

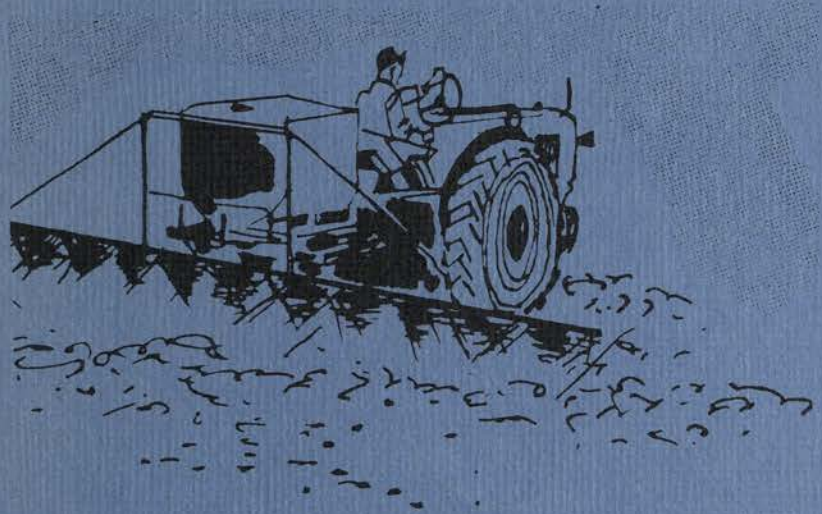
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DOCUMENTS

Keeping Up with Research No. 15

Report of 1974 Herbicide Data



AGRICULTURAL EXPERIMENT STATION
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500

Keeping Up with Research No. 15

Report of

1974 Herbicide Data

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Contribution No. 1481, Department of Agronomy

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 1974 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 222, "Chemical Weed Control in Field Crops, 1975."

Special acknowledgment and thanks are due to the following for support of the research reported:

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TABLE OF CONTENTS

Page

Herbicide Evaluation on Corn at:

Powhattan.

Manhattan.

Scandia.

Topeka

Herbicide Evaluation on Wild Cane at:

Manhattan.

Rossville.

Herbicide Evaluation on Soybeans at:

Manhattan.

Powhattan.

Ottawa

Belleville

Rossville.

Herbicide Evaluation on Grain Sorghum at:

Manhattan.

Powhattan.

Ottawa

Belleville

Hutchinson

Minneola

St. John

Weed Control Research Plot Data

1. Location: Powhattan, Kansas Cooperator: R. E. Sloan
2. Soil: Texture Silty clay loam pH 6.0 Organic Matter 2.8
3. Planting: Date 5/8/74 Rate 18,600/A Depth 2.0"
4. Crop Corn Variety Trojan 119
5. Fertilizer Applied: N 118 P 42 K 0
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10 ft x 30 ft
8. Gallons of Spray per Acre 30 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 5/18/74
 Preemergent 5/8/74 Early Post 5/22/74
10. Precipitation after planting: 5/9 - .33" 5/11 - .31"
5/14 - .16" 5/17-1.83" 5/18 - .61"
5/27 - .07" 5/28- .16" 5/31 - .01"
11. Date of Crop Injury Rating _____; Weed Control Rating 9/16/74
12. Crop Maturity (Silking, 50% headed, etc.) --
13. Date Harvested 10/16/74
14. Summary: (Weed Control - predominant species, etc.)
 Predominant weed species present were velvetleaf, foxtail spp. and pigweed.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
 The Modown treatment caused leaf burning and a transverse band of puckering across the leaf. Moderate leaf burn and stunting was noted in the plot treated with Lasso/Sencor. Bladex plus oil applied early post caused slight leaf burning after application.
16. Summary: (Crop Yield)
 Yields were below normal for Kansas.

KANSAS STATE UNIVERSITY
AGRICULTURE DEPARTMENT

HERBICIDE PERFORMANCE
CORN 1974
POWHATTAN

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. SUTAN + BLADEX	3.0 + 1.2	PPI	8.1	9.7	9.2	0.0
2. LASSO + ATRAZINE	2.5 + 1.5	PPI	9.4	9.5	9.2	0.0
3. ERADICANE + ATRAZINE	4.0 + 1.0	PPI	12.2	9.8	9.8	0.0
4. SUTAN + FOX 4	3.0 + .75	PPI	17.4	9.7	9.7	0.0
5. SUTAN + ATRAZINE	3.0 + 1.0	PPI	24.7	9.7	9.5	0.0
6. H 22234 + ATRAZINE	1.5 + 1.0	PRE	6.9	7.5	9.2	0.0
7. PROWL + ATRAZINE	1.5 + 1.0	PRE	9.7	8.3	8.3	0.0
8. ATRAZINE	2.4	PRE	10.5	9.2	8.5	0.0
9. PROWL	2.0	PRE	10.7	4.5	3.5	0.0
10. BLADEX + ATRAZINE	1.2 + 1.2	PRE	11.3	9.0	8.5	0.0
11. LASSO	3.0	PRE	12.9	2.5	6.5	0.0
12. RAMROD/ATRAZINE	4.14	PRE	13.0	8.5	8.8	0.0
13. LOROX + LASSO	1.0 + 2.0	PRE	13.1	7.0	9.2	0.0
14. LASSO + SENCOR	2.0 + .375	PRE	13.8	9.7	9.7	6.0
15. ROWTATE + LASSO	1.5 + 2.0	PRE	14.3	7.5	6.8	2.0
16. BLADEX	3.0	PRE	14.6	8.8	8.2	0.7
17. MODDOWN + LASSO	1.5 + 2.0	PRE	15.3	8.2	9.0	6.7
18. LASSO + ATRAZINE	2.0 + 1.5	PRE	16.2	9.3	9.5	0.0
19. BLADEX + LASSO	1.6 + 2.0	PRE	16.4	9.2	9.3	0.0
20. BLADEX + 1 GAL OIL	2.0	EP	9.9	9.5	9.3	4.7
21. LASSO + ATRAZINE	2.0 + 1.0	EP	13.0	9.7	9.5	0.0
22. OUTFOX 4L + 1 GAL OIL	.75	EP	19.0	9.2	5.5	0.7
23. ATRAZINE + GAL. OIL	2.0	EP	20.1	9.8	9.5	0.0
24. HAND WEED			9.4	10.0	9.7	0.0
25. NO TREATMENT			7.9	0.0	0.0	0.0
TEST AVERAGES			13.4	8.2	8.2	0.8
L.S.D. (.05)			NS	2.8	2.9	1.6

* WHEN APPLIED: PRE (COMPLETE COVERAGE AFTER PLANTING)
PPI (PREPLANT INCORPORATED)
EP (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: Manhattan, Kansas Cooperator: Oliver G. Russ
2. Soil: Texture Reading SL pH 6.5 Organic Matter 2.5
3. Planting: Date 5/15/74 Rate 1 seed/8" Depth 2.0"
4. Crop Corn Variety Pioneer 3517
5. Fertilizer Applied: N 103 P 46 K 0
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10 ft x 30 ft
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 5/8/74
 Preemergent 5/16/74 Early Post 5/28/74
10. Precipitation after planting: 5/8 - .35" 5/9 - .50"
5/10 - .15" 5/14 - .62" 5/18 - .10"
5/23 - .44" 5/25 - .50" 6/6 - .86"
11. Date of Crop Injury Rating --; Weed Control Rating 6/28/74
12. Crop Maturity (Silking, 50% headed, etc.) --
13. Date Harvested 9/17/74
14. Summary: (Weed Control - predominant species, etc.)
 The plot area was overseeded with alfalfa seed screenings. The predominant weed species present were pigweed, foxtail, crabgrass, mustard, lambsquarter, ragweed, and carpetweed. Weed control was adequate in all plots.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
 All early post treatments caused leaf burn right after application.
16. Summary: (Crop Yield)

Lack of precipitation during the growing season caused poor ear formation and yield was determined by crop forage. The no treatment yield was high because weed species contributed to total plot yield.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
CORN 1974
MANHATTAN

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	TONS PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. SUTAN + ATRAZINE	3.0 + 1.0	PPI	13.8	10.0	9.5	0.0
2. ERADICANE + ATRAZINE	4.0 + 1.0	PPI	14.0	10.0	10.0	0.0
3. LASSO + ATRAZINE	2.5 + 1.5	PPI	14.6	9.8	9.3	0.0
4. SUTAN + BLADEX	3.0 + 1.2	PPI	15.0	10.0	9.7	0.0
5. SUTAN + FOX 4	3.0 + .75	PPI	15.4	9.8	9.7	0.0
6. PROWL	2.0	PRE	13.2	8.5	9.3	0.0
7. H 22234 + ATRAZINE	1.5 + 1.0	PRE	13.8	9.8	9.3	0.0
8. LASSO + ATRAZINE	2.0 + 1.5	PRE	13.9	9.8	6.8	0.0
9. RAMROD/ATRAZINE	4.14	PRE	14.1	10.0	9.7	0.0
10. MODOWN + LASSO	1.5 + 2.0	PRE	14.1	9.5	9.8	0.3
11. BLADEX + LASSO	1.6 + 2.0	PRE	14.3	9.0	10.0	0.0
12. ATRAZINE	2.4	PRE	14.4	7.0	6.2	0.0
13. ROWTATE + LASSO	1.5 + 2.0	PRE	14.5	9.7	9.7	0.0
14. BLADEX + ATRAZINE	1.2 + 1.2	PRE	14.6	9.8	9.2	0.0
15. LASSO + SENCOR	2.0 + .375	PRE	14.6	9.2	9.8	0.0
16. PROWL + ATRAZINE	1.5 + 1.0	PRE	14.7	10.0	9.8	0.0
17. BLADEX	3.0	PRE	15.1	9.5	9.5	0.0
18. LASSO	3.0	PRE	15.2	9.5	7.0	0.0
19. LOROX + LASSO	1.0 + 2.0	PRE	15.7	9.8	7.0	0.0
20. ATRAZINE + GAL. OIL	2.0	EP	14.0	10.0	5.7	0.0
21. BLADEX + 1 GAL OIL	2.0	EP	14.0	8.7	9.0	0.7
22. LASSO + ATRAZINE	2.0 + 1.0	EP	15.2	10.0	7.0	0.0
23. OUTFOX 4L + 1 GAL OIL	.75	FP	15.5	10.0	2.5	0.2
24. HAND WEED			13.9	10.0	10.0	0.0
25. NO TREATMENT			15.0	0.0	0.0	0.0
TEST AVERAGES			14.5	9.2	8.2	0.0
L.S.D. (.05)			NS	1.9	3.6	0.2

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

No-Till

1. Location: Scandia Cooperator: R. J. Raney
2. Soil: Texture Silt loam pH 5.8 Organic Matter 2.1
3. Planting: Date 5-2 Rate 24,561 Depth 2.0"
4. Crop Corn Variety Pioneer 3388
5. Fertilizer Applied: N 158 P 20 K 6
6. Seedbed Condition: () Excellent (X) Fair () Poor () _____
7. Replications 3 Plot Size 10 ft x 30 ft
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated None
 Preemergent 5-2-74 Early Post 5-29-74
10. Precipitation after planting: May - 4.08 June - 2.27
July - 0.23 Aug. - 3.40 Sept. - 0.37
Total- 10.35"
11. Date of Crop Injury Rating 6-14 ; Weed Control Rating 8-28-74
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 9-26-74
14. Summary: (Weed Control - predominant species, etc.)
 Weeds present: pigweeds, foxtail, wild barley, crabgrass;
 some: smartweed, cocklebur, sunflower.
 No cultivation; furrowed for irrigation June 14.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
 Crop injury noted 6-14-74 was stunting.
 Irrigated: 6-21, 6-30, 7-9, 7-16, 7-24, 7-30. 20 inches total
 water applied.
16. Summary: (Crop Yield)
 Good for 1974.

KANSAS STATE UNIVERSITY
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NO-TILL
CORN 1974
SCANDIA

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. H 22234 + ATRAZINE	1.5 + 1.0	PRE	129.3	9.0	8.0	5.0
2. LASSO + SENCOR	2.0 + .375	PRE	130.3	7.3	6.7	5.0
3. BLADEX	3.0	PRE	136.7	7.7	7.7	5.0
4. LASSO	3.0	PRE	139.7	9.3	9.3	0.0
5. PROWL	2.0	PRE	141.0	6.3	9.0	0.0
6. LASSO + ATRAZINE	2.0 + 1.5	PRE	142.0	9.3	8.7	0.0
7. PROWL + ATRAZINE	1.5 + 1.0	PRE	143.0	9.0	9.7	5.0
8. BLADEX + LASSO	1.6 + 2.0	PRE	144.0	9.7	9.7	0.0
9. ATRAZINE	2.4	PRE	149.3	8.0	9.7	0.0
10. LOROX + LASSO	1.0 + 2.0	PRE	152.3	9.3	9.7	0.0
11. BLADEX + ATRAZINE	1.2 + 1.2	PRE	152.3	9.7	9.3	5.0
12. MODOWN + LASSO	1.5 + 2.0	PRE	152.7	9.3	9.7	5.0
13. ROWTATE + LASSO	1.5 + 2.0	PRE	154.7	8.0	9.7	0.0
14. RAMROD/ATRAZINE	4.14	PRE	156.3	9.7	9.7	0.0
15. OUTFOX 4L + OIL(1GAL)	.75	EP	134.3	8.3	6.0	0.0
16. LASSO + ATRAZINE	2.0 + 1.0	EP	147.7	8.0	8.7	0.0
17. BLADEX + OIL(1GAL)	2.0	EP	152.3	8.7	8.7	5.0
18. ATRAZINE + OIL(1GAL)	2.0	EP	159.0	7.7	7.3	0.0
19. HAND WEED			166.0	9.0	9.7	0.0
20. NO TREATMENT			134.7	4.3	9.7	0.0
TEST AVERAGES			145.9	8.4	8.8	1.8
L.S.D. (.05)			NS	2.1	NS	NS

* WHEN APPLIED: PRE (COMPLETE COVERAGE IMMEDIATELY AFTER PLANTING)
EP (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

Conventional Tillage

1. Location: Scandia Cooperator: R. J. Raney
2. Soil: Texture Silty clay loam pH 5.8 Organic Matter 2.0
3. Planting: Date 5-2-74 Rate 24,561 Depth 2.0"
4. Crop Corn Variety NC+ 85 SX
5. Fertilizer Applied: N 158 P 20 K 6
6. Seedbed Condition: () Excellent (X) Fair () Poor () _____
7. Replications 3 Plot Size 10 ft x 30 ft
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 5-1-74
Preemergent 5-2-74 Early Post 5-29-74
10. Precipitation after planting: May - 4.08 June - 2.27
July - 0.23 Aug. - 3.40 Sept. - 0.37
Total - 10.35"
11. Date of Crop Injury Rating 6-14-74; Weed Control Rating 9-17-74
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 9-30-74
14. Summary: (Weed Control - predominant species, etc.)
Pigweed, kochia, foxtail, crabgrass. No cultivation: furrowed for irrigation June 17.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
Crop injury noted in some plots 6-14-74. Irrigated: 6-28, 7-10, 7-20, 7-31. 13.0 inches total water applied.
16. Summary: (Crop Yield)
Fair for 1974.

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AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
CORN 1974
SCANDIA

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. LASSO + ATRAZINE	2.5 + 1.5	PPI	118.0	10.0	7.7	0.0
2. ERADICANE + ATRAZINE	4.0 + 1.0	PPI	118.3	9.3	8.0	0.0
3. SUTAN + ATRAZINE	3.0 + 1.0	PPI	119.7	10.0	7.0	0.0
4. SUTAN + BLADEX	3.0 + 1.2	PPI	127.3	10.0	5.7	0.0
5. SUTAN + FOX 4	3.0 + .75	PPI	133.7	9.7	6.7	0.0
6. MODOWN + LASSO	1.5 + 2.0	PRE	108.0	9.7	8.7	1.7
7. LASSO + SENCOR	2.0 + .375	PRE	113.7	9.7	9.0	5.0
8. BLADEX + LASSO	1.6 + 2.0	PRE	117.7	10.0	7.7	0.0
9. LASSO + ATRAZINE	2.0 + 1.5	PRE	119.3	10.0	9.3	0.0
10. RAMROD/ATRAZINE	4.14	PRE	123.0	10.0	9.0	0.0
11. ROWTATE + LASSO	1.5 + 2.0	PRE	124.0	9.3	8.3	0.0
12. LASSO	3.0	PRE	125.3	10.0	9.3	0.0
13. ATRAZINE	2.4	PRE	125.3	10.0	7.0	0.0
14. PROWL + ATRAZINE	1.5 + 1.0	PRE	128.0	10.0	9.3	0.0
15. H 22234 + ATRAZINE	1.5 + 1.0	PRE	133.3	10.0	9.0	0.0
16. BLADEX	3.0	PRE	135.0	10.0	9.7	0.0
17. LOROX + LASSO	1.0 + 2.0	PRE	146.7	10.0	9.7	0.0
18. BLADEX + ATRAZINE	1.2 + 1.2	PRE	151.7	10.0	9.7	0.0
19. PROWL	2.0	PRE	151.7	10.0	9.3	0.0
20. LASSO + ATRAZINE	2.0 + 1.0	EP	101.3	10.0	0.7	0.0
21. BLADEX + 1 GAL OIL	2.0	EP	110.0	9.3	7.0	5.0
22. OUTFOX 4L + 1 GAL OIL	.75	EP	118.7	10.0	1.3	0.0
23. ATRAZINE + GAL. OIL	2.0	EP	121.3	10.0	2.7	0.0
24. HAND WEED			100.7	10.0	9.0	0.0
25. NO TREATMENT			85.0	5.3	2.0	0.0
TEST AVERAGES			122.3	9.7	7.3	0.5
L.S.D. (.05)			27.3	1.2	2.9	1.0

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)
PRE (COMPLETE COVERAGE IMMEDIATELY AFTER PLANTING)
EP (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
Herbicide Performance
Corn

1. Location: Topeka Cooperator: Neil Humburg and L. S. Axthelm
2. Soil: Texture Eudora SL pH 7.5 Organic Matter 1.0
3. Planting: Date 4/24/74 Rate 19,100 pl/A-6/1/74 Depth 2"
4. Crop Corn Variety Pioneer var. 3369A
5. Fertilizer Applied: N 230 P₂O₅ 40 K₂O 20 Zn 10
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 4 rows (30") x 30 ft
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 4/24/74
Preemergent 4/24/74 Early Post 5/22/74
10. Precipitation after planting: 4/28-0.05 4/29-1.56 4/30-T 5/1-T 5/2-T
5/4-0.02 5/9-0.22 5/10-0.73 5/11-0.04 5/13-0.97 5/14-0.02 5/16-0.11
5/17-0.13 5/18-0.01 5/19-T 5/21-0.37 5/23-0.29 5/25-0.14
11. Date of Crop Injury Rating 6/1/74; Weed Control Rating 6/1/74
12. Crop Maturity (Silking, 50% headed, etc.) Ht: 16"
13. Date Harvested --
14. Summary: (Weed Control - predominant species, etc.) Area in weeds in the summer of 1973. Uniform weed infestations in 1974 with dense stands of foxtail and crabgrass, and a moderate to heavy stand of sunflowers. Light stands of pigweed and lambsquarter made ratings on these less accurate. Some grass in tractor wheel tracks escaped control in plots treated with Sutan⁺- and Eradicane-triazine combinations (the sprayer boom was in front of the tractor drive wheels). Early postemergent (weeds 1-2") treatments were not satisfactory; herbicides were applied at 6-7:00 pm with rain several hours later.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.) Rated for foliar injury. There was severe corn injury from Sencor - stunting, chlorosis, leaf burn, and killed plants - as the rate was too high for a low OM soil. There was height reduction and chlorosis from Bladex for the same reason. Rowtate reduced height slightly. Modown leaf injury (necrotic band) was very slight. Early-post treatments of atrazine, Lasso + atrazine and Bladex caused injury, whereas injury from early-post Outfox was negligible.
16. Summary: (Crop) Dryland. Increased vigor and darker green foliage were observed in plots having the following treatments: Eradicane + AAtrex, Sutan⁺ + AAtrex, Sutan⁺ + Fox 4, Prowl, and Prowl + AAtrex. Zinc deficiency symptoms on corn were evident during the first 5 weeks after planting - the deficiency appeared to be uniform over the entire research area.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
CORN 1974
KANSAS RIVER VALLEY

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. SUTAN + ATRAZINE	3.0 + 1.0	PPI	73.0	10.0	9.3	0.0
2. SUTAN + BLADEX	3.0 + 1.2	PPI	88.3	9.0	9.0	0.0
3. SUTAN + FOX 4	3.0 + .75	PPI	113.7	10.0	9.3	1.0
4. ERADICANE + ATRAZINE	4.0 + 1.0	PPI	115.3	10.0	9.3	0.3
5. LASSO + ATRAZINE	2.5 + 1.5	PPI	131.0	10.0	8.7	0.7
6. LASSO	3.0	PRE	17.3	6.3	9.0	0.3
7. MODOWN + LASSO	1.5 + 2.0	PRE	32.3	5.7	7.7	0.7
8. LASSO + SENCOR	2.0 + .375	PRE	45.0	9.7	9.0	7.0
9. PROWL	2.0	PRE	50.7	4.0	8.7	0.0
10. ROWTATE + LASSO	1.5 + 2.0	PRE	71.7	8.7	8.0	1.3
11. LOROX + LASSO	1.0 + 2.0	PRE	85.7	8.3	9.0	0.0
12. BLADEX + ATRAZINE	1.2 + 1.2	PRE	90.7	10.0	9.7	1.3
13. LASSO + ATRAZINE	2.0 + 1.5	PRE	93.7	10.0	10.0	0.7
14. ATRAZINE	2.4	PRE	99.0	10.0	10.0	0.3
15. BLADEX + LASSO	1.6 + 2.0	PRE	99.7	10.0	9.0	0.0
16. BLADEX	3.0	PRE	111.3	10.0	9.0	1.3
17. RAMROD/ATRAZINE	4.14	PRE	117.0	10.0	9.3	0.0
18. H 22234 + ATRAZINE	1.5 + 1.0	PRE	117.3	10.0	9.3	0.0
19. PROWL + ATRAZINE	1.5 + 1.0	PRE	124.3	10.0	9.3	0.0
20. LASSO + ATRAZINE	2.0 + 1.0	EP	62.7	9.3	4.0	4.7
21. ATRAZINE + GAL. OIL	2.0	EP	78.0	10.0	3.7	3.7
22. BLADEX + 1 GAL OIL	2.0	EP	81.0	8.7	7.7	4.3
23. OUTFOX 4L + 1 GAL OIL	.75	EP	90.0	8.7	5.7	0.7
24. HAND WEED			20.3	10.0	10.0	0.0
25. NO TREATMENT			17.7	0.0	0.0	0.0
TEST AVERAGES			81.1	8.7	8.1	1.1
L.S.D. (.05)			44.8	1.3	1.4	1.5

* WHEN APPLIED: PRE (COMPLETE COVERAGE AFTER PLANTING)
PPI (PREPLANT INCORPORATED)
EP (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: Manhattan, Kansas Cooperator: Oliver G. Russ
2. Soil: Texture Reading SL pH 6.5 Organic Matter 2.5
3. Planting: Date 5/7/74 Rate 1 seed/8" Depth 2"
4. Crop Corn Variety Pioneer 3517
5. Fertilizer Applied: N 103 P 46 K 0
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10 ft x 30 ft
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 5/6/74
 Preemergene -- Early Post --
10. Precipitation after planting: 5/8 - .35" 5/9 - .50"
5/10 - .15" 5/14 - .62" 5/18 - .10"
5/23 - .44" 5/25 - .50" 6/6 - .86"
11. Date of Crop Injury Rating --; Weed Control Rating 7/1/74
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested No harvest
14. Summary: (Weed Control - predominant species, etc.)
 Plot area was overseeded with wild cane. Predominant weed species present were wild cane, foxtail spp., sunflower, and velvetleaf.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
 No apparent crop injury occurred from herbicide treatments.
16. Summary: (Crop Yield)
 This test not carried to yield.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

WILD CANE CONTROL
CORN 1974
MANHATTAN

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. ERADICANE + ATRAZINE	4.0 + 1.0	PPI	0.0	9.3	6.3	0.0
2. ERADICANE + ATRAZINE	6.0 + 1.0	PPI	0.0	9.8	6.8	0.0
3. ERADICANE + BLADEX	4.0 + 2.0	PPI	0.0	9.8	9.7	0.0
4. ERADICANE + BLADEX	3.0 + 1.5	PPI	0.0	10.0	10.0	0.0
5. ERADICANE	4.0	PPI	0.0	8.7	3.8	0.0
6. SUTAN + ATRAZINE	4.0 + 1.0	PPI	0.0	9.3	7.7	0.0
7. SUTAN + BLADEX	4.0 + 1.0	PPI	0.0	8.7	8.3	0.0
8. BLADEX	3.0	PPI	0.0	10.0	6.7	0.0
9. AVADEX	4.0	PPI	0.0	5.7	8.5	0.0
10. AVADEX + LASSO	2.0 + 2.0	PPI	0.0	9.0	7.7	0.0
11. LASSO	4.0	PPI	0.0	8.8	7.2	0.0
12. PREFOX	4.0 QT.	PPI	0.0	9.8	7.2	0.0
13. EPTAM + ATRAZINE	4.0 + 1.0	PPI	0.0	9.5	9.7	0.0
14. NO TREATMENT			0.0	0.0	0.0	0.0
15. VERNAM + ATRAZINE	4.0 + 1.0	PPI	0.0	10.0	9.7	0.0
16. VERNAM + BLADEX	4.0 + 2.0	PPI	0.0	9.7	9.8	0.2
TEST AVERAGES			0.0	8.6	7.4	0.0
L.S.D. (.05)			0.0	1.6	NS	0.1

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)

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

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

Weed Control Research Plot Data
CHEMICAL CONTROL OF WILD CANE IN CORN - 1974

1. Location: Rossville Cooperator: N. E. Humburg & L. S. Axthelm
2. Soil: Texture Eudora silt loam pH 5.8 Organic Matter 1.9%
3. Planting: Date 4/26/74 Rate 23,000 plants/A Depth 2"
4. Crop Corn planted on 30" ridges Variety Pioneer var. 3369A
5. Fertilizer Applied: N 225 lb/A P₂O₅ 40 lb/A K₂O 30 lb/A
6. Seedbed Condition: () Excellent (X) Fair () Poor () Dry, loose
7. Replications 4 Plot Size 4 rows (30") x 100 ft
8. Gallons of Spray per Acre 30 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 4/25/74
Preemergent -- Early Post --
10. Precipitation after planting: 4/29 - 0.45" 4/30 - 0.90" 5/ 9 - 0.34"
5/10-0.55" 5/11-0.04" 5/14-1.10" 5/17-1.41" 5/24-0.28" 5/26 - 0.20"
6/4 - T 6/ 5-0.04" 6/ 6-1.76" 6/ 7-0.76" 6/ 9-0.98" 6/11 - 0.52"
11. Date of Crop Injury Rating 6/24/74; Weed Control Rating 6/24/74
12. Crop Maturity (Silking, 50% headed, etc.) corn height = 4.5 ft
13. Date Harvested --
14. Summary: (Weed Control - predominant species, etc.) The area, with a natural infestation of wild cane, was overseeded with wild cane giving a dense, uniform stand. Stands of other weed species (including pigweed, ivyleaf morningglory, climbing milkweed, smartweed, foxtail spp. and crabgrass) were too sparse for control ratings. Rain with wind reduced the height of ridges which exposed untreated soil or diminished the amount of treated soil in the corn rows. Wild cane was controlled between rows (in furrows) by all treatments except Bladex and Prefox. Refurrowing to move herbicide-treated soil to the base of corn plants would have improved control of wild cane. Wild cane plants averaged 2 ft in height in herbicide-treated plots; height of wild cane in untreated plots was the same as corn plants.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.) Rated for foliar injury. The only apparent injury was some reduction of corn height in plots treated with Bladex or Bladex combinations. The field was leveled for irrigation in 1972; soil irregularities persist, which would influence susceptibility to certain herbicides. Chlorosis was not observed when corn was 8-12" tall.
16. Summary: (Crop) Irrigated study. Normal crop growth to date.
Note: Individual-plot photographs taken 6/26/74.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

WILD CANE CONTROL
CORN 1974
KANSAS RIVER VALLEY

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. BLADEX	3.0	PPI	76.0	9.1	7.1	0.0
2. PREFOX	4.0 QTS	PPI	90.8	9.2	6.5	0.0
3. VERNAM + ATRAZINE	4.0 + 1.0	PPI	101.0	9.3	8.8	0.0
4. SUTAN + BLADEX	4.0 + 2.0	PPI	106.0	8.9	8.6	0.0
5. VERNAM + BLADEX	4.0 + 2.0	PPI	110.0	9.7	9.1	0.0
6. ERADICANE + ATRAZINE	6.0 + 1.0	PPI	113.3	9.5	9.4	0.0
7. ERADICANE + BLADEX	4.0 + 2.0	PPI	113.8	9.5	9.4	0.0
8. SUTAN + ATRAZINE	4.0 + 1.0	PPI	114.3	9.2	8.6	0.0
9. ERADICANE + ATRAZINE	4.0 + 1.0	PPI	121.0	9.7	9.2	0.0
10. NO TREATMENT			9.5	0.0	0.0	0.0
TEST AVERAGES			95.5	8.4	7.7	0.0
L.S.D. (.05)			21.5	0.9	1.3	0.0

* WHEN APPLIED: PPI (PREPLANT INCORPORATED)

** 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, Kansas Cooperator: Oliver G. Russ
2. Soil: Texture Reading SL pH 6.5 Organic Matter 2.5
3. Planting: Date 5/22/74 Rate 10 beans/ft row Depth 2.0"
4. Crop Soybeans Variety Williams
5. Fertilizer Applied: N 103 P 46 K 0
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10 ft x 30 ft
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 5/21/74
Preemergent 5/22/74 Early Post --
10. Precipitation after planting: 5/23 - .44" 5/25 - .50"
6/6 - .86" 6/7 - 1.35" 6/8 - 1.55"
6/11 - .48" 6/13 - .32" 7/4 - .45"
11. Date of Crop Injury Rating 7/2/74; Weed Control Rating 7/2/74
12. Crop Maturity (Silking, 50% headed, etc.) --
13. Date Harvested 10/9/74
14. Summary: (Weed Control - predominant species, etc.)

The plot area was overseeded with alfalfa seed screenings. The predominant weed species present were pigweed, foxtail spp., crabgrass, mustard, lambsquarter, ragweed, and carpetweed. Poor weed control was noted from all dinitroaniline compounds when not used in combination.

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

All herbicide treatments containing Sencor caused moderate stunting and leaf burn. Beans on plots treated with Sencor plus Antor showed the greatest herbicide injury. Beans were slow to emerge with plots treated with Vernam, Cobex and Lasso plus Bladex.

16. Summary: (Crop Yield)

Soybean yields were above average for Kansas.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
SOYBEAN 1974
MANHATTAN

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. PLANAVIN	1.0	PPI	23.7	0.0	7.7	0.0
2. TOLBAN + BROMEX	1.0 + 1.5	PPI	41.1	4.3	8.8	0.0
3. COBEX	.5	PPI	41.5	5.8	8.7	0.0
4. TOLBAN	1.0	PPI	43.4	3.8	9.2	0.0
5. TREFLAN	1.0	PPI	45.8	5.7	9.5	0.0
6. VERNAM	3.0	PPI	50.0	7.7	9.0	0.0
7. TREFLAN + PASGN.(EP)	.75 + .75	PPI	51.5	7.0	8.8	0.0
8. TREFLAN + SENCOR	.75 + .37	PPI	53.4	8.7	9.0	0.2
9. TREFLAN + SENCOR(PRE)	.75 + .5	PPI	58.9	9.7	10.0	0.0
10. SOYEX	4.5	PRE	44.7	6.5	7.7	0.0
11. H 22234 + SENCOR	1.5 + .375	PRE	50.7	8.8	9.5	1.3
12. LASSO	2.5	PRE	51.1	6.8	9.3	0.0
13. LASSO + MALORAN	1.5 + 1.5	PRE	51.8	7.2	8.7	0.0
14. SENCOR	.5	PRE	53.6	9.3	9.5	2.8
15. SURFLAN + SENCOR	1.0 + .375	PRE	53.7	9.7	9.2	1.3
16. LASSO + SENCOR	1.5 + .375	PRE	54.0	8.8	9.7	0.0
17. SOYEX + SENCOR	3.0 + .375	PRE	54.2	8.8	9.2	0.0
18. LASSO + LOROX	1.5 + 1.0	PRE	54.4	8.2	8.8	0.0
19. LASSO + BASGN.(EP)	2.5 + .75	PRE	54.7	9.5	9.3	0.0
20. LASSO + MODOWN	1.5 + 1.5	PRE	55.0	7.8	9.0	0.0
21. LASSO + BLADEX	1.5 + 1.5	PRE	58.2	8.7	9.2	0.2
22. AMEX 820 + SENCOR	1.5 + .375	PPI	44.4	9.2	8.5	0.2
23. AMIBEN	3.0	PRE	54.4	8.5	9.5	0.0
24. HAND WEED			56.5	8.5	9.5	0.0
25. NO TREATMENT			0.0	0.0	0.0	0.0
TEST AVERAGES			48.0	7.2	8.7	0.2
L.S.D. (.05)			7.5	1.1	0.5	0.6

* WHEN APPLIED: PRE (COMPLETE COVERAGE AFTER PLANTING)
PPI (PREPLANT INCORPORATED)
EP (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, Kansas Cooperator: R. F. Sloan
2. Soil: Texture Silty clay loam pH 6.0 Organic Matter 2.8
3. Planting: Date 5/23/74 Rate 70#/A Depth 2.0"
4. Crop Soybeans Variety Williams
5. Fertilizer Applied: N 0 P 0 K 0
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10 ft x 30 ft
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 5/23/74
 Preemergent 5/23/74 Early Post 6/5/74
10. Precipitation after planting: 5/27 - .07" 5/29 - .16"
5/31 - .01" 6/6 - .65" 6/7 - .34"
6/8 - 2.85" 6/9 - .10" 6/10 - .05"
11. Date of Crop Injury Rating 6/17/74; Weed Control Rating 9/16/74
12. Crop Maturity (Silking, 50% headed, etc.) --
13. Date Harvested 10/3/74
14. Summary: (Weed Control - predominant species, etc.)
 Predominant weed species present were velvetleaf, foxtail spp. and pigweed.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
 All herbicide treatments containing Sencor caused moderate stunting and leaf burn. Beans on plots treated with Vernam, Cobex, and Soyex caused moderate soybean injury.
16. Summary: (Crop Yield)
 Yields were below normal for Kansas.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
SOYBEANS 1974
POWHATTAN

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. CCBEX	.5	PPI	19.6	6.0	8.7	0.0
2. TREFLAN	1.0	PPI	21.1	6.7	9.8	0.0
3. TOLBAN + BROMEX	1.0 + 1.5	PPI	21.6	8.8	9.3	0.0
4. TOLBAN	1.0	PPI	22.5	5.8	9.3	0.0
5. TREFLAN + SENCOR (PRE)	.75 + .5	PPI	23.3	9.7	9.8	4.0
6. PLANAVIN	1.0	PPI	23.8	9.0	8.8	0.0
7. TREFLAN + SENCOR	.75 + .37	PPI	24.0	10.0	9.8	2.7
8. VERNAM	3.0	PPI	24.8	10.0	9.0	2.0
9. TREFLAN + BASGN. (EP)	.75 + .75	PPI	25.7	8.8	9.8	0.0
10. SENCOR	.5	PRE	18.9	10.0	9.7	7.3
11. H 22234 + SENCOR	1.5 + .375	PRE	19.3	10.0	9.3	6.7
12. SURFLAN + SENCOR	1.0 + .375	PRE	20.5	10.0	9.8	6.0
13. LASSO + BLADEX	1.5 + 1.5	PRE	20.6	9.2	9.0	0.0
14. LASSO + LOROX	1.5 + 1.0	PRE	21.3	7.7	8.3	0.0
15. LASSO	2.5	PRE	21.8	9.5	9.3	0.0
16. LASSO + MODOWN	1.5 + 1.5	PRE	23.3	8.8	8.2	4.7
17. LASSO + MALDRAN	1.5 + 1.5	PRE	23.8	8.5	8.5	0.0
18. SOYEX + SENCOR	3.0 + .375	PRE	24.9	8.8	7.3	2.7
19. LASSO + BASGN. (EP)	2.5 + .75	PRE	25.3	8.5	8.0	0.0
20. LASSO + SENCOR	1.5 + .375	PRE	25.5	9.5	8.3	2.0
21. SOYEX	4.5	PRE	27.0	5.8	4.5	4.7
22. AMEX 820 + SENCOR	1.5 + .375	PPI	21.8	10.0	9.3	2.7
23. AMIBEN	3.0	PRE	24.7	8.7	9.3	0.0
24. HAND WFFD			22.4	9.8	9.8	0.0
25. NO TREATMENT			22.9	1.3	2.7	0.0
TEST AVERAGES			22.8	8.4	8.6	1.8
L.S.D. (.05)			NS	3.5	2.6	1.2

* WHEN APPLIED: PRE (COMPLETE COVERAGE AFTER PLANTING)
 PPI (PREPLANT INCORPORATED)
 EP (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 Knight
2. Soil: Texture Sic1 pH -- Organic Matter --
3. Planting: Date 6/4/74 Rate 60#/A Depth 1.5
4. Crop Soybeans Variety Columbus
5. Fertilizer Applied: N 0 P 0 K 0
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 6/4/74
Preemergent 6/4/74 Early Post 7/16/74
10. Precipitation after planting: 6/5 - .10" 6/6 - 1.40"
6/7 - .24" 6/8 - 1.58" 6/11 - .50"
7/3 - .28" 8/6 - 1.40"
11. Date of Crop Injury Rating --; Weed Control Rating 11/3/74
12. Crop Maturity (Silking, 50% headed, etc.) --
13. Date Harvested 11/22/74
14. Summary: (Weed Control - predominant species, etc.)

All plots were overseeded with alfalfa screenings at planting time. Grasses did not seem to be a problem this year. Predominant weed species were venice mallow, prickly sida, and pigweed.

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

The first planting washed out due to heavy rains and the second planting was very slow to emerge due to dry weather. An uneven stand was obtained but this appeared to be moisture stress rather than chemical injury.

16. Summary: (Crop Yield)

Plot yields were low and variable due to a poor stand of beans. Dry weather delayed maturity and many plants probably would not have reached maturity if we had received a killing frost before November 4.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
SOYBEANS 1974
OTTAWA

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	RU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. TREFLAN + SENCOR(PRE)	.75 + .5	PPI	19.7	9.7	10.0	0.0
2. TREFLAN	1.0	PPI	20.0	8.0	10.0	0.0
3. TREFLAN + SENCOR	.75 + .37	PPI	20.3	9.0	9.3	0.0
4. TOLBAN + BROMEX	1.0 + 1.5	PPI	20.9	7.3	9.7	0.0
5. PLANAVIN	1.0	PPI	21.1	7.3	8.0	0.0
6. TREFLAN + BASGN.(EP)	.75 + .75	PPI	21.5	6.7	9.3	0.0
7. COBEX	.5	PPI	21.8	8.3	10.0	0.0
8. VERNAM	3.0	PPI	22.6	8.3	9.3	0.0
9. TOLBAN	1.0	PPI	23.9	5.3	7.3	0.0
10. LASSO	2.5	PRE	20.3	6.7	9.0	0.0
11. LASSO + SENCOR	1.5 + .375	PRE	20.8	9.3	9.7	0.0
12. LASSO + LOROX	1.5 + 1.0	PRE	20.9	9.0	10.0	0.0
13. SENCOR	.5	PRE	20.9	10.0	9.7	0.0
14. LASSO + MALORAN	1.5 + 1.5	PRE	21.3	8.7	9.3	0.0
15. SURFLAN + SENCOR	1.0 + .375	PRE	21.4	8.7	9.3	0.0
16. LASSO + MDDOWN	1.5 + 1.5	PRE	21.5	7.3	8.0	0.0
17. LASSO + BASGN.(EP)	2.5 + .75	PRE	21.8	9.0	9.3	0.0
18. SOYEX	4.5	PRE	21.9	6.7	8.0	0.0
19. LASSO + BLADDEX	1.5 + 1.5	PRE	22.1	8.3	9.3	0.0
20. H 22234 + SENCOR	1.5 + .375	PRE	22.4	9.7	10.0	0.0
21. SOYEX + SENCOR	3.0 + .375	PRE	22.7	9.0	10.0	0.0
22. AMEX 820 + SENCOR	1.5 + .375	PPI	23.7	9.3	10.0	0.0
23. AMIBEN	3.0	PRE	20.5	8.0	7.7	0.0
24. HAND WEED			19.0	9.3	9.7	0.0
25. NO TREATMENT			20.3	2.7	2.0	0.0
TEST AVERAGES			21.3	8.1	9.0	0.0
L.S.D. (.05)			NS	2.4	2.4	0.0

* WHEN APPLIED:

PRE (COMPLETE COVERAGE AFTER PLANTING)
PPI (PREPLANT INCORPORATED)
EP (EARLY POST)

** WEED CONTROL RATING:

10 - COMPLETE CONTROL
C - NO CONTROL

*** CROP INJURY RATING:

10 - COMPLETE KILL
C - NO INJURY

Weed Control Research Plot Data

1. Location: Belleville, Kansas Cooperator: R. J. Raney
2. Soil: Texture Silt loam pH 7.1 Organic Matter 1.8
3. Planting: Date 5-31-74 Rate 8 seeds/ft Depth 2"
4. Crop Soybeans Variety Cutler 71
5. Fertilizer Applied: N 16 P 20 K 6
6. Seedbed Condition: () Excellent (X) 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 5-31-74
Preemergent 5-31-74 Early Post _____
10. Precipitation after planting: June - 2.27 July - 0.23
Aug. - 3.40 Sept. - 0.37 Oct. - 1.76
11. Date of Crop Injury Rating --; Weed Control Rating 9-18-74
12. Crop Maturity (Silking, 50% headed, etc.) Frost 9-2 and 10-15
13. Date Harvested 10-16-74
14. Summary: (Weed Control - predominant species, etc.)
Pigweed, kochia, foxtail, crabgrass
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
None observed - 9-18-74
16. Summary: (Crop Yield)

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
SOYBEAN 1974
BELLEVILLE

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. TREFLAN	1.0	PPI	20.6	2.3	8.3	0.0
2. COBEX	.5	PPI	21.7	2.7	8.7	0.0
3. PLANAVIN	1.0	PPI	22.3	2.0	8.7	0.0
4. TREFLAN + SENCOR	.75 + .37	PPI	23.9	5.0	9.3	0.0
5. VERNAM	3.0	PPI	24.2	7.0	8.3	0.0
6. TREFLAN + SENCOR (PRE)	.75 + .5	PPI	24.2	6.0	8.3	0.0
7. TOLBAN	1.0	PPI	24.9	4.7	8.0	0.0
8. TREFLAN + BASGN. (FP)	.75 + .75	PPI	25.1	6.0	9.3	0.0
9. TOLBAN + BROMEX	1.0 + 1.5	PPI	25.9	5.3	8.7	0.0
10. LASSO + BASGN. (FP)	2.5 + .75	PRE	24.7	9.7	9.3	0.0
11. LASSO + MODOWN	1.5 + 1.5	PRE	25.3	8.3	9.0	0.0
12. LASSO	2.5	PRE	25.5	8.7	9.0	0.0
13. SOYEX	4.5	PRE	25.5	2.7	8.7	0.0
14. H 22234 + SENCOR	1.5 + .375	PRE	25.8	9.7	10.0	0.0
15. LASSO + SENCOR	1.5 + .375	PRE	26.9	7.7	10.0	0.0
16. LASSO + BLADEX	1.5 + 1.5	PRE	27.0	7.7	9.3	0.0
17. SURFLAN + SENCOR	1.0 + .375	PRE	27.1	8.7	10.0	0.0
18. SOYEX + SENCOR	3.0 + .375	PRE	27.4	8.0	9.0	0.0
19. LASSO + LOROX	1.5 + 1.0	PRE	27.7	7.7	9.7	0.0
20. LASSO + MALORAN	1.5 + 1.5	PRE	27.7	8.3	9.0	0.0
21. SENCOR	.5	PRE	29.4	9.7	10.0	0.0
22. AMEX 820 + SENCOR	1.5 + .375	PPI	26.1	4.3	9.7	0.0
23. AMIBEN	3.0	PRE	27.6	7.7	10.0	0.0
24. HAND WEED			29.2	10.0	10.0	0.0
25. NO TREATMENT			15.3	0.0	7.0	0.0
TEST AVERAGES			25.2	6.4	9.1	0.0
L.S.D. (.05)			5.9	2.2	1.1	0.0

* WHEN APPLIED: PRE (COMPLETE COVERAGE AFTER PLANTING)
PPI (PREPLANT INCORPORATED)
FP (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
CHEMICAL WEED CONTROL IN SOYBEANS

1. Location: Rossville Cooperator: N. E. Humburg & L. S. Axthelm
2. Soil: Texture sandy loam pH 5.5 Organic Matter 1.0
3. Planting: Date 5/24/74 Rate 58 lbs/A Depth 3/4 - 1"
4. Crop Soybeans Variety Williams
5. Fertilizer Applied: N 15 P₂O₅ 40 K₂O 25
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 4 rows (30") x 30 ft
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 5/24/74
Preemergene 5/24/74 Early Post 6/20/74
10. Precipitation after planting: (in) 4/29 - 0.45 4/30 - 0.90 5/9 - 0.34
5/10 - 0.55 5/11 - 0.04 5/14 - 1.10 5/17 - 1.41 5/24 - 0.28 5/26 - 0.20
6/4 - T 6/5 - 0.04 6/6 - 1.76 6/7 - 0.76 6/9 - 0.98 6/11 - 0.52
11. Date of Crop Injury Rating 6/27/74; Weed Control Rating 7/2/74
12. Crop Maturity (Silking, 50% headed, etc.) 4th to 5th trifoliate
13. Date Harvested --
14. Summary: (Weed Control - predominant species, etc.) Area in corn in 1973. Weed stands uniform but light; only crabgrass stands were adequate for percent-control ratings. Predominant weed species were pigweed, ivyleaf morningglory, and climbing milkweed - the latter two escaping herbicidal injury (except on Basagran-treated plots). Control of weeds was high in that herbicide application rates generally were higher than recommended for a 1% OM soil.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.) Rated for foliar injury. The experiment being located on sandy soil of low OM content resulted in soybean injury on many plots. Soybeans treated with Sencor, combinations with Sencor and Bladex, and Vernam were damaged. Sencor-induced damage was observed as loss of unifoliate leaves, chlorosis, retarded development, reduced height and loss of stand; there was considerable row-to-row variation in degree of injury or kill due to differences in planting depth. Injury from Vernam as of 6/27/74 was reduction of height (leaflet distortion was more obvious one week earlier); recovery from Vernam injury usually is excellent.
16. Summary: (Crop) Dryland study. Irregular emergence of soybeans resulted in slight variation in plant height on most plots.

Note: Individual-plot photographs taken 7/5/74.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

PERFORMANCE HERBICIDES
SOYBEANS 1974
KANSAS RIVER VALLEY

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. TREFLAN + SENCOR (PRE)	.75 + .5	PPI	39.0	9.8	10.0	7.0
2. VERNAM	3.0	PPI	40.9	9.5	9.7	3.0
3. TOLBAN + BROMEX	1.0 + 1.5	PPI	44.2	9.3	9.3	0.3
4. COBEX	.5	PPI	45.7	9.6	8.8	1.0
5. TREFLAN	1.0	PPI	46.6	9.9	9.9	0.0
6. TREFLAN + BASGN. (EP)	.75 + .75	PPI	46.9	9.8	9.6	0.0
7. TOLBAN	1.0	PPI	47.0	9.0	9.9	0.3
8. TREFLAN + SENCOR	.75 + .37	PPI	47.6	9.8	9.6	2.0
9. PLANAVIN	1.0	PPI	48.3	9.6	9.9	0.3
10. LASSO + BLADEX	1.5 + 1.5	PRE	4.0	9.6	9.8	9.7
11. SENCOR	.5	PRE	17.1	9.8	9.9	9.0
12. SURFLAN + SENCOR	1.0 + .375	PRE	30.5	9.8	10.0	8.0
13. H 22234 + SENCOR	1.5 + .375	PRE	36.0	9.8	9.9	7.7
14. LASSO + MODDOW	1.5 + 1.5	PRE	43.1	9.7	7.3	0.3
15. SOYEX + SENCOR	3.0 + .375	PRE	43.6	9.8	9.5	5.7
16. LASSO + SENCOR	1.5 + .375	PRE	44.7	9.8	9.9	5.7
17. LASSO + LOROX	1.5 + 1.0	PRE	46.9	9.8	9.3	0.0
18. LASSO	2.5	PRE	48.1	9.5	9.6	0.0
19. LASSO + BASGN. (EP)	2.5 + .75	PRE	49.7	9.6	9.3	0.0
20. LASSO + MALORAN	1.5 + 1.5	PRE	50.3	9.1	6.3	0.0
21. SOYEX	4.5	PRE	55.3	9.3	8.0	0.3
22. AMEX 820 + SENCOR	1.5 + .375	PPI	44.5	9.2	9.3	3.0
23. AMIBEN	3.0	PRE	47.6	8.0	9.7	0.0
24. HAND WEED			46.8	10.0	10.0	0.3
25. NO TREATMENT			31.2	0.0	0.0	0.0
TEST AVERAGES			41.8	9.2	9.0	2.5
L.S.D. (.05)			8.5	1.1	1.7	1.0

* WHEN APPLIED:

PRE (COMPLETE COVERAGE IMMEDIATELY AFTER
PPI (PREPLANT INCORPORATED)
EP (EARLY POST) 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, Kansas Cooperator: Oliver G. Russ
2. Soil: Texture Reading SL pH 6.5 Organic Matter 2.5
3. Planting: Date 6/17/74 Rate 1 seed/4" Depth 2.0"
4. Crop Grain Sorghum Variety Pioneer 8674
5. Fertilizer Applied: N 18 P 46 K 0
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10 ft x 30 ft
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 6/17/74
 Preemergent 6/17/74 Early Post 7/10/74
10. Precipitation after planting: 7/4 - .45" 7/25 - .88"
8/7 - .58" 8/25 - .88" 9/7 - .58"
9/9 - .38" 9/10 - .12" 9/13 - .05"
11. Date of Crop Injury Rating 7/8/74; Weed Control Rating 7/22/74
12. Crop Maturity (Silking, 50% headed, etc.) --
13. Date Harvested 11/6/74
14. Summary: (Weed Control - predominant species, etc.)
 Plot area was overseeded with alfalfa seed screenings. Predominant weed species present were pigweed, foxtail spp., crabgrass, lambs-quarter and ragweed. Lack of precipitation following planting and treating resulted in poor weed populations and weed control.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
 All early post treatments caused slight leaf burn after application but Igran plus Atrazine caused moderate leaf burn.
16. Summary: (Crop Yield)
 Yields were below normal for Kansas due to the lack of precipitation throughout the growing season.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

PERFORMANCE HERBICIDES
GRAIN SORGHUM 1974
MANHATTAN

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. ATRAZINE	2.0	PRE	100.6	8.5	4.5	0.0
2. RAMROD	4.0	PRE	106.5	5.0	5.8	0.2
3. BLADEX + PROPAZINE	1.0 + 2.0	PRE	107.5	6.3	3.7	0.0
4. PROPAZINE	3.0	PRE	109.7	6.2	2.5	0.0
5. BLADEX + RAMROD	1.0 + 3.0	PRE	111.7	6.5	6.2	0.0
6. IGRAN	2.4	PRE	112.9	5.7	5.5	0.0
7. IGRAN + PROPAZINE	2.0 + .8	PRE	113.0	7.5	5.0	0.0
8. RAMROD/ATRAZINE	4.14	PRE	113.4	7.3	4.3	0.0
9. IGRAN + ATRAZINE	2.0 + .8	PRE	114.6	7.3	3.8	0.0
10. MODOWN + RAMROD	1.5 + 3.0	PRE	116.1	9.0	4.2	0.0
11. NO TREATMENT			50.0	0.0	0.0	0.0
12. HAND WEED			104.7	9.3	9.2	0.0
13. H 101	2.0	PRE	107.0	6.2	3.7	0.0
14. H 100	2.0	PRE	113.0	5.7	2.5	0.0
15. LOROX + RAMROD	1.0 + 3.0	PRE	120.6	7.7	6.3	0.0
16. H 100	2.0	EP	102.7	7.2	2.3	0.0
17. H 101	2.0	EP	109.1	8.7	3.5	0.0
18. IGRAN + ATRAZINE	2.0 + .8	EP	113.9	9.5	8.3	0.7
19. BLADEX + RAMROD	1.0 + 3.0	EP	115.8	8.3	5.7	0.3
20. ATRAZINE	2.0	EP	116.7	7.2	2.5	0.0
21. LASSO + ATRAZINE	2.0 + 1.2	EP	122.7	8.2	5.2	0.0
22. LASSO + PROTECT	3.0	PRE	87.6	1.0	4.8	0.0
23. LASSO + ATR. (PROT)	2.0 + 1.2	PRE	94.9	4.7	2.7	0.0
24. LASSO + PROTECT	3.0	PPI	100.6	9.0	9.7	0.0
25. LASSO + ATR. (PROT)	2.0 + 1.2	PPI	97.1	8.3	9.5	0.0
TEST AVERAGES			108.1	6.8	4.9	0.0
L.S.D. (.05)			11.3	2.7	2.4	0.2

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

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

*** CROP INJURY RATING:
1C - COMPLETE KILL
C - NO INJURY

Weed Control Research Plot Data

1. Location: Powhattan, Kansas Cooperator: R. F. Sloan
2. Soil: Texture Silty clay loam pH 6.0 Organic Matter 2.8
3. Planting: Date 6/5/74 Rate 1 seed every 4" Depth 1.5"
4. Crop Grain Sorghum Variety Co-op SG-40
5. Fertilizer Applied: N 0 P 0 K 0
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10 ft x 30 ft
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated 6/5/74
 Preemergent 6/5/74 Early Post 6/21/74
10. Precipitation after planting: 6/6 - .65" 6/7 - .34"
6/9 - 2.85" 6/10 - .10" 6/11 - .05"
6/13 - .03" 7/3 - .99"
11. Date of Crop Injury Rating _____; Weed Control Rating 9/16/74
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 11/8/74
14. Summary: (Weed Control - predominant species, etc.)
 Predominant weed species present were pigweed, velvetleaf, foxtail spp., and spurge.
15. Summary: (Crop injury - stand reduction, stunting, chlorosis, etc.)
 Three pounds of Lasso applied preemergent caused moderate sorghum injury.
16. Summary: (Crop Yield)
 Yields were below normal for Kansas.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
GRAIN SORGHUM 1974
POWHATTAN

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. IGRAN	2.4	PRE	70.7	3.0	5.2	0.0
2. IGRAN + PROPAZINE	2.0 + .8	PRE	76.9	7.8	7.7	0.0
3. RAMROD	4.0	PRE	80.5	8.8	9.7	0.0
4. MODOWN + RAMROD	1.5 + 3.0	PRE	81.7	7.7	9.3	0.0
5. IGRAN + ATRAZINE	2.0 + .8	PRE	82.2	4.8	7.3	0.0
6. PROPAZINE	3.0	PRE	82.3	7.8	6.8	0.0
7. ATRAZINE	2.0	PRE	82.6	9.0	8.2	0.0
8. RAMROD/ATRAZINE	4.14	PRE	84.7	8.7	9.3	0.0
9. BLADEX + PROPAZINE	1.0 + 2.0	PRE	86.1	8.7	7.8	0.0
10. BLADEX + RAMROD	1.0 + 3.0	PRE	87.4	7.8	9.0	0.0
11. NO TREATMENT			59.6	0.0	6.2	0.0
12. HAND WEED			82.2	9.8	10.0	0.0
13. LOROX + RAMROD	1.0 + 3.0	PRE	80.1	8.2	9.3	0.2
14. LASSO	3.0	PRE	82.5	9.3	9.7	1.2
15. H 100	2.0	PRE	85.6	9.3	8.5	0.0
16. IGRAN + ATRAZINE	2.0 + .8	FP	78.2	6.2	5.3	0.0
17. ATRAZINE	2.0	EP	81.6	8.3	7.8	0.0
18. H 100	2.0	EP	83.5	9.3	7.5	0.0
19. BLADEX + RAMROD	1.0 + 3.0	EP	83.5	9.7	9.5	0.0
20. H 101	2.0	FP	86.1	9.2	8.2	0.2
21. LASSO + ATRAZINE	2.0 + 1.2	EP	86.3	9.8	9.0	0.0
22. LASSO + ATR. (PROT)	2.0 + 1.2	PRE	83.9	9.0	9.7	0.0
23. LASSO + PROTECT	3.0	PRE	86.8	8.8	9.8	0.0
24. LASSO + PROTECT	3.0	PPI	90.5	7.7	9.5	0.0
25. LASSO + ATR. (PROT)	2.0 + 1.2	PPI	74.2	9.5	9.8	0.8
TEST AVERAGES			81.6	7.9	8.4	0.1
L.S.D. (.05)			NS	2.6	2.4	0.3

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

** 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 Knight
2. Soil: Texture Sic1 pH -- Organic Matter --
3. Planting: Date 6/21/74 Rate 4.5#/A Depth 1.0
4. Crop Grain Sorghum Variety DeKalb C-42Y
5. Fertilizer Applied: N 100 P -- K --
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 6/21/74
 Preemergent 6/24/74 Early Post 7/16/74
10. Precipitation after planting: 7/3 - .28" 8/6 - 1.40"
8/8 - .23" 8/14 - .09" 8/15 - .20"
11. Date of Crop Injury Rating 8/8/74 ; Weed Control Rating 11/21/74
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 12/9/74
14. Summary: (Weed Control - predominant species, etc.)
 All plots were overseeded with alfalfa screenings at planting time, but due to dry weather, weeds did not appear until late August.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
 There was a 20-30 percent stand reduction on all plots in which the seeds were treated with Protect.
16. Summary: (Crop Yield)
 Crop yields were low due to dry weather, but weeds did not provide much competition until late in the season.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
GRAIN SORGHUM 1974
OTTAWA

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. IGRAN + ATRAZINE	2.0 + .8	PRE	33.2	5.0	7.0	0.0
2. RAMROD/ATRAZINE	4.14	PRE	44.2	5.7	9.0	0.0
3. IGRAN + PROPAZINE	2.0 + .8	PRE	45.0	9.0	9.0	0.0
4. RAMROD	4.0	PRE	48.0	3.0	9.0	0.0
5. IGRAN	2.4	PRF	52.0	7.3	7.0	0.0
6. PROPAZINE	3.0	PRE	52.5	9.7	8.0	0.0
7. BLADEX + RAMROD	1.0 + 3.0	PRE	53.9	4.3	9.0	0.0
8. BLADEX + PROPAZINE	1.0 + 2.0	PRE	54.2	9.3	9.0	0.0
9. ATRAZINE	2.0	PRE	55.5	8.7	9.3	0.0
10. MODOWN + RAMROD	1.5 + 3.0	PRE	58.7	5.0	7.0	0.0
11. HAND WEED			43.0	8.0	9.0	0.0
12. NO TREATMENT			48.4	1.0	3.0	0.0
13. H 100	2.0	PRE	46.0	9.0	6.3	0.0
14. H 101	2.0	PRF	49.1	9.3	9.3	0.0
15. LOROX + RAMROD	1.0 + 3.0	PRE	49.4	4.0	5.3	0.0
16. ATRAZINE	2.0	EP	36.5	8.0	9.7	0.0
17. IGRAN + ATRAZINE	2.0 + .8	EP	39.6	8.0	9.3	0.0
18. BLADEX + RAMROD	1.0 + 3.0	FP	43.6	7.0	9.0	0.0
19. LASSO + ATRAZINE	2.0 + 1.2	EP	46.5	8.7	9.3	0.0
20. H 100	2.0	FP	48.7	8.7	9.3	0.0
21. H 101	2.0	FP	51.5	9.0	9.7	0.0
22. LASSO + PROTECT	3.0	PRE	32.7	2.3	7.0	0.0
23. LASSO + ATR. (PROT)	2.0 + 1.2	PRE	39.3	7.3	8.0	0.0
24. LASSO + PROTECT	3.0	PPI	38.6	1.7	3.0	0.0
25. LASSO + ATR. (PROT)	2.0 + 1.2	PPI	37.1	4.7	5.7	0.0
TEST AVERAGES			45.9	6.5	7.9	0.0
L.S.D. (.05)			NS	2.8	2.4	0.0

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

No-Till

1. Location: Belleville Cooperator: R. J. Raney
2. Soil: Texture Silt loam pH 7.1 Organic Matter 1.8
3. Planting: Date 6-3-74 Rate 5" spacing Depth 1"
4. Crop Grain Sorghum Variety Pioneer 8311
5. Fertilizer Applied: N 66 P 20 K 6
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 6-3-74 Early Post 6-20-74
10. Precipitation after planting: June - 2.27 July - 0.23
Aug. - 3.40 Sept. - 0.37 Oct. - 1.76
11. Date of Crop Injury Rating ---; Weed Control Rating 9-18-74
12. Crop Maturity (Silking, 50% headed, etc.) Frost 9-2; 10-15
13. Date Harvested _____
14. Summary: (Weed Control - predominant species, etc.)
Pigweed, kochia, foxtail, crabgrass
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
Poor stand on plots 120-121-220-221-320-321. Replanted but stands were poor. Evidently leaving off the PROTECT resulted in Lasso injury.
16. Summary: (Crop Yield)

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

NO-TILL
GRAIN SORGHUM 1974
BELLEVILLE

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. MCDOWN + RAMROD	1.5 + 3.0	PRE	26.8	7.3	6.0	0.0
2. BLADEX + RAMROD	1.0 + 3.0	PRE	34.7	9.0	8.0	0.0
3. RAMROD	4.0	PRE	35.0	8.7	6.7	0.0
4. PROPAZINE	3.0	PRE	43.1	9.0	5.3	0.0
5. BLADEX + PROPAZINE	1.0 + 2.0	PRE	43.4	8.7	8.7	0.0
6. ATRAZINE	2.0	PRE	45.3	8.7	6.3	0.0
7. RAMROD/ATRAZINE	4.14	PRE	48.5	8.7	6.3	0.0
8. IGRAN + PROPAZINE	2.0 + .8	PRE	51.3	9.3	8.3	0.0
9. IGRAN	2.4	PRE	52.4	9.7	8.3	0.0
10. IGRAN + ATRAZINE	2.0 + .8	PRE	57.3	8.7	8.7	0.0
11. NO TREATMENT			25.7	5.7	7.0	0.0
12. HAND WEED			37.3	7.3	8.7	0.0
13. H 100	2.0	PRE	46.0	7.7	6.0	0.0
14. LOROX + RAMROD	1.0 + 3.0	PRE	61.4	9.3	8.7	0.0
15. H 100	2.0	EP	20.2	6.3	5.3	0.0
16. IGRAN + ATRAZINE	2.0 + .8	EP	21.4	7.3	7.0	0.0
17. BLADEX + RAMROD	1.0 + 3.0	EP	44.7	6.7	5.7	0.0
18. ATRAZINE	2.0	EP	44.9	9.0	5.7	0.0
19. LASSO + ATRAZINE	2.0 + 1.2	EP	48.6	9.0	6.0	0.0
20. LASSO	3.0	PRE	7.2	5.0	4.3	0.0
21. LASSO + ATRAZINE	2.0 + 1.2	PRE	14.8	8.0	4.3	0.0
TEST AVERAGES			38.6	8.0	6.7	0.0
L.S.D. (.05)			19.1	NS	3.1	0.0

* WHEN APPLIED:

PRE (COMPLETE COVERAGE AFTER PLANTING)
EP (EARLY POST)

** WEED CONTROL RATING:

1C - COMPLETE CONTROL
0 - NO CONTROL

*** CROP INJURY RATING:

1C - COMPLETE KILL
0 - NO INJURY

Weed Control Research Plot Data

Conventional Tillage

1. Location: Belleville, Kansas Cooperator: R. J. Raney
2. Soil: Texture Silt loam pH 7.1 Organic Matter 1.8
3. Planting: Date 5-30-74 Rate 5" spacing Depth 1"
4. Crop Grain Sorghum Variety DeKalb F-62
5. Fertilizer Applied: N 66 P 20 K 6
6. Seedbed Condition: () Excellent (X) Fair () Poor () _____
7. Replications 3 Plot Size 10' x 30'
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
Preemergent 5-30 Early Post 6-20
10. Precipitation after planting: June - 2.27 July - 0.23
Aug. - 3.40 Sept. - 0.37 Oct. - 1.76
11. Date of Crop Injury Rating --; Weed Control Rating 9-18-74
12. Crop Maturity (Silking, 50% headed, etc.) Frost 9-2 and 10-15
13. Date Harvested 11-5-74
14. Summary: (Weed Control - predominant species, etc.)
Pigweed, kochia, foxtail, crabgrass
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
16. Summary: (Crop Yield)

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
GRAIN SORGHUM 1974
BELLEVILLE

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. IGRAN + PROPAZINE	2.0 + .8	PRE	43.9	8.0	8.0	0.0
2. MODOWN + RAMROD	1.5 + 3.0	PRE	44.7	5.0	8.3	0.0
3. IGRAN + ATRAZINE	2.0 + .8	PRE	44.8	8.3	8.7	0.0
4. IGRAN	2.4	PRE	45.4	4.0	7.0	0.0
5. BLADEX + RAMROD	1.0 + 3.0	PRE	46.0	7.3	9.3	0.0
6. RAMROD	4.0	PRE	48.7	5.0	8.7	0.0
7. ATRAZINE	2.0	PRE	49.7	10.0	8.7	0.0
8. RAMROD/ATRAZINE	4.14	PRE	50.6	9.7	9.7	0.0
9. BLADEX + PROPAZINE	1.0 + 2.0	PRE	51.9	9.7	9.3	0.0
10. PROPAZINE	3.0	PRE	59.1	9.3	6.7	0.0
11. NO TREATMENT			13.2	0.0	3.7	0.0
12. HAND WEED			56.2	10.0	10.0	0.0
13. H 100	2.0	PRE	49.3	10.0	9.7	0.0
14. LOROX + RAMROD	1.0 + 3.0	PRE	52.7	6.7	9.0	0.0
15. H 100	2.0	EP	40.3	7.3	3.7	0.0
16. LASSO + ATRAZINE	2.0 + 1.2	EP	41.3	7.0	4.7	0.0
17. ATRAZINE	2.0	EP	44.1	6.0	5.7	0.0
18. BLADEX + RAMROD	1.0 + 3.0	EP	48.8	8.7	6.0	0.0
19. IGRAN + ATRAZINE	2.0 + .8	EP	48.9	6.7	7.7	0.0
20. LASSO + ATR. (PROT)	2.0 + 1.2	PRE	41.0	9.7	10.0	0.0
21. LASSO + PROTECT	3.0	PRE	44.4	9.3	8.7	0.0
22. LASSO + PROTECT	3.0	PPI	33.6	8.0	10.0	0.0
23. LASSO + ATR. (PROT)	2.0 + 1.2	PPI	35.4	8.7	9.3	0.0
TEST AVERAGES			45.0	7.6	7.9	0.0
L.S.D. (.05)			14.9	1.7	2.3	0.0

* WHEN APPLIED:

PRE (COMPLETE COVERAGE AFTER PLANTING)
PPI (PREPLANT INCORPORATED)
EP (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, Kansas Cooperator: W. A. Moore
2. Soil: Texture Clark-Ost Cl pH 6.2 Organic Matter 2.1
3. Planting: Date 6/14/74 Rate 3.0 lb/A Depth 1.5"
4. Crop Grain Sorghum Variety Pioneer 8442
5. Fertilizer Applied: N 0 P 0 K 0
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10 ft x 30 ft
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated --
 Preemergent 6/14/74 Early Post 7/9/74
10. Precipitation after planting: 6/13 - .31" 7/25 - .17"
7/30 - .04" _____

11. Date of Crop Injury Rating --; Weed Control Rating --
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 11/26/74
14. Summary: (Weed Control - predominant species, etc.)
 Lack of precipitation following planting and treating resulted in poor weed populations. No control ratings were recorded.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
16. Summary: (Crop Yield)

Yields were below normal for Kansas.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
GRAIN SORGHUM 1974
HUTCHINSON

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. IGRAN + ATRAZINE	2.0 + .8	PRE	63.1	0.0	0.0	0.0
2. IGRAN + PROPAZINE	2.0 + .8	PRE	66.5	0.0	0.0	0.0
3. RAMROD	4.0	PRE	66.5	0.0	0.0	0.0
4. ATRAZINE	2.0	PRE	67.2	0.0	0.0	0.0
5. RAMROD/ATRAZINE	4.14	PRE	68.1	0.0	0.0	0.0
6. MODOWN + RAMROD	1.5 + 3.0	PRE	70.5	0.0	0.0	0.0
7. IGRAN	2.4	PRE	70.9	0.0	0.0	0.0
8. BLADEX + RAMROD	1.0 + 3.0	PRE	72.6	0.0	0.0	0.0
9. PROPAZINE	3.0	PRE	73.3	0.0	0.0	0.0
10. BLADEX + PROPAZINE	1.0 + 2.0	PRE	74.0	0.0	0.0	0.0
11. NO TREATMENT			70.9	0.0	0.0	0.0
12. HAND WEED			75.5	0.0	0.0	0.0
13. H 100	2.0	PRE	69.8	0.0	0.0	0.0
14. H 101	2.0	PRE	70.5	0.0	0.0	0.0
15. LOROX + RAMROD	1.0 + 3.0	PRE	71.0	0.0	0.0	0.0
16. IGRAN + ATRAZINE	2.0 + .8	EP	68.6	0.0	0.0	0.0
17. H 101	2.0	EP	70.9	0.0	0.0	0.0
18. LASSO + ATRAZINE	2.0 + 1.2	EP	72.4	0.0	0.0	0.0
19. BLADEX + RAMROD	1.0 + 3.0	EP	73.6	0.0	0.0	0.0
20. ATRAZINE	2.0	EP	74.7	0.0	0.0	0.0
21. H 100	2.0	EP	77.4	0.0	0.0	0.0
22. LASSO + PROTECT	3.0	PRE	60.7	0.0	0.0	0.0
23. LASSO + ATR. (PROT)	2.0 + 1.2	PRE	73.8	0.0	0.0	0.0
24. LASSO + PROTECT	3.0	PPI	69.8	0.0	0.0	0.0
25. LASSO + ATR. (PROT)	2.0 + 1.2	PPI	64.5	0.0	0.0	0.0
TEST AVERAGES			70.3	0.0	0.0	0.0
L.S.D. (.05)			NS	0.0	0.0	0.0

* WHEN APPLIED:

PRE (COMPLETE COVERAGE AFTER PLANTING)
PPI (PREPLANT INCORPORATED)
EP (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: Southwest Kansas Expt. Field Cooperator: D. Bonne
(Surface)
2. Soil: Texture Harney Silt Loam pH 6.8 (6") Org. Mat. 2%
3. Planting: Date 17 June Rate 30" - 12" Depth 2"
4. Crop Grain Sorghum Variety Asgrow Dorado M
5. Fertilizer Applied: N 45# P -- K --
Dry sur-
6. Seedbed Condition: () Excellent (X) Fair () Poor () face 2"
7. Replications 3 Plot Size 10' x 30" x 2 rows
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated --
Preemergent 17 June Early Post 15 July
10. Precipitation after planting: June 1 - 0.05 June 3 - 0.15
June 4 - 0.56 June 6 - 1.48 June 8 - 0.92
July 23 - 0.62 July 24 - 0.26 July 25 - 0.60
11. Date of Crop Injury Rating _____; Weed Control Rating _____
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested November 16, 18, 19, 1974
14. Summary: (Weed Control - predominant species, etc.)

Very few grasses in this year's test; accurate evaluation for grass control is thereby nullified. Amaranthus sp. were the main problem weeds with some Russian thistle. High temperature and low spring moisture contributed to poor stands making herbicide stand reduction evaluation a guess at best. Preemergent herbicides were not activated soon enough to give good weed control.

15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
Some root damage noted with dacamine; no other injury noted.
Stand problems due to low surface moisture at planting.
16. Summary: (Crop Yield)
Some frost injury.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
GRAIN SORGHUM 1974
SOUTHWEST KANSAS

NO. TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
				BROADLEAF	GRASSY	
1. RAMROD + 2,4-D (EP)	4.0 + 0.5	PRE	46.1	7.7	10.0	0.0
2. IGRAN + ATRAZINE	1.6 + 0.4	PRE	50.3	8.0	10.0	0.0
3. PROPAZINE	2.0	PRE	53.9	7.0	10.0	0.0
4. IGRAN + 13529	2.0 + 1.0	PRE	55.5	7.0	6.7	0.0
5. RAMROD + ATRAZINE	3.45	PRE	57.0	6.7	10.0	0.0
6. IGRAN + PROPAZINE	1.6 + 0.4	PRE	57.5	7.0	9.3	0.0
7. IGRAN	2.0	PRE	61.2	8.7	10.0	0.0
8. RAMROD	4.0	PRE	66.3	5.7	10.0	0.0
9. BROMINAL + 2,4-D	0.5 + 0.5	EP	44.1	8.0	10.0	0.0
10. DACAMINE	0.33	EP	50.8	7.0	10.0	0.0
11. BANVEL	0.25	EP	51.3	5.7	9.7	0.0
12. ATRAZINE	2.0	EP	54.4	8.3	10.0	0.0
13. LASSO + FOX 4	2.0 + 1.0	EP	56.5	9.7	10.0	0.0
14. ATRAZINE + (AGRI OIL)	1.5 + 1QT	EP	73.1	7.3	10.0	0.0
15. LASSO + BLADEX	2.0 + 1.0	EP	74.6	5.7	10.0	0.0
16. LASSO + ATRAZINE	2.0 + 1.0	EP	85.5	6.7	10.0	0.0
17. HAND WEED			66.9	10.0	10.0	0.0
18. NO TREATMENT			64.3	4.0	10.0	0.0
TEST AVERAGES			59.4	7.2	9.8	0.0
L.S.D. (.05)			NS	2.3	NS	0.0

* WHEN APPLIED: PRE (COMPLETE COVERAGE AFTER PLANTING)
EP (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: St. John, Kansas Cooperator: M. Lundquist and G. TenEyck
2. Soil: Texture Pratt - Carwile pH 6.3 Organic Matter 0.7
3. Planting: Date 5/31/74 Rate 80,000/A Depth 1.5
4. Crop Grain Sorghum Variety DeKalb E59
5. Fertilizer Applied: N 80 P 46 K 0
6. Seedbed Condition: (X) Excellent () Fair () Poor () _____
7. Replications 3 Plot Size 10 ft. x 30 ft.
8. Gallons of Spray per Acre 20 Carrier: (X) Water () Fert.
9. Date Herbicide Applied: Preplant Incorporated _____
 Preemergent 5/31/74 Early Post _____
10. Precipitation after planting: 6/74 - 1.52" 7/74 - .87"
8/74 - 5.14" 9/74 - 1.45"
11. Date of Crop Injury Rating _____; Weed Control Rating 10/31/74
12. Crop Maturity (Silking, 50% headed, etc.) _____
13. Date Harvested 11/1/74
14. Summary: (Weed Control - predominant species, etc.)
 Predominant weed species present were crabgrass and pigweed.
15. Summary: (Crop Injury - stand reduction, stunting, chlorosis, etc.)
 Bladex treatments caused early injury resulting in stand reduction and a decrease in yield.
16. Summary: (Crop Yield)
 Yields were normal for the area of Kansas.

KANSAS STATE UNIVERSITY
AGRONOMY DEPARTMENT

HERBICIDE PERFORMANCE
GRAIN SORGHUM 1974
ST JOHN

NO.	TREATMENT	LBS. A.I. PER A.	WHEN* APPLIED	BU. PER A.	WEED CONTROL RATING**		CROP*** INJURY
					BROADLEAF	GRASSY	
1.	IGRAN + BLADEX W/O	1.6 + .4	PRE	87.7	4.0	3.0	0.0
2.	IGRAN W/O	2.0	PRE	101.0	7.7	4.5	0.0
3.	IGRAN + BLADEX W/1	1.6 + .4	PRE	101.4	5.7	7.7	0.0
4.	IGRAN + PROPAZINE W/O	2.0 + .4	PRE	101.7	7.0	3.5	0.0
5.	IGRAN + ATRAZINE W/O	2.0 + .4	PRE	104.3	8.0	6.5	0.0
6.	IGRAN W/1	2.0	PRE	106.8	8.7	8.7	0.0
7.	IGRAN + BLADEX W/O	2.0 + .4	PRE	108.4	5.5	5.0	0.0
8.	IGRAN + BLADEX W/2	2.0 + .4	PRE	108.6	8.2	9.2	0.0
9.	IGRAN + ATRAZINE W/1	2.0 + .4	PRE	109.3	8.7	9.0	0.0
10.	IGRAN + 13529 W/O	2.0 + 1.0	PRE	110.9	7.7	6.0	0.0
11.	IGRAN + 13529 W/2	2.0 + 1.0	PRE	112.2	10.0	9.7	0.0
12.	IGRAN W/2	2.0	PRE	112.7	9.2	9.0	0.0
13.	IGRAN + BLADEX W/2	1.6 + .4	PRE	114.1	8.2	8.2	0.0
14.	IGRAN + BLADEX W/1	2.0 + .4	PRE	114.6	9.0	9.7	0.0
15.	IGRAN + PROPAZINE W/2	2.0 + .4	PRE	116.5	9.2	8.2	0.0
16.	IGRAN + 13529 W/1	2.0 + 1.0	PRE	116.5	9.5	8.5	0.0
17.	IGRAN + PROPAZINE W/1	2.0 + .4	PRE	118.5	9.5	9.5	0.0
18.	IGRAN + ATRAZINE W/2	2.0 + .4	PRE	120.7	9.8	9.7	0.0
19.	HAND WEED W/O			110.1	9.0	8.5	0.0
20.	HAND WEED W/1			110.6	9.5	8.7	0.0
21.	HAND WEED W/2			108.8	10.0	9.7	0.0
22.	NO TREATMENT W/O			39.0	2.3	1.5	0.0
23.	NO TREATMENT W/1			40.1	4.3	2.0	0.0
24.	NO TREATMENT W/2			67.3	4.0	2.0	0.0
TEST AVERAGES				101.7	7.7	7.0	0.0
L.S.D. (.05)				12.1	1.7	1.1	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