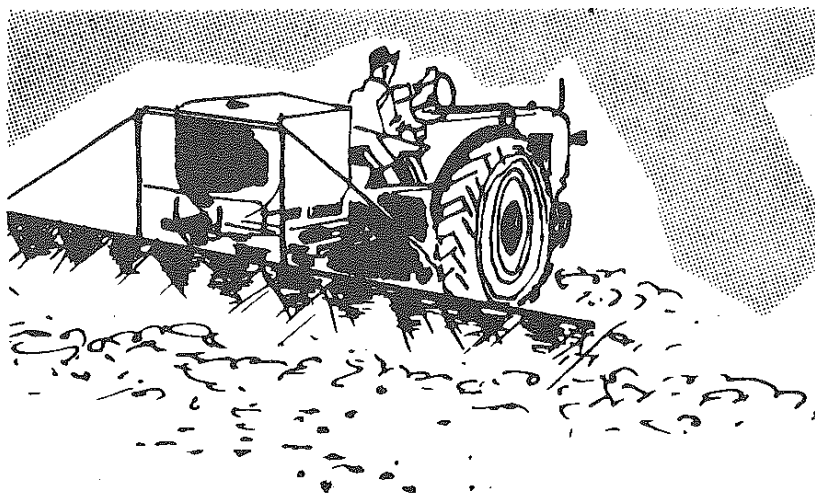


Keeping Up with Research No. 29

Report of 1976 Herbicide Data



AGRICULTURAL EXPERIMENT STATION
Floyd W. Smith, director

COOPERATIVE EXTENSION SERVICE
John O. Dunbar, director

Kansas State University of Agriculture and
Applied Science, Manhattan

Keeping Up with Research No. 29

Report of

1976 Herbicide Data

OLIVER G. RUSS, Weed Control Research
Agronomist, Department of Agronomy

Contribution No. 1630-E, Department of Agronomy

We appreciate the efforts and cooperation of those who made this work possible:

Experiment Field Superintendents

C. W. Knight - Ottawa
L. D. Maddux - Rossville/Topeka
W. A. Moore - Hutchinson
R. J. Raney - Scandia/Belleville
R. F. Sloan - Powhattan
M. C. Lundquist - Minneola

Graduate Students

S. M. Irons
L. Schilling

Publications and public meetings by the Kansas Agricultural Experiment Station are available and open to the public regardless of race, color, national origin, sex, or religion.

The information in this report is to inform cooperators in industry, colleagues at the University, producers, and other interested persons of the results of the 1976 field evaluation of herbicides used to control weeds in corn, grain sorghum, and soybeans. The information does not constitute a recommendation or endorsement. Weed control suggestions may be found in Report of Progress 284, "Chemical Weed Control in Field Crops, 1977."

Special acknowledgment and thanks go to the following firms for supporting the research reported:

Amchem Products, Inc.
American Cyanamid Company
BASF Wyandotte Corporation
Chemagro Corporation
Chipman Chemical Company, Inc.
CIBA-Geigy Corporation
Diamond Shamrock Company
Elanco Products Company
E. I. DuPont De Nemours and Company
Gulf Oil Chemical Company
Hercules Incorporated
Hopkins Agricultural Chemical Company
Mobil Chemical Company
Monsanto Chemical Company
NOR-AM Agricultural Products, Inc.
Shell Chemical Company
Stauffer Chemical Company
US Borax Research Corporation
Velsicol Chemical Corporation

CONTENTS

	Page
Herbicide Evaluation on Corn at:	
Manhattan.	4
Powhattan.	6
Topeka	8
Scandia. . . . .	.10
Herbicide Evaluation on Soybeans at:	
Manhattan. . . . .	.14
Powhattan. . . . .	.16
Belleville . . . . .	.18
Rossville. . . . .	.20
Hesston. . . . .	.22
Herbicide Evaluation on Grain Sorghum at:	
Manhattan. . . . .	.24
Powhattan. . . . .	.26
Ottawa . . . . .	.28
Belleville . . . . .	.30
Hutchinson . . . . .	.34
Minneola . . . . .	.36

Weed Control Research Plot Data

1. Location: Manhattan Cooperator: KSU Agronomy, O. G. Russ
2. Soil: Texture Muir Silt Loam pH 6.1 Organic Matter 2.4
3. Planting: Date 5/14 Rate 1 plant/foot Depth 2"
4. Crop Corn Variety Trojan TXS 102
5. Fertilizer Applied: N 120 P 46 K 0
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10' x 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 5/10
Preemergent 5/14 Early Post 6/4
10. Precipitation after planting: 5/5-1.0" 5/24-1.35" 5/27-.34"
6/11-.05" 6/23-1.33" 6/24-1.66"
6/28-.42" 6/29-.60" 7/17-.75"
11. Date of Crop Injury Rating 6/11; Weed Control Rating 6/11
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 9/14
14. Summary: (Weed Control - predominant species, etc.)
Prior to planting, the plot area was overseeded with alfalfa and red clover seed screenings. Equal quantities of rough and smooth pigweed made up the pigweed population. A sparse velvet leaf population did not warrant a rating. The foxtail population was equally divided among species of giant, yellow, and green foxtail.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
Although significant crop injury was noted in some treatments, the injury did not reduce the yields.
16. Summary: (Crop Yield)
Crop yield was reduced because of the low amount of rainfall received.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
CORN 1976
MANHATTAN

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. SUTAN + ATRAZINE	4.0 + 1.0	PPI	67.8	10.0	10.0	0.0
2. ERADICANE + CYCLE	4.0 + 1.5	PPI	67.9	10.0	9.8	0.0
3. SUTAN + CYCLE	4.0 + 1.5	PPI	69.0	10.0	10.0	0.0
4. LASSO + ATRAZINE	2.5 + 1.5	PPI	69.6	10.0	9.7	0.0
5. ERADICANE + BLADEX	4.0 + 1.5	PPI	73.8	10.0	10.0	0.0
6. CGA-24705 + CYCLE	1.5 + 1.5	PRE	55.8	10.0	10.0	0.0
7. LASSO	3.0	PRE	59.2	8.2	10.0	0.0
8. PROWL	2.0	PRE	65.0	6.0	9.7	0.0
9. LASSO + BANVEL	2.5 + 0.5	PRE	65.7	9.3	10.0	0.0
10. LASSO + LOROX	2.0 + 1.0	PRE	65.7	9.8	10.0	0.5
11. BLADEX + ATRAZINE	2.0 + 1.0	PRE	65.7	10.0	9.8	0.0
12. H-22234 + ATRAZINE	1.5 + 1.0	PRE	65.8	10.0	9.8	1.3
13. LASSO + BLADEX	2.0 + 1.5	PRE	66.1	10.0	10.0	0.3
14. RAMROD/ATRAZINE	4.14	PRE	67.8	10.0	10.0	0.0
15. LASSO + ATRAZINE	2.0 + 1.5	PRE	69.0	10.0	10.0	0.0
16. CYCLE	2.8	PRE	69.6	8.8	9.7	0.0
17. CGA-24705	2.5	PRE	70.2	6.5	10.0	0.0
18. BEXTON 4L + ATRAZINE	3.0 + 1.0	PRE	70.7	10.0	9.8	0.0
19. ATRAZINE	2.4	PRE	71.3	10.0	9.7	0.0
20. BLADEX	3.0	PRE	72.2	9.2	9.8	0.0
21. CGA-24705+ATRAZINE	1.5 + 1.2	PRE	72.2	10.0	10.0	0.7
22. PROWL + ATRAZINE	1.5 + 1.5	PRE	72.3	10.0	10.0	0.2
23. LASSO + MODOWN	2.0 + 1.5	PRE	75.9	10.0	10.0	1.5
24. HAND WEED			70.2	10.0	10.0	0.0
25. NO TREATMENT			25.3	0.0	0.0	0.0
TEST AVERAGES			66.5	9.1	9.5	0.2
L.S.D. (.05)			9.0	0.9	0.4	0.6

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Powhattan Cooperator: R. F. Sloan
2. Soil: Texture Silty Clay Loam pH 5.8 Organic Matter 2.8
3. Planting: Date 5/4/76 Rate 18,640 seeds/Acre Depth 1½
4. Crop Corn Variety Pioneer 3184
5. Fertilizer Applied: N 120 P -- K --
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10' X 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 5/4
Preemergent 5/4 Early Post ---
10. Precipitation after planting: 5/5-.01" 5/6-1.77" 5/13-.09"
5/16-.53" 5/17-.12" 5/23-.04" 5/24-.08" 5/29-.16"
June-3.47" July-1.30" Aug.-.94" Sept.-3.06" Oct.-1.06"
11. Date of Crop Injury Rating 6/9; Weed Control Rating 6/9 and 10/26
12. Crop Maturity (Silking, 50% headed, etc.) 8-10" high and mature
13. Date Harvested 10/27/76
14. Summary: (Weed Control - predominant species, etc.)

Weeds were essentially 100% velvetleaf. Grass control was excellent. Preplant treatments clearly gave the best weed control with the exception of PROWL in the preemerge treatments. This material was outstanding in 1976.

15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)

Crop injury was only very slight if it existed at all.

16. Summary: (Crop Yield)

Crop yields were quite variable and generally low because of an unfavorable season for corn and the choice of hybrid for the type of season that developed.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
CORN 1976
POWHATTAN

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. ERADICANE + CYCLE	4.0 + 1.5	PPI	41.5	10.0	10.0	0.0
2. LASSO + ATRAZINE	2.5 + 1.5	PPI	45.2	9.6	10.0	0.0
3. SUTAN + ATRAZINE	4.0 + 1.0	PPI	53.6	9.7	10.0	0.0
4. SUTAN + CYCLE	4.0 + 1.5	PPI	56.8	9.8	10.0	0.0
5. ERADICANE + BLADEX	4.0 + 1.5	PPI	59.8	10.0	10.0	0.0
6. CGA-24705	2.5	PRE	41.6	1.3	10.0	0.0
7. CYCLE	2.8	PRE	42.9	6.8	10.0	0.0
8. CGA-24705 + ATRAZINE	1.5 + 1.2	PRE	43.3	7.2	10.0	0.0
9. LASSO + BLADEX	2.0 + 1.5	PRE	43.9	7.7	10.0	0.0
10. LASSO	3.0	PRE	47.4	4.7	10.0	0.0
11. LASSO + ATRAZINE	2.0 + 1.5	PRE	48.0	8.0	10.0	0.0
12. RAMROD/ATRAZINE	4.14	PRE	48.3	7.7	10.0	0.0
13. LASSO + BANVEL	2.5 + 0.5	PRE	51.8	4.0	10.0	0.0
14. H-22234 + ATRAZINE	1.5 + 1.0	PRE	52.0	6.0	10.0	0.0
15. LASSO + LOROX	2.0 + 1.0	PRE	53.9	7.0	10.0	0.0
16. CGA-24705 + CYCLE	1.5 + 1.5	PRE	55.2	5.2	10.0	0.0
17. ATRAZINE	2.4	PRE	57.6	8.5	10.0	0.0
18. BLADEX	3.0	PRE	59.7	7.0	10.0	0.0
19. PROWL + ATRAZINE	1.5 + 1.5	PRE	60.2	9.7	10.0	0.0
20. LASSO + MDDOWN	2.0 + 1.5	PRE	60.7	9.5	10.0	0.0
21. PROWL	2.0	PRE	67.5	10.0	10.0	0.0
22. BLADEX + ATRAZINE	2.0 + 1.0	PRE	68.2	7.0	10.0	0.0
23. BEXTON 4L + ATRAZINE	3.0 + 1.0		49.7	4.7	10.0	0.0
24. HANDWEED			52.3	10.0	10.0	0.0
25. NO TREATMENT			42.1	0.0	3.0	0.0
TEST AVERAGES			52.1	7.2	9.7	0.0
L.S.D. (.05)			NS	2.1	1.7	0.0

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Rossville Cooperator: Larry Maddux
2. Soil: Texture Eudora S.L. pH 5.8 Organic Matter 1.9
3. Planting: Date 4/21 Rate 26,690 Depth 2"
4. Crop Corn Variety Bo Jac X56
5. Fertilizer Applied: N 48.56 P 33.2 K ---
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10' X 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 4/19
Preemergent 4/21 Early Post ---
10. Precipitation after planting: 13.53" of water applied by irrigation
4/21-.38" 4/24-.30" 4/25-.05" 4/27-.02" 4/28-.36"
5/1-.04" 5/6-2.22" 5/7-.15"
11. Date of Crop Injury Rating _____; Weed Control Rating _____
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 9/20

14. Summary: (Weed Control - predominant species, etc.)

Major weed species were pigweed and crabgrass with a variable stand of sunflower and morning glory. Early season weed control was good for most of the herbicides, but late season control was fairly poor. Late season crabgrass, pigweed, and sunflower pressure was heavy in many plots.

15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)

16. Summary: (Crop Yield)

The treatments on which corn yield was decreased were generally the ones that had a high infestation of broadleaved weeds, especially sunflower.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
CORN 1976
KANSAS RIVER VALLEY

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CPOP*** INJURY
				BROADLEAF	GRASSY	
1. ERADICANE + CYCLE	4.0 + 1.5	PPI	171.5	8.7	7.0	0.0
2. LASSO + ATRAZINE	2.5 + 1.5	PPI	176.4	9.0	6.3	0.0
3. ERADICANE + BLADEX	4.0 + 1.5	PPI	181.5	8.3	7.7	0.0
4. SUTAN + CYCLE	4.0 + 1.5	PPI	194.5	9.3	9.0	0.0
5. SUTAN + ATRAZINE	4.0 + 1.0	PPI	227.9	9.7	8.7	0.0
6. CGA-24705	2.5	PRE	79.7	7.0	9.3	0.0
7. CYCLE	2.8	PRE	116.2	8.7	9.3	0.0
8. LASSO + LOROX	2.0 + 1.0	PRE	117.4	8.3	8.3	0.0
9. PROWL	2.0	PRE	121.0	7.3	7.7	0.0
10. LASSO + MCDOWN	2.0 + 1.5	PRE	127.3	8.3	8.7	0.0
11. CGA-24705 + CYCLE	1.5 + 1.5	PRE	141.2	9.0	9.7	0.0
12. PROWL + ATRAZINE	1.5 + 1.5	PRE	149.8	9.3	8.7	0.0
13. BLADEX	3.0	PRE	154.4	9.0	9.0	0.0
14. BEXTON 4L + ATRAZINE	3.0 + 1.0	PRE	158.2	9.3	8.0	0.0
15. LASSO + BLADEX	2.0 + 1.5	PRE	164.9	8.7	8.3	0.0
16. LASSO + BANVEL	2.5 + 0.5	PRE	171.7	9.3	8.7	2.0
17. H-22234 + ATRAZINE	1.5 + 1.0	PRE	177.0	9.7	8.0	0.0
18. LASSO + ATRAZINE	2.0 + 1.5	PRE	177.9	9.7	8.7	0.0
19. BLADEX + ATRAZINE	2.0 + 1.0	PRE	180.0	9.3	9.3	0.0
20. RAMROD/ATRAZINE	4.14	PRE	182.1	9.7	8.7	0.0
21. CGA-24705+ATRAZINE	1.5 + 1.2	PRE	183.1	9.3	9.0	0.0
22. LASSO	3.0	PRE	184.7	8.3	8.3	0.0
23. ATRAZINE	2.4	PRE	184.8	9.0	9.0	0.0
24. HAND WEED			147.1	10.0	10.0	0.0
25. NO TREATMENT			94.6	1.7	2.0	0.0
TEST AVERAGES			158.6	8.6	8.3	0.1
L.S.D. (.05)			49.1	1.4	1.7	0.3

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Scandia (Conv.) Cooperator: R. J. Raney
2. Soil: Texture Crete S.C.L. pH 5.8 Organic Matter 2.0
3. Planting: Date May 5, 1976 Rate 26,997 plants/A Depth 2 inches
4. Crop Corn Variety NC⁺ 85
5. Fertilizer Applied: N 210 P 20 K none
6. Seedbed Condition: () Excellent () Fair () Poor () _____
7. Replications Three Plot Size 10 ft x 30 ft
8. Gallons of Spray per Acre 20 Carrier: () Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated May 5
Preemergent May 5 Early Post None
10. Precipitation after planting: May 12 - .52" May 13 - .12"
May 16 - .33" May 22 - 1.33" May 26 - .08"
May 31 - .53" June 22 - .15" June 23 - .94"
11. Date of Crop Injury Rating None; Weed Control Rating 9/15/76
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 9/17/76
14. Summary: (Weed Control - predominant species, etc.)

15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)

16. Summary: (Crop Yield)

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

NO-TILL
CORN 1976
SCANDIA

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. CGA-247C5	2.5	PRE	80.2	7.3	7.7	0.0
2. CGA-24705+ATRAZINE	1.5 + 1.2	PRE	82.2	9.3	9.0	0.0
3. LASSO + BLADEX	2.0 + 1.5	PRE	84.0	8.3	8.7	0.0
4. CYCLE	2.8	PRE	84.8	9.3	8.7	0.0
5. LASSO + ATRAZINE	2.0 + 1.5	PRE	85.8	9.3	9.3	0.0
6. LASSO + BANVEL	2.5 + 0.5	PRE	86.5	9.3	9.3	0.0
7. BLADEX + ATRAZINE	2.0 + 1.0	PRE	88.0	9.0	8.3	0.0
8. BEXTON 4L + ATRAZINE	3.0 + 1.0	PRE	88.4	9.3	8.7	0.0
9. LASSO	3.0	PRE	88.5	8.0	9.7	0.0
10. CGA-24705 + CYCLE	1.5 + 1.5	PRE	89.1	9.0	9.0	0.0
11. LASSO + LOROX	2.0 + 1.0	PRE	89.5	9.3	9.0	0.0
12. PROWL	2.0	PRE	90.9	8.7	9.0	0.0
13. H-22234 + ATRAZINE	1.5 + 1.0	PRE	91.6	9.7	8.3	0.0
14. BLADEX	3.0	PRE	92.8	7.3	8.3	0.0
15. PROWL + ATRAZINE	1.5 + 1.5	PRE	94.4	9.7	9.7	0.0
16. LASSO + MGDOWN	2.0 + 1.5	PRE	97.6	8.0	9.0	0.0
17. RAMROD/ATRAZINE	4.14	PRE	109.2	9.7	9.3	0.0
18. ATRAZINE	2.4	PRE	111.1	9.3	7.7	0.0
19. HAND WEED			85.6	10.0	10.0	0.0
20. NO TREATMENT			97.5	6.0	6.3	0.0
TEST AVERAGES			90.9	8.8	8.7	0.0
L.S.D. (.05)			NS	2.0		0.0

* WHEN APPLIED: PRE (COMPLETE COVERAGE AFTER PLANTING)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Scandia (No-Till) Cooperator: R. J. Raney
2. Soil: Texture Crete S.C.L. pH 5.8 Organic Matter 2.0
3. Planting: Date 5/5 Rate 27,600/Acre Depth 2"
4. Crop Corn Variety NC⁺ 85
5. Fertilizer Applied: N 190 P 20 K ---
6. Seedbed Condition: (X) Excellent () Fair () Poor () ---
7. Replications 3 Plot Size 10' x 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated ---
Preemergent 5/5 Early Post ---
10. Precipitation after planting: 5/12-.52" 5/13-.12" 5/16-.33"
5/22-1.33" 5/26-.08" 5/31-.53" 6/22-.15" 6/23-.94"
11. Date of Crop Injury Rating ---; Weed Control Rating 10/14
12. Crop Maturity (Silking, 50% headed, etc.) ---
13. Date Harvested 10/14
14. Summary: (Weed Control - predominant species, etc.)
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
16. Summary: (Crop Yield)

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
CORN 1976
SCANDIA

NO.	TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
					BROADLEAF	GRASSY	
1.	ERADICANE + CYCLE	4.0 + 1.5	PPI	106.7	8.7	10.0	0.0
2.	SUTAN + CYCLE	4.0 + 1.5	PPI	112.9	9.3	10.0	0.0
3.	LASSO + ATRAZINE	2.5 + 1.5	PPI	117.4	9.3	10.0	0.0
4.	ERADICANE + BLADEX	4.0 + 1.5	PPI	123.2	9.3	10.0	0.0
5.	SUTAN + ATRAZINE	4.0 + 1.0	PPI	125.7	9.3	10.0	0.0
6.	PROWL	2.0	PRE	104.6	7.7	10.0	0.0
7.	H-22234 + ATRAZINE	1.5 + 1.0	PRE	109.7	8.3	10.0	0.0
8.	LASSO + LOPOX	2.0 + 1.0	PRE	110.6	9.3	10.0	0.0
9.	RAMROD/ATRAZINE	4.14	PRE	113.7	9.3	10.0	0.0
10.	CGA-24705+ATRAZINE	1.5 + 1.2	PRE	113.9	10.0	10.0	0.0
11.	CGA-24705 + CYCLE	1.5 + 1.5	PRE	114.7	8.3	10.0	0.0
12.	PROWL + ATRAZINE	1.5 + 1.5	PRE	114.7	9.3	10.0	0.0
13.	LASSO	3.0	PRE	116.7	8.3	10.0	0.0
14.	CYCLE	2.8	PRE	117.0	9.0	10.0	0.0
15.	LASSO + MODOWN	2.0 + 1.5	PRE	117.2	8.7	10.0	0.0
16.	BEXTON 4L + ATRAZINE	3.0 + 1.0	PRE	119.8	9.3	10.0	0.0
17.	BLADEX	3.0	PRE	119.9	9.3	10.0	0.0
18.	LASSO + BLADEX	2.0 + 1.5	PRE	120.9	9.0	10.0	0.0
19.	CGA-24705	2.5	PRE	121.1	8.3	10.0	0.0
20.	LASSO + ATRAZINE	2.0 + 1.5	PRE	123.7	9.0	10.0	0.0
21.	BLADEX + ATRAZINE	2.0 + 1.0	PRE	123.8	9.3	10.0	0.0
22.	LASSO + BANVEL	2.5 + 0.5	PRE	124.9	7.7	10.0	0.0
23.	ATRAZINE	2.4	PRE	126.7	8.7	10.0	0.0
24.	HAND WEED			124.6	8.3	10.0	0.0
25.	NO TREATMENT			105.7	3.7	7.7	0.0
TEST AVERAGES				117.2	8.7	9.9	0.0
L.S.D. (.05)				NS	1.9	0.8	0.0

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Manhattan Cooperator: KSU Agronomy, O. G. Russ
2. Soil: Texture Muir Silt Loam pH 6.1 Organic Matter 2.4
3. Planting: Date 6/3/76 Rate 60#/Acre Depth 1"
4. Crop Soybeans Variety Williams
5. Fertilizer Applied: N 18 P 40 K ---
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10' X 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 6/2
Preemergent 6/3 Early Post 7/1
10. Precipitation after planting: 6/11-.05" 6/17-1.10"
6/23-1.33" 6/24-1.66" 6/28-.42"
6/29-.60" 7/16-.05" 7/17-.75"
11. Date of Crop Injury Rating 7/7; Weed Control Rating 7/7
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 10/7
14. Summary: (Weed Control - predominant species, etc.)
Before being planted the plot area was overseeded with alfalfa and red clover seed screenings. Equal quantities of rough and smooth pigweed made up the pigweed population. A sparse velvet leaf population did not warrant a rating. The foxtail population was equally divided among species of giant, yellow, and green foxtail.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
Although some treatments had significant crop injury ratings, the yield of these plots was not reduced by the injury.
16. Summary: (Crop Yield)
Yield was lower than average because of the low amount of rainfall.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
SOYBEANS 1976
MANHATTAN

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. TREFLAN + SENCOR	.75 + .38	PPI	32.6	9.8	9.7	0.3
2. COBEX + SENCOR	0.38+0.38	PPI	33.9	9.2	9.8	0.0
3. AMEX + SENCOR	1.5 + 0.38	PPI	34.7	9.0	9.8	0.0
4. PROWL + SENCOR	0.75+0.38	PPI	34.7	9.7	8.8	0.0
5. VERNAM + SENCOR	2.5 + 0.38	PPI	34.7	9.5	9.2	0.0
6. BASLN + BSGRN EP	1.0 +1.0	PPI	36.6	9.2	9.8	0.2
7. TREFLAN + SENCOR PRE	.75 + 0.5	PPI	37.1	9.5	10.0	0.0
8. TREFLAN	1.0	PPI	39.0	9.3	10.0	0.0
9. TOLBAN + SENCOR	.75 + .38	PPI	39.2	9.7	8.8	0.2
10. TOLBAN	1.0	PPI	40.0	8.7	10.0	0.0
11. AMIBEN	3.0	PRE	27.7	7.0	7.0	0.0
12. CGA-24705	2.5	PRE	28.4	7.7	7.5	0.0
13. PROWL + SENCOR	0.75 + 0.38	PRE	30.0	6.2	8.5	0.0
14. LASSO + LOROX	1.5 + 1.0	PRE	31.0	9.3	9.2	0.0
15. SURFLAN + SENCOR	1.0 + 0.38	PRE	31.3	7.5	8.0	0.0
16. H-22234 + SENCOR	2.0 + 0.38	PRE	31.3	7.7	8.3	0.0
17. CGA-24705 + SENCOR	1.5 + 0.38	PRE	31.3	7.5	7.7	0.0
18. SENCOR	0.5	PRE	31.5	6.5	8.0	0.0
19. LASSO	2.5	PRE	31.6	7.8	8.7	0.0
20. LASSO + SENCOR	2.0 + 0.38	PRE	34.0	8.5	8.8	0.0
21. LASSO + MODOWN	2.0 + 1.5	PRE	34.2	9.5	8.5	0.7
22. LASSO + BSGRN EP	2.5 + 1.0	PRE	35.5	7.8	8.5	0.0
23. LASSO + RP-17623	1.5 + 1.0	PRE	36.1	9.5	8.5	0.0
24. HAND WEED			34.8	10.0	10.0	0.0
25. NO TREATMENT			26.8	0.0	0.0	0.0
TEST AVERAGES			33.5	8.2	8.5	0.1
L.S.D. (.05)			3.8	1.3	1.3	0.3

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Powhattan Cooperator: R. F. Sloan
2. Soil: Texture Silty Clay Loam pH 5.8-6.0 Organic Matter 2.8
3. Planting: Date 5/27 Rate 60#/Acre Depth 1-1½"
4. Crop Soybeans Variety Williams
5. Fertilizer Applied: N 5.2 P 20.8 K 10.4
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10' X 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 5/27
Preemergent 5/27 Early Post 6/18
10. Precipitation after planting: 5/29-.08", 5/30-.08", 6/6-.08", 6/15-.11",
6/18-.10", 6/23-.06", 6/24-1.15", 6/27-.06", 6/28-1.81"
July-1.30", Aug.-.94", Sept.- 3.06", Oct.-1.06"
11. Date of Crop Injury Rating _____; Weed Control Rating 11/3
12. Crop Maturity (Silking, 50% headed, etc.) Mature
13. Date Harvested 11/4

14. Summary: (Weed Control - predominant species, etc.)

Essentially 100% velvetleaf. Inadequate rainfall resulted in little or no early control of seeds, particularly in the plots treated before plants emerged, so all plots were cultivated June 23. Plots were reasonably clean the remainder of the season and many of the weeds that survived were quite stunted.

15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)

There was very little, if any, crop injury because of inadequate rainfall following treatment to activate the herbicides. Some stands were a little thin because of planter malfunction.

16. Summary: (Crop Yield)

This was a fairly good test in spite of the variations in stands and again the preplant treatments were clearly superior for weed control.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
SOYBEANS 1976
POWHATTAN

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. TREFLAN	1.0	PPI	19.3	4.0	9.7	0.0
2. TREFLAN + SENCOR PRE	.75 + 0.5	PPI	19.3	6.3	10.0	0.0
3. TOLBAN	1.0	PPI	19.6	5.0	9.8	0.0
4. PROWL + SENCOR	.75 + .38	PPI	19.9	9.7	9.8	0.0
5. COBEX + SENCOR	.38 + .38	PPI	21.0	9.5	8.8	0.0
6. VERNAM + SENCOR	2.5 + .38	PPI	21.4	9.8	9.7	0.0
7. TREFLAN + SENCOR	.75 + .38	PPI	21.6	8.3	10.0	0.0
8. AMEX + SENCOR	1.5 + .38	PPI	22.1	9.8	9.3	0.0
9. BASLN + BSGRN E.P.	1.0 + 1.0	PPI	22.4	9.0	9.7	0.0
10. TOLBAN + SENCOR	.75 + .38	PPI	22.4	9.7	9.0	0.0
11. CGA-24705	2.5	PRE	19.4	4.0	10.0	0.0
12. CGA-24705 + SENCOR	1.5 + .38	PRE	19.8	5.7	10.0	0.0
13. LASSO	2.5	PRE	20.6	3.3	9.8	0.0
14. AMIBEN	3.0	PRE	21.4	5.8	10.0	0.0
15. LASSO + PP-17623	1.5 + 1.0	PRE	21.6	8.2	10.0	0.0
16. PROWL + SENCOR	.75 + .38	PRE	21.7	5.7	10.0	0.0
17. SENCOR	0.5	PRE	21.8	5.3	10.0	0.0
18. H-22234 + SENCOR	2.0 + .38	PRE	22.2	4.7	9.8	0.0
19. LASSO + MODOWN	2.0 + 1.5	PRE	22.4	9.2	5.8	0.0
20. LASSO + SENCOR	2.0 + .38	PRE	22.4	3.3	10.0	0.0
21. LASSO + LOROX	1.5 + 1.0	PRE	24.0	5.0	8.3	0.0
22. SURFLAN + SENCOR	1.0 + .38	PRE	24.2	5.3	10.0	0.0
23. LASSO + BSGRN E.P.	2.5 + 1.0	PRE	26.3	8.0	10.0	0.0
24. HANDWEED			23.7	10.0	10.0	0.0
25. NO TREATMENT			19.5	2.7	6.5	0.0
TEST AVERAGES			21.6	6.7	9.6	0.0
L.S.D. (.05)			NS	2.7		0.0

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Belleville Cooperator: R. J. Raney
2. Soil: Texture Silt Loam pH 7.1 Organic Matter 1.8
3. Planting: Date 5/20 Rate 8 seeds/foot Depth 2"
4. Crop Soybeans Variety Mitchell
5. Fertilizer Applied: N --- P --- K ---
6. Seedbed Condition: (X) Excellent () Fair () Poor () ---
7. Replications 3 Plot Size 10' X 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 5/20
Preemergent 5/20 Early Post 6/16
10. Precipitation after planting: 5/22-.95" 5/23-.05" 5/24-.25"
June 1.74" July 1.89" August 1.10"
September 2.91" October .66"
11. Date of Crop Injury Rating ---; Weed Control Rating 6/30
12. Crop Maturity (Silking, 50% headed, etc.) ---
13. Date Harvested 10/13
14. Summary: (Weed Control - predominant species, etc.)

15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)

16. Summary: (Crop Yield)

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
SOYBEANS 1976
BELLEVILLE

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. TOLBAN	1.0	PPI	14.0	7.7	9.7	0.0
2. TREFLAN+SENCOR (PRE)	.75 + 0.5	PPI	14.2	8.3	9.7	0.0
3. BASLN + BSGRN(E.P.)	1.0 + 1.0	PPI	14.7	8.7	9.7	0.0
4. COBEX + SENCOR	.38 + .38	PPI	14.8	9.0	10.0	0.0
5. TREFLAN + SENCOR	.75 + .38	PPI	15.2	9.0	10.0	0.0
6. PROWL + SENCOR	.75 + .38	PPI	15.4	8.7	9.0	0.0
7. TREFLAN	1.0	PPI	15.8	8.0	9.3	0.0
8. VERNAM + SENCOR	2.5 + .38	PPI	16.1	8.7	9.7	0.0
9. AMEX + SENCOR	1.5 + .38	PPI	16.7	8.3	9.7	0.0
10. TOLBAN + SENCOR	.75 + .38	PPI	16.9	8.7	10.0	0.0
11. H-22234 + SENCOR	2.0 + .38	PRE	9.9	8.3	9.7	0.0
12. LASSO + BSGRN(E.P.)	2.5 + 1.0	PRE	10.1	9.3	9.3	0.0
13. LASSO	2.5	PRE	11.2	9.3	9.3	0.0
14. LASSO + SENCOR	2.0 + .38	PRE	12.5	9.3	9.7	0.0
15. SENCOR	0.5	PRE	12.7	8.3	8.7	0.0
16. AMIBEN	3.0	PRE	12.7	8.3	9.3	0.0
17. SURFLAN + SENCOR	1.0 + .38	PRE	13.8	8.3	9.0	0.0
18. PROWL + SENCOR	.75 + .38	PRE	13.8	8.0	9.3	0.0
19. LASSO + MODOWN	2.0 + 1.5	PRE	14.3	9.3	9.0	0.0
20. CGA-24705 + SENCOR	1.5 + .38	PRE	14.4	8.0	8.7	0.0
21. LASSO + LOROX	1.5 + 1.0	PRE	14.4	9.3	9.0	0.0
22. CGA-24705	2.5	PRE	14.9	7.7	9.7	0.0
23. LASSO + RP-17623	1.5 + 1.0	PRE	17.7	8.3	9.3	0.0
24. HAND WEED			15.4	4.3	1.3	0.0
25. NO TREATMENT			15.7	3.0	2.3	0.0
TEST AVERAGES			14.3	8.2	8.8	0.0
L.S.D. (.05)			NS	1.7	1.1	0.0

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Rossville Cooperator: Larry Maddux
2. Soil: Texture Eudora S.L. pH 5.8 Organic Matter 1.9
3. Planting: Date 5/13 Rate 10 seeds/foot Depth 1½"
4. Crop Soybeans Variety Pomona
5. Fertilizer Applied: N --- P --- K ---
6. Seedbed Condition: () Excellent () Fair () Poor () ---
7. Replications 3 Plot Size 10' X 30'
8. Gallons of Spray per Acre 20 Carrier: () Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated ---
Preemergent 5/13 Early Post ---
10. Precipitation after planting: 13.53" of water applied by irrigation

<u>5/13-.23"</u>	<u>5/15-.25"</u>	<u>5/16-.43"</u>	<u>5/17-.17"</u>
<u>5/23-.68"</u>	<u>5/24-.52"</u>	<u>5/27-.12"</u>	<u>5/30-.41"</u>
11. Date of Crop Injury Rating ---; Weed Control Rating ---
12. Crop Maturity (Silking, 50% headed, etc.) ---
13. Date Harvested 10/12
14. Summary: (Weed Control - predominant species, etc.)
Grassy weed pressure was light but variable. Broadleafed weed stands were relatively heavy, but quite variable. Early weed control was good, but stands of pigweed, sunflower, and morning glory increased as the growing season progressed.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
No reduction of stand or yield occurred on the low organic content, sandy soil as a result of crop injury.
16. Summary: (Crop Yield)

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
SOYBEANS 1976
KANSAS RIVER VALLEY

NO.	TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
					BROADLEAF	GRASSY	
1.	VERNAM + SENCOR	295 + .375	PPI	36.9	8.7	9.0	0.0
2.	PROWL + SENCOR	.75 + .375	PPI	39.4	7.3	8.0	0.3
3.	COBEX + SENCOR	.375 + .375	PPI	43.2	7.7	7.7	0.0
4.	TOLBAN + SENCOR	.75 + .375	PPI	45.2	6.7	8.0	0.0
5.	TOLBAN	1.0	PPI	46.5	7.3	8.0	0.0
6.	AMEX + SENCOR	1.5 + .375	PPI	46.8	7.0	7.3	0.0
7.	TREFLAN	1.0	PPI	48.8	9.0	9.3	0.0
8.	TREFLAN + SENCOR PE	.75 + 0.5	PPI	50.6	9.7	10.0	0.3
9.	TREFLAN + SENCOR TM	.75 + .375	PPI	53.6	8.7	9.0	0.7
10.	BASLN + BSGRN EP	1.0 + 1.0	PPI	54.4	9.0	9.3	2.0
11.	AMIBEN	3.0	PRE	30.3	4.3	7.3	0.0
12.	LASSO	2.5	PRE	34.4	9.0	9.3	0.0
13.	CGA-24705	2.5	PRE	34.8	8.7	9.7	0.0
14.	H-22234 + SENCOR	2.0 + .375	PRE	35.0	8.7	9.0	0.0
15.	LASSO + BSGRN EP	2.5 + 1.0	PRE	35.7	9.3	9.0	1.7
16.	LASSO + LOROX TM	1.5 + 1.0	PRE	36.9	9.0	9.0	0.0
17.	SURFLAN + SENCOR TM	1.0 + .375	PRE	40.2	9.0	9.3	0.0
18.	PROWL + SENCOR	.75 + .375	PRE	40.4	8.7	9.0	0.3
19.	SENCOR	0.5	PRE	41.1	9.0	8.3	0.0
20.	CGA-24705 + SENCOR	1.5 + .375	PRE	41.6	8.3	10.0	0.0
21.	LASSO + RP-17623	1.5 + 1.0	PRE	43.2	8.7	8.7	0.0
22.	LASSO + MDDJWN	2.0 + 1.5	PRE	43.2	9.3	7.7	0.0
23.	LASSO + SENCOR TM	2.0 + .375	PRE	45.4	9.3	9.3	0.3
24.	HAND WEED			37.6	10.0	10.0	0.0
25.	NO TREATMENT			29.9	1.3	1.0	0.0
TEST AVERAGES				41.4	8.1	8.5	0.2
L.S.D. (.05)				13.3	1.7	1.4	0.6

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Hesston Cooperator: Phillip Stahlman
2. Soil: Texture Ladysmith S.C.L. pH 5.5 Organic Matter 2.0
3. Planting: Date 6/16 Rate 60#/Acre Depth 1.0"
4. Crop Soybeans Variety Williams
5. Fertilizer Applied: N --- P --- K ---
6. Seedbed Condition: () Excellent () Fair (X) Poor () Dry
7. Replications 3 Plot Size 10' X 30'
8. Gallons of Spray per Acre _____ Carrier: () Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 6/16
Preemergent 6/16 Early Post 7/13
10. Precipitation after planting: Note Weed Control Summary Below

11. Date of Crop Injury Rating _____; Weed Control Rating _____
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested _____
14. Summary: (Weed Control - predominant species, etc.)

Moisture soon after herbicide application was sufficient to assure complete incorporation and chemical activation. Resulting weed control was excellent. Essentially no differences were observed among the treatments in control of redroot pigweed. No grasses were in the plot area, therefore, the 9.5 weed control rating for grasses.

15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)

No crop injury was noted.

16. Summary: (Crop Yield)

Soybean yields differed little because of the good weed control.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
SOYBEANS 1976
HESSTON

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. VERNAM + SENCOR	2.5 + .38	PPI	8.6	10.0	9.5	0.0
2. TREFLAN	1.0	PPI	8.7	10.0	9.5	0.0
3. TOLBAN + SENCOR	.75 + .38	PPI	9.5	10.0	9.5	0.0
4. TREFLAN + SENCOR	.75 + .38	PPI	9.6	10.0	9.5	0.0
5. TOLBAN	1.0	PPI	10.1	9.7	9.5	0.0
6. PROWL + SENCOR	.75 + .38	PPI	10.1	10.0	9.5	0.0
7. TREFLAN + SENCOR (PRE)	.75 + 0.5	PPI	10.2	10.0	9.5	0.0
8. AMEX + SENCOR	1.5 + .38	PPI	10.2	10.0	9.5	0.0
9. COBEX + SENCOR	.38 + .38	PPI	10.6	10.0	9.5	0.0
10. BASLN + BSGRN E.P.	1.0 + 1.0	PPI	10.7	9.8	9.5	0.0
11. CGA-24705	2.5	PRE	5.9	9.7	9.5	0.0
12. LASSO + BASAGRAN E.P.	2.5 + 1.0	PRE	8.6	10.0	9.5	0.0
13. PROWL + SENCOR	.75 + .38	PRE	9.1	10.0	9.5	0.0
14. LASSO + LOROX	1.5 + 1.0	PRE	9.4	9.9	9.5	0.0
15. CGA-24705 + SENCOR	1.5 + .38	PRE	9.7	10.0	9.5	0.0
16. AMIBEN	3.0	PRE	10.1	10.0	9.5	0.0
17. LASSO + RP-17623	1.5 + 1.0	PRE	10.1	10.0	9.5	0.0
18. SENCOR	0.5	PRE	10.4	10.0	9.5	0.0
19. H-22234 + SENCOR	2.0 + .38	PRE	10.4	9.9	9.5	0.0
20. LASSO	2.5	PRE	10.8	10.0	9.5	0.0
21. LASSO + MODOWN	2.0 + 1.5	PRE	11.1	10.0	9.5	0.0
22. SURFLAN + SENCOR	1.0 + .38	PRE	11.2	9.6	9.5	0.0
23. LASSO + SENCOR	2.0 + .38	PRE	12.5	10.0	9.5	0.0
24. HANDWEED			11.5	10.0	10.0	0.0
25. NO TREATMENT			8.8	0.0	0.0	0.0
TEST AVERAGES			9.9	9.5	9.1	0.0
L.S.D. (.05)			2.5	0.3	0.0	0.0

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Manhattan Cooperator: KSU, Agronomy, O. Russ
2. Soil: Texture Muir SL pH 6.1 Organic Matter 2.4
3. Planting: Date 6/8 Rate 1 plant/6" Depth 2"
4. Crop Grain Sorghum Variety DeKalb E-59
5. Fertilizer Applied: N 120 P 46 K 0
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10' x 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 6/8
Preemergent 6/8 Early Post 7/9
10. Precipitation after planting: 6/11 - .05" 6/17 - 1.10"
6/23 - 1.33" 6/24 - 1.66" 6/28 - .42"
6/29 - .60" 7/16 - .05" 7/17 - .75"
11. Date of Crop Injury Rating 7/14; Weed Control Rating 7/14
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 10/13
14. Summary: (Weed Control - predominant species, etc.)

Prior to planting, the plot area was overseeded with alfalfa and red clover seed screenings. Equal quantities of rough and smooth pigweed made up the pigweed population. A sparse velvet leaf population did not warrant a rating. The foxtail population was equally divided among species of giant, yellow, and green foxtail.

15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)

The crop injury noted did not affect yield.

16. Summary: (Crop Yield)

The yield was lower than average because rainfall was inadequate.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
GRAIN SORGHUM 1976
MANHATTAN

NO.	TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
					BROADLEAF	GRASSY	
1.	PROPAZINE	2.4	PPI	114.9	10.0	8.7	0.0
2.	ATRAZINE	2.0	PPI	118.4	10.0	9.2	0.0
3.	IGRAN + PROPAZINE	1.6 + 0.8	PPI	124.1	10.0	8.3	0.0
4.	IGRAN	2.4	PPI	125.0	9.8	9.0	0.0
5.	IGRAN + ATRAZINE	1.6 + 0.8	PPI	125.1	10.0	9.3	0.0
6.	H-101 ATRAZINE (FLO)	2.0	PRE	116.0	9.8	8.0	0.0
7.	MODOWN 4F + BEXTON 4L	1.5 + 3.0	PRE	121.3	8.5	9.7	0.0
8.	IGRAN	2.4	PRE	121.5	9.8	9.3	0.0
9.	BLADEX(WP)+PROP(WP)	1.0 + 1.0	PRE	122.5	10.0	9.7	0.0
10.	BEXTON 4L	4.0	PRE	123.4	7.8	9.5	0.0
11.	MODOWN(W)+RAMROD(W)	1.6 + 3.0	PRE	123.9	8.5	9.3	0.0
12.	H-100 ATRAZINE (WP)	2.0	PRE	123.9	10.0	9.0	0.0
13.	IGRAN + PROPAZINE	1.6 + 0.8	PRE	124.8	9.8	9.3	0.0
14.	ATRAZINE	2.0	PRE	125.6	10.0	9.2	0.0
15.	LOROX + BEXTON 4L	1.0 + 3.0	PRE	125.6	8.5	9.3	0.0
16.	BLADEX FL + BEXTON 4L	1.0+ 3.0	PRE	125.8	9.5	9.5	0.0
17.	RAMROD/ATRAZINE	4.14	PRE	127.9	9.7	9.7	0.0
18.	PROPAZINE	2.4	PRE	128.4	10.0	8.3	0.0
19.	IGRAN + ATRAZINE	1.6 + 0.8	PRE	128.8	10.0	9.0	0.0
20.	H-101 ATRAZINE (FLO)	2.0	E.P.	108.2	7.5	5.5	0.2
21.	ATRAZINE (4L)	2.0	E.P.	123.6	10.0	7.8	0.0
22.	H-100 ATRAZINE (WP)	2.0	E.P.	127.7	6.8	5.3	0.0
23.	LASSO + ATRAZINE	2.0 + 1.0	E.P.	137.1	8.8	6.0	0.0
24.	HAND WEED			119.4	10.0	10.0	0.0
25.	NO TREATMENT			108.5	0.0	0.0	0.0
TEST AVERAGES				122.9	9.0	8.3	0.0
L.S.D. (.05)				13.6	1.2	1.8	

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)
E.P. (EARLY POST)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Powhattan Cooperator: R. F. Sloan
2. Soil: Texture Silty Clay Loam pH 5.8 - 6.0 Organic Matter 2.8
3. Planting: Date 5/27 Rate 5.0#/Acre Depth 1.0 - 1½"
4. Crop Grain Sorghum Variety Asgrow Capitan
5. Fertilizer Applied: N 105 P 21 K 11
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10' X 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 5/27
Preemergent 5/27 Early Post 6/18
10. Precipitation after planting: 5/29-.08", 5/30-.08", 6/6-.08",
6/15-.11", 6/18-.10", 6/23-.06", 6/24-1.15", 6/27-.06", 6/28-1.81",
July-1.30", Aug.-.94", Sept.-3.06", Oct.-1.06"
11. Date of Crop Injury Rating _____; Weed Control Rating 6/22 and 10/11
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 10/12
14. Summary: (Weed Control - predominant species, etc.)
Essentially 100% velvetleaf. Extremely weedy early in season because of inadequate rainfall to activate herbicides so all plots were cultivated June 23. They turned out then to be a nice set of plots.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
Any crop injury that occurred was very slight, in most cases barely detectable.
16. Summary: (Crop Yield)
Crop yield was exceptionally good considering the dry season. Test weights were high.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
GRAIN SORGHUM 1976
POWHATTAN

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. ATRAZINE	2.0	PPI	100.3	9.9	10.0	1.3
2. IGRAN + PROPAZINE	1.6 + 0.8	PPI	103.8	9.6	10.0	1.0
3. IGRAN	2.4	PPI	105.8	9.8	10.0	1.3
4. PROPAZINE	2.4	PPI	107.3	9.9	10.0	1.7
5. IGRAN + ATRAZINE	1.6 + 0.8	PPI	107.4	10.0	10.0	1.7
6. BLADEX(F) + BEXTON 4L	1.0 + 3.0	PRE	102.7	6.0	10.0	1.0
7. MODDOWN(W) + RAMROD(W)	1.6 + 3.0	PRE	104.7	9.8	9.8	4.0
8. BEXTON 4L	4.0	PRE	109.0	3.7	10.0	1.3
9. RAMROD/ATRAZINE	4.14	PRE	109.5	6.0	9.9	1.0
10. IGRAN + ATRAZINE	1.6 + 0.8	PRE	111.3	8.2	10.0	1.3
11. ATRAZINE	2.0	PRE	111.3	6.2	9.7	1.3
12. H-101 ATRAZINE (FLO)	2.0	PRE	113.0	1.7	6.2	1.3
13. BLADEX(WP) + PROP(WP)	1.0 + 1.0	PRE	115.4	4.8	9.9	1.3
14. PROPAZINE	2.4	PRE	116.1	5.5	9.8	1.0
15. H-100 ATRAZINE (WP)	2.0	PRE	116.7	3.7	9.8	1.0
16. IGRAN + PROPAZINE	1.6 + 0.8	PRE	117.4	6.7	9.8	1.0
17. LOROX BEXTON 4L	1.0 + 3.0	PRE	117.6	3.3	10.0	1.0
18. MODDOWN(F) + BEXTON 4L	1.5 + 3.0	PRE	117.8	9.9	10.0	3.3
19. IGRAN	2.4	PRE	119.2	7.7	9.9	1.0
20. H-101 ATRAZINE (FLO)	2.0	E.P.	108.3	9.7	10.0	1.3
21. H-100 ATRAZINE (WP)	2.0	E.P.	112.1	9.8	10.0	1.7
22. LASSO + ATRAZINE	2.0 + 1.0	E.P.	115.8	9.9	10.0	1.3
23. ATRAZINE (4L)	2.0	E.P.	119.8	9.6	10.0	1.3
24. HANDWEED			116.7	10.0	10.0	1.0
25. NO TREATMENT			115.9	8.2	10.0	1.0
TEST AVERAGES			111.8	7.6	9.8	1.4
L.S.D. (.05)			NS	2.8		0.8

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)
E.P. (EARLY POST)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Ottawa, Kansas Cooperator: Charles W. Knight
2. Soil: Texture Silty clay loam pH 6.2 Organic Matter 2.0
3. Planting: Date 6/21/76 Rate 1 seed/4" Depth 1½"
4. Crop Grain Sorghum Variety Pioneer 8626
5. Fertilizer Applied: N 100 P 32 K 16
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10 ft x 50 ft
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 6/21/76
Preemergent 6/21/76 Early Post 7/20/76
10. Precipitation after planting: 6/23 - 1.35" 6/28 - .20"
6/29 - .10" 7/16 - .25" 7/18 - .02" 7/28 - .10"
8/5 - .07" 8/12 - .10" 8/27 - .36" 9/8 - .20"
11. Date of Crop Injury Rating --; Weed Control Rating 9/15/76
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 11/17/76
14. Summary: (Weed Control - predominant species, etc.)
Late planting and dry weather prevented weeds from becoming much of a problem. Predominant weed species included pigweed, fall panicum, morning glory, and velvet leaf.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
No apparent crop injury from herbicide treatments.
16. Summary: (Crop Yield)
Drought throughout the growing season caused low yields.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
GRAIN SORGHUM 1976
OTTAWA

NO.	TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
					BROADLEAF	GRASSY	
1.	ATRAZINE	2.0	PPI	48.1	8.0	4.3	0.0
2.	IGRAN + PROPAZINE	1.6 + 0.8	PPI	48.1	7.3	6.3	0.0
3.	PROPAZINE	2.4	PPI	52.9	8.7	7.0	0.0
4.	IGRAN	2.4	PPI	55.0	3.3	7.0	0.0
5.	IGRAN + ATRAZINE	1.6 + 0.8	PPI	62.1	8.7	7.0	0.0
6.	BEXTON 4L	4.0	PRE	44.4	3.0	8.7	0.0
7.	LOROX + BEXTON 4L	1.0 + 3.0	PRE	51.0	6.3	9.0	0.0
8.	IGRAN	2.4	PRE	52.0	5.7	3.7	0.0
9.	MODDWM WP + RAMROD WP	1.6 + 3.0	PRE	52.6	3.7	9.0	0.0
10.	PROPAZINE	2.4	PRE	54.0	7.0	2.0	0.0
11.	MODDWM 4F + BEXTON 4L	1.5 + 3.0	PRE	54.2	6.3	9.7	0.0
12.	H-101 ATRAZINE (FLO)	2.0	PRE	55.4	8.0	5.7	0.0
13.	H-100 ATRAZINE (WP)	2.0	PRE	56.7	8.3	5.3	0.0
14.	ATRAZINE	2.0	PRE	57.8	8.7	5.7	0.0
15.	IGRAN + PROPAZINE	1.6 + 0.8	PRE	59.1	7.7	6.3	0.0
16.	BLADEX(WP)+PROP(WP)	1.0 + 1.0	PRE	60.0	8.0	7.7	0.0
17.	RAMROD/ATRAZINE	4.14	PRE	60.2	8.7	9.3	0.0
18.	IGRAN + ATRAZINE	1.6 + 0.8	PRE	60.2	6.7	6.3	0.0
19.	BLADEX(F)+BEXTON 4L	1.0 + 3.0	PRE	62.3	6.0	10.0	0.0
20.	LASSO + ATRAZINE	2.0 + 1.0	E.P.	36.0	5.7	3.0	0.0
21.	H-100 ATRAZINE WP	2.0	E.P.	36.4	3.0	2.7	0.0
22.	H-101 ATRAZINE FLO	2.0	E.P.	42.8	5.7	1.3	0.0
23.	ATRAZINE 4L	2.0	E.P.	49.3	4.0	4.7	0.0
24.	HANDWEED			37.5	9.0	10.0	0.0
25.	NO TREATMENT			25.8	0.0	0.0	0.0
TEST AVERAGES				51.0	6.3	6.1	0.0
L.S.D. (.05)				15.5	3.2	3.9	0.0

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)
E.P. (EARLY POST)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Belleville (Conv.) Cooperator: R. J. Raney
2. Soil: Texture Silt Loam pH 7.1 Organic Matter 1.8
3. Planting: Date 6/3 Rate 5.6" apart Depth 1"
4. Crop Grain Sorghum Variety DeKalb E-59
5. Fertilizer Applied: N 70 P 20 K ---
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10' X 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 6/3
Preemergent 6/3 Early Post _____
10. Precipitation after planting: 5/22-.95" 5/23-.05" 5/24-.25"
June 1.74" July 1.89" August 1.10"
Sept. 2.91" Oct. .66"
11. Date of Crop Injury Rating ---; Weed Control Rating 10/18
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 10/21
14. Summary: (Weed Control - predominant species, etc.)

15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)

16. Summary: (Crop Yield)

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
GRAIN SORGHUM 1976
BELLEVILLE

NO.	TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
					BROADLEAF	GRASSY	
1.	IGRAN + ATRAZINE	1.6 + 0.8	PPI	16.7	7.3	9.7	0.0
2.	IGRAN + PROPAZINE	1.6 + 0.8	PPI	17.5	7.3	9.3	0.0
3.	IGRAN	2.4	PPI	18.0	6.0	9.7	0.0
4.	ATRAZINE	2.0	PPI	24.1	6.7	9.3	0.0
5.	PROPAZINE	2.4	PPI	27.0	7.7	10.0	0.0
6.	IGRAN	2.4	PRE	9.9	3.3	7.3	0.0
7.	BLADEX FL + BEXTON 4L	1.0 + 3.0	PRE	11.0	3.7	8.0	0.0
8.	IGRAN + PROPAZINE	1.6 + 0.8	PRE	12.0	6.3	8.7	0.0
9.	BEXTON 4L	4.0	PRE	12.9	4.7	7.3	0.0
10.	H-100 ATRAZINE (WP)	2.0	PRE	15.3	6.0	8.3	0.0
11.	LOROX + BEXTON 4L	1.0 + 3.0	PRE	16.2	5.7	8.0	0.0
12.	MODOWN 4F + BEXTON 4L	1.5 + 3.0	PRE	17.6	5.3	8.0	0.0
13.	ATRAZINE	2.0	PRE	18.1	6.7	9.3	0.0
14.	RAMROD/ATRAZINE	4.14	PRE	18.3	6.3	9.0	0.0
15.	IGRAN + ATRAZINE	1.6 + 0.8	PRE	19.2	5.7	9.3	0.0
16.	MODOWN (WP)+RAMROD (WP)	1.6 + 3.0	PRE	19.2	7.0	9.3	0.0
17.	BLADEX (WP)+PROP (WP)	1.0 + 1.0	PRE	19.7	6.3	9.0	0.0
18.	PROPAZINE	2.4	PRE	20.5	6.3	9.0	0.0
19.	H-101 ATRAZINE (FL)	2.0	PRE	33.3	7.0	9.7	0.0
20.	LASSO + ATRAZINE	2.0 + 1.0	E.P.	20.9	6.3	9.3	0.0
21.	H-100 ATRAZINE (WP)	2.0	E.P.	22.6	7.0	9.0	0.0
22.	H-101 ATRAZINE (FLO)	2.0	E.P.	27.0	7.0	9.3	0.0
23.	ATRAZINE (4L)	2.0	E.P.	30.8	6.3	9.3	0.0
24.	HAND WEED			24.0	6.7	9.7	0.0
25.	NO TREATMENT			8.6	3.7	7.3	0.0
TEST AVERAGES				19.2	6.1	8.9	0.0
L.S.D. (.05)				12.0	2.2	1.8	0.0

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)
E.P. (EARLY POST)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Belleville (No-Till) Cooperator: R. J. Raney
2. Soil: Texture Silt Loam pH 7.1 Organic Matter 1.8
3. Planting: Date 5/21 Rate 5.6" apart Depth 1"
4. Crop Grain Sorghum Variety DeKalb E-59 (Greenbug resistant)
5. Fertilizer Applied: N 70 P 20 K ---
6. Seedbed Condition: () Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10' X 30'
8. Gallons of Spray per Acre 20 Carrier: () Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated ---
Preemergent 5/21 Early Post 6/16
10. Precipitation after planting: 5/22-.95", 5/23-.05", 5/24-.25"
June 1.74" July 1.89" August 1.10"
September 2.91" October .66"
11. Date of Crop Injury Rating ---; Weed Control Rating 6/25
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 10/20
14. Summary: (Weed Control - predominant species, etc.)

15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)

16. Summary: (Crop Yield)

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

NO-TILL
GRAIN SORGHUM 1976
BELLEVILLE

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. MODOWN(W)+RAMROD(W)	1.6 + 3.0	PRE	36.3	8.7	8.7	0.0
2. PROPAZINE	2.4	PRE	37.3	9.0	5.0	0.0
3. H-101 ATRAZINE (FLO)	2.0	PRE	38.1	8.3	5.7	0.0
4. IGRAN	2.4	PRE	38.4	7.3	5.3	0.0
5. H-100 ATRAZINE (WP)	2.0	PRE	41.1	8.0	4.0	0.0
6. ATRAZINE	2.0	PRE	41.9	9.3	7.7	0.0
7. BLADEX FL + BEXTON 4L	1.0 + 3.0	PRE	42.8	7.0	8.0	0.0
8. BLADEX(WP)+PROP(WP)	1.0 + 1.0	PRE	50.5	9.0	7.3	0.0
9. BEXTON 4L	4.0	PRE	51.0	7.7	8.0	0.0
10. IGRAN + ATRAZINE	1.6 + 0.8	PRE	53.4	9.0	7.3	0.0
11. LOROX + BEXTON 4L	1.0 + 3.0	PRE	57.2	8.3	9.3	0.0
12. RAMROD/ATRAZINE	4.14	PRE	59.8	9.0	7.0	0.0
13. MODOWN 4F + BEXTON 4L	1.5 + 3.0	PRE	67.6	6.7	7.7	0.0
14. IGRAN + PROPAZINE	1.6 + 0.8	PRE	70.5	7.0	6.7	0.0
15. H-100 ATRAZINE (WP)	2.0	E.P.	33.7	8.0	4.3	0.0
16. ATRAZINE (4L)	2.0	E.P.	37.7	7.3	6.0	0.0
17. H-101 ATRAZINE (FL)	2.0	E.P.	46.5	9.0	7.3	0.0
18. LASSO + ATRAZINE	2.0 + 1.0	E.P.	46.9	6.3	4.7	0.0
19. HAND WEED			43.3	3.7	6.7	0.0
20. NO TREATMENT			16.3	1.3	2.7	0.0
TEST AVERAGES			45.5	7.5	6.5	0.0
L.S.D. (.05)			21.1	1.9	2.7	0.0

* WHEN APPLIED: PRE (COMPLETE COVERAGE AFTER PLANTING)
E.P. (EARLY POST)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Hutchinson Cooperator: W. A. Moore
2. Soil: Texture Clark-Ost Cl pH 6.3 Organic Matter 2.2
3. Planting: Date 6/9 Rate 30 seeds/foot Depth 1"
4. Crop Grain Sorghum Variety Pioneer 8324
5. Fertilizer Applied: N --- P --- K ---
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10' X 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 6/9
Preemergent 6/9 Early Post 7/5
10. Precipitation after planting: June-1.64" July-2.72"
August - .08" September - 5.02"

11. Date of Crop Injury Rating 10/21; Weed Control Rating 10/21
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 10/21
14. Summary: (Weed Control - predominant species, etc.)
Weed population was sparse on the plot area, therefore, the uniform control rating.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
16. Summary: (Crop Yield)
Below average yield because of low rainfall.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
GRAIN SORGHUM 1976
HUTCHINSON

NO.	TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
					BROADLEAF	GRASSY	
1.	IGRAN	2.4	PPI	21.6	9.5	9.5	0.0
2.	IGRAN + PROPAZINE	1.6 + 0.8	PPI	21.8	9.5	9.5	0.0
3.	PROPAZINE	2.4	PPI	23.0	9.5	9.5	0.0
4.	IGRAN + ATPAZINE	1.6 + 0.8	PPI	23.0	9.5	9.5	0.0
5.	ATRAZINE	2.0	PPI	23.9	9.5	9.5	0.0
6.	MODDOWN 4F + BEXTON 4L	1.5 + 3.0	PRE	27.0	9.5	9.5	0.0
7.	LOROX + BEXTON 4L	1.0 + 3.0	PRE	27.8	9.5	9.5	0.0
8.	IGRAN + PROPAZINE	1.6 + 0.8	PRE	28.0	9.5	9.5	0.0
9.	PROPAZINE	2.4	PRE	31.1	9.5	9.5	0.0
10.	H-100 (WP) ATRAZINE	2.0	PRE	32.0	9.5	9.5	0.0
11.	RAMROD/ATRAZINE	4.14	PRE	32.7	9.5	9.5	0.0
12.	H-101 (FLOW) ATRAZINE	2.0	PRE	33.4	9.5	9.5	0.0
13.	ATRAZINE	2.0	PRE	34.0	9.5	9.5	0.0
14.	MODDOWN WP + RAMROD WP	1.6 + 3.0	PRE	34.9	9.5	9.5	0.0
15.	BLADEX FL + BEXTON 4L	1.0 + 3.0	PRE	35.3	9.5	9.5	0.0
16.	BLADEX WP + PROP. WP	1.0 + 1.0	PRE	35.9	9.5	9.5	0.0
17.	BEXTON 4L	4.0	PRE	36.8	9.5	9.5	0.0
18.	IGRAN + ATRAZINE	1.6 + 0.8	PRE	36.8	9.5	9.5	0.0
19.	IGRAN	2.4	PRE	37.0	9.5	9.5	0.0
20.	H-101 (FLOW) ATRAZINE	2.0	E.P.	31.8	9.5	9.5	0.0
21.	H-100 (WP) ATRAZINE	2.0	E.P.	32.7	9.5	9.5	0.0
22.	LASSO + ATRAZINE	2.0 + 1.0	E.P.	33.0	9.5	9.5	0.0
23.	ATRAZINE (4L)	2.0	E.P.	37.5	9.5	9.5	0.0
24.	HAND WEED.			29.7	9.5	9.5	0.0
25.	NO TREATMENT			36.3	9.5	9.5	0.0
TEST AVERAGES				31.1	9.5	9.5	0.0
L.S.D. (.05)				10.6	0.0	0.0	0.0

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)
E.P. (EARLY POST)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

1. Location: Minneola Cooperator: M. C. Lundquist
2. Soil: Texture Silt Loam pH 6.8 Organic Matter 1.25
Pre/EP-6/7
3. Planting: Date PPI - 6/8 Rate 20,000 plants/A Depth 1.5"
4. Crop Grain Sorghum Variety Hoegemeyer 664
5. Fertilizer Applied: N --- P --- K ---
6. Seedbed Condition: (X) Excellent () Fair () Poor () ---
7. Replications 3 Plot Size 10' X 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 6/8
Preemergent 6/8 Early Post 7/1
10. Precipitation after planting: 6/23-.96" 6/30-.43" 7/3-.11"
7/17-.21" 7/28-.15" 8/2-.48" 8/13-.22" 8/31-.18" 9/8-.19"
9/13-.04" 9/15-.71" 9/25,26,28-1.22"
11. Date of Crop Injury Rating 7/28; Weed Control Rating 7/28
12. Crop Maturity (Silking, 50% headed, etc.) Boot
13. Date Harvested 10/14
14. **Summary:** (Weed Control - predominant species, etc.)
Lower than average weed population and no grassy weeds. Broadleafed weeds consisted generally of smooth, red and narrow leafed pigweed, kochia, and a few russian thistles.
Delay of rainfall after planting reduced weed emergence, but also prevented incorporation of chemicals by rainfall. The dry summer helped the effectiveness of post treatments. PPI treatments were effective.
15. **Summary:** (Crop Injury - stand reduction, stunting, chlorosis, etc.)
No injury notes were taken as no injury was evident until the application of early post treatments.
Neighborhood aerial spraying of wheat fields with 2,4-D or banvel caused some overall injury.
Overall stand was irregular because of faulty seedbed preparation and planter adjustment. No reduction of stand was apparent because of herbicides.
16. **Summary:** (Crop Yield)
Crop yield was fair considering the dry season. Stands differed among plots.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
GRAIN SORGHUM 1976
SOUTHWEST KANSAS

NO.	TREATMENT	LBS.		WHEN*	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
		A. I.	PER A.			BROADLEAF	GRASSY	
1.	PROPAZINE+BLADEX W/O	1.5	+ 1.5	PPI	31.7	10.0	9.5	0.0
2.	PROPAZINE W/O	2.0		PPI	35.7	10.0	9.5	0.0
3.	PROPAZINE+BLADEX W/1	1.5	+ 1.5	PPI	36.7	10.0	9.5	0.0
4.	PROPAZINE W/1	2.0		PPI	49.1	10.0	9.5	0.0
5.	IGRAN W/1	2.0		PRE	36.2	8.3	9.5	0.0
6.	RAMROD W/O	4.0		PRE	37.1	5.7	9.5	0.0
7.	IGRAN W/O	2.0		PRE	37.6	7.3	9.5	0.0
8.	IGRAN + PROPAZINE W/O	1.6	+ 0.4	PRE	40.0	7.0	9.5	0.0
9.	RAMROD + 2,4-D EP W/1	4.0	+ 0.5	PRE	40.0	8.7	9.5	0.0
10.	PROPAZINE+BLADEX W/O	1.5	+ 1.5	PRE	40.4	8.0	9.5	0.0
11.	RAMROD/ATRAZINE W/O	3.45		PRE	41.2	7.3	9.5	0.0
12.	RAMROD + 2,4-D EP W/O	4.0	+ 0.5	PRE	42.0	7.3	9.5	0.0
13.	RAMROD W/1	4.0		PRE	43.7	7.7	9.5	0.0
14.	IGRAN + PROPAZINE W/1	1.6	+ 0.4	PRE	44.5	8.3	9.5	0.0
15.	BLADEX + RAMROD W/O	1.5	+ 2.0	PRE	45.3	8.0	9.5	0.0
16.	PROPAZINE W/1	2.0		PRE	46.2	8.7	9.5	0.0
17.	PROPAZINE W/O	2.0		PRE	47.7	8.0	9.5	0.0
18.	BLADEX + RAMROD W/O	3.6	+ 6.0	PRE	48.4	8.7	9.5	0.0
19.	PROPAZINE+BLADEX W/O	1.0	+ 1.0	PRE	52.2	8.7	9.5	0.0
20.	RAMROD/ATRAZINE W/1	3.45		PRE	57.8	8.0	9.5	0.0
21.	2,4-D W/O	0.5		E.P.	33.3	6.0	9.5	0.0
22.	BANVEL W/O	0.25		E.P.	44.9	7.3	9.5	0.0
23.	ATRAZINE + OIL W/1	1.5+1.0	QT.	E.P.	48.6	8.3	9.5	0.0
24.	ATRAZINE + OIL W/O	1.5+1.0	QT.	E.P.	49.3	6.3	9.5	0.0
25.	2,4-D W/1	0.5		E.P.	49.6	8.7	9.5	0.0
26.	BANVEL W/1	0.25		E.P.	50.1	9.0	9.5	0.0
27.	HANDWEED W/O				49.4	10.0	10.0	0.0
28.	HANDWEED W/1				53.4	10.0	10.0	0.0
29.	NO TREATMENT W/O				33.7	4.7	0.0	0.0
30.	NO TREATMENT W/1				37.6	7.3	0.0	0.0
TEST AVERAGES					43.4	8.1	8.9	0.0
L.S.D. (.05)					NS	1.6	0.0	0.0

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE AFTER PLANTING)
E.P. (EARLY POST)

** WEED CONTROL RATING: 10 - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING: 10 - COMPLETE KILL
0 - NO INJURY

