA HEADERS

- 1.%SORHA=PERCENT CONTROL OF  
JOHNSONGRASS USING A POST-  
DIRECTED SPRAYER.  
2.%ZEAMX=PERCENT CORN INJURY.  
3.Y/BU/AC=CORN YIELD IN BUSHELS  
PER ACRE WITH THE MOISTURE  
CORRECTED TO 15.5%. MOISTURE  
AT HARVEST WAS 18.8%.

JOHNSONGRASS OFTEN ESCAPES PREEMERGENCE CONTROL IN NO-TILL CORN. THE OBJECTIVES OF THIS EXPERIMENT WERE TO EVALUATE SEVERAL OPTIONS FOR CONTROL AND TO DETERMINE IF THERE WAS ANY INCREASE IN YIELD AS A RESULT OF IMPROVED CONTROL. THERE WAS SOME INJURY TO CORN WHERE ROUNDUP WAS POST-DIRECTED, BUT THIS DID NOT AFFECT YIELD. IMPROVED CONTROL OF JOHNSONGRASS WAS NOT REFLECTED IN IMPROVED YIELD.

=====

APPROVED BY: \_\_\_\_\_ SUBMITTED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

UNITS: LBai/A  
PRINTED: 10/21/86

ST: TN COUNTRY: USA  
INITIATED: 04/16/86  
COMPLETED: 09/13/86

PROJ. NUM.:  
FILE NAME: MESNFCRG

UNITS: LBai/A  
PRINTED: 10/20/86

WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

HERBICIDE EVALUATION FOR NO-TILL CORN

RESEARCH BY: R.M. HAYES  
COOPERATOR : JOHN BRADLEY  
TOTAL REPS : 4  
REPORTED BY: R.M. HAYES

COUNTY: GIBSON  
LAST UPDATE: 10/20/86  
EXPT. STATUS: 4  
RELATED FILE: NONE

ST: TN COUNTRY: USA  
INITIATED: 04/16/86  
COMPLETED: 09/13/86  
SOURCE: UNIVER.

PREVIOUS CROP: SOYBEANS PLOT SIZE(LxW): 10.0x 30.0 SOIL pH :6.8  
PREVIOUS TILL: NO-TILLAGE SOIL TEXTURE: GRENADA SIL SOIL OM%: 01.1  
FERTILITY: 150-80-80 ROW WIDTH: 030 EXPERIMENTAL DESIGN: RCB  
MISC. 1: FURADAN 15G AT 1.0 LB AI/A NUMBER OF REPS: 4  
MISC. 2: SOIL TEST 0-40-140 (HIGH-P;MED-K) REPORT TYPE: SUMMARY

PLANTING DATE: 04/16/86 CROP CULTIVAR: PIONEER 3184  
HARVEST DATE : 09/12/86 SEASONAL RAINFALL DURING EXPERIMENT  
RESIDUE TAKEN: N EARLY: OPT MID: WET LATE: DRY

APPLICATION INFO	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
APPLICATION DATE	04/16/86	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J106/86	J 0/00	J 0/00	J 0/00	J 0/00
GEN. APPLIC TYPE	PRE				
AIR/SOIL TEMP(F)	052/058	/	/	/	/
% REL. HUMIDITY	%				
WIND DIR/VELOC.	NW/03	/	/	/	/
ROOT/LEAF MOIST.	WET/DRY	/	/	/	/
INCRP. EQUIP.					
INCRP. DEPTH in	.	.	.	.	.
SPRAYER TYPE	CO2BACKPACK				
SPRAYER GPA/PSI	18.0/032	. /	. /	. /	. /
NOZZLE TYPE	FLATFAN8002				
RAIN / IRRIG. in					
0-24 hr/1-3 days	. / .	. / .	. / .	. / .	. / .
4-7 days/2nd wk	. / .	. / .	. / .	. / .	. / .
3rd / 4th week	. / .	. / .	. / .	. / .	. / .

SPEC.	DEN-	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
CODE	SPECIES	SITY	HTin/STG.	HTin/STG.	HTin/STG.	HTin/STG.

***** CROP *****						
ZEAMA CORN	1.3F	/	/	/	/	/

***** PEST *****						
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/

PROJ. NUM.:

FILE NAME: MESNTCR6

UNITS: LBai/A

PRINTED: 10/20/86

W E S T E R N T E N N E S S E E A G R I E X P S T A T I O N

HERBICIDE EVALUATION FOR NO-TILL CORN

=====

EXPERIMENT COMMENTS

SC5676 CONTAINED THE EXTENDER. WEEDS PRESENT AT APPLICATION CONSISTED  
MAINLY OF WHEAT, CHEAT, COMMON LAMBSQUARTERS, AND A FEW SCATTERED  
WINTER ANNUALS SUCH AS CHICKWEED AND HENBIT.

KEY TO DATA HEADERS

1.BURNDN=BURNDOWN

2.Y/BU/AC=CORN YIELD IN BUSHELS  
PER ACRE WITH THE MOISTURE  
CORRECTED TO 15.5%. MOISTURE  
AT HARVEST WAS 17%.

=====

APPROVED BY: \_\_\_\_\_ SUBMITTED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

UNITS: LBai/A  
PRINTED: 10/20/86

## HERBICIDE EVALUATION FOR NO-TILL CORN

ST: TN COUNTRY: USA  
INITIATED: 04/16/86  
COMPLETED: 09/13/86

[illegible]

01	DUAL IGNITE AATREX	EC 8 EC 1.67 EC 4.0	2.0 0.89 1.5	PRE PRE PRE	96	94.3
02	DUAL IGNITE AATREX	EC 8 EC 1.67 EC 4.0	2.5 1.11 1.5	PRE PRE PRE	98	86.2
03	BICEP IGNITE	EC 6.0 EC 1.67	3.6 0.89	PRE PRE	95	84.3
04	BICEP IGNITE	EC 6.0 EC 1.67	4.5 1.11	PRE PRE	99	95.4
05	BICEP PARAQUAT X-77	EC 6.0 EC 2.0 %A 100%	2.7 0.25 0.25%	PRE PRE PRE	74	86.1
06	EXTRAZIN 2,4-DLVE COC	EC 4.0 EC 4.0 EC 4.0	4.0 0.5 1.0	PRE PRE PRE	60	89.3
07	EXTRAZIN PARAQUAT X-77	EC 4.0 EC 2.0 %A 100%	4.0 0.25 0.5%	PRE PRE PRE	97	103.0
08	SC5676 AATREX PARAQUAT X-77	EC 7.0 EC 4.0 EC 2.0 %A 100%	1.5 1.5 0.25 0.25%	PRE PRE PRE PRE	85	75.5
09	SC5676 AATREX PARAQUAT X-77	EC 7.0 EC 4.0 EC 2.0 %A 100%	2.0 1.5 0.25 0.25%	PRE PRE PRE PRE	81	80.2
10	DUAL AATREX PARAQUAT X-77	EC 8.0 EC 4.0 EC 2.0 %A 100%	1.5 1.5 0.25 0.25%	PRE PRE PRE PRE	64	87.7

UNITS: LBai/A  
PRINTED: 10/20/86

## HERBICIDE EVALUATION FOR NO-TILL CORN

=====						
PESTICIDE		APPLI-%BURNDN\Y/BU/AC;				
TRT.	CATION;VISUAL ;HARVEST;					
NO. NAME FORMU. LBai/A TYPE;J125/86;J255/86;						
=====						

PAGE 4



HERBICIDE EVALUATION FOR NO-TILL CORN

APPL: PRE =J106/86

=====									
PESTICIDE	APPLI-	BURNDN	Y/BU/AC						
TRT. -----	CATION	VISUAL	HARVEST						
NO. NAME	FORMU. LBai/A	TYPE	J125/86	J255/86					
=====									

LSD(0.05) =

25

18.0

STANDARD DEVIATION =

18

12.4

COEFF. OF VARIABILITY =

23

15.1

PROJ. NUM.: N-41  
FILE NAME: MNXJGCR6

INTERIM DATA

UNITS: LBai/A  
PRINTED: 10/21/86

WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

NITROGEN BY JOHNSONGRASS-NO-TILL CORN

RESEARCH BY: R.M. HAYES  
COOPERATOR : D.D. HOWARD  
TOTAL REPS : 4  
REPORTED BY: R.M. HAYES

COUNTY: GIBSON  
LAST UPDATE: 10/21/86  
EXPT. STATUS: 3  
RELATED FILE: NONE

ST: TN COUNTRY: USA  
INITIATED: 04/16/86  
COMPLETED: 09/13/86  
SOURCE: UNIVER.

PREVIOUS CROP: SOYBEANS  
PREVIOUS TILL: NO-TILLAGE  
FERTILITY: 0-80-80 AT PLANT  
MISC. 1: NITROGEN ACCORDING TO PLAN  
MISC. 2:

PLOT SIZE(LxW): 10.0x 30.0 SOIL pH :6.8  
SOIL TEXTURE: GRENADA SIL SOIL OM%: 01.1  
ROW WIDTH: 030 EXPERIMENTAL DESIGN: RCB  
NUMBER OF REPS: 4  
REPORT TYPE: INTERIM

PLANTING DATE: 04/16/86  
HARVEST DATE : 09/12/86  
RESIDUE TAKEN: N

CROP CULTIVAR: PIONEER 3184  
SEASONAL RAINFALL DURING EXPERIMENT  
EARLY: OPT MID: WET LATE: DRY

APPLICATION INFO	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
APPLICATION DATE	/ /	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J 0/00	J 0/00	J 0/00	J 0/00	J 0/00
GEN. APPLIC TYPE					
AIR/SOIL TEMP(F)	/	/	/	/	/
% REL. HUMIDITY	%				
WIND DIR/VELOC.	/	/	/	/	/
ROOT/LEAF MOIST.	/	/	/	/	/
INCRP. EQUIP.					
INCRP. DEPTH in	.	.	.	.	.
SPRAYER TYPE					
SPRAYER GPA/PSI	18.0/	. /	. /	. /	. /
NOZZLE TYPE					
RAIN / IRRIG. in					
0-24 hr/1-3 days	. / .	. / .	. / .	. / .	. / .
4-7 days/2nd wk	. / .	. / .	. / .	. / .	. / .
3rd / 4th week	. / .	. / .	. / .	. / .	. / .

SPEC.	DEN-	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
CODE	SPECIES	SITY	HTin/STG.	HTin/STG.	HTin/STG.	HTin/STG.
*****	CROP	*****	*****	*****	*****	*****
ZEAMX	CORN	/	/	/	/	/
*****	PEST	*****	*****	*****	*****	*****
SORHA	JOHNSONGRASS	/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/

NITROGEN BY JOHNSONGRASS-NO-TILL CORN

=====

EXPERIMENT COMMENTS

KEY TO DATA HEADERS.

- 1.SORHA D.W./AC=DRY WEIGHT OF  
JOHNSONGRASS PER ACRE
- 2.%MOIST CALC.=MOISTURE OF  
THE CORN AT HARVEST.
- 3.Y/BU/AC=CORN YIELD IN BUSHELS  
PER ACRE WITH A MOISTURE OF  
15.5%.

OUR OBJECTIVE WAS TO DETERMINE IF NITROGEN FERTILIZATION AT PLANTING GAVE JOHNSONGRASS A COMPETITIVE ADVANTAGE OVER CORN WHEN COMPARED TO DELAYING APPLICATION. AMMONIUM NITRATE (AN) AND ANHYDROUS AMMONIA (AA) WERE CHOSEN BECAUSE OF THEIR COMMON USE.

CORN YIELDS WERE LOWER WITH AA COMPARED TO AN. THE HIGHEST CORN YIELD WAS WITH AN APPLIED AT PLANTING. THE GREATEST JOHNSONGRASS DRY WEIGHT WAS WITH AA APPLIED AT PLANTING. MOST OF THE EARLY EMERGENCE OF JOHNSONGRASS IN THIS TREATMENT OCCURRED ALONG THE SLOT WHERE THE AA WAS INJECTED. THERE WAS A DEFINITE TREND TOWARD LESS JOHNSONGRASS WHERE NITROGEN APPLICATIONS WERE DELAYED.

=====

APPROVED BY: \_\_\_\_\_ SUBMITTED BY: \_\_\_\_\_

DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

W E S T E R N T E N N E S S E E A G R I E X P S T A T I O N

## 3ITROGEN BY JOHNSONGRASS-NO-TILL CORN

RESEARCH BY: R.M. HAYES  
COOPERATOR : D.D. HOWARD  
TOTAL REPS : 4  
APPL:

COUNTY: GIBSON                      ST: TN COUNTRY: USA  
LAST UPDATE: 10/21/86              INITIATED: 04/16/86  
EXPT. STATUS: 3                      COMPLETED: 09/13/86

APPL:

[illegible]

01	AN	DF 34%	150	PRE	3144.1	16.7	78.7
02	AN	DF 34%	150	4WAP	2838.4	17.9	70.1
03	AA	FL 82%	150	PRE	5633.3	17.1	53.8
04	AA	FL 82%	150	4WAP	4225.0	18.7	64.3

LSD(0.05) =	2315.1	2.1	12.2
STANDARD DEVIATION =	1447.4	1.3	7.6
COEFF. OF VARIABILITY =	36.5	7.4	11.4

PLATEAU EXPERIMENT STATION

Rt. 9, Box 363

Crossville, TN 38555

Superintendent - Dr. Robert D. Freeland

RAINFALL  
Plateau Experiment Station  
Crossville, TN 1986

Date	April	May	June	July	August	September
1	0	0	0	0	.56	.66
2	0	0	.16	.42	0	.33
3	0	0	0	1.08	0	.47
4	0	0	.42	0	0	1.66
5	0	0	.09	0	0	.20
6	.05	0	0	0	0	0
7	.28	0	.03	0	.02	0
8	.41	0	.14	.13	.01	0
9	0	0	0	0	0	0
10	0	0	.72	.06	0	0
11	0	0	.02	1.09	.68	0
12	0	0	.08	.06	0	.34
13	0	.06	0	0	0	0
14	0	0	0	.13	.01	0
15	.08	0	0	0	0	0
16	0	0	0	0	0	0
17	0	0	0	0	.34	0
18	0	0	0	0	0	0
19	0	.05	0	0	.02	0
20	.06	.38	0	0	0	.70
21	.48	0	0	.08	0	.07
22	.22	0	0	0	.42	0
23	0	.79	0	0	0	0
24	0	.11	0	0	0	0
25	0	.38	0	0	0	0
26	0	.04	0	0	0	.48
27	0	1.52	0	0	.38	0
28	0	2.93	0	0	.63	.03
29	.24	.10	.20	0	0	0
30	0	0	.01	0	0	0
31	-	0	-	0	.03	-
Total	1.82	6.36	1.87	3.05	3.10	4.94

TEMPERATURE  
Plateau Experiment Station  
Crossville, TN 1986

Date	April		May		June		July		August		Sept	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	78	51	82	51	81	58	87	66	83	61	62	57
2	76	51	72	44	82	60	84	67	84	62	65	62
3	76	50	65	36	81	59	79	57	84	60	71	64
4	78	55	61	36	79	60	78	54	83	59	75	64
5	77	56	73	40	72	61	82	64	82	57	78	63
6	77	56	79	59	79	62	84	64	87	61	77	55
7	74	54	80	58	81	62	85	64	88	62	77	51
8	76	55	84	55	82	68	88	65	85	62	79	53
9	69	38	83	53	85	67	89	68	87	63	71	51
10	50	32	84	52	85	65	87	68	84	64	78	54
11	58	35	80	56	80	66	83	63	89	65	73	65
12	65	40	76	55	82	66	84	66	81	59	72	62
13	70	45	71	59	79	58	84	68	82	61	74	51
14	74	49	80	59	77	56	85	65	84	62	79	52
15	72	40	80	60	82	61	87	65	85	65	80	55
16	60	33	76	60	81	57	84	65	87	64	77	60
17	44	35	80	60	84	59	86	65	84	64	79	59
18	46	35	82	65	83	52	90	66	80	66	76	59
19	71	45	70	59	79	55	92	68	82	63	68	61
20	75	52	66	50	85	61	92	67	84	60	75	60
21	60	43	63	39	87	65	93	64	83	62	83	62
22	53	32	63	39	89	61	89	66	80	65	83	60
23	49	24	70	47	89	62	89	67	85	64	81	60
24	59	32	70	53	89	66	90	68	85	66	82	65
25	74	50	78	58	85	58	92	67	83	54	83	61
26	80	52	72	58	83	55	90	70	86	65	83	62
27	84	57	69	61	86	55	92	66	83	67	84	62
28	85	54	72	62	90	64	90	65	85	56	84	62
29	69	43	71	62	88	69	91	67	67	42	83	64
30	74	48	81	59	83	65	91	62	71	44	84	65
31	--	--	82	60	--	--	91	59	71	52	--	--

12-02-1986

EXPERIMENT DESCRIPTION FORM

**The University of Tennessee**

**EVALUATION OF METOLACHLOR FORMULATIONS IN CORN**

Conducted at CROSSVILLE, TN by G.N. RHODES, JR.  
Project TN-692-86-P-2 with cooperator PLATEAU EXPT STA

Experimental Management

Date Planted 4-30-86      Variety PIONEER 3320      Row Width 36 IN  
Design RCB      No. Reps. 4      Plot Size 3 ROWS\*30 FT  
Field Preparation and Plot Maintenance DISK, ROTERRA, POWER-DRIVEN TILLER.

Site Description

Season Moisture SEE RAINFALL TABLES  
Soil Texture SILT LOAM  
Soil Series TILSIT

% OM 1.6      pH 6.0

Application Information

1      2      3      4      5      6

Date Treated      4-30-86  
Time Treated      PM  
Cloud Cover      CLEAR  
Air Temperature      84  
Relative Humidity      36%  
Wind Speed/Direction      4MPH-W  
Soil Temperature      84  
Soil/Leaf Surface Moisture      DRY  
Soil Subsurface Moisture      DRY  
Soil Tilth      FINE  
Crop Stage      PRE  
Pest Name, Stage & Density  
AMACH 1/FT      PRE  
IPOLA 1/FT      PRE

Application Equipment

Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Nozzle Width	Boom GPA	Carrier	PSI
1. CO2 BACKPACK	3	FLAT FAN	8002	19	19	6.3FT	20	WATER	41

Comments

CRINJ=CROP INJURY; AMACH=SMOOTH PIGWEED; IPOLA=PITTED MORNINGGLORY. RAINFALL WAS NOT RECEIVED FOR THE FIRST 3 WEEKS AFTER PLANTING. LACK OF RAINFALL AND MILD TEMPERATURES ELIMINATED THE PROBABILITY OF CROP INJURY. ANNUAL GRASS POPULATION DID NOT DEVELOP.



11-26-1986

## SUMMARY

# The University of Tennessee

## EVALUATION OF METOLACHLOR FORMULATIONS IN CORN

Conducted at CROSSVILLE, TN by G.M. RHODES, JR.  
Project TN-692-86-P-2 with cooperator PLATEAU EXPT STA

TRT. PEST.	RATE	GROW.	CRINJ	AMACH	IPOLA	AMACH	IPOLA	AMACH	IPOLA
NUM. NAME	FORM	#ai/A	STAGE	6-6-86	6-6-86	7-22-86	7-22-86	8-18-86	8-18-86
01 DUAL	8.0E	1.5	PRE 0	98.8	88.8	98.3	84.0	100.0	78.8
01 ATRAZINE	4.0L	1.5	PRE						
02 DUAL	8.0E	3.0	PRE 0	100.0	88.8	100.0	90.0	100.0	86.3
02 ATRAZINE	4.0L	1.5	PRE						
03 CG180937	7.8E	1.5	PRE 0	99.5	91.3	100.0	88.3	100.0	71.3
03 ATRAZINE	4.0L	1.5	PRE						
04 CG180937	7.8E	3.0	PRE 0	100.0	91.3	100.0	82.0	100.0	76.3
04 ATRAZINE	4.0L	1.5	PRE						
05 LASSO MT	4.0L	2.0	PRE 0	100.0	90.0	100.0	81.8	100.0	77.5
05 ATRAZINE	4.0L	1.5	PRE						
06 LASSO MT	4.0L	4.0	PRE 0	100.0	93.3	100.0	93.3	100.0	91.3
06 ATRAZINE	4.0L	1.5	PRE						
07 BICEP	6.0L	3.6	PRE 0	99.5	92.0	98.8	86.3	98.8	85.0
08 BICEP	6.0L	7.2	PRE 0	100.0	98.3	100.0	89.3	100.0	81.3
09 BICEP-D	6.0E	3.6	PRE 0	98.8	82.5	99.3	68.3	100.0	55.0
10 BICEP-D	6.0E	7.2	PRE 0	100.0	97.0	100.0	92.0	100.0	89.3
11 DUAL G	0.25G	2.5	PRE 0	100.0	88.8	100.0	87.5	100.0	85.0
11 ATRAZINE	4.0L	1.5	PRE						
12 DUAL G	0.25G	5.0	PRE 0	99.5	92.5	100.0	85.0	100.0	81.3
12 ATRAZINE	4.0L	1.5	PRE						
13 DUAL G-D	0.25G	2.5	PRE 0	100.0	93.8	100.0	86.3	100.0	78.8
13 ATRAZINE	4.0L	1.5	PRE						
14 DUAL G-D	0.25G	5.0	PRE 0	100.0	93.3	100.0	87.8	100.0	89.8
14 ATRAZINE	4.0L	1.5	PRE						
15 ATRAZINE	4.0L	1.5	PRE 0	98.8	86.3	100.0	81.8	100.0	75.0
16 WEEDFREE			0	100.0	100.0	100.0	100.0	100.0	100.0
17 WEEDY			0	0.0	0.0	0.0	0.0	0.0	0.0
LEAST SIGNIFICANT DIFF. (.05) =				1.396	5.863	1.242	11.36	.8663	16.90
STANDARD DEVIATION =				.9769	4.103	.8695	7.955	.6062	11.82
COEFF. OF VARIABILITY =				1.041	4.753	.9260	9.777	.6446	15.45

12-02-1986

## EXPERIMENT DESCRIPTION FORM

## The University of Tennessee

## POSTEMERGENCE WEED CONTROL IN CORN

Conducted at CROSSVILLE, TN by G.N. RHODES, JR.  
Project TN-692-86-P-6 with cooperators FLATEAU EXPT STA

## Experimental Management

Date Planted 4-30-86 Variety PIONEER 3320 Row Width 36 IN  
Design RCB No. Reps. 4 Plot Size 3 ROWS\*30 FT  
Field Preparation and Plot Maintenance DISK, ROTERRA, POWER-DRIVEN TILLER.

## Site Description

Season Moisture SEE RAINFALL TABLES

Soil Texture SILT LOAM

Soil Series TILSIT

% OM 1.6 pH 6.0

## Application Information

	1	2	3	4	5	6
Date Treated	4-30-86	6-11-86	6-19-86			
Time Treated	PM	AM	AM			
Cloud Cover	CLEAR	80%	CLEAR			
Air Temperature	84	77	71			
Relative Humidity	36%	83%	69%			
Wind Speed/Direction	4MPH-W	3MPH-S	CALM			
Soil Temperature	84	80	70			
Soil/Leaf Surface Moisture	DRY	MOIST	DRY			
Soil Subsurface Moisture	DRY	MOIST	DRY			
Soil Tilth	FINE	N/A	N/A			
Crop Stage	PRE	6-10 IN	10-24 IN			
Pest Name, Stage & Density						
CYPES 15/FT	PRE	5-10 LF	18 IN			
AMACH 6/FT	PRE	3-4 LF	8 LF			
DIGSA 5/FT	PRE	3-4 LF	5 IN-2TL			

## Application Equipment

Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	GPA	Carrier	FSI
1. CO2 BACKPACK	3	FLAT FAN	8002	19	19	6.3FT	20	WATER	41
2. CO2 BACKPACK	3	FLAT FAN	8002	19	19	6.3FT	20	WATER	41
3. CO2 BACKPACK	3	FLAT FAN	8002	19	19	6.3FT	20	WATER	41

## Comments

CRINJ=CROP INJURY; CYPES=YELLOW NUTSEDGE; AMACH=SMOOTH FIGWEED; DIGSA=LARGE CRABGRASS. RAINFALL WAS NOT RECEIVED FOR THE FIRST 3 WEEKS AFTER PLANTING. CROP EMERGENCE WAS SLOW AND EXTREMELY UNEVEN, MAKING CROP INJURY EVALUATIONS DIFFICULT TO CONDUCT. YELLOW NUTSEDGE PRESSURE WAS VIRTUALLY OVERWHELMING.

11-26-1986

## SUMMARY

**The University of Tennessee**  
**POSTEMERGENCE WEED CONTROL IN CORN**

Conducted at CROSSVILLE, TN by G.N. RHODES, JR.  
 Project TN-692-86-P-6 with cooperator PLATEAU EXPT STA

TRT. NUM.	PEST. NAME	FORM	RATE #ai/A	GROW. STAGE	CRINJ 6-19-86	CYPES 6-19-86	AMACH 6-19-86	DIGSA 6-19-86
01	SC-0051	3.0E	0.25	POT1	10.0	36.3	95.0	71.3
01	TWEEN-20	P	0.25	POT1				
02	SC-0051	3.0E	0.50	POT1	8.8	56.3	99.0	82.5
02	TWEEN-20	P	0.25	POT1				
03	SC-0051	3.0E	1.0	POT1	26.3	68.8	98.3	80.0
03	TWEEN-20	P	0.25	POT1				
04	SC-0051	3.0E	0.25	POT1	1.3	70.0	98.3	87.5
04	ATRAZINE	0.90W	0.50	POT1				
04	TWEEN-20	P	0.25	POT1				
05	SC-0051	3.0E	0.25	POT1	11.3	77.5	99.5	87.5
05	ATRAZINE	0.90W	1.0	POT1				
05	TWEEN-20	P	0.25	POT1				
06	SC-0051	3.0E	0.50	POT1	10.0	77.5	100.0	85.0
06	ATRAZINE	0.90W	0.50	POT1				
06	TWEEN-20	P	0.25	POT1				
07	SC-0051	3.0E	0.50	POT1	5.0	83.8	100.0	90.0
07	ATRAZINE	0.90W	1.0	POT1				
07	TWEEN-20	P	0.25	POT1				
08	SC-0051	3.0E	1.0	POT1	16.3	86.3	100.0	88.8
08	ATRAZINE	0.90W	0.50	POT1				
08	TWEEN-20	P	0.25	POT1				
09	SC-0051	3.0E	1.0	POT1	12.5	91.3	100.0	95.8
09	ATRAZINE	0.90W	1.0	POT1				
09	TWEEN-20	P	0.25	POT1				
10	ATRAZINE	0.90W	0.50	POT1	3.8	31.3	95.0	48.8
10	TWEEN-20	P	0.25	POT1				
11	ATRAZINE	0.90W	1.0	POT1	1.3	42.5	97.8	50.0
11	TWEEN-20	P	0.25	POT1				
12	TANDEM	4.0E	0.5	POT1	6.3	53.8	98.0	85.0
12	ATRAZINE	0.90W	1.5	POT1				
12	C.O.C.	P	1.25	POT1				
13	TANDEM	4.0E	0.75	POT1	6.3	61.3	99.0	85.0
13	ATRAZINE	0.90W	1.5	POT1				
13	C.O.C.	P	1.25	POT1				

11-26-1986

SUMMARY

**The University of Tennessee**  
**POSTEMERGENCE WEED CONTROL IN CORN**

Conducted at CROSSVILLE, TN by G.N. RHODES, JR.  
 Project TN-692-86-P-6 with cooperator PLATEAU EXPT STA

TRT. NUM.	PEST. NAME	FORM	RATE #ai/A	GROW. STAGE	CRINJ 6-19-86	CYPES 6-19-86	AMACH 6-19-86	DIGSA 6-19-86
14	ATRAZINE	0.90W	1.5	POT1	2.5	57.5	97.0	67.5
14	C.O.C.	P	1.25	POT1				
19	LESSO MT	4.0L	2.0	PRE	0.0	55.0	100.0	100.0
19	ATRAZINE	0.90W	1.5	PRE				
20	WEEDY				0.0	0.0	0.0	0.0
LEAST SIGNIFICANT DIFF. (.05)=					8.224	12.52	1.659	10.62
STANDARD DEVIATION					= 5.815	8.858	1.173	7.516
COEFF. OF VARIABILITY					= 95.92	18.67	1.589	12.48

12-01-1986

SUMMARY

**The University of Tennessee**  
**POSTEMERGENCE WEED CONTROL IN CORN**

Conducted at CROSSVILLE, TN by G.N. RHODES, JR.  
 Project TN-692-86-F-6 with cooperator PLATEAU EXPT STA

TRT. NUM.	PEST. NAME	FORM	RATE #ai/A	GROW. STAGE	CYPES 7-22-86	AMACH 7-22-86	DIGSA 7-22-86
01	SC-0051	3.0E	0.25	POT1	30.0	100.0	68.8
01	TWEEN-20	P	0.25	POT1			
02	SC-0051	3.0E	0.50	POT1	50.0	100.0	78.8
02	TWEEN-20	P	0.25	POT1			
03	SC-0051	3.0E	1.0	POT1	62.5	100.0	78.8
03	TWEEN-20	P	0.25	POT1			
04	SC-0051	3.0E	0.25	POT1	58.8	100.0	81.3
04	ATRAZINE	0.90W	0.50	POT1			
04	TWEEN-20	P	0.25	POT1			
05	SC-0051	3.0E	0.25	POT1	72.5	100.0	87.5
05	ATRAZINE	0.90W	1.0	POT1			
05	TWEEN-20	P	0.25	POT1			
06	SC-0051	3.0E	0.50	POT1	75.0	100.0	86.3
06	ATRAZINE	0.90W	0.50	POT1			
06	TWEEN-20	P	0.25	POT1			
07	SC-0051	3.0E	0.50	POT1	83.8	100.0	91.3
07	ATRAZINE	0.90W	1.0	POT1			
07	TWEEN-20	P	0.25	POT1			
08	SC-0051	3.0E	1.0	POT1	91.3	100.0	91.8
08	ATRAZINE	0.90W	0.50	POT1			
08	TWEEN-20	P	0.25	POT1			
09	SC-0051	3.0E	1.0	POT1	92.5	100.0	93.8
09	ATRAZINE	0.90W	1.0	POT1			
09	TWEEN-20	P	0.25	POT1			
10	ATRAZINE	0.90W	0.50	POT1	20.0	100.0	22.5
10	TWEEN-20	P	0.25	POT1			
11	ATRAZINE	0.90W	1.0	POT1	32.5	100.0	38.8
11	TWEEN-20	P	0.25	POT1			
12	TANDEM	4.0E	0.5	POT1	57.5	100.0	78.8
12	ATRAZINE	0.90W	1.5	POT1			
12	C.O.C.	P	1.25	POT1			
13	TANDEM	4.0E	0.75	POT1	51.3	100.0	61.3
13	ATRAZINE	0.90W	1.5	POT1			
13	C.O.C.	P	1.25	POT1			

12-01-1986

## SUMMARY

**The University of Tennessee**  
**POSTEMERGENCE WEED CONTROL IN CORN**

Conducted at CROSSVILLE, TN by G.N. RHODES, JR.  
 Project TN-692-86-P-6 with cooperator FLATEAU EXPT STA

TRT. NUM.	PEST. NAME	FORM	RATE #ai/A	GROW. STAGE	CYPES 7-22-86	AMACH 7-22-86	DIGSA 7-22-86
14	ATRAZINE	0.90W	1.5	POT1	50.0	100.0	25.0
14	C.O.C.	P	1.25	POT1			
15	TANDEM	4.0E	0.5	POT2	40.0	100.0	32.5
15	ATRAZINE	0.90W	1.5	POT2			
15	C.O.C.	P	1.25	POT2			
16	TANDEM	4.0E	0.75	POT2	30.0	100.0	40.0
16	ATRAZINE	0.90W	1.5	POT2			
16	C.O.C.	P	1.25	POT2			
17	ATRAZINE	0.90W	1.5	POT2	37.5	100.0	28.8
17	C.O.C.	P	1.25	POT2			
18	TANDEM	4.0E	0.5	POT2	71.3	100.0	72.5
18	ATRAZINE	0.90W	1.5	POT2			
18	C.O.C.	P	1.25	POT2			
18	ATRAZINE	0.90W	1.0	POT3			
18	C.O.C.	P	1.25	POT3			
19	LAUSD MT	4.0L	2.0	PRE	42.5	100.0	70.0
19	ATRAZINE	0.90W	1.5	PRE			
20	WEEDY				0.0	0.0	0.0
LEAST SIGNIFICANT DIFF. (.05) =					16.39	0	24.70
STANDARD DEVIATION =					11.59	0	17.46
COEFF. OF VARIABILITY =					22.11	0	28.44

12-02-1986

EXPERIMENT DESCRIPTION FORM

The University of Tennessee

MANAGEMENT OF BROADLEAF WEEDS IN GRAIN SORGHUM

Conducted at CROSSVILLE, TN by G.N. RHODES, JR.  
Project TN-692-86-P-4 with cooperator PLATEAU EXPT STA

Experimental Management

Date Planted 6-19-86  
Design RCB  
Field Preparation and Plot Maintenance DISK, ROTERRA, POWER-DRIVEN TILLER, CULTIPACKER.  
No. Reps. 4  
Row Width 36 IN  
Plot Size 3 ROWS\*30 FT

Site Description

Season Moisture SEE RAINFALL TABLES  
Soil Texture SILT LOAM  
Soil Series TILSIT

% OM 1.6 pH 6.0

	Application Information					
	1	2	3	4	5	6
Date Treated	6-18-86	6-19-86	7-11-86			
Time Treated	PM	PM	AM			
Cloud Cover	CLEAR	CLEAR	50%			
Air Temperature	70	83	79			
Relative Humidity	64%	56%	80%			
Wind Speed/Direction	1MPH-N	1MPH-N	3MPH-S			
Soil Temperature	78	92	86			
Soil/Leaf Surface Moisture	DRY	DRY	WET			
Soil Subsurface Moisture	MOIST	MOIST	MOIST			
Soil Tilth	FINE	FINE	N/A			
Crop Stage	FPI	PRE	4-5 IN			
Pest Name, Stage & Density						
AMACH 3/FT	PRE	PRE	POT			
CYPES 4/FT	PRE	PRE	POT			

Application Equipment

	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	GPA	Carrier	FSI
1.	C02 BACKPACK	3	FLAT FAN	8002	19	19	6.3FT	20	WATER	41
2.	C02 BACKPACK	3	FLAT FAN	8002	19	19	6.3FT	20	WATER	41
3.	C02 BACKPACK	3	FLAT FAN	8002	19	19	6.3FT	20	WATER	41

Comments

AMACH=SMOOTH PIGWEED; CYPES=YELLOW NUTSEDGE. TEST WAS HARVESTED ON 11-3-86.

12-02-1986

## SUMMARY

# The University of Tennessee

## MANAGEMENT OF BROADLEAF WEEDS IN GRAIN SORGHUM

Conducted at CROSSVILLE, TN by G.M. RHODES, JR.  
Project TN-692-86-P-4 with cooperator PLATEAU EXPT STA

TRT. NUM.	PEST. NAME	RATE FORM	GROW. #ai/A	CRINJ STAGE	AMACH 7-22-86	CYPES 7-22-86	AMACH 8-5-86	CYPES 8-5-86	AMACH 8-18-86	CYPES 8-18-86	YIELD RU/A	
01	RE-40885	1.5E	0.5	PPI	0	87.5	71.3	73.8	51.3	78.8	30.0	65.30
02	RE-40885	1.5E	0.5	PRE	0	63.8	27.5	60.0	5.0	45.0	0.0	61.20
03	DUAL	8.0	1.5	PRE	0	84.3	72.5	89.5	77.5	92.0	71.3	79.25
03	ATRAZINE	4.0L	1.0	PRE								
04	LESSO MT	4.0L	2.0	PRE	0	98.8	61.3	95.0	62.5	97.5	55.0	81.90
04	ATRAZINE	4.0L	1.0	PRE								
05	ATRAZINE	4.0L	1.0	PRE	0	98.0	46.3	93.8	52.5	95.0	32.5	68.78
06	BUCTRIL	2.0E	0.25	POT	0	88.8	17.5	91.3	0.0	88.3	0.0	70.88
07	BUCTRIL	2.0E	0.38	POT	0	100.0	41.3	96.3	38.8	96.3	28.8	77.18
08	BUCTIATR	3.0L	.568	POT	0	98.3	57.5	93.3	61.3	96.3	50.0	74.88
09	BUCTIATR	3.0L	0.75	POT	0	99.3	47.5	98.0	38.8	98.5	37.5	83.50
10	BUCTIATR	3.0L	1.13	POT	0	100.0	70.0	95.0	67.5	98.8	62.5	70.15
11	BANVEL	4.0L	0.25	POT	0	76.3	21.3	86.3	0.0	93.8	7.5	67.78
12	BANVEL	4.0L	.125	POT	0	100.0	67.5	100.0	68.8	100.0	65.0	73.58
12	ATRAZINE	4.0L	1.25	POT								
12	C.O.C.	P	1.25	POT								
13	BANVEL	4.0L	0.25	POT	0	98.8	57.5	97.5	46.3	100.0	52.5	77.05
13	ATRAZINE	4.0L	1.25	POT								
14	MARKSMAN	3.2L	0.8	POT	0	98.8	50.0	97.5	27.5	100.0	26.3	76.08
15	BASAGRAM	4.0L	0.5	POT	0	98.8	88.3	97.0	83.8	97.3	80.0	82.40
15	ATRAZINE	4.0L	0.5	POT								
15	C.O.C.	P	1.25	POT								
16	BASAGRAM	4.0L	0.25	POT	0	99.3	82.5	94.5	71.3	97.5	78.8	81.83
16	ATRAZINE	4.0L	0.5	POT								
16	C.O.C.	P	1.25	POT								
17	BASAGRAM	4.0L	0.75	POT	0	90.0	81.3	72.5	76.3	80.0	63.8	69.20
17	C.O.C.	P	1.25	POT								
18	BAS-514	0.50M	0.5	POT	0	42.5	0.0	55.0	0.0	46.3	0.0	49.80
18	C.O.C.	P	1.25	POT								



12-02-1986

SUMMARY

**The University of Tennessee**  
**MANAGEMENT OF BROADLEAF WEEDS IN GRAIN SORGHUM**

Conducted at CROSSVILLE, TN by G.M. RHODES, JR.  
 Project TN-692-86-P-4 with cooperator PLATEAU EXPT STA

TRT.	PEST.	RATE	GROW.	CRINJ	AMACH	CYPES	AMACH	CYPES	AMACH	CYPES	YIELD	
NUM.	NAME	FORM	#ai/A	STAGE	7-22-86	7-22-86	7-22-86	8-5-86	8-5-86	8-18-86	8-18-86	BU/A
19	BAS-514	0.50M	1.0	POT	0	45.0	12.5	60.0	0.0	61.3	0.0	50.70
19	C.O.C.	P	1.25	POT								
20	WEEDY			0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.35
LEAST SIGNIFICANT DIFF. (.05)=					15.58	18.61	18.16	25.09	14.23	30.09	18.60	
STANDARD DEVIATION =					11.01	13.16	12.84	17.74	10.06	21.28	13.15	
COEFF. OF VARIABILITY =					13.21	27.04	15.60	42.81	12.11	57.42	18.74	

WEST TENNESSEE EXPERIMENT STATION

605 Airways Blvd

Jackson, TN 38301

Superintendent - Dr. James F. Brown

RAINFALL  
West Tennessee Experiment Station  
Jackson, TN 1986

Date	April	May	June	July	August	September
1	0	.76	1.35	0	0	0
2	0	0	.02	0	0	0
3	0	0	.03	0	0	0
4	1.50	0	.90	0	0	0
5	.05	0	.70	0	0	0
6	.05	0	.31	0	.12	0
7	1.20	0	.50	.05	0	0
8	1.20	0	.72	0	.26	0
9	0	0	1.00	.30	1.00	0
10	0	.59	.13	0	0	0
11	0	0	.01	0	0	.12
12	0	0	0	0	0	0
13	.10	0	0	.60	0	0
14	.01	0	0	1.70	0	0
15	0	0	0	0	0	0
16	0	0	0	0	.36	0
17	0	.35	0	0	0	.63
18	0	.16	0	0	0	1.45
19	.42	0	0	0	0	0
20	.27	0	0	0	0	.23
21	0	0	0	0	0	0
22	0	.77	0	0	0	0
23	0	.02	0	0	0	0
24	0	.55	0	0	0	0
25	0	.20	0	0	0	0
26	0	.08	0	.74	0	0
27	.08	.09	0	0	0	0
28	0	0	.28	0	0	0
29	0	0	0	0	0	0
30	.05	0	0	0	0	0
31	-	0	-	0	0	-
Total	4.93	3.57	5.95	3.39	1.74	2.43

TEMPERATURE  
West Tennessee Experiment Station  
Jackson, TN 1986

Date	April		May		June		July		August		Sept	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	85	50	87	65	88	66	91	75	100	74	81	62
2	80	56	72	47	85	67	91	72	90	69	76	62
3	80	60	68	48	84	69	84	67	85	63	86	66
4	85	60	67	40	84	70	88	60	85	62	89	72
5	83	59	76	53	74	67	89	62	87	50	88	69
6	76	57	83	62	79	70	92	71	94	62	79	54
7	81	61	83	64	81	72	94	73	86	64	88	59
8	78	60	86	65	84	72	91	73	93	68	82	54
9	69	42	88	66	88	71	94	76	80	69	80	55
10	60	30	89	65	80	71	92	76	90	69	89	64
11	64	39	84	65	86	71	92	76	87	69	88	73
12	73	48	73	63	85	67	92	74	84	60	90	58
13	78	51	80	61	84	62	90	69	84	62	81	52
14	81	60	81	50	84	67	93	69	88	67	83	51
15	71	36	86	70	83	64	91	69	92	68	87	62
16	59	36	77	62	88	66	92	71	90	73	88	68
17	52	33	85	65	90	69	93	73	88	74	90	66
18	64	45	81	61	90	61	94	75	85	68	91	70
19	75	53	68	56	85	60	95	74	88	67	85	66
20	79	57	69	50	90	66	97	74	89	55	84	69
21	65	47	69	45	93	67	97	74	87	69	90	69
22	61	40	73	53	94	69	89	68	89	70	89	69
23	55	32	68	55	95	72	90	68	90	71	86	69
24	67	43	75	63	94	71	93	70	92	69	89	70
25	81	53	81	64	91	69	94	72	90	71	90	73
26	86	54	80	66	89	67	96	76	92	71	90	72
27	85	52	72	59	93	73	97	69	94	71	90	69
28	89	62	81	65	92	72	91	75	91	61	92	69
29	74	46	80	65	86	70	96	76	73	50	94	70
30	85	54	86	63	92	75	95	74	78	58	92	72
31	--	--	86	69	--	--	98	72	79	61	--	--

PROJ. NUM.:  
FILE NAME: WPRECR6

INTERIM DATA

UNITS: LBai/A  
PRINTED: 10/20/86

WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

CORN PRE HERBICIDE EVALUATION

RESEARCH BY: R.M. HAYES  
COOPERATOR :  
TOTAL REPS : 4  
REPORTED BY: R.M. HAYES

COUNTY: MADISON  
LAST UPDATE: 10/20/86  
EXPT. STATUS: 4  
RELATED FILE: NONE

ST: TN COUNTRY: USA  
INITIATED: 04/18/86  
COMPLETED: 09/15/86  
SOURCE: UNIVER.

PREVIOUS CROP: SOYBEANS PLOT SIZE(LxW): 10.0x 30.0 SOIL pH :6.2  
PREVIOUS TILL: CONVENTIONAL SOIL TEXTURE: COLLINS SIL SOIL OM%: 01.0  
FERTILITY: 45-45-45 ROW WIDTH: 030 EXPERIMENTAL DESIGN: RC2  
MISC. 1: FURADAN 15G AT 10 LB/A (1.5 LB AI/A) NUMBER OF REPS: 4  
MISC. 2: 100-0-0 ON 14 MAY 86 AS ANHYD. AMMONIA REPORT TYPE: INTERIM

PLANTING DATE: 04/18/86 CROP CULTIVAR: PIONEER 3147  
HARVEST DATE : 09/15/86 SEASONAL RAINFALL DURING EXPERIMENT  
RESIDUE TAKEN: N EARLY: OPT MID: WET LATE: DRY

APPLICATION INFO	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
APPLICATION DATE	04/18/86	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J108/86	J 0/00	J 0/00	J 0/00	J 0/00
GEN. APPLIC TYPE	PRE				
AIR/SOIL TEMP(F)	072/072	/	/	/	/
% REL. HUMIDITY	%				
WIND DIR/VELOC.	SE/02	/	/	/	/
ROOT/LEAF MOIST.	OPT/	/	/	/	/
INCRP. EQUIP.					
INCRP. DEPTH in	.	.	.	.	.
SPRAYER TYPE	CO2BACKPACK				
SPRAYER GPA/PSI	18.0/032	18.0/	. /	. /	. /
NOZZLE TYPE	FLATFAN8002				
RAIN / IRRIG. in					
0-24 hr/1-3 days	. /00.7	. / .	. / .	. / .	. / .
4-7 days/2nd wk	. /00.1	. / .	. / .	. / .	. / .
3rd / 4th week	. /00.6	. / .	. / .	. / .	. / .

SPEC.	DEN-	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
CODE	SPECIES	SITY	HTin/STG.	HTin/STG.	HTin/STG.	HTin/STG.

***** CROP *****						
ZEAMA   CORN		/	/	/	/	/

***** PEST *****						
XANST   COMMONCOCKLEBUR	/	/	/	/	/	/
AMACH   SMOOTH PIGWEED	/	/	/	/	/	/
IPOHG   ENTIRELEAF MG	/	/	/	/	/	/
BRAPP   BR.LF.SIGNAL GR	/	/	/	/	/	/
SORHA   JOHNSONGRASS	/	/	/	/	/	/
	/	/	/	/	/	/
	/	/	/	/	/	/
	/	/	/	/	/	/

CORN PRE HERBICIDE EVALUATION

=====

EXPERIMENT COMMENTS

KEY TO DATA HEADERS

- 1.CRINJU=CROP INJURY
- 2.XANST=COMMON COCKLEBUR
- 3.AMACH=SMOOTH PIGWEED
- 4.POLPY=PENNSYLVANIA SMARTWEED
- 5.SORHA=JOHNSONGRASS
- 6.Y/BU/AC=YIELD IN BUSHEL  
PER ACRE WITH A MOISTURE  
OF 15.5% AND A TEST WEIGHT  
OF 56 POUNDS PER BUSHEL.  
CORN WAS HARVESTED AT A  
MOISTURE OF 16% AND HAD  
A TEST WEIGHT OF 55.04  
POUNDS PER BUSHEL.

=====

APPROVED BY: \_\_\_\_\_ SUBMITTED BY: \_\_\_\_\_

DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

PROJ. NUM.:  
FILE NAME: WPRECR6

INTERIM DATA

UNITS: LBai/A  
PRINTED: 10/20/86

WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

CORN PRE HERBICIDE EVALUATION

RESEARCH BY: R.M. HAYES  
COOPERATOR :  
TOTAL REPS : 4  
APPL: PRE =J108/86

COUNTY: MADISON  
LAST UPDATE: 10/20/86  
EXPT. STATUS: 4

ST: TN COUNTRY: USA  
INITIATED: 04/18/86  
COMPLETED: 09/15/86

=====										
PESTICIDE		APPLI-%CRINJU%ANST %AMACH %POLPY %SORHA %YIELD								
TRT. -----		CATION%VISUAL %CONTROL%CONTROL%CONTROL%CONTROL%BU/ACRE%								
NO. NAME	FORMU. LBai/A	TYPE	J150/86	J150/86	J150/86	J150/86	J150/86	J258/86		
=====										
01	DUAL	EC 8.0 1.25 PRE	0	96	99	99	71	143.4		
	AATREX	FL 4.0 1.5 PRE								
02	DUAL	EC 8.0 3.0 PRE	0	95	99	99	89	132.0		
	AATREX	FL 4.0 1.5 PRE								
03	CG180937	EC 8.0 1.25 PRE	0	97	99	99	68	129.5		
	AATREX	FL 4.0 1.5 PRE								
04	CG180937	EC 8.0 3.0 PRE	3	96	99	99	87	140.4		
	AATREX	FL 4.0 1.5 PRE								
05	LASSO	EC 4.0 2.0 PRE	0	99	99	99	78	128.4		
	AATREX	FL 4.0 1.5 PRE								
06	LASSO	EC 4.0 4.0 PRE	0	98	99	99	88	142.5		
	AATREX	FL 4.0 1.5 PRE								
07	BICEP-D	FL 6.0 2.7 PRE	0	86	99	99	81	141.9		
08	BICEP-D	FL 6.0 5.4 PRE	0	98	99	99	96	143.8		
09	SAN 582	EC 8.0 1.5 PRE	0	40	98	98	73	139.7		
10	SAN 582	EC 8.0 3.0 PRE	13	70	99	97	90	133.0		
11	SAN 582	EC 8.0 1.5 PRE	0	97	99	99	89	146.5		
	AATREX	FL 4.0 1.5 PRE								
12	SAN 582	EC 8.0 1.5 PRE	3	86	99	99	96	129.3		
	BLADEX	FL 4.0 2.0 PRE								
13	RS 118	DF 80% 3.0 PRE	6	95	99	99	66	131.8		
14	RS 238	DF 80% 2.4 PRE	5	97	99	99	74	131.4		
15	RS 238	DF 80% 3.2 PRE	0	97	98	99	81	138.9		

CORN PRE HERBICIDE EVALUATION

APPL: PRE - J108/86

TRT.	PESTICIDE	APPLI-	%CRINJU	%XANST	%AMACH	%POLPY	%SORHA	YIELD					
NO. NAME	FORMU. LBai/A	TYPE	J150/86	J150/86	J150/86	J150/86	J150/86	J258/86	BU/ACRE				

16	PPDNL	EC 4.0	1.0	PRE	0	95	99	99	61	131.4			
	AATREX	FL 4.0	1.5	PRE									

17	SC 5676	EC 7.0	0.75	PRE	0	90	99	99	75	138.1			
	AATREX	FL 4.0	1.5	PRE									

18	SC 5676	EC 7.0	1.5	PRE	0	97	99	99	92	132.9			
	AATREX	FL 4.0	1.5	PRE									

19	WEEDY CK				0	0	0	0	0	114.8			
----	----------	--	--	--	---	---	---	---	---	-------	--	--	--

20	WEEDFREE				0	99	99	99	96	139.1			
----	----------	--	--	--	---	----	----	----	----	-------	--	--	--

LS0(0.05) =	7	13	1	2	19	17.8
STANDARD DEVIATION =	5	9	1	1	13	12.3
COEFF. OF VARIABILITY =	355	10	1	1	17	9.1



PROD. NUM.:  
FILE NAME: WPOSTCR6

INTERIM DATA

UNITS: LBa1/A  
PRINTED: 10/20/86

WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

POSTEMERGENCE WEED CONTROL IN CORN

RESEARCH BY: R.M. HAYES  
COOPERATOR :  
TOTAL REPS : 4  
REPORTED BY: R.M. HAYES

COUNTY: MADISON  
LAST UPDATE: 10/20/86  
EXPT. STATUS: 4  
RELATED FILE: NONE

ST: TN COUNTRY: USA  
INITIATED: 04/18/86  
COMPLETED: 09/15/86  
SOURCE: UNIVER.

=====

PREVIOUS CROP: SOYBEAN	PLOT SIZE(LxW): 6.3x 30.0	SOIL pH :6.2
PREVIOUS TILL: CONVENTIONAL	SOIL TEXTURE: COLLIN SIL	SOIL OM%: 01.0
FERTILITY: 45-45-45 AT PLANT	ROW WIDTH: 030	EXPERIMENTAL DESIGN: RCB
MISC. 1: 100-0-0 AS ANHYDROUS AMMONIA MAY 14,1986	NUMBER OF REPS: 4	
MISC. 2: FURADAN 2 LB AI/A IN FURROW	REPORT TYPE: INTERIM	

=====

=====

PLANTING DATE: 04/18/86	CROP CULTIVAR: PIONEER 3147
HARVEST DATE : 09/15/86	SEASONAL RAINFALL DURING EXPERIMENT
RESIDUE TAKEN: N	EARLY: OPT MID: WET LATE: DRY

=====

=====

APPLICATION INFO	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
APPLICATION DATE	05/02/86	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J122/86	J 0/00	J 0/00	J 0/00	J 0/00
GEN. APPLIC TYPE	POST3				
AIR/SOIL TEMP(F)	070/	/	/	/	/
% REL. HUMIDITY	040%				
WIND DIR/VELOC.	NW/05	/	/	/	/
ROOT/LEAF MOIST.	OPT/DRY	/	/	/	/
INCRP. EQUIP.					
INCRP. DEPTH in	.	.	.	.	.
SPRAYER TYPE	CO2BACKPACK				
SPRAYER GPA/PSI	20.0/032	. /	. /	. /	. /
NOZZLE TYPE	FLATFAN8002				
RAIN / IRRIG. in					
0-24 hr/1-3 days	. / .	. / .	. / .	. / .	. / .
4-7 days/2nd wk	. /00.6	. / .	. / .	. / .	. / .
3rd / 4th week	01.3/01.1	. / .	. / .	. / .	. / .

=====

=====

SPEC.	DEN-	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
CODE	SPECIES	SITY	HTin/STG.	HTin/STG.	HTin/STG.	HTin/STG.

=====

\*\*\*\*\* CROP \*\*\*\*\*

ZEAMA   CORN		/	/	/	/	/
--------------	--	---	---	---	---	---

\*\*\*\*\* PEST \*\*\*\*\*

XANST   COMMONCOCKLEBUR	/	/	/	/	/
AMACH   SMOOTH PIGWEED	/	/	/	/	/
ELEIN   GOOSEGRASS	/	/	/	/	/
	/	/	/	/	/
	/	/	/	/	/
	/	/	/	/	/
	/	/	/	/	/

PROJ. NUM.: INTERIM DATA UNITS: LBai/A  
FILE NAME: WPOSTCR6 PRINTED: 10/20/86  
WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

POSTEMERGENCE WEED CONTROL IN CORN

=====

EXPERIMENT COMMENTS

KEY TO DATA HEADERS

-----  
1.CRINJU=CROP INJURY  
2.CRINJU=CROP INJURY  
3.SORHA=JOHNSONGRASS  
4.AMACH=SMOOTH PIGWEED  
5.XANST=COMMON COCKLEBUR  
6.BRAPP=BROADLEAF SIGNALGRASS  
7.Y/BU/AC=YIELD IN BUSHEL  
PER ACRE WITH A MOISTURE  
OF 15.5% AND A TEST WEIGHT  
OF 56 POUNDS PER BUSHEL.  
CORN WAS HARVESTED AT A  
MOISTURE OF 16% AND HAD  
A TEST WEIGHT OF 55.04  
POUNDS PER BUSHEL.

=====

APPROVED BY: \_\_\_\_\_ SUBMITTED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

PROJ. NUM.:  
FILE NAME: WPOSTCR6

INTERIM DATA

UNITS: LBai/A  
PRINTED: 10/20/86

WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

POSTEMERGENCE WEED CONTROL IN CORN

RESEARCH BY: R.M. HAYES  
COOPERATOR :  
TOTAL REPS : 4  
APPL: POST3=J122/86

COUNTY: MADISON  
LAST UPDATE: 10/20/86  
EXPT. STATUS: 4

ST: TN COUNTRY: USA  
INITIATED: 04/18/86  
COMPLETED: 09/15/86

=====											
PESTICIDE		APPLI-; %CRINJU; %CRINJU; %SORHA ; %AMACH ; %XANST ; %BRAPP ; Y/BU/AC;									
TRT. -----		CATION; VISUAL ; VISUAL ; CONTROL; CONTROL; CONTROL; CONTROL; HARVEST;									
NO. NAME	FORMU. LBai/A	TYPE	J125/86	J150/86	J150/86	J150/86	J150/86	J150/86	J150/86	J258/86	
=====											
01	SC0051 EC 3.0 0.75 POST		10	0	21	96	97	66	133.1		
02	SC0051 EC 3.0 1.0 POST		9	0	33	97	95	65	127.5		
03	SC0051 EC 3.0 0.75 POST		8	0	46	98	96	65	125.5		
	AATREX FL 4.0 1.0 POST										
04	SC0456 EC 2.0 0.5 POST		8	0	26	56	83	68	124.1		
05	SC0456 EC 2.0 1.0 POST		8	0	76	97	98	96	124.3		
06	SC0456 EC 2.0 0.5 POST		4	0	48	99	99	65	123.3		
	AATREX FL 4.0 1.0 POST										
07	SC0735 WP 75% 0.5 POST		5	0	65	99	98	98	131.8		
08	SC0735 WP 75% 1.0 POST		8	0	83	98	98	99	122.0		
09	SC0735 WP 75% 0.5 POST		3	0	28	98	97	96	118.0		
	AATREX FL 4.0 1.0 POST										
10	SC0098 EC 1.7 0.03 POST		20	0	0	0	0	0	103.1		
11	SC0098 EC 1.7 0.06 POST		25	0	8	23	36	28	111.9		
12	SC0098 EC 1.7 0.125 POST		34	3	45	72	47	32	120.2		
13	SC0098 EC 1.7 0.03 POST		85	40	9	47	48	33	97.1		
	AGRIDEX %A 100% 1.25% POST										
14	SC0098 EC 1.7 0.06 POST		90	53	19	37	29	0	66.0		
	AGRIDEX %A 100% 1.25% POST										
15	2,4-DLVE EC 4.0 1.0 POST		25	16	6	69	76	25	53.4		
16	AATREX FL 4.0 1.0 POST		9	0	0	98	97	32	120.4		
	AGRIDEX %A 100% 1.25% POST										

POSTEMERGENCE WEED CONTROL IN CORN

APPL: POST3=J122/86

=====											
PESTICIDE			APPLI-;%CRINJU;%CRINJU;%SORHA;%AMACH;%XANST;%BRAPP;%Y/BU/AC;								
TRT.-----			CATION;VISUAL;VISUAL;CONTROL;CONTROL;CONTROL;CONTROL;HARVEST;								
NO.	NAME	FORMU. LBai/A	TYPE	J125/86	J150/86	J150/86	J150/86	J150/86	J150/86	J258/86	
=====											
17	TANDEM	EC 4.0 0.75	POST	23	3	84	99	99	66	122.8	
	AATREX	FL 4.0 1.5	POST								
	AGRIDEX	%A 100% 1.25%	POST								
18	PROWL	EC 4.0 0.75	POST	19	0	29	98	98	63	114.1	
	AATREX	FL 4.0 1.0	POST								
19	MARKSMAN	SC 3.2 1.6	POST	26	28	40	99	99	75	104.9	
20	RS 010	WP 45% 0.9	POST	11	3	23	98	97	56	123.3	
	AATREX	FL 4.0 1.0	POST								
21	RS 010	WP 45% 0.9	POST	13	0	21	98	97	65	113.2	
	BLADEX	WP 80% 0.75	POST								
22	BUCTRIL-	FL 3.0 .75	POST	38	0	13	97	97	25	109.1	
	AATREX										
23	BUCTRIL	EC 2.0 0.38	POST	31	0	0	71	69	47	107.8	
24	BAS 514	WP 50% 0.5	POST	13	0	0	93	58	62	97.2	
	AGRIDEX	%A 100% 1.25%	POST								
25	BAS 514	WP 50% 1.0	POST	10	10	28	95	89	62	86.3	
	AGRIDEX	%A 100% 1.25%	POST								
26	WEEDY CK			3	0	5	23	5	0	112.1	
27	WEEDFREE			5	0	96	99	99	99	123.9	
	LSD(0.05) =			10	10	29	35	33	NA	18.0	
	STANDARD DEVIATION =			7	7	20	25	23	NA	12.4	
	COEFF. OF VARIABILITY =			34	120	65	31	29	NA	11.1	

PROJ. NUM.: INTERIM DATA UNITS: LBai/A  
 FILE NAME: CASOROT6 PRINTED: 10/29/86  
 WESTERN TENNESSEE AGRICULTURAL STATION

# SICKLEPOD CONTROL IN CORN

RESEARCH BY: R.M. HAYES COUNTY: MADISON ST: TN COUNTRY: USA  
 COOPERATOR : LAST UPDATE: 10/29/86 INITIATED: 05/11/84  
 TOTAL REPS : 4 EXPT. STATUS: 4 COMPLETED: 10/09/86  
 REPORTED BY: R.M. HAYES RELATED FILE: \*\*NONE\*\* SOURCE: UNIVER.

PREVIOUS CROP: SAME PLOT SIZE(LxW): 13.3x 30.0 SOIL pH :6.2  
 PREVIOUS TILL: CONVENTIONAL/NO-TILL SOIL TEXTURE: COLLINS S.L. SOIL OM%: 01.0  
 FERTILITY: P-VH,K-VH./0-40-40 ROW WIDTH: 040 EXPERIMENTAL DESIGN: SPPL  
 MISC. 1: CORN 150LB/N/A NUMBER OF REPS: 4  
 MISC. 2: CORN PLOTS RECIEVED 2.0 LB AI/A. REPORT TYPE: INTERIM

PLANTING DATE: 04/30/86 CROP CULTIVAR: PIONEER 3147  
 HARVEST DATE : 09/16/86 SEASONAL RAINFALL DURING EXPERIMENT  
 RESIDUE TAKEN: N EARLY: OPT MID: WET LATE: DRY

APPLICATION INFO	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
APPLICATION DATE	04/30/86	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J120/86	J 0/00	J 0/00	J 0/00	J 0/00
GEN. APPLIC TYPE	PRE				
AIR/SOIL TEMP(F)	/	/	/	/	/
% REL. HUMIDITY	%				
WIND DIR/VELOC.	/	/	/	/	/
ROOT/LEAF MOIST.	OPT/	/	/	/	/
INCorp. EQUIP.	NONE				
INCorp. DEPTH in	.	.	.	.	.
SPRAYER TYPE	CO2BACKPACK				
SPRAYER GPA/PSI	018.0/032	. /	. /	. /	. /
NOZZLE TYPE	FLATFAN8002				
RAIN / IRRIG. in					
0-24 hr/1-3 days	. / .	. / .	. / .	. / .	. / .
4-7 days/2nd wk	. / .	. / .	. / .	. / .	. / .
3rd / 4th week	. / .	. / .	. / .	. / .	. / .

SPEC.	SPECIES	DEN-SITY	APPLIC. 1 HTin/STG.	APPLIC. 2 HTin/STG.	APPLIC. 3 HTin/STG.	APPLIC. 4 HTin/STG.	APPLIC. 5 HTin/STG.
*****	***** CROP *****	*****	*****	*****	*****	*****	*****
ZEAMX	CORN		/	/	/	/	/
*****	***** PEST *****	*****	*****	*****	*****	*****	*****
CASOB	SICKLEPOD		/	/	/	/	/
			/	/	/	/	/
			/	/	/	/	/
			/	/	/	/	/
			/	/	/	/	/
			/	/	/	/	/
			/	/	/	/	/
			/	/	/	/	/

PROJ. NUM.: INTERIM DATA UNITS: LBai/A  
FILE NAME: CASOROT6 PRINTED: 10/29/86  
WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

SICKLEPOD CONTROL IN CORN

=====

EXPERIMENT COMMENTS

ENTIRE EXPERIMENTAL AREA TREATED WITH DUAL 8E (1.5PT/A)FOR ANNUAL  
GRASS AND BROADLEAF WEEDS. (PARAQUAT AT 0.5 LB/A ON NO-TILL PORTION).  
SURFACTANT(0.25%) ADDED TO BOTH SCEPTER AND CLASSIC.

=====

APPROVED BY: \_\_\_\_\_ SUBMITTED BY: \_\_\_\_\_

DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

# SICKLEPOD CONTROL IN CORN

APPL: PRE = J120/86

01	CORN/ AATREX	FL	4.0	2.0	PRE	97	0	16	17	6	6	98.2	17.1	52.7	74.3	17.5	52.2
02	CORN/ AATEX	FL	4.0	3.0	PRE	98	0	11	16	5	5	90.5	17.2	53.6	85.8	16.9	51.0
03	CORN/ WEEDY-CK					0	0	198	81	50	29	87.3	17.4	52.7	76.1	17.2	52.4
04	CORN/ WEEDFREE					95	0	0	0	0	0	98.1	17.1	53.4	77.6	16.9	55.1
	Whole plot mean					73	0	56	29	15	10	93.5	17.2	53.1	78.4	17.1	52.6
	LSD(0.05) =					2	NA	62	18	27	11	26.2	2.7	1.7	27.5	2.7	3.1
	STANDARD DEVIATION =					1	NA	39	11	17	7	16.4	1.7	1.1	17.2	1.7	1.9
	COEFF. OF VARIABILITY =					2	NA	69	38	111	70	17.5	9.7	2.0	21.9	9.9	3.7

PROJ. NUM.:  
 FILE NAME: WHRMYCRG  
 WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

INTERIM DATA

UNITS: LBai/A  
 PRINTED: 10/20/86

# CORN RESPONSE TO HARMONY HERBICIDE

RESEARCH BY: R.M. HAYES  
 COOPERATOR :  
 TOTAL REPS : 4  
 REPORTED BY: R.M. HAYES

COUNTY: MADISON  
 LAST UPDATE: 10/20/86  
 EXPT. STATUS: 4  
 RELATED FILE: NONE

ST: TN COUNTRY: USA  
 INITIATED: 04/18/86  
 COMPLETED: 09/15/86  
 SOURCE: UNIVER.

PREVIOUS CROP: SOYBEANS  
 PREVIOUS TILL: CONVENTIONAL  
 FERTILITY: 45-45-45 AT PLANTING  
 MISC. 1: 100-0-0 ANHYDROUS AMMONIA MAY 14  
 MISC. 2: FURADAN 2.0 LB AI/A IN FURROW AT PLANT

PLOT SIZE(LxW): 10.0x 30.0 SOIL pH :6.2  
 SOIL TEXTURE: COLLINS SIL SOIL OM%: 01.0  
 ROW WIDTH: 030 EXPERIMENTAL DESIGN: RCB  
 NUMBER OF REPS: 4  
 REPORT TYPE: INTERIM

PLANTING DATE: 04/18/86  
 HARVEST DATE : 09/15/86  
 RESIDUE TAKEN: N

CROP CULTIVAR: PIONEER 3147  
 SEASONAL RAINFALL DURING EXPERIMENT  
 EARLY: OPT MID: WET LATE: DRY

APPLICATION INFO	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
APPLICATION DATE	05/02/86	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J122/86	J 0/00	J 0/00	J 0/00	J 0/00
GEN. APPLIC TYPE	POST3				
AIR/SOIL TEMP(F)	070/	/	/	/	/
% REL. HUMIDITY	%				
WIND DIR/VELOC.	NW/05	/	/	/	/
ROOT/LEAF MOIST.	OPT/DRY	/	/	/	/
INCORP. EQUIP.					
INCORP. DEPTH in	.	.	.	.	.
SPRAYER TYPE	CO2BACKPACK				
SPRAYER GPA/PSI	18.0/032	. /	. /	. /	. /
NOZZLE TYPE	FLATFAN8002				
RAIN / IRRIG. in					
0-24 hr/1-3 days	. / .	. / .	. / .	. / .	. / .
4-7 days/2nd wk	. /00.6	. / .	. / .	. / .	. / .
3rd / 4th week	01.3/01.1	. / .	. / .	. / .	. / .

SPEC.	DEN-	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
CODE	SPECIES	SITY	HTin/STG.	HTin/STG.	HTin/STG.	HTin/STG.
*****	CROP	*****	*****	*****	*****	*****
ZEAMA	CORN	/	/	/	/	/
*****	PEST	*****	*****	*****	*****	*****
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/



PROJ. NUM.: INTERIM DATA UNITS: LBai/A  
FILE NAME: WHRMYCR6 PRINTED: 10/20/86  
WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

CORN RESPONSE TO HARMONY HERBICIDE

=====

EXPERIMENT COMMENTS

KEY TO DATA HEADERS

- 1.CRSTUN=CROP STUNTING  
2.Y/BU/AC=YIELD IN BUSHEL  
PER ACRE WITH A MOISTURE  
OF 15.5% AND A TEST WEIGHT  
OF 56 POUNDS PER BUSHEL.  
CORN WAS HARVESTED AT A  
MOISTURE OF 16% AND HAD  
A TEST WEIGHT OF 55.04  
POUNDS PER BUSHEL.

=====

APPROVED BY: \_\_\_\_\_ SUBMITTED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

CORN RESPONSE TO HARMONY HERBICIDE

RESEARCH BY: R.M. HAYES  
COOPERATOR :  
TOTAL REPS : 4  
APPL: POST3=J122/86

COUNTY: MADISON  
LAST UPDATE: 10/20/86  
EXPT. STATUS: 4

ST: TN COUNTRY: USA  
INITIATED: 04/18/86  
COMPLETED: 09/15/86

PESTICIDE		APPLI-!%CRSTUN!Y/BU/AC!																	
TRT.	-----	CATION!VISUAL !HARVEST!																	
NO. NAME	FORMU. LBai/A	TYPE!J150/86!J258/86!																	

01	HARMONY	DF 75%	0.007	EPOST	0	90.2
	X-77	%A 100%	0.5%	EPOST		
02	HARMONY	DF 75%	0.015	EPOST	8	94.5
	X-77	%A 100%	0.5%	EPOST		
03	HARMONY	DF 75%	0.021	EPOST	15	89.7
	X-77	%A 100%	0.5%	EPOST		
04	HARMONY	DF 75%	0.03	EPOST	34	89.3
	X-77	%A 100%	0.5%	EPOST		
05	WEEDFREE				0	97.0
		LSD(0.05) =	11	12.5		
		STANDARD DEVIATION =	7	8.1		
		COEFF. OF VARIABILITY =	64	8.8		

PROJ. NUM.: INTERIM DATA UNITS: LBai/A  
FILE NAME: WRESDCRG PRINTED: 10/29/86  
WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

EFFECTS OF SCEPTER AND CLASSIC ON CORN

RESEARCH BY: R.M.HAYES COUNTY: MADISON ST: TN COUNTRY: USA  
COOPERATOR : LAST UPDATE: 10/29/86 INITIATED: 04/18/86  
TOTAL REPS : 4 EXPT. STATUS: 3 COMPLETED: 09/15/86  
REPORTED BY: R.M.HAYES RELATED FILE: NONE SOURCE: UNIVER.

PREVIOUS CROP: SOYBEANS PLOT SIZE(LxW): 10.0x 30.0 SOIL pH :6.2  
PREVIOUS TILL: CONVENTIONAL SOIL TEXTURE: COLLINS SIL SOIL OM%: 01.0  
FERTILITY: 45-45-45;100#N AS A.A. ROW WIDTH: 030 EXPERIMENTAL DESIGN: RCB  
MISC. 1: FURADAN 15G AT 20 LB/A IN FURROW NUMBER OF REPS: 4  
MISC. 2: LASSO + AATREX (2.0 + 2.0 LB AI/A)PRE REPORT TYPE: INTERIM

PLANTING DATE: 04/18/86 CROP CULTIVAR: PIONEER 3147  
HARVEST DATE : 09/15/86 SEASONAL RAINFALL DURING EXPERIMENT  
RESIDUE TAKEN: N EARLY: OPT MID: WET LATE: DRY

APPLICATION INFO					
APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5	
APPLICATION DATE	04/18/86	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J108/86	J 0/00	J 0/00	J 0/00	J 0/00
GEN. APPLIC TYPE	PPI	/	/	/	/
AIR/SOIL TEMP(F)	072/072	/	/	/	/
% REL. HUMIDITY	%	/	/	/	/
WIND DIR/VELOC.	SE/02	/	/	/	/
ROOT/LEAF MOIST.	OPT/	/	/	/	/
INCRP. EQUIP.	TINE DO-ALL	/	/	/	/
INCRP. DEPTH in	2 IN	.	.	.	.
SPRAYER TYPE	CO2BACKPACK	.	.	.	.
SPRAYER GPA/PSI	18.0/032	. /	. /	. /	. /
NOZZLE TYPE	FLATFAN8002	.	.	.	.
RAIN / IRRIG. in					
0-24 hr/1-3 days	. /00.7	. / .	. / .	. / .	. / .
4-7 days/2nd wk	. /00.8	. / .	. / .	. / .	. / .
3rd / 4th week	. /00.6	. / .	. / .	. / .	. / .

SPEC. | DEN- | APPLIC. 1 | APPLIC. 2 | APPLIC. 3 | APPLIC. 4 | APPLIC. 5 |  
CODE | SPECIES | SITY | HTin/STG. | HTin/STG. | HTin/STG. | HTin/STG. | HTin/STG. |

\*\*\*\*\* CROP \*\*\*\*\*  
ZEAMA | CORN | | / | / | / | / | / |

\*\*\*\*\* PEST \*\*\*\*\*  
	/	/	/	/	/
	/	/	/	/	/
	/	/	/	/	/
	/	/	/	/	/
	/	/	/	/	/
	/	/	/	/	/
	/	/	/	/	/

PROJ. NUM.:  
FILE NAME: WRESDCRG

INTERIM DATA

UNITS: LBai/A  
PRINTED: 10/29/86

WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

EFFECTS OF SCEPTER AND CLASSIC ON CORN

RESEARCH BY: R.M.HAYES

COUNTY: MADISON

ST: TN COUNTRY: USA

COOPERATOR :

LAST UPDATE: 10/29/86

INITIATED: 04/18/86

TOTAL REPS : 4

EXPT. STATUS: 3

COMPLETED: 09/15/86

APPL: PPI =J108/86

NO.	NAME	FORMU. LBai/A	TYPE	APPLI- CATION	SCRINJU VISUAL	PLT.WT. G/10PLT	Y/BU/AC HARVEST								
-----	------	---------------	------	------------------	-------------------	--------------------	--------------------	--	--	--	--	--	--	--	--

01	SCEPTER	SC 1.5	.0025 PPI	0	2.86	106.8									
02	SCEPTER	SC 1.5	0.025 PPI	43	2.29	92.5									
03	SCEPTER	SC 1.5	.05 PPI	90	1.67	46.6									
04	CLASSIC	DF 25%	.0005 PPI	0	2.82	108.0									
05	CLASSIC	DF 25%	.0054 PPI	33	2.70	98.9									
06	CLASSIC	DF 25%	.0107 PPI	40	2.50	95.0									
07	WEEDFREE			0	2.77	113.6									

LSD(0.05) =	11	.38	31.4
STANDARD DEVIATION =	8	.26	21.1
COEFF. OF VARIABILITY =	26	10.25	22.4

PROJ. NUM.:  
FILE NAME: SC&CLCR6

INTERIM DATA

UNITS: LBai/A  
PRINTED: 10/21/86

WESTERN TENNESSEE AGRICULTURAL EXPERIMENT STATION

F.C. EFFECT OF SCEPTER & CLASSIC ON CORN

RESEARCH BY: R.M.HAYES  
COOPERATOR :  
TOTAL REPS : 4  
REPORTED BY: R.M.HAYES

COUNTY: MADISON  
LAST UPDATE: 10/21/86  
EXPT. STATUS: 4  
RELATED FILE: \*\*NONE\*\*  
ST: TN COUNTRY: USA  
INITIATED: 05/17/85  
COMPLETED: 09/12/86  
SOURCE: UNIVER.

PREVIOUS CROP: SOYBEANS  
PREVIOUS TILL: NO-TILL  
FERTILITY: HIGH-P,HIGH-K  
MISC. 1: 45-45-45 APPLIED AT PLANTING  
MISC. 2: 100-0-0 APPLIED AS 82% A.A.  
PLOT SIZE(LxW): 10.0x 30.0  
SOIL pH :7.2  
SOIL TEXTURE: COLLINS S.L. SOIL OM%: 01.1  
ROW WIDTH: 030  
EXPERIMENTAL DESIGN: RC3  
NUMBER OF REPS: 4  
REPORT TYPE: INTERIM

PLANTING DATE: 04/17/86  
HARVEST DATE: 09/12/86  
RESIDUE TAKEN: N  
CROP CULTIVAR: PIONEER 3147  
SEASONAL RAINFALL DURING EXPERIMENT  
EARLY: OPT MID: WET LATE: DRY

APPLICATION INFO	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
APPLICATION DATE	05/17/85	05/24/85	05/31/85	/ /	/ /
JULIAN DATE/YEAR	J137/85	J144/85	J151/85	J 0/00	J 0/00
GEN. APPLIC TYPE	PRE	POST1	POST2		
AIR/SOIL TEMP(F)	080/	072/	085/	/	/
% REL. HUMIDITY	%				
WIND DIR/VELOC.	/	/	/	/	/
ROOT/LEAF MOIST.	OPT/	/DRY	/DRY	/	/
INCORP. EQUIP.					
INCORP. DEPTH in	.	.	.	.	.
SPRAYER TYPE	C02BACKPACK	C02BACKPACK	C02BACKPACK		
SPRAYER GPA/PSI	018.0/032	018.0/032	018.0/032	. /	. /
NOZZLE TYPE	FLATFAN8002	FLATFAN8002	FLATFAN8002		
RAIN / IRRIG. in					
0-24 hr/1-3 days	. / .	. / .	. / .	. / .	. / .
4-7 days/2nd wk	. / .	. / .	. / .	. / .	. / .
3rd / 4th week	. / .	. / .	. / .	. / .	. / .

SPEC.	DEN-	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
CODE	SPECIES	SITY HTin/STG.	HTin/STG.	HTin/STG.	HTin/STG.	HTin/STG.
*****	***** CROP *****					
ZEAMA	CORN	/	/	/	/	/

*****	***** PEST *****					
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/
		/	/	/	/	/

PROJ. NUM.:  
FILE NAME: SC&CLCRG

INTERIM DATA

UNITS: LBai/A  
PRINTED: 10/21/86

WESTERN TENNESSEE AGRICULTURAL EXPERIMENTATION STATION

F.C. EFFECT OF SCEPTER & CLASSIC ON CORN

=====

EXPERIMENT COMMENTS

KEY TO DATA HEADERS

1. CORN/HT=CORN HEIGHT IN INCHES  
MEASURED ON JUNE 9.
2. Y/BU/AC=YIELD IN BUSHEL  
PER ACRE WITH A MOISTURE  
OF 15.5% AND A TEST WEIGHT  
OF 56 POUNDS PER BUSHEL.  
CORN WAS HARVESTED AT A  
MOISTURE OF 18.8% AND HAD  
A TEST WEIGHT OF 53.76  
POUNDS PER BUSHEL.

OUR OBJECTIVE IN THIS EXPERIMENT WAS TO EVALUATE THE RESPONSE  
OF NO-TILL CORN THE YEAR FOLLOWING SCEPTER AND CLASSIC APPLICATIONS.  
THERE WAS NO EARLY SEASON INJURY, NO CONSISTENT PLANT HEIGHT EFFECT,  
AND NO YIELD REDUCTION DUE TO TREATMENT. IT SHOULD BE NOTED THAT  
THE PH OF THIS EXPERIMENTAL AREA RANGED FROM 7.1 TO 7.4.

=====

APPROVED BY: \_\_\_\_\_ SUBMITTED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

PROJ. NUM.:  
FILE NAME: SC&CLCR6

INTERIM DATA

UNITS: LBai/A  
PRINTED: 10/21/86

W E S T E R N T E N N E S S E E A G R I E X P S T A T I O N

F.C. EFFECT OF SCEPTER & CLASSIC ON CORN

RESEARCH BY: R.M.HAYES

COUNTY: MADISON

ST: TN COUNTRY: USA

COOPERATOR :

LAST UPDATE: 10/21/86

INITIATED: 05/17/85

TOTAL REPS : 4

EXPT. STATUS: 4

COMPLETED: 09/12/86

APPL: PRE =J137/85 POST1=J144/85 POST2=J151/85

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=====
      PESTICIDE      APPLI-|CORN/HT|Y|BU/AC|
TRT. ----- CATION|INCHES |HARVEST|
NO. NAME      FORMU. LBai/A TYPE|J160/86|J255/86|
=====
```

01	SCEPTER	EC 1.5	0.125 PRE	58.5	119.4
02	SCEPTER	EC 1.5	0.25 PRE	55.4	114.3
03	CLASSIC	DF 25%	0.03 PRE	54.1	107.8
04	CLASSIC	DF 25%	0.06 PRE	47.4	116.9
05	SCEPTER	EC 1.5	0.125 1WAP	58.1	117.5
06	SCEPTER	EC 1.5	0.25 1WAP	58.3	111.7
07	CLASSIC		0.015 1WAP	57.3	112.5
08	CLASSIC		0.03 1WAP	59.1	124.0
09	SCEPTER		0.125 2WAP	53.9	120.9
10	SCEPTER		0.25 2WAP	59.5	114.2
11	CLASSIC		0.015 2WAP	55.5	118.3
12	CLASSIC		0.03 2WAP	51.6	110.3
13	SCEPTER		0.125 3WAP	58.9	125.1
14	SCEPTER		0.25 3WAP	57.6	119.7
15	CLASSIC		0.015 3WAP	55.0	105.9
16	CLASSIC		0.03 3WAP	50.6	110.5
17	BASAGRAN BLAZER	0.25 2WAP 0.125 2WAP		56.6	125.1
18	BASAGRAN BLAZER	0.5 3WAP 0.25 3WAP		60.8	124.6

F.C. EFFECT OF SCEPTER & CLASSIC ON CORN

APPL: PRE =J137/85 POST1=J144/85 POST2=J151/85

PESTICIDE		APPLI-;CORN/HT;Y/BU/AC;									
TRT. -----		CATION;INCHES ;HARVEST;									
NO. NAME	FORMU. LBai/A	TYPE;J160/86;J255/86;									

19 WEEDY CK 58.1 112.3

20 WEEDFREE 52.4 108.9

LSD(0.05) = 5.9 28.7  
STANDARD DEVIATION = 4.1 19.9  
COEFF. OF VARIABILITY = 7.3 17.1