1987 University of Illinois Weed Control Research Report

Department of Agronomy

University of Illinois at Urbana-Champaign

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TROL * RESEARCH * REPORT *

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43-24 1987-88*
42-28 632.58*I161*

1987-88*

FOIL- WHITE
0017 CALL # IS I SMALL L61 NOT I161*

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1987
University of Illinois Weed Control Research Report

Department of Agronomy

University of Illinois at Urbana-Champaign

INTRODUCTORY COMMENTS

This report is a summary of herbicide evaluation studies conducted by the University of Illinois Department of Agronomy Weed Science program in 1987. Research from six locations in Illinois are reported. The purpose of this report is to inform our cooperators in industry, colleagues at other universities, and other interested persons of the results of our 1987 field research. Information herein does not constitute a recommendation or endorsement. Current recommendations for weed control in field crops are available from the University of Illinois cooperative extension service.

Weed control and crop injury ratings are based on a 0 to 99 scale with 99 equal to complete kill. Weed species are generally reported as four-letter NCWCC abbreviations. Herbicides are referred to by their trade name or experimental number. For your convenience we have identified individual components of herbicides formulated as pre-mixes. Components of a pre-mix are listed directly below the pre-mix name and are preceded by an asterisk (*). A list of weed species and herbicides used in these studies can be found in the appendix.

In preparing individual studies we tried to be as complete as possible, however, certain omissions do occur. In addition, despite careful proofing, certain errors in typing and compilation may exist. If you believe you found an error and would like further explanation please contact the appropriate author. We hope you find this report useful. If you have concerns or suggestions please feel free to contact us.

Thank You.

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ACKNOWLEDGEMENT

WE WOULD LIKE TO RECOGNIZE AND THANK THE FOLLOWING INDIVIDUALS FOR THEIR ASSISTANCE WITH THF U OF I WEED SCIENCE FIELD EVALUATION PROJECT DURING 1987. THROUGH THEIR COOPERATIVE EFFORTS THIS PUBLICATION IS MADE POSSIBLE.

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ACKNOWLEDGMENT

SPECIAL THANKS TO THE FOLLOWING AGRICULTURAL ORGANIZATIONS FOR THEIR SUPPORT COMMITMENT TO THE WEED SCIENCE PROGRAM IN THE DEPARTMENT OF AGRONOMY AT THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN:

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UNION CARBIDE AGRICULTURAL PRODUCTS COMPANY, INC.
UNIROYAL CHEMICAL

U N I V E R S I T Y   O F   I L L I N O I S

Early Preplant Corn

LOCATION:URBANA CRUSE FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:JOHN CANTWELL
PREVIOUS CROP:SOYBEANS   PLOT / Ft:10x38   ROW WIDTH/In:30
PREVIOUS TILL:ZERO (NO TILL)
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5.0   pH:6.0
EXPT. DESIGN:RCBD NUM. OF REPS:3
FERTILIZER :200#
CROP:CORN   VARIETY:PIONEER 3377
PLANTING DATE:05/10/87 DEPTH/In:1.5   NUM.PLANTS/ACR. @28,000
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

In the fall of 1986 our zero till area that had been set aside was accidentaly tilled. Therefore a new area was chosen, mixed annual weed seed was applied at the rate of 50#/A on March 15. However, a relatively dry spring resulted in little weed growth. No weeds were present at early preplant date of application. Herbicide treatments performed well but were not significantly better than controls on May 10. The area was abandoned and grew weed free corn.

Early Preplant Corn

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	EARLY PREPL				
APPLICATION DATE	04/02/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J 92/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	06:30/08:30	: / :	: / :	: / :	: / :
APPLIC. METHOD	EPP				
AIR/SOIL TEMP (F)	35 / 32	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	40	0	0	0	0
WIND DIR. / VELOC	NW / 09	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/COLD	/	/	/	/
SOIL/LEAF MOIST.	OPT /	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	25 / 30	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	.66	0	0	0	0
NOZZLE TYPE /NUM.	8003 / 6				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0 / 0	/	/	/	/
4-7 DAYS/2ND WEEK	0 / 0	/	/	/	/
3RD WEEK/4TH WEEK	.07 / .3	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	ZEAMA	CORN	0 / 0	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1			/	/	/	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

Early Preplant Corn

EXPT. LOCATION:Cruse South,
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	WEEDS 5/10/87				
01	BLADEX	DG 90%	4.0	EPP	0				
02	CONQUEST	DG 90%	4.0	EPP	0				
	*BLADEX		3.0						
	*ATRAZIN		1.0						
03	EXTRAZIN	DG 90%	4.0	EPP	0				
	*BLADEX		2.67						
	*ATRAZIN		1.33						
04	BLADEX	DG 90%	2.0	EPP	0				
	ATRAZINE	DG 90%	2.0	EPP					
05	ATRAZINE	DG 90%	3.0	EPP	0				
06	BLADEX	DG 90%	2.4	EPP	0				
	BLADEX	DG 90%	1.6	PRE					
07	CONQUEST	DG 90%	2.4	EPP	0				
	*BLADEX		1.8						
	*ATRAZIN		0.6						
	CONQUEST	DG 90%	1.6	PRE					
	*BLADEX		1.2						
	*ATRAZIN		0.4						
08	EXTRAZIN	DG 90%	2.4	EPP	0				
	*BLADEX		1.6						
	*ATRAZIN		0.8						
	EXTRAZIN	DG 90%	1.6	PRE					
	*BLADEX		1.07						
	*ATRAZIN		0.53						
09	ATRAZINE	DG 90%	1.2	EPP	0				
	BLADEX	DG 90%	1.2	EPP					
	ATRAZINE	DG 90%	0.8	PRE					
	BLADEX	DG 90%	0.8	PRE					
10	CHECK				0				

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Early Preplant Corn

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLICATION TYPE	WEEDS 5/10/87					
11	ATRAZINE	DG 90%	1.8	EPP	0					
	ATRAZINE	DG 90%	1.2	PRE						
12	BICEP	FL 6.0	4.5	EPP	0					
	*DUAL		2.5							
	*ATRAZIN		2.0							
13	LAS/ATR	FL 4.00	5.0	EPP	0					
	*LASSO		3.12							
	*ATRAZIN		1.88							
14	BICEP	FL 6.00	2.7	EPP	0					
	*DUAL		1.5							
	*ATRAZIN		1.2							
	BICEP	FL 6.0	1.8	PRE						
	*DUAL		1.0							
	*ATRAZIN		0.8							
15	LAS/ATR	FL 4.0	3.0	EPP	0					
	*LASSO		1.88							
	*ATRAZIN		1.12							
	LAS/ATR	FL 4.0	2.0	PRE						
	*LASSO		1.25							
	*ATRAZIN		1.0							
16	BLADEX	DG 90%	3.0	EPP	0					
	LAS/ATR	FL 4.0	4.0	PRE						
	*LASSO		2.5							
	*ATRAZIN		1.5							
17	BLADEX	DG 90%	3.0	EPP	0					
	BICEP	FL 6.0	3.6	PRE						
	*DUAL		2.0							
	*ATRAZIN		1.6							
18	BLADEX	DG 90%	3.0	EPP	0					
	BLADEX	DG 90%	2.0	SP-3"						
	COC	%C 1.0	1.0	SP-3"						
19	BLADEX	DG 90%	2.4	EPP	0					
	BLADEX	DG 90%	1.6	SP-3"						
	TANDEM	EC 4.0	0.5	SP-3"						
	COC	%C 1.0	1.0	SP-3"						

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Early Preplant Corn

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	WEEDS 5/10/87				
20	CHECK				0				
21	BLADEX	DG 90%	2.4	EPP	0				
	ATRAZINE	DG 90%	1.5	SP-3"					
	TANDEM	EC 4.0	0.5	SP-3"					
	COC	%C 1.0	1.0	SP-3"					
22	ATRAZINE	DG 90%	2.0	EPP	0				
	BLADEX	DG 90%	1.6	SP-3"					
	COC	%C 1.0	1.0	SP-3"					
23	BLADEX	DG 90%	2.0	EPP	0				
	TANDEM	EC 4.0	0.5	SP-3"					
	COC	%C 1.0	1.0	SP-3"					
24	SC0774	WP 75%	1.0	EPP	0				
	R29148	WP 75%	0.166	EPP					
25	SC0774	WP 75%	1.25	EPP	0				
	R29148	WP 75%	0.208	EPP					
26	SC0774	WP 75%	1.0	EPP	0				
	R29148	WP 75%	0.166	EPP					
	ATRAZINE	DG 90%	1.50	EPP					
27	SC0774	WP 75%	1.25	EPP	0				
	R29148	WP 75%	0.208	EPP					
	ATRAZINE	DG 90%	1.50	EPP					
28	SC0774	WP 75%	0.75	EPP	0				
	R29148	WP 75%	0.125	EPP					
	ATRAZINE	DG 90%	0.90	EPP					
	SC0774	WP 75%	0.50	PRE					
	R29148	WP 75%	0.083	PRE					
	ATRAZINE	DG 90%	0.60	PRE					
29	SC0774	WP 75%	1.0	PRE	0				
	R29148	WP 75%	0.166	PRE					
30	SC0774	WP 75%+	1.25	PRE	0				
	R29148	WP 75%	0.208	PRE					

U N I V E R S I T Y   O F   I L L I N O I S

Early Preplant Corn

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	WEEDS 5/10/87				
31	CHECK				0				
32	SC0774	WP 75%	1.0	PRE	0				
	R29148	WP 75%	0.166	PRE					
	ATRAZINE	DG 90%	1.50	PRE					
33	SC0774	WP 75%	1.25	PRE	0				
	R29148	WP 75%	0.208	PRE					
	ATRAZINE	DG 90%	1.50	PRE					
34	TANDEM	EC 4.0	1.50	EPP	0				
	DPXM6316	DF 75%	.0078	SP-3"					
35	TANDEM	EC 4.0	1.50	EPP	0				
	DPXM6316	DF 75%	.0156	SP-3					
36	TANDEM	EC 4.0	1.50	EPP	0				
	DPXM6316	DF 75%	.0156	SP-3"					
	X-77	%S 1.0	.25%	SP-3"					
37	TANDEM	EC 4.0	1.50	EPP	0				
	DPXM6316	DF 75%	.0078	SP-3"					
	X-77	%S 1.0	.25%	SP-3"					
38	DPXM6316	DF 75%	.0078	SP-3"	0				
	BLADEX	DG 90%	1.5	SP-3"					
	X-77	%S 1.0	.25%	SP-3"					
39	DPXM6316	DF 75%	.0156	SP-3"	0				
	BLADEX	DG 90%	1.5	SP-3"					
	X-77	%S 1.0	.25%	SP-3"					
40	LASSO	EC 4.0	2.0	EPP	0				
	2-4D	EC 3.8	0.5	SP-3"					
41	CHECK				0				
42	LASSO MT	FL 4.0	2.0	EPP	0				
	2-4D	EC 3.8	0.5	SP-3"					
43	LASSO	EC 4.0	1.5	EPP	0				
	LASSO	EC 4.0	1.0	PRE					
	2-4D	EC 3.8	0.5	SP-3"					

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Early Preplant Corn

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLICATION TYPE	WEEDS 5/10/87				
44	LASSOMT	FL 4.0	1.5	EPP	0				
	LASSOMT	FL 4.0	1.0	PRE					
	2-4D	EC 3.8	0.5	SP-3"					
	LSD(0.05) =				NA				
	STANDARD DEVIATION =				NA				
	COEFF. OF VARIABILITY =				NA				

U N I V E R S I T Y O F I L L I N O I S

CORN HERBICIDES PREPLANT INCORPORATED

LOCATION:URBANA SOUTH FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR:GENE OLDHAM
REPORTED BY:M. D. MCGLAMERY
PREVIOUS CROP:CORN PLOT / Ft:10x35 ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM OM%:5.0 pH:6.2
EXPT. DESIGN:RCBD NUM. OF REPS:3
CROP:CORN VARIETY:PIONEER 3377
PLANTING DATE:04/21/87 DEPTH/In:1.5 NUM.PLANTS/ACR. @28,000
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW MID:MED LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Grass control was rated 5/20/87 prior to 2,4-D application on 5/25/87 when corn was in the 6 leaf stage. Pigweed control on 5/20 was 100% in all plots except the checks. Jimsonweed and tall morningglory were rated after the 2-4D applications.

EPTC provided 100% grass control and better morningglory control than butylate before 2,4-D treatment. PPG-1259 improved broadleaf weed control over atrazine alone. A thunderstorm approx. 2 weeks after 2,4-D application caused severe corn "lean" which lasted for several days. Corn recovered completely from the 2,4-D injury within 2 weeks.

CORN PREPLANT INCORPORATED 1

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PPI	POST			
APPLICATION DATE	04/21/87	05/25/87	/ /	/ /	/ /
JULIAN DATE/YEAR	J111/87	J146/87	J 0/00	J 0/00	J 0/00
START HR / END HR	06:00/07:00	06:00/07:00	: / :	: / :	: / :
APPLIC. METHOD	PPI	POST			
AIR/SOIL TEMP (F)	70 / 60	90 / 80	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	75	90	0	0	0
WIND DIR. / VELOC	NE / @5	SW / 05	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	CLDY/ DRY	/	/	/
SOIL/LEAF MOIST.	/	ADQ / ADQ	/	/	/
INCORP. EQUIPMENT	FAST FINISH				
INCORP. DEPTH(in)	4	0	0	0	0
SPRAYER TYPE	HAND HELD	HAND HELD			
SPRAYER GPA / PSI	20 / 30	20 / 40	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	.502	.502	0	0	0
NOZZLE TYPE /NUM.	8003/5	8002/5			
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0 / 0.28	0 /	/	/	/
4-7 DAYS/2ND WEEK	0.55 / 0	/	/	/	/
3RD WEEK/4TH WEEK	0.50 / 1.52	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	ZEAMA	CORN	- / -	- / 20"	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	ANMG	TALL MORNINGGLORY	- / -	H /VINE	/	/	/
2	GIFT	GIANT FOXTAIL	- / -	H / 12"	/	/	/
3	JIWE	JIMSON WEED	- / -	M / 12"	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

CORN PREPLANT INCORPORATED 1

EXPT. LOCATION:M-17E
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% GIFT 5/20/87	% ANMG 6/01/87	% JIWE 6/01/87	CROP % INJ. 6/01/87	
01	SUTAN	EC 6.7	4.0	PPI	90	78	93	0	
	ATRAZINE	DG 90%	1.5	PPI					
02	SUTAN+	EC 6.7	4.0	PPI	98	98	83	22	
	24DAMINE	EC 3.8	0.5	@ 20"					
03	ERADICAN	EC 6.7	4.0	PPI	99	99	99	22	
	24DAMINE	EC 3.8	0.5	@ 20"					
04	ERADICAN	EC 6.7	4.0	PPI	99	93	93	0	
	ATRAZINE	DG 90%	1.5	PPI					
05	SUTAN	FL 4.0	4.0	PPI	99	98	70	15	
	*ENCAP.								
	24DAMINE	EC 3.8	0.5	@ 20"					
06	ERADICAN	FL 3.0	4.0	PPI	99	99	99	22	
	*ENCAP.								
	24DAMINE	EC 3.8	0.5	@ 20"					
07	GENEP	EC 7.0	4.0	PPI	99	99	99	22	
	24DAMINE	EC 3.8	0.5	@ 20"					
08	GENEP	EC 7.0	4.0	PPI	99	97	99	0	
	ATRAZINE	DG 90%	1.5	PPI					
09	CHECK				0	0	0	0	
10	GENATE+	EC 6.7	4.0	PPI	99	93	77	20	
	24DAMINE	EC 3.8	0.5	@ 20"					
11	GENATE+	EC 6.7	4.0	PPI	98	83	93	0	
	PPG-4000	FL 4.8	0.9	PPI					
	*PPG1259		.15						
	*ATRAZIN		.75						
12	GENATE+	EC 6.7	4.0	PPI	99	90	90	23	
	BLADEX+	DG 90%	1.5	PPI					
	PPG-1259	FL 4.8	0.15	PPI					

U N I V E R S I T Y   O F   I L L I N O I S

CORN PREPLANT INCORPORATED 1

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% GIFT 5/20/87	% ANMG 6/01/87	% JIWE 6/01/87	CROP % INJ. 6/01/87
13	GENATE+	EC 6.7	4.0	PPI	99	95	99	8
	PPG-4000	FL 4.8	1.8	PPI				
	*PPG1259		0.3					
	*ATRAZIN		1.5					
14	GENATE+	EC 6.7	4.0	PPI	99	78	92	0
	ATRAZINE	DG 90%	1.5	PPI				
15	DUAL+	EC 8.0	2.5	PPI	99	63	93	0
	ATRAZINE	DG 90%	1.5	PPI				
	LSD(0.05) =				4	13	15	8
	STANDARD DEVIATION =				3	8	9	5
	COEFF. OF VARIABILITY =				3	9	10	47

U N I V E R S I T Y   O F   I L L I N O I S

CORN PREEMERGENCE GRASS HERBICIDES

LOCATION:URBANA SOUTH FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:M. D. McGLAMERY
PREVIOUS CROP:CORN   PLOT / Ft:7.5x35   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5.0   pH:6.2
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:CORN   VARIETY:PIONEER 3377
PLANTING DATE:04/20/87 DEPTH/In:1.5"   NUM.PLANTS/ACR. @28,000
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:MOD   LATE:ADQ
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Preemergence grass herbicides performed surprisingly well considering the limited rainfall. The 2X rates worked better than the X rates. The encapsulated thiocarbamates did not provide adequate foxtail control. Rainfall was not adequate for atrazine to control morninglory the only prodominent broadleaf species. The 5.9FL Bicep gave better weed control than did the 6.0FL. BAS-514 had better broadleaf control than grass control, and showed benzoic like injury syptoms on uncontrolled broadleaves after rainfall. Corn injury was minimal and likely attributable to the lack of early rainfall.

CORN PREEMERGENCE GRASS 1

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PRE				
APPLICATION DATE	04/21/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J111/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	03:00/04:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	PRE				
AIR/SOIL TEMP (F)	75 / 60	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	75	0	0	0	0
WIND DIR. / VELOC	NE / @5	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLDY / DRY	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT	NONE				
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	20 / 30	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	.40	0	0	0	0
NOZZLE TYPE /NUM.	8003/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0.28 / 0.55	/	/	/	/
4-7 DAYS/2ND WEEK	0 / 0	/	/	/	/
3RD WEEK/4TH WEEK	0.50 / 1.52	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	ZEAMA	CORN	- /6-Lf.	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	H / -	/	/	/	/
2	TAMG	TALL MORNINGGLORY	H / -	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

CORN PREEMERGENCE GRASS 1

EXPT. LOCATION:M-17E/CHAMPAIGN
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% CONT. GIFT 5/20/87	% CONT. TAMG 5/20/87			
01	DUAL	EC 8.0	2.0	PRE	80	0			
	ATRAZINE	DG 90%	1.0	PRE					
02	DUAL	EC 8.0	4.0	PRE	87	43			
	ATRAZINE	DG 90%	1.0	PRE					
03	LASSO	EC 4.0	2.5	PRE	60	33			
	ATRAZINE	DG 90%	1.0	PRE					
04	LASSO	EC 4.0	5.0	PRE	77	33			
	ATRAZINE	DG 90%	1.0	PRE					
05	CG180937	EC 7.8	2.0	PRE	70	57			
	ATRAZINE	DG 90%	1.0	PRE					
06	CG180937	EC 7.8	4.0	PRE	78	47			
	ATRAZINE	DG 90%	1.0	PRE					
07	SAN-582	EC 8.0	1.5	PRE	83	33			
	ATRAZINE	DG 90%	1.0	PRE					
08	SAN-582	EC 8.0	3.0	PRE	85	23			
	ATRAZINE	DG 90%	1.0	PRE					
09	HARNESS	EC 7.5	2.0	PRE	99	23			
	ATRAZINE	DG 90%	1.0	PRE					
10	HARNESS	EC 7.5	4.0	PRE	83	10			
	ATRAZINE	DG 90%	1.0	PRE					
11	SUTAN *ENCAP.	FL 4.0	4.0	PRE	37	27			
	ATRAZINE	DG 90%	1.0	PRE					
12	SUTAN *ENCAP.	FL 4.0	6.0	PRE	53	33			
	ATRAZINE	DG 90%	1.0	PRE					

U N I V E R S I T Y   O F   I L L I N O I S

CORN PREEMERGENCE GRASS 1

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% CONT GIFT 5/20/87	% CONT TAMG 5/20/87			
13	ERADICAN	FL 3.0	4.0	PRE	73	33			
	*ENCAP.								
	ATRAZINE	DG 90%	1.0	PRE					
14	ERADICAN	FL 3.0	6.0	PRE	67	53			
	*ENCAP.								
	ATRAZINE	DG 90%	1.0	PRE					
15	SUTAN+	EC 6.7	6.0	PRE	20	23			
	ATRAZINE	DG 90%	1.0	PRE					
16	ERADICAN	EC 6.7	6.0	PRE	43	37			
	ATRAZINE	DG 90%	1.0	PRE					
17	BICEP	FL 6.0	3.35	PRE	47	3			
	*DUAL		1.86						
	*ATRAZIN		1.5						
18	BICEP	FL 6.0	6.7	PRE	67	17			
	*DUAL		3.72						
	*ATRAZIN		2.98						
19	BICEP	FL 5.9	3.35	PRE	83	23			
	*DUAL		1.89						
	*ATRAZIN		1.52						
20	BICEP	FL 5.9	6.7	PRE	88	27			
	*DUAL		3.78						
	*ATRAZIN		3.04						
21	ATRAZINE	DG 90%	1.5	PRE	23	23			
22	ATRAZINE	DG 90%	3.0	PRE	53	30			
23	BAS-514	WP 50.0	0.5	PRE	70	50			
24	BAS-514	WP 50.0	1.0	PRE	67	80			
25	BAS-514	WP 50.0	2.0	PRE	89	82			
26	BAS-514	WP 50.0	0.5	PRE	60	57			
	ATRAZINE	DG 90%	1.5	PRE					

U N I V E R S I T Y   O F   I L L I N O I S

CORN PREEMERGENCE GRASS 1

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% CONT. GIFT 5/20/87	% CONT. TAMG 5/20/87			
27	BAS-514	WP 50.0	1.0	PRE	53	60			
	ATRAZINE	DG 90%	1.5	PRE					
28	BAS-514	WP 50.0	2.0	PRE	77	57			
	ATRAZINE	DG 90%	1.5	PRE					
				LSD(0.05) =	18	29			
				STANDARD DEVIATION =	11	17			
				COEFF. OF VARIABILITY =	16	47			

UNIVERSITY OF ILLINOIS

NO-TILL CORN WEED CONTROL STUDY

LOCATION:MONMOUTH RESEARCH STATION
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :MIKE MAINZ
REPORTED BY:JOHN CANTWELL
PREVIOUS CROP:CORN PLOT / Ft:10x35 ROW WIDTH/In:30
PREVIOUS TILL:ZERO
SOIL TEXTURE:SILT LOAM OM%:2.5 pH:6.0
EXPT. DESIGN:RCBD NUM. OF REPS:3
CROP:CORN VARIETY:
PLANTING DATE:05/04/87 DEPTH/In:1.5 NUM.PLANTS/ACR. @24,000
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW MID:LOW LATE:
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

OUR NO-TILL AREA AT URBANA WAS ACCIDENTALLY TILLED IN THE FALL OF 1986 WHICH NECESSITATED MOVING THE STUDY TO MONMOUTH, ILLINOIS. THE EXPERIMENTAL AREA AT MONMOUTH WAS IN NO-TILL CORN AND HAD COMPLETE FAILURE OF GIANT FOXTAIL CONTROL IN 1986. THE COMBINATION OF EXTREMELY THICK SURFACE RESIDUE (BOTH FOXTAIL AND CORN) AND THREE WEEKS OF VERY HOT DRY WEATHER FOLLOWING APPLICATION GREATLY REDUCED HERBICIDE EFFICACY. CONTROL OF EXISTING WEEDS AS WELL AS NON-EMERGED WEEDS WAS VERY POOR. THEREFORE NO RATINGS WILL BE REPORTED.

IN GENERAL ROUNDUP AND IGNITE AFFORDED FAIR CONTROL OF GIANT FOXTAIL PRESENT AT APPLICATION. THE CARRIER VOLUME (20GPA) WAS INSUFFICIENT FOR GOOD PARAQUAT PERFORMANCE UNDER THE CONDITIONS OF THIS STUDY, 40 GALLON PER ACRE WATER WOULD HAVE BEEN JUSTIFIED. TRIAZINE-OIL COMBINATIONS ALSO SUFFERED FROM INSUFFICIENT CARRIER VOLUME, COMBINED WITH DROUTHY FOXTAIL AT APPLICATION RESULTED IN VIRTUALLY NO CONTROL FROM THESE TREATMENTS. THERE WAS LITTLE RESIDUAL CONTROL OF UNEMERGED GIANT FOXTAIL, THEREFORE AFTER OBSERVATION THE STUDY WAS MOLDBOARD PLOWED.

NO-TILL CORN WEED CONTROL STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PRE				
APPLICATION DATE	05/06/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J126/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	10:00/14:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	PRE				
AIR/SOIL TEMP (F)	88 / 65	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	85	0	0	0	0
WIND DIR. / VELOC	NE / 09	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.5	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIE CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	ZEAMA	CORN	- / -	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1			/	/	/	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

NO-TILL CORN WEED CONTROL STUDY

EXPT. LOCATION:MONMOUTH, IL
RESEARCH BY:CANTWELL/LEIBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/04/87				
01	ROUND-UP	EC 4.0	1.0	PRE	0				
	ATRAZINE	DG 90%	1.5	PRE					
	DUAL	EC 8.0	2.25	PRE					
02	ROUND-UP	EC 4.0	1.0	PRE	0				
	ATRAZINE	DG 90%	1.5	PRE					
03	ROUND-UP	EC 4.0	1.0	PRE	0				
	ERADACAN	SC 3.0	6.0	PRE					
	*FERT.								
04	ROUND-UP	EC 4.0	1.0	PRE	0				
	ERADACAN	SC 3.0	6.0	PRE					
	*ENCAP.								
05	ROUND-UP	EC 4.0	1.0	PRE	0				
	ERADACAN	SC 3.0	6.0	PRE					
	*ENCAP.								
	ATRAZINE	DG 90%	1.5	PRE					
06	ROUND-UP	EC 4.0	1.0	PRE	0				
	ERADACAN	SC 3.0	6.0	PRE					
	*FERT.								
	ATRAZINE	DG 90%	1.5	PRE					
07	ROUND-UP	EC 4.0	1.0	PRE	0				
	ERADACAN	EC 6.7	6.0	PRE					
08	ROUND-UP	EC 4.0	1.0	PRE	0				
	24DAMINE	EC 3.8	0.5	POST					
09	ROUND-UP	EC 4.0	1.0	PRE	0				
	LAS/ATR	FL 4.0	4.5	PRE					
	*LASSO		2.5						
	*ATRAZIN		2.0						
10	ROUND-UP	EC 4.0	1.0	PRE	0				
	BLADEX	DG 90%	2.5	PRE					

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NO-TILL CORN WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLICATION TYPE	GIFT 6/04/87				
11	ROUND-UP	EC 4.0	1.0	PRE	0				
	PPG-4000	FL 4.8	1.2	PRE					
	DUAL	EC 8.0	2.25	PRE					
12	ROUND-UP	EC 4.0	1.0	PRE	0				
	PPG-4000	FL 4.8	1.2	PRE					
	DUAL	EC 8.0	2.25	PRE					
	PPG-4000	FL 4.8	0.6	POST					
13	ROUND-UP	EC 4.0	1.0	PRE	0				
	RS-012	EC 3.75	0.9	POST					
14	ROUND-UP	EC 4.0	1.0	PRE	0				
	RS-012	EC 3.75	0.9	POST					
	ATRAZINE	DG 90%	1.5	POST					
15	ROUND-UP	EC 4.0	1.0	PRE	0				
	RS-012	EC 3.75	0.9	POST					
	BLADEX	DG 90%	1.25	POST					
16	ROUND-UP	EC 4.0	1.0	PRE	0				
	LASSO	EC 4.0	2.75	PRE					
	ATRAZINE	DG 90%	1.5	POST					
	COC	CO 1.0	0.25	POST					
17	PARAQUAT	SC 2.0	0.5	PRE	0				
	LASSO	EC 4.0	2.75	PRE					
	X-77	%S 1.0	0.25%	PRE					
	BANVEL	SC 2.0	0.38	POST					
18	PARAQUAT	SC 2.0	0.5	PRE	0				
	LASSO	EC 4.0	2.75	PRE					
	X-77	%S 1.0	0.25%	PRE					
	BUCTRIL	EC 2.0	0.38	POST					
19	PARAQUAT	SC 2.0	0.5	PRE	0				
	LASSO	EC 4.0	2.75	PRE					
	X-77	%S 1.0	0.25%	PRE					
	BUCTRIL	EC 2.0	0.38	POST					
	ATRAZINE	DG 90%	1.5	POST					

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NO-TILL CORN WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/04/87					
20	ROUND-UP	EC 4.0	1.0	PRE	0					
	ATRAZINE	DG 90%	1.5	POST						
	COC	CO 1.0	0.25	POST						
21	ROUND-UP	EC 4.0	1.0	PRE	0					
	ATRAZINE	DG 90%	1.5	POST						
	TANDEM	EC 4.0	0.5	POST						
	COC	CO 1.0	0.25	POST						
22	CHECK				0					
23	DUAL/IGN	EC 4.0	3.3	PRE	0					
	*PPKG									
	ATRAZINE	DF 90%	1.5	PRE						
24	IGNITE	AS 1.67	1.0	PRE	0					
	DUAL	EC 8.0	2.3	PRE						
	ATRAZINE	DF 90%	1.5	PRE						
25	DUAL/IGN	EC 4.0	3.3	PRE	0					
	*PPKG									
	IGNITE	AS 1.67	0.5	PRE						
	ATRAZINE	DF 90%	1.5	PRE						
26	PARAQUAT	SC 2.0	0.5	PRE	0					
	LASSO	EC 4.0	2.7	PRE						
	ATRAZINE	DF 90%	1.5	PRE						
	X-77	%S 1.0	0.25%	PRE						
27	COLONEL	FL 2.4	0.25	PRE	0					
	*PARAQT		0.25	PRE						
	*ATRAZIN		1.25	PRE						
	DUAL	EC 8.0	2.3	PRE						
	X-77	%S 1.0	0.25%	PRE						
28	PARAQUAT	EC 1.5	0.25	PRE	0					
	DUAL	EC 8.0	2.3	PRE						
	ATRAZINE	DF 90%	1.25	PRE						
	X-77	%S 1.0	0.25%	PRE						
29	POAST	EC 1.5	0.2	PRE	0					
	DUAL	EC 8.0	2.3	PRE						
	24DLVE	EC 3.8	0.5	PRE						

U N I V E R S I T Y   O F   I L L I N O I S

NO-TILL CORN WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/04/87				
30	DUAL	EC 8.0	2.3	PRE	0				
	ATRAZINE	DF 90%	1.5	PRE					
	COC	CO 1.0	0.25	PRE					
31	DUAL	EC 8.0	2.3	PRE	0				
	PPG-4000	FL 4.8	1.2	PRE					
	COC	CO 1.0	0.25	PRE					
32	DUAL	EC 8.0	2.3	PRE	0				
	PPG-4000	FL 4.8	0.6	PRE					
	COC	CO 1.0	1.0	PRE					
	PPG-4000	FL 4.8	0.6	POST					
33	DUAL	EC 8.0	2.3	PRE	0				
	PPG-4000	FL 4.8	1.2	PRE					
	COC	CO 1.0	0.25	PRE					
	PPG-4000	FL 4.8	0.6	POST					
34	DUAL	EC 8.0	2.3	PRE	0				
	ATRAZINE	DF 90%	1.5	PRE					
	COC	CO 1.0	0.25	PRE					
	PPG-4000	FL 4.8	0.6	POST					
35	BLADEX	DG 90%	2.5	PRE	0				
	COC	CO 1.0	0.25	PRE					
36	TANDEM	EC 4.0	0.5	PRE	0				
	ATRAZINE	DF 90%	1.5	PRE					
	COC	CO 1.0	0.25	PRE					
37	TANDEM	EC 4.0	0.5	PRE	0				
	BLADEX	DG 90%	2.0	PRE					
	COC	CO 1.0	0.25	PRE					
38	TANDEM	EC 4.0	0.5	PRE	0				
	ATRAZINE	DF 90%	1.5	PRE					
	LASSO	EC 4.0	2.7	PRE					
	COC	CO 1.0	0.25	PRE					
39	TANDEM	EC 4.0	0.37	PRE	0				
	ATRAZINE	DF 90%	1.5	PRE					
	COC	CO 1.0	0.25	PRE					
	TANDEM	EC 4.0	0.37	POST					

U N I V E R S I T Y   O F   I L L I N O I S

NO-TILL CORN WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/04/87				
40	CHECK				0				
	*ROUNDUP	EC 4.0	1.0	PRE					
41	TANDEM	EC 4.0	0.37	PRE	0				
	BLADEX	DG 90%	2.0	PRE					
	COC	CO 1.0	0.25	PRE					
	TANDEM	EC 4.0	0.35	POST					
	ATRAZINE	DF 90%	1.0	POST					
	COC	CO 1.0	0.25	POST					
42	ATRAZINE	DF 90%	2.0	PRE	0				
	BLADEX	DG 90%	2.0	PRE					
	COC	CO 1.0	0.25	PRE					
43	ATRAZINE	DF 90%	1.3	PRE	0				
	BLADEX	DG 90%	2.7	PRE					
	COC	CO 1.0	0.25	PRE					
44	ATRAZINE	DF 90%	1.0	PRE	0				
	BLADEX	DG 90%	1.0	PRE					
	COC	CO 1.0	0.25	PRE					
				LSD(0.05) =	NA				
				STANDARD DEVIATION =	NA				
				COEFF. OF VARIABILITY =	NA				

U N I V E R S I T Y   O F   I L L I N O I S

APPLICATION METHODS STUDY WITH SC 0051

LOCATION:URBANA SOUTH FARM
RESEARCH BY:FRITZ KOPPATSCHEK
COOPERATOR :GENE OLDHAM
REPORTED BY:FRITZ KOPPATSCHEK
PREVIOUS CROP:SOYBEANS   PLOT / Ft:7.5x30   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:4   pH:6.8
PREVIOUS TRT.:SOYBEAN HERBICIDES
EXPT. DESIGN:RCBD   NUM. OF REPS:4
CROP:CORN   VARIETY:PIONEER 3377
PLANTING DATE:04/29/87 DEPTH/In:2   NUM. PLANTS/ACR. @28,000
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

SC 0051 was evaluated to determine the optimum application method and rate. Preplant incorporated and preemergent applications failed to give adequate control of giant foxtail. Preemergent applications were not as effective as preplant incorporated applications due to lack of rainfall following application. Postemergence applications resulted in the best control and the level of control was enhanced when atrazine was included. No corn injury was detected with any method of applications or at any of the rates. The primary activity of this compound was on giant foxtail. More consistent control probably could be obtained if rates were increased to 1.5 to 2.0 lb/A.

APPLICATION METHODS STUDY WITH SC 0051

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PPI	PRE	POST		
APPLICATION DATE	04/28/87	04/30/87	05/20/87	/ /	/ /
JULIAN DATE/YEAR	J118/87	J120/87	J140/87	J 0/00	J 0/00
START HR / END HR	06:00/07:00	06:00/07:00	06:00/07:00	: / :	: / :
APPLIC. METHOD					
AIR/SOIL TEMP (F)	65 / 58	55 / 58	78 / 68	0 / 0	0 / 0
% REL. HUMIDITY	40	40	85	0	0
WIND DIR. / VELOC	W / 8	W / 5	W / 4	/ 0	/ 0
SKY / SOIL COND.	CLEAR/MOIST	CLEAR/DRY	CLEAR/MOIST	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT	FIELD CULT	NONE	NONE		
INCORP. DEPTH(in)	2	0	0	0	0
SPRAYER TYPE	CO2	CO2	CO2		
SPRAYER GPA / PSI	20 / 35	20 / 35	20 / 45	0 / 0	0 / 0
MIX SIZE (Gallon)	.475	0	0	0	0
NOZZLE TYPE /NUM.	8003	8003	8002		
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	*******	****** CROP ******	*********	*********	*********	*********	*********
		CORN	/	/	/5 LF	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	/	/	/3 LF	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

APPLICATION METHODS STUDY WITH SC 0051

EXPT. LOCATION:ANS. 200
RESEARCH BY:FRITZ KOPPATSCHEK

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% GIFT 5/26/87	% GIFT 6/22/87			
01	SC-0051	EC 3.0	0.25	PPI	83	11			
02	SC-0051	EC 3.0	0.50	PPI	85	29			
03	SC-0051	EC 3.0	0.75	PPI	78	5			
04	SC-0051	EC 3.0	0.25	PPI	88	38			
	SC-29148	WP 75	0.04	PPI					
05	SC-0051	EC 3.0	0.50	PPI	82	43			
	SC-29148	WP 75	0.08	PPI					
06	SC-0051	EC 3.0	0.75	PPI	88	44			
	SC-29148	WP 75	0.125	PPI					
07	SC-0051	EC 3.0	0.25	PPI	93	85			
	SC-29148	WP 75	0.04	PPI					
	ATRAZINE	DG 90%	1.25	PPI					
08	SC-0051	EC 3.0	0.50	PPI	89	80			
	SC-29148	WP 75	0.08	PPI					
	ATRAZINE	DG 90%	1.25	PPI					
09	SC-0051	EC 3.0	0.75	PPI	91	70			
	SC-29148	WP 75	0.125	PPI					
	ATRAZINE	DG 90%	1.25	PPI					
10	SC-0051	EC 3.0	0.25	PRE	80	23			
11	SC-0051	EC 3.0	0.50	PRE	75	23			
12	SC-0051	EC 3.0	0.75	PRE	82	36			
13	SC-0051	EC 3.0	0.25	PRE	82	21			
	SC-29148	WP 75	0.04	PRE					
14	SC-0051	EC 3.0	0.50	PRE	83	25			
	SC-29148	WP 75	0.08	PRE					

U N I V E R S I T Y   O F   I L L I N O I S

APPLICATION METHODS STUDY WITH SC 0051

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% GIFT 5/26/87	% GIFT 6/22/87			
15	SC-0051	EC 3.0	0.75	PRE	69	5			
	SC-29148	WP 75	0.125	PRE					
16	SC-0051	EC 3.0	.025	PRE	74	19			
	SC-29148	WP 75	0.04	PRE					
	ATRAZINE	DG 90%	1.25	PRE					
17	SC-0051	EC 3.0	0.50	PRE	83	36			
	SC-29148	WP 75	0.08	PRE					
	ATRAZINE	DG 90%	1.25	PRE					
18	SC-0051	EC 3.0	0.75	PRE	86	43			
	SC-29148	WP 75	0.125	PRE					
	ATRAZINE	DG 90%	1.25	PRE					
19	SC-0051	EC 3.0	0.25	POST	85	45			
	TWEEN 20		.25%	POST					
20	SC-0051	EC 3.0	0.50	POST	86	44			
	TWEEN 20		.25%	POST					
21	SC-0051	EC 3.0	0.75	POST	89	61			
	TWEEN 20		.25%	POST					
22	SC-0051	EC 3.0	0.25	POST	90	77			
	ATRAZINE	DG 90%	1.25	POST					
	TWEEN 20		.25%	POST					
23	SC-0051	EC 3.0	0.50	POST	90	85			
	ATRAZINE	DG 90%	1.25	POST					
	TWEEN 20		.25%	POST					
24	SC-0051	EC 3.0	0.75	POST	94	89			
	ATRAZINE	DG 90%	1.25	POST					
	TWEEM 20		.25%	POST					
25	ATRAZINE	DG 90%	1.25	PPI	92	87			
26	ATRAZINE	DG 90%	1.25	PRE	84	59			
27	ATRAZINE	DG 90%	1.25	POST	89	59			
	COC		1 QT	POST					

U N I V E R S I T Y   O F   I L L I N O I S

APPLICATION METHODS STUDY WITH SC 0051

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% GIFT 5/26/87	% GIFT 6/22/87			
28	ATRAZINE	DG 90%	1.50	PRE	92	80			
	LASSO	EC 4.0	2.50	PRE					
29	ATRAZINE	DG 90%	1.50	POST	94	95			
	TANDEM	EC 4.0	0.50	POST					
	COC		1 QT	POST					
30	W-CHECK				25	13			
				LSD(0.05) =	15	28			
				STANDARD DEVIATION =	11	20			
				COEFF. OF VARIABILITY =	13	41			

U N I V E R S I T Y   O F   I L L I N O I S

APPLICATION METHODS STUDY WITH SC 0774

LOCATION:URBANA SOUTH FARM
RESEARCH BY:FRITZ KOPPATSCHEK
COOPERATOR :GENE OLDHAM
REPORTED BY:FRITZ KOPPATSCHEK
PREVIOUS CROP:SOYBEANS PLOT / Ft:7.5x30 ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM OM%:5 pH:6.8
EXPT. DESIGN:RCBD NUM. OF REPS:4
CROP:CORN VARIETY:PIONEER 3377
PLANTING DATE:04/29/87 DEPTH/In:1.5 NUM.PLANTS/ACR. @28,000
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW MID:ADQ LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

SC 0774 was evaluated using several different methods of application. Préplant incorporated and postemergence applications were the most effective at controlling giant foxtail. Lack of rainfall following the preemergent application resulted in poor control by the treatments. PPI treatments of .75 to 1.25 lb/A preformed as well as commercial standards. Postemergence applications were the most effective at controlling giant foxtail. Postemergence applications also resulted in 25-35% corn injury, in the form of chlorosis. Injury was no longer present after a period of two weeks. The primary activity of the compound was on giant foxtail but some control was detected on jimsonweed and pigweed. Variable results between reps existed primarily due to carryover from last years soybean herbicides.

APPLICATION METHODS STUDY WITH SC 0774

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PPI	PRE	POST		
APPLICATION DATE	04/28/87	04/30/87	05/20/87	/ /	/ /
JULIAN DATE/YEAR	J118/87	J120/87	J140/87	J 0/00	J 0/00
START HR / END HR	06:00/07:00	06:00/07:00	06:00/07:00	: / :	: / :
APPLIC. METHOD					
AIR/SOIL TEMP (F)	65 / 58	52 / 58	78 / 65	0 / 0	0 / 0
% REL. HUMIDITY	40	40	95	0	0
WIND DIR. / VELOC	W / 8	W / 5	W / 5	/ 0	/ 0
SKY / SOIL COND.	CLEAR/MOIST	CLEAR/DRY	CLEAR/MOIST	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT	FIELD CULT	NONE	NONE		
INCORP. DEPTH(in)	2	0	0	0	0
SPRAYER TYPE	CO2	CO2	CO2		
SPRAYER GPA / PSI	20 / 32	20 / 32	20 / 45	0 / 0	0 / 0
MIX SIZE (Gallon)	.475	0	0	0	0
NOZZLE TYPE /NUM.	8003	8003	8002		
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		CORN	/	/	/5 LF	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	/	/	/3 LF	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

APPLICATION METHODS STUDY WITH SC 0774

EXPT. LOCATION:ANIMAL SCIENCE 200E
RESEARCH BY:FRITZ KOPPATSCHEK

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% CONT. GIFT 5/26/87	ZEAMA %CRINJU 5/26/87	% CONT. GIFT 6/22/87		
01	SC-0774	WP 75	0.50	PPI	78	0	43		
02	SC-0774	WP 75	0.75	PPI	85	0	37		
03	SC-0774	WP 75	1.00	PPI	92	2	75		
04	SC-0774	WP 75	1.25	PPI	93	1	73		
05	SC-0774	WP 75	0.50	PPI	85	0	41		
	SC-29148	WP 75	0.08	PPI					
06	SC-0774	WP 75	0.75	PPI	91	0	44		
	SC-29148	WP 75	1.25	PPI					
07	SC-0774	WP 75	1.00	PPI	91	1	74		
	SC-29148	WP 75	.166	PPI					
08	SC-0774	WP 75	1.25	PPI	88	0	53		
	SC-29148	WP 75	.208	PPI					
09	SC-0774	WP 75	0.50	PPI	91	0	61		
	SC-29148	WP 75	0.08	PPI					
	ATRAZINE	DG 90%	1.25	PPI					
10	SC-0774	WP 75	0.75	PPI	94	0	84		
	SC-29148	WP 75	.125	PPI					
	ATRAZINE	DG 90%	1.25	PPI					
11	SC-0774	WP 75	1.00	PPI	93	0	75		
	SC-29148	WP 75	.166	PPI					
	ATRAZINE	DG 90%	1.25	PPI					
12	SC-0774	WP 75	1.25	PPI	96	6	81		
	SC-29148	WP 75	.208	PPI					
	ATRAZINE	DG 90%	1.25	PPI					
13	SC-0774	WP 75	0.50	PRE	86	0	40		

U N I V E R S I T Y   O F   I L L I N O I S

APPLICATION METHODS STUDY WITH SC 0774

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% CONT. GIFT 5/26/87	% CORN INJURY 5/26/87	% CONT. GIFT 6/22/87		
14	SC-0774	WP 75	0.75	PRE	86	0	25		
15	SC-0774	WP 75	1.00	PRE	88	0	30		
16	SC-0774	WP 75	1.25	PRE	84	0	23		
17	SC-0774	WP 75	0.50	PRE	80	0	21		
	SC-29148	WP 75	0.08	PRE					
18	SC-0774	WP 75	0.75	PRE	81	0	14		
	SC-29148	WP 75	.125	PRE					
19	SC-0774	WP 75	1.00	PRE	89	0	30		
	SC-29148	WP 75	.166	PRE					
20	SC-0774	WP 75	1.25	PRE	89	0	29		
	SC-29148	WP 75	.208	PRE					
21	SC-0774	WP 75	0.50	PRE	82	0	19		
	SC-29148	WP 75	0.08	PRE					
	ATRAZINE	DG 90%	1.25	PRE					
22	SC-0774	WP 75	0.75	PRE	84	0	39		
	SC-29148	WP 75	.125	PRE					
	ATRAZINE	DG 90%	1.25	PRE					
23	SC-0774	WP 75	1.00	PRE	83	0	57		
	SC-29148	WP 75	.166	PRE					
	ATRAZINE	DG 90%	1.25	PRE					
24	SC-0774	WP 75	1.25	PRE	86	0	33		
	SC-29148	WP 75	.208	PRE					
	ATRAZINE	DG 90%	1.25	PRE					
25	SC-0774	WP 75	0.50	POST	91	95	38		
	TWEEN 20		.25%	POST					
26	SC-0774	WP 75	0.75	POST	90	40	59		

U N I V E R S I T Y   O F   I L L I N O I S

APPLICATION METHODS STUDY WITH SC 0774

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% CONT. GIFT 5/26/87	%CORN INJURY 5/26/87	% CONT. GIFT 6/22/87		
29	SC-0774	WP 75	0.50	POST	96	27	97		
	ATRAZINE	DG 90%	1.25	POST					
	TWEEN 20		.25%	POST					
30	SC-0774	WP 75	0.75	POST	97	23	96		
	ATRAZINE	DG 90%	1.25	POST					
	TWEEN 20		.25%	POST					
31	SC-0774	WP 75	1.00	POST	95	32	97		
	ATRAZINE	DG 90%	1.25	POST					
	TWEEN 20		.25%	POST					
32	SC-0774	WP 75	1.25	POST	97	26	97		
	ATRAZINE	DG 90%	1.25	POST					
	TWEEN 20		.25%	POST					
33	SC-0735	WP 75	0.50	PRE	92	1	56		
	SC-29148	WP 75	.083	PRE					
34	SC-0735	WP 75	0.75	PRE	90	0	74		
	SC-29148	WP 75	.125	PRE					
35	LASSO	4E C	2.50	PRE	91	0	57		
	2-4D	4E C	.50	POST					
36	LASSO	4M T	2.50	PRE	92	0	78		
	2-4D	4E C	.50	POST					
37	ATRAZINE	DG 90%	1.25	PRE	83	0	35		
38	ATRAZINE	DG 90%	1.25	PPI	89	0	48		
39	ATRAZINE	DG 90%	1.25	POST	84	0	53		
	COC		1 QT	POST					
40	ATRAZINE	DG 90%	1.25	PRE	96	0	78		
	LASSO	EC 4.0	2.50	PRE					
41	ATRAZINE	DG 90%	1.25	PPI	97	0	85		
	LASSO	EC 4.0	2.50	PPI					

U N I V E R S I T Y   O F   I L L I N O I S

APPLICATION METHODS STUDY WITH SC 0774

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% CONT. GIFT 5/26/87	% CORN INJURY 5/26/87	% CONT. GIFT 6/22/87		
42	ATRAZINE	DG 90%	1.25	POST	96	0	91		
	TANDEM	EC 4.0	0.50	POST					
	COC		1 QT	POST					
43	LASSO	EC 4.0	2.50	PRE	91	0	41		
	24DAMINE	EC 3.8	0.50	POST					
44	W-CHECK				0	0	0		
45	HW-CHECK				99	0	99		
	LSD(0.05) =				58	26	48		
	STANDARD DEVIATION =				40	18	33		
	COEFF. OF VARIABILITY =				40	149	51		

U N I V E R S I T Y   O F   I L L I N O I S

POSTEMERGENCE BROADLEAF WEED CONTROL IN CORN 1

LOCATION:URBANA SOUTH FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:LOYD WAX
PREVIOUS CROP:SOYBEANS   PLOT / Ft:7.5x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5.0   pH:6.2
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:CORN   VARIETY:PIONEER 3377
PLANTING DATE:04/22/87 DEPTH/In:1.5   NUM. PLANTS/ACR. @28,000
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

A reasonably uniform stand of annual broadleaf weeds were present at the time of application. Stage of weed growth and environmental conditions provided for good postemergence activity.

Some treatments injured corn, with Starane causing slight to moderate injury and BAS-514 causing severe to very severe injury. BAS-514 with COC was less injurious to corn than BAS-514 with the adjuvant "090". A storm approx. three weeks after application caused corn in plots treated with 2-4,D or Banvel to "lay down" for several days, however, excellent growing conditions allowed corn to recover quickly. Several treatments provided excellent control of annual broadleaf weeds with little or no injury to corn.

CORN POSTEMERGENCE BROADLEAF STUDY 1

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	05/27/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J147/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	06:00/09:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	85 / 75	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	85	0	0	0	0
WIND DIR. / VELOC	SW / 10	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/MOIST	/	/	/	/
SOIL/LEAF MOIST.	ADQ / ADQ	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	Co2 HND HLD				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.4	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIE CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		CORN	H / 7Lf	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	VELE	VELVETLEAF	H / 8"	/	/	/	/
2	JIWE	JIMSON WEED	H / 8"	/	/	/	/
3	COLQ	COM.LAMBSQUARTERS	V / 6"	/	/	/	/
4	SMPW	SMOOTH PIGWEED	V / 8"	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

CORN POSTEMERGENCE BROADLEAF STUDY 1

EXPT. LOCATION:C-500 W,
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 6/11/87	JIWE 6/11/87	VELE 6/11/87	SMPW 6/11/87	COLQ 6/11/87
01	STARANE	FL 1.67	0.25	@-5"	8	98	96	97	73
02	STARANE	FL 1.67	0.50	@-5"	18	95	92	85	65
03	STARANE	FL 1.67	1.00	@-5"	22	98	99	96	93
04	LONTREL	FL 3.0	0.25	@-5"	0	77	43	53	43
05	LONTREL	FL 3.0	0.50	@-5"	3	77	73	78	82
06	STARANE COC	FL 1.67 CO 1.0	0.25 0.25	@-5" @-5"	23	93	93	55	65
07	STARANE COC	FL 1.67 CO 1.0	0.50 0.25	@-5" @-5"	23	97	97	81	82
08	STARANE COC	FL 1.67 CO 1.0	1.00 0.25	@-5" @-5"	23	96	96	86	83
09	LONTREL COC	FL 3.0 CO 1.0	0.25 0.25	@-5" @-5"	0	73	48	48	58
10	LONTREL COC	FL 3.0 CO 1.0	0.50 0.25	@-5" @-5"	5	75	50	57	58
11	STARANE X-77	FL 1.67 %S 1.0	0.25 0.25%	@-5" @-5"	13	94	90	78	70
12	STARANE X-77	FL 1.67 %S 1.0	0.50 0.25%	@-5" @-5"	23	96	97	86	77
13	STARANE X-77	FL 1.67 %S 1.0	1.00 0.25%	@-5" @-5"	30	96	93	89	80
14	LONTREL X-77	FL 3.0 %S 1.0	0.25 0.25%	@-5" @-5"	0	63	57	78	73
15	LONTREL X-77	FL 3.0 %S 1.0	0.50 0.25%	@-5" @-5"	5	87	65	67	68

U N I V E R S I T Y   O F   I L L I N O I S

CORN POSTEMERGENCE BROADLEAF STUDY 1

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 6/11/87	JIWE 6/11/87	VELE 6/11/87	SMPW 6/11/87	COLQ 6/11/87
16	DPXM6316	DF 75	3.54g	@-5"	0	67	78	80	70
17	DPXM6316	DF 75	7g	@-5"	3	74	88	92	73
18	DPXM6316	DF 75	14g	@-5"	0	73	90	90	78
19	METRIBUZ	DF 75	0.25	@-5"	13	92	96	97	96
	X-77	%S 1.0	0.25%	@-5"					
20	DPXM6316	DF 75	7g	@-5"	0	92	98	98	96
	METRIBUZ	DF 75	0.25	@-5"					
21	DPXM6316	DF 75	3.54g	@-5"	5	68	83	90	92
	24DAMINE	EC 3.8	0.5	@-5"					
22	DPXM6316	DF 75	3.54g	@-5"	0	37	47	60	57
	X-77	%S 1.0	0.25%	@-5"					
23	DPXM6316	DF 75	3.54g	@-5"	0	57	72	82	82
	X-77	%S 1.0	0.1%	@-5"					
24	DPXM6316	DF 75	7g	@-5"	3	48	60	80	73
	X-77	%S 1.0	0.25%	@-5"					
25	DPXM6316	DF 75	7g	@-5"	5	50	57	67	63
	X-77	%S 1.0	0.1%	@-5"					
26	24DAMINE	EC 3.8	0.5	@-5"	7	53	85	90	87
27	24DAMINE	EC 3.8	0.5	@-5"	8	78	90	95	93
	COC	CO 1.0	0.25	@-5"					
28	BANVEL	SC 4.0	0.25	@-5"	0	89	85	91	79
29	BANVEL	SC 4.0	0.5	@-5"	8	97	95	93	93
30	BENAZOL	FL 4.0	0.25	@-5"	0	75	63	60	68
	COC	CO 1.0	0.25	@-5"					
31	BENAZOL	FL 4.0	0.5	@-5"	0	85	83	80	78
	COC	CO 1.0	0.25	@-5"					

U N I V E R S I T Y O F I L L I N O I S

CORN POSTEMERGENCE BROADLEAF STUDY 1

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 6/11/87	JIWE 6/11/87	VELE 6/11/87	SMPW 6/11/87	COLQ 6/11/87
32	BENAZOL	FL 4.0	0.3	@-5"	0	97	93	93	91
	ATRAZINE	DG 90%	0.125	@-5"					
	COC	CO 1.0	0.25	@-5"					
33	BENAZOL	FL 4.0	0.3	@-5"	0	99	95	99	97
	ATRAZINE	DG 90%	0.25	@-5"					
	COC	CO 1.0	0.25	@-5"					
34	BENAZOL	FL 4.0	0.25	@-5"	0	99	97	99	99
	ATRAZINE	DG 90%	0.5	@-5"					
	COC	CO 1.0	0.25	@-5"					
35	BENAZOL	FL 4.0	0.25	@-5"	0	99	98	99	99
	ATRAZINE	DG 90%	1.0	@-5"					
	COC	CO 1.0	1.0	@-5"					
36	BAS-514	WP 50	0.25	@-5"	75	47	40	43	40
	090	CO 1.0	0.25	@-5"					
37	BAS-514	WP 50	0.5	@-5"	90	68	50	50	57
	090	CO 1.0	0.25	@-5"					
38	BAS-514	WP 50	0.25	@-5"	37	57	60	62	53
	COC	CO 1.0	0.25	@-5"					
39	BAS-514	WP 50	0.5	@-5"	42	63	62	75	62
	COC	CO 1.0	0.25	@-5"					
40	ATRAZINE	DG 90%	1.0	@-5"	0	97	95	98	98
	COC	CO 1.0	0.25	@-5"					
				LSD(0.05) =	9	19	17	25	25
				STANDARD DEVIATION =	5	11	10	15	15
				COEFF. OF VARIABILITY =	44	15	13	20	20

U N I V E R S I T Y   O F   I L L I N O I S

POSTEMERGENCE BROADLEAF WEED CONTROL IN CORN 2

LOCATION:URBANA SOUTH FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:REX LIEBL
PREVIOUS CROP:SOYBEANS   PLOT / Ft:7.5x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5.0   pH:6.2
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:CORN   VARIETY:PIONEER 3377
PLANTING DATE:04/22/87 DEPTH/In: NUM. PLANTS/ACR. 28,000
SEASONAL RAINFALL DURING EXPERIMENT   EARLY:LOW   MID:ADQ   LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Although broadleaf weeds were quite large at application, excellent control by many treatments was attributable to good environmental conditions at application. PPG-1259 in combination with Banvel or 2,4-D improved weed control when compared to either applied alone. Treatments including Tackle resulted in 20% corn injury. A storm 3 weeks after application caused treatments including 2,4-D or Banvel to "lay down" for several days, however, corn recovered soon thereafter.

POSTEMERGENCE BROADLEAF WEED CONTROL IN CORN 2

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	05/27/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J147/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	06:00/09:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	85 / 75	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	85	0	0	0	0
WIND DIR. / VELOC	SW / 10	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/MOIST	/	/	/	/
SOIL/LEAF MOIST.	ADQ / ADQ	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	CO2 HND HLD				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.4	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		CORN	H / 7Lf	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	VELE	VELVETLEAF	H / 8"	/	/	/	/
2	JIWE	JIMSONWEED	H / 8"	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

POSTEMERGENCE BROADLEAF WEED CONTROL IN CORN 2

EXPT. LOCATION:C-500 W,
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	VELE 6/07/87	JIWE 6/07/87			
01	BANVEL	SC 4.0	0.25	@-5"	87	96			
	PPG-1259	FL 3.0	0.05	@-5"					
02	BANVEL	SC 4.0	0.25	@-5"	96	99			
	PPG-1259	FL 3.0	0.10	@-5"					
03	24DAMINE	EC 3.8	0.25	@-5"	90	87			
	PPG-1259	FL 3.0	0.10	@-5"					
04	PPG-4000	FL 4.8	0.60	@-5"	95	96			
	*ATRAZIN		0.50						
	*PPG1259		0.10						
05	BUCTRIL	EC 2.0	0.25	@-5"	83	96			
	X-77	%S 1.0	0.25%	@-5"					
06	BUCTRIL	EC 2.0	0.25	@-5"	95	97			
07	BUCTRIL	EC 2.0	0.38	@-5"	98	97			
08	BANVEL	SC 4.0	0.25	@-5"	90	96			
09	BANVEL	SC 4.0	0.50	@-5"	93	99			
10	24DAMINE	FL 3.8	0.25	@-5"	87	63			
11	24DAMINE	FL 3.8	0.50	@-5"	96	83			
12	ATRAZINE	DG 90%	0.50	@-5"	93	99			
	COC	CO 1.0	1qt	@-5"					
13	ATRAZINE	DG 90%	1.00	@-5"	91	97			
	COC	CO 1.0	1qt	@-5"					
14	ATRAZINE	DG 90%	1.50	@-5"	92	99			
	COC	CO 1.0	1qt	@-5"					
15	BUCTRIL	FL 2.0	0.25	@-5"	97	99			
	ATRAZINE	DG 4.0	1.00	@-5"					

U N I V E R S I T Y   O F   I L L I N O I S

POSTEMERGENCE BROADLEAF WEED CONTROL IN CORN 2

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	VELE 6/07/87	JIWE 6/07/87			
16	BUCTRIL	FL 2.0	0.25	@-5"	94	99			
	BLADEX	DF 90%	0.50	@-5"					
17	BUC/ATR	FL 3.0	0.75	@-5"	88	99			
	*BUCTRIL		0.25						
	*ATRAZIN		0.50						
18	BUC/ATR	FL 3.0	1.13	@-5"	97	99			
	*BUCTRIL		0.375						
	*ATRAZIN		0.75						
19	BUCTRIL	FL 4.0	0.25	@-5"	84	91			
	24DAMINE	FL 3.8	0.25	@-5"					
20	RS-105	EC 3.36	1.05	@-5"	93	99			
21	BASAGRAN	SC 4.0	1.00	@-5"	90	99			
	COC	CO 1.0	0.25	@-5"					
22	BASAGRAN	SC 4.0	0.50	@-5"	86	99			
	COC	CO 1.0	0.25	@-5"					
23	BASAGRAN	SC 4.0	0.50	@-5"	98	99			
	ATRAZINE	FL 4.0	0.50	@-5"					
	COC	CO 1.0	0.25	@-5"					
24	BASAGRAN	SC 4.0	0.50	@-5"	99	99			
	ATRAZINE	FL 4.0	0.50	@-5"					
	DASH	CO 1.0	0.25	@-5"					
25	BASAGRAN	SC 4.0	0.25	@-5"	96	98			
	ATRAZINE	FL 4.0	0.50	@-5"					
	28%	CO 1.0	1.00	@-5"					
26	BASAGRAN	SC 4.0	0.50	@-5"	93	98			
	ATRAZINE	FL 4.0	0.50	@-5"					
	28%N	CO 1.0	1.00	@-5"					
27	MARKSMAN	FL 3.2	1.0	@-5"	88	99			
	*BANVEL		0.34						
	*ATRAZIN		0.66						

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POSTEMERGENCE BROADLEAF WEED CONTROL IN CORN 2

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	VELE 6/07/87	JIWE 6/07/87			
28	MARKSMAN	FL 3.2	1.4	@-5"	90	99			
	*BANVEL		0.48						
	*ATRAZIN		0.92						
29	BASAGRAN	EC 4.0	0.5	@-5"	94	96			
	24DLVE	FL 3.8	0.12	@-5"					
	28%N	CO 1.0	1.00	@-5"					
30	BASAGRAN	FL 4.0	0.25	@-5"	98	99			
	ATRAZINE	DG 90%	0.50	@-5"					
	24DLVE	FL 3.8	0.12	@-5"					
	28%N	CO 1.0	1.00	@-5"					
31	BASAGRAN	FL 4.0	0.50	@-5"	NA	99			
	ATRAZINE	DG 90%	0.50	@-5"					
	24DLVE	FL 3.8	0.12	@-5"					
	28%N	CO 1.0	1.00	@-5"					
32	LADDOCK	FL 3.33	1.00	@-5"	97	99			
	*BASAGRN		0.50						
	*ATRAZIN		0.50						
	COC	CO 1.0	0.25	@-5"					
33	LADDOCK	FL 3.33	1.00	@-5"	91	97			
	*BASAGRN		0.50						
	*ATRAZIN		0.50						
	28%N	CO 1.0	1.00	@-5"					
34	BANVEL	SC 2.0	0.33	@-5"	97	99			
	BLADEX	DG 90%	2.00	@-5"					
35	TACKLE	SC 2.0	0.50	@-5"	88	92			
	28%N	CO 1.0	1.00	@-5"					
36	TACKLE	SC 2.0	0.50	@-5"	78	91			
	X-77	%S 1.0	0.25%	@-5"					
37	TACKLE	SC 2.0	0.375	@-5"	84	95			
	28%N	CO 1.0	1.00	@-5"					
38	TACKLE	SC 2.0	0.375	@-5"	80	99			
	X-77	%S 1.0	0.25%	@-5"					

U N I V E R S I T Y   O F   I L L I N O I S

POSTEMERGENCE BROADLEAF WEED CONTROL IN CORN 2

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	VELE 6/07/87	JIWE 6/07/87				
39	2,4-D LVE	EC3.8	0.25	@-5"	94	66				
40	2,4-D LVE	EC3.8	0.50	@-5"	98	50				
				LSD(0.05) =	NA	11				
				STANDARD DEVIATION =	NA	6				
				COEFF. OF VARIABILITY =	NA	7				

U N I V E R S I T Y   O F   I L L I N O I S

CORN POSTEMERGENCE GRASS STUDY 1

LOCATION:URBANA CRUSE FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:JOHN CANTWELL
PREVIOUS CROP:SOYBEANS   PLOT / Ft:7.5x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILY CLAY LOAM   OM%:5.0   pH:6.4
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:CORN   VARIETY:PIONEER 3377
PLANTING DATE:04/20/87 DEPTH/In:1.5"   NUM. PLANTS/ACR. @28,000
SEASONAL RAINFALL DURING EXPERIMENT   EARLY:LOW   MID:ADQ   LATE:ABD
PRIMARY RATE UNIT:LBai/A   RATE UNIT [B]:   RATE UNIT [C]:

EXPERIMENT COMMENTS

Corn emerged 9 days after planting, and was followed by 2 weeks of hot, dry, windy weather. Despite 0.5" rainfall one day prior, giant foxtail was not growing actively at the Sp-3" application. The resulting weed contol from these treatments was less than optimal. The week that followed the Sp-3" application was hot, dry, and windy. Corn and giant foxtail grew slowly and were mildly drought stressed until 1.52" rainfall on 5/19/87. Sp-5" treatments were applied the following day when weed and crop had more than doubled in size from the preceding day. The larger very actively growing Giant Foxtail were not easily controlled by any of the herbicide treatments.

Tandem enhanced control of giant foxtail. SC-0051 and SC-0735 showed exellent corn tolerance and good foxtail activity. SC-0774 caused notable chlorosis of the corn leaves but had excellent foxtail activity. SC-0051 and SC-0735 have excellant prospect for better control if higher rates can be justified. SC-0774 may be a candidate for post-directed application.

CORN POSTEMERGENCE GRASS STUDY 1

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PRE	POST	POST		
APPLICATION DATE	04/22/87	05/12/87	05/20/87	/ /	/ /
JULIAN DATE/YEAR	J112/87	J132/87	J140/87	J 0/00	J 0/00
START HR / END HR	07:00/08:00	08:00/09:00	07:00/08:00	: / :	: / :
APPLIC. METHOD	PRE	POST	POST		
AIR/SOIL TEMP (F)	60 / 60	75 / 65	85 / 70	0 / 0	0 / 0
% REL. HUMIDITY	80	0	95	0	0
WIND DIR. / VELOC	NE / @5	NE / 09	S / 03	/ 0	/ 0
SKY / SOIL COND.	CLDY /MOIST	CLEAR/MOIST	CLDY /MOIST	/	/
SOIL/LEAF MOIST.	/	low / low	WET / WET	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	Co2 H/HELD	Co2 H/HELD	Co2 H/HELD		
SPRAYER GPA / PSI	25 / 30	25 / 40	25 / 40	0 / 0	0 / 0
MIX SIZE (Gallon)	0.53	0.53	0.53	0	0
NOZZLE TYPE /NUM.	8003/5	8002/5	8002/5		
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0 / .16	0 / 0	0 / 0	/	/
4-7 DAYS/2ND WEEK	.39 / 0	0 / 1.52	0 / 0	/	/
3RD WEEK/4TH WEEK	0.5 / 0	0 / 0	0 / 0	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	ZEAMA	CORN	H / 3Lf	H / 4Lf	H / 5Lf	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	H / 2Lf	H / 3Lf	H / 4Lf	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

CORN POSTEMERGENCE GRASS STUDY 1

EXPT. LOCATION:C-500 W,
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT %CTL 6/03/87	%INJ VIS 6/03/87				
01	BLADEX	DG 90%	1.6	SP-3"	63	0				
	COC	CO 1.0	0.25	SP-3"						
02	TANDEM	FL 4.0	0.5	SP-3"	85	0				
	ATRAZINE	DG 90%	1.5	SP-3"						
	COC	CO 1.0	0.25	SP-3"						
03	TANDEM	FL 4.0	0.5	SP-3"	87	0				
	BLADEX	DF 90%	1.60	SP-3"						
	COC	CO 1.0	0.25	SP-3"						
04	ATRAZINE	DG 90%	2.0	SP-3"	56	0				
	COC	CO 1.0	0.25	SP-3"						
05	TANDEM	FL 4.0	0.5	@-5"	78	0				
	ATRAZINE	DG 90%	1.5	@-5"						
	COC	CO 1.0	0.25	@-5"						
06	TANDEM	FL 4.0	0.5	@-5"	83	0				
	ATRAZINE	DG 90%	2.0	@-5"						
	COC	CO 1.0	0.25	@-5"						
07	TANDEM	FL 4.0	0.5	@-5"	28	0				
	24DAMINE	EC 3.8	0.5	@-20"						
08	ATRAZINE	DG 90%	2.0	@-5"	57	0				
	COC	CO 1.0	0.25	@-5"						
09	ATRAZINE	DG 90%	1.0	@-5"	57	0				
	COC	CO 1.0	0.25	@-5"						
10	BLADEX	DG 90%	2.0	@-5"	65	0				
	COC	CO 1.0	0.25	@-5"						
11	BLADEX	DG 90%	2.0	@-5"	45	0				
12	BLADEX	FL 4.0	2.0	@-5"	53	0				

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CORN POSTEMERGENCE GRASS STUDY 1

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT %CTL 6/03/87	%INJ VIS 6/03/87			
13	BLADEX	DG 90%	2.0	@-5"	60	0			
	TANDEM	FL 4.0	0.5	@-5"					
14	BLADEX	FL 4.0	2.0	@-5"	67	0			
	TANDEM	FL 4.0	0.5	@-5"					
15	BLADEX	DG 90%	2.0	@-5"	76	0			
	TANDEM	FL 4.0	0.5	@-5"					
	COC	CO 1.0	0.25	@-5"					
16	SC-0051	SC 3.0	0.25	@-5"	20	0			
	TWEEN 20	%S 1.0	0.25%	@-5"					
17	SC-0051	SC 3.0	0.50	@-5"	20	0			
	TWEEN 20	%S 1.0	0.25%	@-5"					
18	SC-0051	SC 3.0	0.75	@-5"	57	0			
	TWEEN 20	%S 1.0	0.25%	@-5"					
19	SC-0051	SC 3.0	0.25	@-5"	67	0			
	ATRAZINE	DG 90%	1.0	@-5"					
	TWEEN 20	%S 1.0	0.25%	@-5"					
20	SC-0051	EC 3.0	0.5	@-5"	60	0			
	ATRAZINE	DG 90%	1.0	@-5"					
	TWEEN 20	%S 1.0	0.25%	@-5"					
21	SC-0051	EC 3.0	0.75	@-5"	64	0			
	ATRAZINE	DG 90%	1.0	@-5"					
	TWEEN 20	%S 1.0	0.25%	@-5"					
22	SC-0735	WP 75	0.25	@-5"	70	0			
	TWEEN 20	%S 1.0	0.5%	@-5"					
23	SC-0735	WP 75	0.5	@-5"	76	0			
	TWEEN 20	%S 1.0	0.5%	@-5"					
24	SC-0735	WP 75	0.25	@-5"	82	0			
	ATRAZINE	DG 90%	1.0	@-5"					
	TWEEN 20	%S 1.0	0.5%	@-5"					

U N I V E R S I T Y   O F   I L L I N O I S

CORN POSTEMERGENCE GRASS STUDY 1

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT %CTL 6/03/87	%INJ VIS 6/03/87				
25	SC-0735	WP 75	0.5	@-5"	65	0				
	ATRAZINE	DG 90%	1.0	@-5"						
	TWEEN 20	%S 1.0	0.5%	@-5"						
26	SC-0735	WP 75	0.75	PRE	60	0				
	SC-29148	WP 75	0.125	PRE						
27	SC-0735	WP 75	0.75	PRE	62	0				
	SC-29148	WP 75	0.125	PRE						
	ATRAZINE	DG 90%	1.0	PRE						
28	SC-0774	WP 75	1.25	@-5"	88	20				
	TWEEN 20	%S 1.0	0.25%	@-5"						
29	SC-0774	WP 75	1.25	@-5"	90	18				
	ATRAZINE	DG 90%	1.0	@-5"						
	TWEEN 20	%S 1.0	0.25%	@-5"						
30	DPXM6316	DF 75	3.54g	@-5"	51	0				
	BLADEX	DG 90%	1.5	@-5"						
	X-77	%S 1.0	0.25%	@-5"						
31	DPXM6316	DF 75	7.08g	@-5"	58	0				
	BLADEX	DG 90%	1.5	@-5"						
	X-77	%S 1.0	0.25%	@-5"						
32	BLADEX	DG 90%	1.5	@-5"	47	0				
	X-77	%S 1.0	0.25%	@-5"						
33	BLADEX	DG 90%	2.0	@-5"	56	0				
	X-77	%S 1.0	0.25%	@-5"						
34	BANVEL	SC 2.0	0.33	@-5"	48	0				
	BLADEX	DG 90%	2.0	@-5"						
35	SAN-825H	FL 4.67	2.33	@-5"	58	0				
	*BANVELK		0.33							
	*BLADEX		2.0							
36	DCA-1	FL 4.67	2.33	@-5"	60	0				
	*BANVELK		0.33							
	*BLADEX		1.5							
	*ATRAZIN		0.5							

U N I V E R S I T Y   O F   I L L I N O I S

CORN POSTEMERGENCE GRASS STUDY 1

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT %CTL 6/03/87	%INJ VIS 6/03/87			
37	RS-012	EC 3.75	0.90	@-5"	56	0			
	X-77	%S 1.0	0.25%	@-5"					
	24DAMINE	EC 3.8	0.5	@-20"					
38	RS-012	EC 3.75	0.90	SP-3"	62	0			
	ATRAZINE	DG 90%	1.5	SP-3"					
39	RS-012	EC 3.75	0.90	@-5"	64	0			
	ATRAZINE	DG 90%	1.5	@-5"					
40	RS-012	EC 3.75	0.90	@-5"	68	0			
	BLADEX	DG 90%	1.5	@-5"					
	ATRAZINE	DG 90%	1.5	@-5"					
				LSD(0.05) =	19	2			
				STANDARD DEVIATION =	12	1			
				COEFF. OF VARIABILITY =	19	100			

U N I V E R S I T Y   O F   I L L I N O I S

POST-DIRECTED GRASS CONTROL IN CORN

LOCATION:URBANA SOUTH FARM
RESEARCH BY:KLADAR/LIEBL
COOPERATOR :GENE OLDHAM
REPORTED BY:TOM KLADAR
PREVIOUS CROP:SOYBEAN   PLOT / Ft:10x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5   pH:6.8
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:CORN   VARIETY:PIONEER 3377
PLANTING DATE:04/20/87 DEPTH/In:1.5   NUM.PLANTS/ACR. @28,000
SEASONAL RAINFALL DURING EXPERIMENT EARLY:LOW MID:ADQ LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Broadleaf weeds were controlled with 1.5 lbs of atrazine preemergence, consequently, fairly good supression of giant foxtail occurred. With the populations of giant foxtail reduced, this allowed for an accurate placement of the post-directed chemicals, which minimized injury.

Treatments were applied at a speed of two miles an hour with a hand held post-directed boom. At this slow speed, and with hand held equipment, post directed work can be done very accuratly, which is important to keep crop injury to a minimum.

POST-DIRECTED GRASS CONTROL IN CORN

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST DIR.				
APPLICATION DATE	06/08/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J159/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	07:00/09:00	: / :	: / :	: / :	: / :
APPLIC. METHOD					
AIR/SOIL TEMP (F)	80 / 65	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	70	0	0	0	0
WIND DIR. / VELOC	S / 5	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/DRY	/	/	/	/
SOIL/LEAF MOIST.	DRY / MOD	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	.52	0	0	0	0
NOZZLE TYPE /NUM.	15002				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	ZEMA	CORN	/	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	M /6-8"	/	/	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

POST-DIRECTED GRASS CONTROL IN CORN

EXPT. LOCATION:ANIMAL SCIENCE 200-E
RESEARCH BY:KLADAR/LIEBL

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% CONT. GIFT 6/22/87	CORN HT. RED 6/08/87	CORN LF.INJ. 6/08/87		
	ROUNDUP	EC 4.0	0.50	@-40"	99	27	7		
	ROUNDUP	EC 4.0	0.25	@-40"	93	12	3		
	IGNITE	EC 1.67	0.50	@-40"	99	3	15		
	IGNITE	EC 1.67	0.25	@-40"	99	2	10		
	PARAQUAT	EC 1.5	0.40	@-40"	99	0	18		
	X-77	%S 1.0	0.25%						
	PARAQUAT	EC 1.5	0.20	@-40"	97	3	23		
	X-77	%S 1.0	0.25%						
	LOROX	DF 50	1.00	@-40"	42	3	3		
	COC	CO 1.0	0.25						
	LOROX	DF 50	0.50	@-40"	32	2	5		
	COC	CO 1.0	0.25						
	POAST	EC 1.5	0.20	@-40"	98	22	5		
	COC	CO 1.0	0.25						
	POAST	EC 1.5	0.10	@-40"	87	8	5		
	COC	CO 1.0	0.25						
	WD CHECK				0	0	0		
	HW CHECK				0	0	0		
				LSD(0.05) =	7	8	4		
				STANDARD DEVIATION =	4	5	2		

U N I V E R S I T Y   O F   I L L I N O I S

INCORPORATION VS. PREEMERGENCE STUDY

LOCATION:URBANA CRUSE FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:M. D. McGLAMERY
PREVIOUS CROP:CORN   PLOT / Ft:10x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5.0   pH:6.0
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:HACK
PLANTING DATE:05/06/87 DEPTH/In:1.5"   SPACING/In:7-9/Ft/ROW NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:ADQ
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

1. INCORPORATION 1X WITH FIELD CULTIVATOR, PLUS
   1X WITH FAST FINISHER PARALLEL WITH PLOTS.

<u>Command</u>: Better preemergence than preplant incorporated especially at the lower rates. Foxtail and velvetleaf control better than cocklebur and pigweed. <u>Scepter</u>: effectively controlled cocklebur and pigweed at 0.083 #/A, yet 0.125 #/A provided only good foxtail control and unacceptable velvetleaf control. <u>Pursuit</u>: at the low rate was more effective applied preplant incorporated than preemergence, however there was difference in weed control at the high rates between the application methods. Pursuit provided effective control of all four weedy species and was markedly better than Scepter in controlling foxtail and velvetleaf. <u>Preview</u>: Control of foxtail and cocklebur was better when Preview was applied preemergence compared to preplant incorporated. There was nodifference in control of velvetleaf between the application methods. <u>Dual</u>: provided better pigweed and giant foxtail control when applied preemergence vs. preplant incorporated while there was little difference in the metribuzin or Dual plus metribuzin combinations.

INCORPORATION Vs. PREEMERGENCE STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PPI	PRE			
APPLICATION DATE	05/05/87	05/11/87	/ /	/ /	/ /
JULIAN DATE/YEAR	J125/87	J131/87	J 0/00	J 0/00	J 0/00
START HR / END HR	06:00/07:00	08:00/10:00	: / :	: / :	: / :
APPLIC. METHOD	PPI	PRE			
AIR/SOIL TEMP (F)	75 / 60	85 / 65	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	70	90	0	0	0
WIND DIR. / VELOC	NE / 08	NE / 09	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	CLEAR/ DRY	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT	FIELD CULT.				
INCORP. DEPTH(in)	04	0	0	0	0
SPRAYER TYPE	HAND HELD	HAND HELD			
SPRAYER GPA / PSI	20 / 30	20 / 30	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.5	0.4	0	0	0
NOZZLE TYPE /NUM.	8003/5	8003/5			
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0 / 0	0.5 / 0	/	/	/
4-7 DAYS/2ND WEEK	0.50 / 1.50	1.5 / 0	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	GLYMA	SOYBEANS	/	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	/	/	/	/	/
2	SMPW	SMOOTH PIGWEED	/	/	/	/	/
3	VELE	VELVETLEAF	/	/	/	/	/
4	COCB	COMMON COCKLEBUR	/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

INCORPORATION Vs. PREEMERGENCE STUDY

EXPT. LOCATION:CRUSE 600-W
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% CONT. GIFT 6/27/87	% CONT. SMPW 6/27/87	% CONT. COCB 6/27/87	% CONT. % VELE 6/27/87	
01	COMMAND	EC 4.0	0.25	PPI	83	17	0	35	
02	COMMAND	EC 4.0	0.25	PRE	95	48	20	86	
03	COMMAND	EC 4.0	0.50	PPI	93	77	20	90	
04	COMMAND	EC 4.0	0.50	PRE	94	70	75	95	
05	COMMAND	EC 4.0	1.0	PPI	99	48	73	99	
06	COMMAND	EC 4.0	1.0	PRE	99	92	83	99	
07	SCEPTER	EC 1.5	0.083	PPI	77	66	99	83	
08	SCEPTER	EC 1.5	0.083	PRE	53	99	98	30	
09	SCEPTER	EC 1.5	0.125	PPI	80	99	99	27	
10	SCEPTER	EC 1.5	0.125	PRE	93	66	96	66	
11	PURSUIT	EC 2.0	0.063	PPI	94	99	99	95	
12	PURSUIT	EC 2.0	0.063	PRE	94	50	99	97	
13	PURSUIT	EC 2.0	0.094	PPI	95	99	99	96	
14	PURSUIT	EC 2.0	0.094	PRE	97	99	99	96	
15	PREVEIW *METRIBZ *CLASSIC	DF 75	0.45	PPI	73	99	99	95	
16	PREVEIW *METRIBZ *CLASSIC	DF 75	0.45	PRE	62	99	89	95	
17	PREVEIW *METRIBZ *CLASSIC	DF 75	0.33	PPI	73	94	80	93	

U N I V E R S I T Y   O F   I L L I N O I S

INCORPORATION Vs. PREEMERGENCE STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% CONT. GIFT 6\27/87	% CONT. SMPW 6/27/87	% CONT. COCB 6/27/87	% CONT. VELE 6/27/87
18	PREVEIW *METRIBZ *CLASSIC	DF 75	0.33	PRE	62	99	80	96
19	DUAL	EC 8.0	2.25	PPI	93	70	0	0
20	DUAL	EC 8.0	2.25	PRE	99	98	0	0
21	METRIBUZ	DF 75	0.50	PPI	48	99	87	96
22	METRIBUZ	DF 75	0.50	PRE	53	99	90	99
23	CHECK				0	0	0	0
24	DUAL METRIBUZ	EC 8.0 DF 75%	2.25 0.50	PPI PPI	99	99	89	98
25	DUAL METRIBUZ	EC 8.0 DF 75%	2.25 0.50	PRE PRE	99	99	99	96
			LSD(0.05) =		20	36	23	18
			STANDARD DEVIATION =		12	22	14	11
			COEFF. OF VARIABILITY =		15	28	20	15

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN PREPLANT HERBICIDES INCORPORATED 2X

LOCATION:URBANA SOUTH FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:JOHN CANTWELL
PREVIOUS CROP:CORN   PLOT / Ft:10x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM OM%:5.0   pH:6.2
EXPT. DESIGN:RCBD NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:HACK
PLANTING DATE:05/06/87 DEPTH/In:1.5"   SPACING/In:7-9/Ft/ROW NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

INCORPORATION 1X WITH FIELD CULTIVATOR, PLUS 1X WITH FAST FINISHER, PARALLEL TO PLOTS. In comparison with the PPI 1X study,and the pre--emergence study, soybean soil applied herbicides performed best at Urbana, 1987, when incorporated 2X. Several combinations would have resulted in perfect weed control with one cultivation.

SOYBEAN PREPLANT HERBICIDES INCORPORATED 2X

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PPI				
APPLICATION DATE	05/05/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J125/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	07:00/08:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	PPI				
AIR/SOIL TEMP (F)	75 / 60	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	75	0	0	0	0
WIND DIR. / VELOC	NE / 09	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT	FIELD CULT.				
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	18 / 30	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.52	0	0	0	0
NOZZLE TYPE /NUM.	8003/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0 / 0	/	/	/	/
4-7 DAYS/2ND WEEK	0.50 / 1.52	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	GLYMA	SOYBEANS	/	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	H /	/	/	/	/
2	SMPW	SMOOTH PIGWEED	H /	/	/	/	/
3	JIWE	JIMSONWEED	M /	/	/	/	/
4	VELE	VELVETLEAF	M /	/	/	/	/
5	ANMG	ANUAL MORNINGGLORY	M /	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN PREPLANT HERBICIDES INCORPORATED 2X

EXPT. LOCATION:ANIMAL SCIENCE 100-E
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 0/00/00	GIFT 6/16/87	SMPW 6/16/87	JIWE 6/16/87	VELE 6/16/87	ANMG 6/16/87
01	METRIBUZ	DF 75	0.5	PPI	0	95	99	91	99	70
	DUAL	EC 8.0	2.25	PPI						
02	TREFLAN	EC 4.0	1.0	PPI	0	91	91	57	83	93
03	COMMAND	EC 4.0	1.0	PPI	0	99	50	93	99	45
04	DUAL	EC 8.0	2.25	PPI	0	89	91	83	80	45
05	COMMAND	EC 4.0	0.5	PPI	2	98	85	96	99	72
	DUAL	EC 8.0	2.25	PPI						
06	COMMAND	EC 4.0	0.5	PPI	0	93	50	95	99	73
07	SALUTE	FL 4.0	1.5	PPI	0	88	96	82	94	87
	*TREFLAN		1.0							
	*METRIBZ		0.5							
08	METRIBUZ	DF 75	0.5	PPI	0	80	96	96	97	80
	TREFLAN	EC 4.0	0.75	PPI						
09	SALUTE	FL 4.0	1.13	PPI	3	80	98	97	99	81
	*TREFLAN		0.75							
	*METRIBZ		0.375							
	COMMAND	EC 4.0	0.25	PPI						
10	METRIBUZ	DF 75	0.375	PPI	0	85	93	98	98	97
	TREFLAN	EC 4.0	0.75	PPI						
	COMMAND	EC 4.0	0.25	PPI						
11	METRIBUZ	DF 75	0.5	PPI	12	98	99	99	99	88
	COMMAND	EC 4.0	0.75	PPI						
12	METRIBUZ	DF 75	0.5	PPI	5	62	99	98	96	78
13	COMMAND	EC 4.0	0.25	PPI	0	67	53	77	87	60
14	METRIBUZ	DF 75	0.2	PPI	2	95	96	68	98	96
	TREFLAN	EC 4.0	0.6	PPI						
	DUAL	EC 8.0	2.0	PPI						

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN PREPLANT HERBICIDES INCORPORATED 2X

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 0/00/00	GIFT 6/16/87	SMPW 6/16/87	JIWE 6/16/87	VELE 6/16/87	ANMG 6/16/87
15	METRIBUZ	DF 75	0.5	PPI	10	95	96	99	99	88
	COMMAND	EC 4.0	0.5	PPI						
16	CHECK				0	0	0	0	0	0
17	COMMENCE	EC 5.25	1.48	PPI	0	98	96	99	99	88
	*TREFLAN		0.86							
	*COMMAND		0.63							
18	COMMENCE	EC 5.25	1.48	PPI	0	96	96	98	99	93
	*TREFLAN		0.86							
	*COMMAND		0.63							
	METRIBUZ	DF 75	0.4	PPI						
19	COMMENCE	EC 5.25	1.48	PPI	5	98	99	91	99	97
	*TREFLAN		0.86							
	*COMMAND		0.63							
	SCEPTER	EC 2.0	0.06	PPI						
20	PREVIEW	DF 75	0.45	PPI	0	85	99	95	99	98
	*CLASSIC		0.04							
	*METRIBZ		0.4							
	TREFLAN	EC 4.0	1.0	PPI						
21	PURSUIT	EC 2.0	0.094	PPI	2	95	99	97	99	97
	LASSO MT	MT 4.0	2.0	PPI						
22	PURSUIT	EC 2.0	0.063	PPI	8	96	99	90	96	97
	TREFLAN	EC 4.0	1.0	PPI						
23	SALUTE	FL 4.0	1.13	PPI	3	96	99	87	98	93
	*TREFLAN		0.75							
	*METRIBZ		0.375							
	SCEPTER	EC 2.0	0.094	PPI						
24	PARTNER	DG 74%	2.125	PPI	12	93	99	97	98	96
	*LASSO		2.0							
	*SCEPTER		0.125							
25	SQUADRON	EC 2.0	0.875	PPI	8	94	99	93	96	93
	*PROWL		0.75							
	*SCEPTER		0.125							

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN PREPLANT HERBICIDES INCORPORATED 2X

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 0/00/00	GIFT 6/16/87	SMPW 6/16/87	JIWE 6/16/87	VELE 6/16/87	ANMG 6/16/87
26	PURSUIT	EC 2.0	0.063	PPI	3	93	99	91	96	98
	PROWL	EC 4.0	1.0	PPI						
27	BAS-514	WP 50	0.25	PPI	18	50	33	99	57	98
28	BAS-514	WP 50	0.25	PPI	10	85	83	99	65	98
	TREFLAN	EC 4.0	1.0	PPI						
	LSD(0.05) =				10	12	18	19	8	23
	STANDARD DEVIATION =				6	7	11	11	5	14
	COEFF. OF VARIABILITY =				164	8	13	13	5	17

U N I V E R S I T Y   O F   I L L I N O I S

MORNINGLORY CONTROL IN SOYBEANS

LOCATION:URBANA SOUTH FARM ANS.100
RESEARCHER:CANTWELL, LIEBL, WAX.
COOPERATOR :GENE OLDHAM
REPORTED BY:REX LIEBL
PREVIOUS CROP:CORN   PLOT / Ft:7.5x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5   pH:6.4
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:HACK
PLANTING DATE:05/06/87 DEPTH/In:1.5"   SPACING/In:7-9/Ft/ROW
SEASONAL RAINFALL DURING EXPERIMENT   EARLY:LOW   MID:ADQ   LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Postemergence treatments generally performed better than pre--emergence treatments, presumably because of limited rainfall after planting to mobilize soil applied herbicides. Environmental conditions at the time of postemergence applications were ideal for maximum herbicide efficacy. All soil applied treatments afforded less than 90% morningglory control, however Scepter and Pursuit reduce morningglory growth such that a favorable height differential was created. Acifluorfen, Cobra, Reflex, Pursuit, and all combinations with 2-4,DB performed well. Significant soybean injury was observed on 6/14/87 with acifluorfen, Cobra, and AC-263,222.

MORNINGLORY CONTROL IN SOYBEANS

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PRE	POST	POST		
APPLICATION DATE	05/11/87	06/03/87	06/12/87	/ /	/ /
JULIAN DATE/YEAR	J131/87	J154/87	J163/87	J 0/00	J 0/00
START HR / END HR	07:00/08:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	PRE	POST	POST/DI		
AIR/SOIL TEMP (F)	75 / 62	85 / 80	90 / 80	0 / 0	0 / 0
% REL. HUMIDITY	75	95	80	0	0
WIND DIR. / VELOC	NE / 09	SW / 5	SW / 5	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	CLDY /MOIST	CLEAR/MOIST	/	/
SOIL/LEAF MOIST.	/	ABD / ABD	ABD / ABD	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD	HAND HELD	HAND HELD		
SPRAYER GPA / PSI	20 / 30	20 / 40	15 / 40	0 / 0	0 / 0
MIX SIZE (Gallon)	0.44	.44	0	0	0
NOZZLE TYPE /NUM.	8003/5	8002/5	11002/4		
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	GLYMA	SOYBEANS	/	/ 3T	/ 5T	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	Tamg	TALL MORNINGGLORY	/	H /2-5LF	H /VINE	/	/
2	Ilmg	IVYLEAF M.G.	/	H /2-4LF	H /VINE	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y O F I L L I N O I S

MORNINGLORY CONTROL IN SOYBEANS

EXPT. LOCATION:ANIMAL SCIENCE 100-MID-EAST,
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 6/14/87	ANMG 6/14/87			
01	SCEPTER	EC 1.5	0.125	PRE	0	60			
02	PURSUIT	EC 2.0	0.063	PRE	0	57			
03	PURSUIT	EC 2.0	0.094	PRE	0	50			
04	PREVEIW	DF 75	0.45	PRE	0	20			
	*METRIBZ		0.04						
	*CLASSIC		0.4						
05	AC263222	EC 2.0	0.009	PRE	0	17			
06	AC263222	EC 2.0	0.018	PRE	0	40			
07	AC263222	EC 2.0	0.036	PRE	0	59			
08	SCEPTER	EC 1.5	0.125	PRE	0	53			
	AC263222	EC 2.0	0.009	PRE					
09	SCEPTER	EC 1.5	0.125	PRE	0	81			
	AC263222	EC 2.0	0.018	PRE					
10	SCEPTER	EC 1.5	0.125	PRE	0	86			
	AC263222	EC 2.0	0.036	PRE					
11	PURSUIT	EC 2.0	0.063	PRE	0	80			
	AC263222	EC 2.0	0.009	PRE					
12	PURSUIT	EC 2.0	0.063	PRE	0	53			
	AC263222	EC 2.0	0.018	PRE					
13	PURSUIT	EC 2.0	0.063	PRE	0	70			
	AC263222	EC 2.0	0.036	PRE					
14	METRIBUZ	DF 75	0.5	PRE	0	10			
15	COMMAND	EC 4.0	1.0	PRE	0	22			

U N I V E R S I T Y   O F   I L L I N O I S

MORNINGLORY CONTROL IN SOYBEANS

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 6/14/87	ANMG 6/14/87				
16	BLAZER	EC 2.0	0.5	POST	20	95				
	X-77	%S 1.0	0.25%	POST						
17	COBRA	EC 2.0	0.2	POST	20	91				
	X-77	%S 1.0	0.25%	POST						
18	REFLEX	EC 2.0	0.25	POST	2	92				
	X-77	%S 1.0	0.25%	POST						
19	BASAGRAN	EC 4.0	0.75	POST	0	43				
20	CLASSIC	DF 75	.0117	POST	0	84				
	X-77	%S 1.0	0.25%	POST						
21	SCEPTER	EC 1.5	0.125	POST	10	76				
	X-77	%S 1.0	0.25%	POST						
22	PURSUIT	EC 2.0	0.063	POST	3	82				
	X-77	%S 1.0	0.25%	POST						
23	PURSUIT	EC 2.0	0.093	POST	3	84				
	X-77	%S 1.0	0.25%	POST						
24	BASAGRAN	EC 4.0	0.5	POST	10	88				
	BLAZER	EC 2.0	0.38	POST						
	COC	CO 1.0	0.125	POST						
25	BASAGRAN	EC 4.0	0.75	POST	0	94				
	BUTYRAC	EC 2.0	0.03	POST						
	COC	CO 1.0	0.125	POST						
26	BUTYRAC	EC 2.0	0.03	POST	18	91				
	BLAZER	EC 2.0	0.38	POST						
	COC	CO 1.0	0.125	POST						
27	PURSUIT	EC 2.0	0.125	POST	5	89				
	X-77	%S 1.0	0.25%	POST						
28	PURSUIT	EC 2.0	0.094	POST	18	88				
	AC263222	EC 2.0	0.009	POST						
	X-77	%S 1.0	0.25%	POST						

U N I V E R S I T Y   O F   I L L I N O I S

MORNINGLORY CONTROL IN SOYBEANS

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 6/14/87	ANMG 6/14/87				
29	PURSUIT	EC 2.0	0.094	POST	25	89				
	AC263222	EC 2.0	0.018	POST						
	X-77	%S 1.0	0.25%	POST						
30	PURSUIT	EC 2.0	0.063	POST	8	89				
	AC263222	EC 2.0	.0018	POST						
	X-77	%S 1.0	0.25%	POST						
31	BUTYRAC	EC 2.0	0.03	PODIR	0	40				
	COC	CO 1.0	0.25	PODIR						
32	BUTYRAC	EC 2.0	0.06	PODIR	3	69				
	COC	CO 1.0	0.25	PODIR						
				LSD(0.05) =	9	23				
				STANDARD DEVIATION =	5	14				
				COEFF. OF VARIABILITY =	122	22				

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN PREEMERGENCE WEED CONTROL STUDY

LOCATION: URBANA SOUTH FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:RICHARD STEVENS
PREVIOUS CROP:CORN   PLOT / Ft:7.5x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5.0   pH:6.0
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:HACK
PLANTING DATE:05/06/87   DEPTH/In:1.5"   SPACING/In:7-9/Ft/ROW   NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Note that herbicides were applied 5 days after planting, and recieved 0.5" rainfall the evening of application. Cinch and BAS-514 caused noteable soybean height reduction as well as a growth regulator effect on the upper soybean leaves. The giant foxtail population was intense, contrasted by the velvetleaf population which was light and variable. No herbicide treatment afforded satisfactory control of the annual morningglory complex which consisted of approx. 70% Tall and 30% Ivy leaf.

SOYBEAN PREEMERGENCE WEED CONTROL STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PRE				
APPLICATION DATE	05/11/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J131/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	08:00/10:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	PRE				
AIR/SOIL TEMP (F)	80 / 65	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	80	0	0	0	0
WIND DIR. / VELOC	NE / 09	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	20 / 30	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	.44	0	0	0	0
NOZZLE TYPE /NUM.	8003/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0.5 / 0	/	/	/	/
4-7 DAYS/2ND WEEK	1.5 / 0	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	GLYMA	SOYBEANS	/	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	H /	/	/	/	/
2	ANMG	ANUAL MORNINGGLORY	H /	/	/	/	/
3	SMPW	SMOOTH PIGWEED	M /	/	/	/	/
4	JIWE	JIMSONWEED	M /	/	/	/	/
5	VELE	VELVETLEAF	L /	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN PREEMERGENCE WEED CONTROL STUDY

EXPT. LOCATION:ANIMAL SCIENCE 100-MID
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/12/87	ANMG 6/12/87	SMPW 6/12/87	J1WE 6/12/87	VELE 6/12/87
01	BAS-514	WP 50	0.25	PRE	42	38	54	93	87
02	BAS-514	WP 50	0.25	PRE	90	80	89	93	87
	LASSO MT	EC 4.0	2.75	PRE					
03	METRIBUZ	DF 75	0.5	PRE	13	23	95	75	95
04	CINCH	EC 7.0	1.125	PRE	98	0	50	10	98
05	CINCH	EC 7.0	1.5	PRE	90	0	40	50	99
06	METRIBUZ	DF 75	0.5	PRE	96	7	99	81	99
	CINCH	EC 7.0	1.125	PRE					
07	METRIBUZ	DF 75	0.5	PRE	22	0	74	79	93
08	METRIBUZ	DF 75	0.5	PRE	97	18	99	84	99
	LASSO MT	EC 4.0	2.75	PRE					
09	PREVIEW	DF 75	0.45	PRE	51	52	99	93	99
	*METRIBZ		0.41						
	*CLASSIC		0.04						
10	PREVIEW	DF 75	0.45	PRE	97	35	99	94	99
	*METRIBZ		0.41						
	*CLASSIC		0.04						
	CINCH	EC 7.0	1.125	PRE					
11	PREVIEW	DF 75	0.45	PRE	97	37	99	84	99
	*METRIBZ		0.41						
	*CLASSIC		0.04						
	CINCH	EC 7.0	1.5	PRE					
12	SCEPTER	EC 1.5	0.125	PRE	78	73	95	94	95
13	SCEPTER	EC 1.5	0.125	PRE	93	71	99	94	99
	CINCH	EC 7.0	1.5	PRE					

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SOYBEAN PREEMERGENCE WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLICATION TYPE	GIFT 6/12/87	ANMG 6/12/87	SMPW 6/12/87	JIWE 6/12/87	VELE 6/12/87
14	SCEPTER	EC 1.5	0.125	PRE	95	74	99	98	98
	LASSO MT	EC 4.0	2.75	PRE					
15	SCEPTER	EC 1.5	0.125	PRE	92	67	99	96	98
	PROWL	EC 4.0	1.0	PRE					
16	SCEPTER	EC 1.5	0.125	PRE	96	62	99	99	96
	DUAL	EC 8.0	2.25	PRE					
17	PURSUIT	EC 2.0	0.063	PRE	91	73	99	95	97
18	PURSUIT	EC 2.0	0.078	PRE	87	63	95	96	99
19	PURSUIT	EC 2.0	0.094	PRE	84	73	91	96	96
20	PURSUIT	EC 2.0	0.063	PRE	93	55	96	98	96
	LASSO MT	EC 4.0	2.75	PRE					
21	PURSUIT	EC 2.0	0.063	PRE	87	59	95	91	97
22	AMIBEN	DF 75	2.0	PRE	56	22	68	23	91
23	AMIBEN	DF 75	2.0	PRE	95	20	95	50	80
	DUAL	EC 8.0	2.25	PRE					
24	DUAL	EC 8.0	2.25	PRE	91	23	90	66	81
25	COMMAND	EC 4.0	1.0	PRE	97	27	70	98	99
26	TURBO	EC 8.0	2.75	PRE	98	7	99	90	98
	*METRIBZ		0.5						
	*DUAL		1.85						
27	COMMAND	EC 4.0	1.0	PRE	97	82	97	99	99
	SCEPTER	EC 1.5	0.125	PRE					
28	PARTNER	DG 74%	2.125	PRE	98	56	99	99	98
	*LASSO								
	*SCEPTER								
29	PURSUIT	EC 2.0	0.094	PRE	97	67	99	99	99
	DUAL	EC 8.0	2.0	PRE					

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN PREEMERGENCE WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/12/87	ANMG 6/12/87	SMPW 6/12/87	JIWE 6/12/87	VELE 6/12/87
30	SQUADRON	EC 2.33	0.875	PRE	95	84	99	99	99
	*PROWL		0.75						
	*SCEPTER		1.25						
31	PROWL	EC 4.0	1.25	PRE	92	59	95	96	99
	PURSUIT	EC 2.0	0.094	PRE					
32	DUAL	EC 8.0	2.0	PRE	98	22	99	99	99
	METRIBUZ	DF 75	0.5	PRE					
	COMMAND	EC 4.0	0.5	PRE					
33	DUAL	EC 8.0	1.0	PRE	96	53	96	96	99
	PURSUIT	EC 2.0	0.063	PRE					
	COMMAND	EC 4.0	0.5	PRE					
	LSD(0.05) =				24	30	26	18	5
	STANDARD DEVIATION =				14	18	15	11	3
	COEFF. OF VARIABILITY =				17	40	17	12	3

UNIVERSITY OF ILLINOIS

SOYBEAN PREPLANT HERBICIDES INCORPORATED 1X

LOCATION: URBANA SOUTH FARM M17W
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:LOYD WAX
PREVIOUS CROP:CORN   PLOT/Ft:10x35   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM OM%:5.0 pH:6.4
EXPT. DESIGN:RCBD   NUMBER OF REPS:3
CROP:SOYBEANS   VARIETY:HACK
PLANTING DATE:05/06/87 DEPTH/In:1.5"   SPACING/In:7-9/Ft/ROW
SEASONAL RAINFALL DURING EXPERIMENT. EARLY:LOW MID:ADQ LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

INCORPORATED 1X WITH FAST FINISHER PARALLEL TO PLOTS.

The low soil moisture conditions in this study at the time of application and after, plus the very dense population of weeds, and the single pass incorporation, resulted in very few outstanding treatments, and several that were only fair to good. There was a dense stand of several annual weeds, especially cocklebur and annual morningglory (a mixture of about 70% ivyleaf and 30% tall). Single pass incorporation with a combination surface-blending tool under the dry conditions resulted in streaked incorporation and variability within and among plots. The dinitroanilines and the imidazolinones were affected most adversely.

Crop injury was essentially non-existant and is not reported. Giant foxtail was prevalent in the studies and was controlled most effectively with the acetanilides alone or in combination with Command. Many treatments controlled pigweed adequately. Velvetleaf was controlled very well by treatments including metribuzin or Command. Jimsonweed was controlled adequately only with combinations including metribuzin. None of the treatments in this study provided acceptable control of cocklebur or annual morningglory, although treatments including Preview were the best of the group.

SOYBEAN PREPLANT HERBICIDES INCORPORATED 1X

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PPI				
APPLICATION DATE	05/05/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J125/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	06:00/07:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	PPI				
AIR/SOIL TEMP (F)	70 / 65	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	80	0	0	0	0
WIND DIR. / VELOC	NE / 05	/	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	/	/	/	/
SOIL/LEAF MOIST.	ADQ / ADQ	/	/	/	/
INCORP. EQUIPMENT	FAST FINISH				
INCORP. DEPTH(in)	03	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	20 / 30	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.502	0	0	0	0
NOZZLE TYPE /NUM.	8003/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0 / 0	/	/	/	/
4-7 DAYS/2ND WEEK	0.5 / 1.52	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIE CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	GLYMA	SOYBEANS	/	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	COCB	COM. COCKLEBUR	/	/	/	/	/
2	JIWE	JIMSONWEED	/	/	/	/	/
3	ANMG	ANUAL MORNINGGLORY	/	/	/	/	/
4	SMPW	SMOOTH PIGWEED	/	/	/	/	/
5	VELE	VELVETLEAF	/	/	/	/	/
6	GIFT	GIANT FOXTAIL	/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y O F I L L I N O I S

SOYBEAN PREPLANT HERBICIDES INCORPORATED 1X

EXPT. LOCATION:M-17 W URBANA
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/06/87	SMPW 6/06/87	VELE 6/06/87	JIWE 6/06/87	COCB 6/06/87	ANMG 6/06/87
01	METRIBUZ	DF 75	0.5	PPI	53	92	78	88	60	7
02	METRIBUZ	DF 75	0.5	PPI	94	97	92	95	63	20
	DUAL	EC 8.0	2.25	PPI						
03	BAS-514	WP 50	0.25	PPI	23	47	37	47	30	30
04	BAS-514	WP 50	0.25	PPI	70	73	43	47	30	30
	TREFLAN	EC 4.0	1.0	PPI						
05	TREFLAN	EC 4.0	1.0	PPI	68	77	10	17	7	7
06	COMMAND	EC 4.0	1.0	PPI	91	67	82	65	43	0
07	DUAL	EC 8.0	2.25	PPI	83	73	37	33	17	0
08	COMMAND	EC 4.0	1.0	PPI	95	94	88	70	55	10
	DUAL	EC 8.0	2.25	PPI						
09	COMMAND	EC 4.0	0.5	PPI	79	80	80	65	40	0
	DUAL	EC 8.0	2.25	PPI						
10	COMMAND	EC 4.0	0.5	PPI	75	83	60	50	33	0
	LASSO	MT 4.0	1.5	PPI						
11	COMMAND	EC 4.0	0.5	PPI	87	83	73	60	37	0
	LASSO	MT 4.0	2.0	PPI						
12	COMMAND	EC 4.0	0.5	PPI	88	85	75	75	30	0
	LASSO	MT 4.0	2.5	PPI						
13	COMMAND	EC 4.0	0.5	PPI	88	87	63	58	27	0
	LASSO	MT 4.0	3.0	PPI						
14	COMMAND	EC 4.0	0.5	PPI	78	75	62	47	17	10
15	TURBO	EC 8.0	2.25	PPI	93	91	68	78	55	23
	*DUAL		2.25							
	*METRIBZ		0.5							

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN PREPLANT HERBICIDES INCORPORATED 1X

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/06/87	SMPW 6/06/87	VELE 6/06/87	JIWE 6/06/87	COCB 6/06/87	ANMG 6/06/87
16	TURBO	EC 8.0	2.75	PPI	90	95	78	70	63	25
	*DUAL		1.85							
	*METRIBZ		0.4							
	COMMAND	EC 4.0	0.25	PPI						
17	PREVEIW	DF 75	0.45	PPI	63	97	93	73	72	47
	*METRIBZ		0.41							
	*CLASSIC		0.04							
18	PREVEIW	DF 75	0.45	PPI	80	93	83	82	70	47
	*METRIBZ		0.41							
	*CLASSIC		0.04							
	COMMAND	EC 4.0	0.5	PPI						
19	PREVEIW	DF 75	0.45	PPI	90	94	85	85	65	35
	*METRIBZ		0.41							
	*CLASSIC		0.04							
	LASSO	EC 4.0	2.75	PPI						
20	PREVEIW	DF 75	0.45	PPI	94	98	94	91	85	57
	*METRIBZ		0.41							
	*CLASSIC		0.04							
	DUAL	EC 8.0	2.25	PPI						
21	SCEPTER	EC 2.0	0.125	PPI	75	85	43	50	58	30
22	SCEPTER	EC 2.0	0.125	PPI	70	85	27	45	43	23
	DUAL	EC 8.0	2.25	PPI						
23	SCEPTER	EC 2.0	0.125	PPI	75	85	47	47	43	27
	LASSO	EC 8.0	2.25	PPI						
24	PARTNER	WG 71	2.125	PPI	83	83	43	43	40	23
	*LASSO		2.0							
	*SCEPTER		0.125							
25	PROWL	EC 4.0	1.0	PPI	53	78	33	23	7	0
26	PURSUIT	EC 2.0	0.063	PPI	52	80	37	43	17	0

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN PREPLANT HERBICIDES INCORPORATED 1X

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/06/87	SMPW 6/06/87	VELE 6/06/87	JIWE 6/06/87	COCB 6/06/87	ANMG 6/06/87
27	PURSUIT	EC 2.0	0.094	PPI	77	88	63	47	23	7
28	PURSUIT	EC 2.0	0.063	PPI	86	93	67	70	40	17
	DUAL	EC 8.0	1.75	PPI						
29	PURSUIT	EC 2.0	0.063	PPI	78	83	60	57	33	23
	PROWL	EC 4.0	1.0	PPI						
30	PURSUIT	EC 2.0	0.063	PPI	88	93	73	63	48	37
	LASSO	EC 4.0	2.0	PPI						
31	TURBO	EC 8.0	2.0	PPI	85	90	70	70	47	10
	*METRIBZ		0.36							
	*DUAL		1.64							
	SCEPTER	EC 2.0	0.09	PPI						
32	SALUTE	FL 4.0	1.13	PPI	83	94	78	78	62	23
	*TREFLAN		0.75							
	*METRIBZ		0.375							
	SCEPTER	EC 2.0	0.09	PPI						
33	SQUADRON	FL 2.2	0.875	PPI	85	95	80	85	60	30
	*PROWL		0.75							
	*SCEPTER		0.125							
34	AMIBEN	DF 75	1.35	PPI	72	80	70	62	27	10
	COMMAND	EC 4.0	0.5	PPI						
35	AMIBEN	DF 75	1.8	PPI	60	83	73	67	23	0
	COMMAND	EC 4.0	0.5	PPI						
36	AMIBEN	DF 75	1.35	PPI	70	85	80	77	38	7
	COMMAND	EC 4.0	0.5	PPI						
	METRIBUZ	DF 75	0.25	PPI						
37	SCEPTER	EC 2.0	0.125	PPI	79	88	85	63	40	37
	COMMAND	EC 4.0	1.0	PPI						
38	SONALAN	EC 3.0	0.94	PPI	67	85	57	47	23	13
	PREVEIW	DF 75	0.45	PPI						
	*METRIBZ		0.41							
	*CLASSIC		0.04							

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN PREPLANT HERBICIDES INCORPORATED 1X

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/06/87	SMPW 6/06/87	VELE 6/06/87	JIWE 6/06/87	COCB 6/06/87	ANMG 6/06/87
39	SONALAN	EC 3.0	0.94	PPI	75	87	40	47	10	10
40	SONALAN	EC 3.0	0.94	PPI	80	88	50	35	25	15
	PURSUIT	EC 2.0	0.063	PPI						
41	SONALAN	EC 3.0	0.94	PPI	80	82	50	53	50	37
	PURSUIT	EC 2.0	0.094	PPI						
42	SONALAN	EC 3.0	0.94	PPI	88	94	63	63	33	33
	PURSUIT	EC 2.0	0.063	PPI						
43	CHECK				NA	NA	NA	NA	NA	NA
44	SONALAN	EC 3.0	0.94	PPI	80	82	77	53	43	20
	COMMAND	EC 4.0	0.5	PPI						
45	SONALAN	EC 3.0	0.94	PPI	82	78	73	53	27	0
	COMMAND	EC 4.0	0.75	PPI						
				LSD(0.05) =	24	14	21	27	31	24
				STANDARD DEVIATION =	15	8	13	16	18	14
				COEFF. OF VARIABILITY =	20	11	21	29	50	88

U N I V E R S I T Y   O F   I L L I N O I S

POSTEMERGENCE GRASS CONTROL IN SOYBEANS

LOCATION:URBANA CRUSE FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:M. D. McGLAMERY
PREVIOUS CROP:CORN PLOT / Ft:7.5x40 ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM OM%:5.0 pH:6.0
EXPT. DESIGN:RCBD NUM. OF REPS:3
CROP:SOYBEANS VARIETY:WILLIAMS
PLANTING DATE:05/06/87 DEPTH/In:1.5" SPACING/In:7-9/Ft/ROW NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT:EARLY:LOW MID:ADQ LATE:ADQ
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

This study was conducted on a moderate stand of giant foxtail that was growing vigourously at the time of application. All post grass treatments controlled foxtail quite well. Speed of control was a noteable difference, Whip and Assure were faster than Verdict, Fusilade, BAS 517, Select, or Fusilade. Scepterantagonized Select control of giant foxtail.

POSTEMERGENCE SOYBEAN GRASS CONTROL STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/03/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J154/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	07:00/08:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	80 / 80	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	90	0	0	0	0
WIND DIR. / VELOC	N / 05	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/MOIST	/	/	/	/
SOIL/LEAF MOIST.	ABD / ABD	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	Co2 HND HLD				
SPRAYER GPA / PSI	10 / 0	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.24	0	0	0	0
NOZZLE TYPE /NUM.	8001/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	GLYMA	SOYBEANS	- / 3T	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	H /4-6"	/	/	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

POSTEMERGENCE SOYBEAN GRASS CONTROL STUDY

EXPT. LOCATION:CRUSE 500-E
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% CONT. GIFT 7/03/87				
01	BAS-517	EC 1.67	0.05	POST	33				
	COC	CO 1.0	0.25	POST					
02	BAS-517	EC 1.67	0.10	POST	66				
	COC	CO 1.0	0.25	POST					
03	BAS-517	EC 1.67	0.15	POST	97				
	COC	CO 1.0	0.25	POST					
04	POAST	EC 1.5	0.15	POST	98				
	COC	CO 1.0	0.25	POST					
05	SELECT	EC 2.0	0.075	POST	96				
	COC	CO 1.0	0.25	POST					
06	SELECT	EC 2.0	0.10	POST	99				
	COC	CO 1.0	0.25	POST					
07	SELECT	EC 2.0	0.125	POST	99				
	COC	CO 1.0	0.25	POST					
08	SELECT	EC 2.0	0.06	POST	96				
	COC	CO 1.0	0.25	POST					
	SELECT	EC 2.0	0.06	DAY10					
	COC	CO 1.0	0.25	DAY10					
09	SELECT	EC 2.0	0.25	LPOST	99				
	COC	CO 1.0	0.25	LPOST					
10	SCEPTER	EC 1.5	0.125	POST	80				
	SELECT	EC 2.0	0.10	POST					
	COC	CO 1.0	0.25	POST					
11	WHIP	EC 1.0	0.075	POST	98				
	COC	CO 1.0	0.25	POST					
12	WHIP	EC 1.0	0.10	POST	99				
	COC	CO 1.0	0.25	POST					

U N I V E R S I T Y   O F   I L L I N O I S

POSTEMERGENCE SOYBEAN GRASS CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% CONT. GIFT 7/03/87				
13	ASSURE	EC 0.8	0.025	POST	98				
	X-77	%S 1.0	0.25%	POST					
14	ASSURE	EC 0.8	0.05	POST	99				
	X-77	%S 1.0	0.25%	POST					
15	VERDICT	EC 2.0	0.12	POST	99				
	X-77	%S 1.0	0.25%	POST					
16	FUSILADE	EC 1.0	0.156	POST	98				
	COC	CO 1.0	0.25	POST					
17	FUSILADE	EC 1.0	0.188	POST	99				
	COC	CO 1.0	0.25	POST					
18	CHECK				0				
				LSD(0.05) =	32				
				STANDARD DEVIATION =	19				
				COEFF. OF VARIABILITY =	22				

UNIVERSITY OF ILLINOIS

ASSURE (DPX-Y6202-38) AND POAST ADDITIVE STUDIES

RESEARCH BY:T. BECKETT, E. STOLLER
REPORTED BY:T. BECKETT

CHAMPAIGN, IL STUDY		COOPERATOR: G. OLDHAM	
PREVIOUS CROP:CORN		PLOT / Ft: 10 x 30	ROW WIDTH/In:30
EXPT. DESIGN:RCBD		NUM. OF REPS:4	
CROP:SOYBEAN	VARIETY:HACK	PLANTING DATE:05/07/87	
ORR CENTER, PERRY, IL STUDY		COOPERATOR: G. RAINES	
PREVIOUS CROP:CORN		PLOT / Ft: 7.5 x 35	ROW WIDTH/In:30
EXPT. DESIGN:RCBD		NUM. OF REPS:4	
CROP:SOYBEAN	VARIETY:HACK	PLANTING DATE:05/21/87	

EXPERIMENT COMMENTS

These studies are based on a 1986 experiment, but were modified by reducing the carrier rate to 10 GPA from 18 GPA, and by doubling the rates of 10-34-0 and 28% N to 1 GAL/A. Note that the herbicide rates are roughly <u>one-fourth</u> of the field use rates, and so comparisons between Assure and Poast treatments are <u>not</u> justified. Basagran (1 lb ai/A) and Butyrac (2 fl oz product/A) were applied on to control broadleaf weeds.

ASSURE (DPX-Y6202-38) AND POAST ADDITIVE STUDIES

** SET 1 OF 1 ** GEN. APPLIC. TYPE	CHAMPAIGN POST	ORR CENTER POST
APPLICATION DATE	6/10/87	6/18/87
JULIAN DATE/YEAR	J161/87	J169/87
START HR / END HR	5:45/ 7:15	8:30/10:30
APPLIC. METHOD	BROADCAST	BROADCAST
AIR/SOIL TEMP (F)	51 / -	85 /
% REL. HUMIDITY	68	85 /
WIND DIR. / VELOC	NE/5-8	S / 1
SKY / SOIL COND.	CLEAR/DRY	HAZY / DRY
SOIL/LEAF MOIST.	DRY /DRY	DRY / DRY
INCORP. EQUIPMENT	--	--
INCORP. DEPTH(in)	--	--
SPRAYER TYPE	CO_2 HND HLD	CO_2 HND HLD
SPRAYER GPA / PSI	10 / 40	10 / 40
MIX SIZE (Gallon)	0.4	0.4
NOZZLE TYPE /NUM.	FF 8001	FF 8001
IRRIGATION (inch)	1.25 (5/17)	--

	SPECIES CODE	SPECIES	CHAMPAIGN DEN.	CHAMPAIGN STG.	ORR CENTER DEN.	ORR CENTER STG
	*******	****** CROP ******	**********	**********	**********	**********
	GLYMA	SOYBEAN		9 IN, 6 LF		7 IN, 3-5 LF
	*******	****** PEST ******	**********	**********	**********	**********
1	GIFT	GIANT FOXTAIL	$95/FT^2$	12 IN, 5 LF	$1\text{-}80/FT^2$	7 IN,6 LF
2	VOLCORN	VOLUNTEER CORN	12/PLOT	23 IN, 6 LF	12/PLOT	17 IN,5LF

ASSURE (DPX-Y6202-38) AND POAST ADDITIVE STUDIES

EXPT. LOCATIONS: AGRONOMY SOUTH FARM, CHAMPAIGN, and ORR CENTER, PERRY, IL
RESEARCH BY: T. BECKETT, E. STOLLER LAST UPDATE: 06/09/87 INITIATED: 1986

TRT. NUM.	COMPOUND TESTED	FORMUL. AI/UNIT	RATE LBai/A	CHAMPAIGN GIFT 14	CHAMPAIGN GIFT 28	CHAMPAIGN VOL CORN 14	CHAMPAIGN VOL CORN 28	ORR CENTER GIFT 15	ORR CENTER GIFT 27	ORR CENTER VOL CORN 15	ORR CENTER VOL CORN 27
				(DAYS AFTER TREATMENT)							
01A	ASSURE	EC 0.8	0.025	11	0	4	0	63	48	14	10
02A	ASSURE	EC 0.8	0.025	93	99	89	100	93	99	100	100
02B	COC	CO	1 QT/A								
03A	ASSURE	EC 0.8	0.025	85	68	3	1	90	99	89	79
03B	X-77	%A	.25% V/V								
04A	ASSURE	EC 0.8	0.025	63	1	8	0	53	63	32	7
04B	28% N	AD	1 GAL/A								
05A	ASSURE	EC 0.8	0.025	14	4	1	0	61	55	21	8
05B	10-34-0	AD	1 GAL/A								
06A	ASSURE	EC 0.8	0.025	29	1	0	0	73	50	10	4
06B	AMM-SULF	DG	2.5 LB/A								
07A	ASSURE	EC 0.8	0.025	93	98	89	99	98	99	100	95
07B	COC	CO	1 QT/A								
07C	28% N	AD	1 GAL/A								
08A	ASSURE	EC 0.8	0.025	94	97	94	100	93	99	81	81
08B	COC	CO	1 QT/A								
08C	10-34-0	AD	1 GAL/A								
09A	ASSURE	EC 0.8	0.025	91	97	80	99	94	99	95	100
09B	COC	CO	1 QT/A								
09C	AMM-SULF	DG	2.5 LB/A								
10A	ASSURE	EC 0.8	0.025	94	85	55	53	93	99	90	98
10B	X-77	%A	.25% V/V								
10C	28% N	AD	1 GAL/A								
11A	ASSURE	EC 0.8	0.025	88	94	18	18	95	92	75	80
11B	X-77	%A	.25% V/V								
11C	10-34-0	AD	1 GAL/A								
12A	ASSURE	EC 0.8	0.025	86	73	6	0	88	97	65	73
12B	X-77	%A	.25% V/V								
12C	AMM-SULF	DG	2.5 LB/A								

ASSURE (DPX-Y6202-38) AND POAST ADDITIVE STUDIES

TRT. NUM.	COMPOUND TESTED	FORMUL. AI/UNIT	RATE LBai/A	CHAMPAIGN GIFT 14	CHAMPAIGN GIFT 28	CHAMPAIGN VOL CORN 14	CHAMPAIGN VOL CORN 28	ORR CENTER GIFT 15	ORR CENTER GIFT 27	ORR CENTER VOL CORN 15	ORR CENTER VOL CORN 27
				(DAYS AFTER TREATMENT)							
13A	POAST	SL 1.5	0.05	0	0	0	0	0	0	0	0
14A	POAST	SL 1.5	0.05	55	4	16	0	69	81	15	3
14B	COC	CO	1 QT/A								
15A	POAST	SL 1.5	0.05	1	0	0	0	4	0	0	0
15B	X-77	%A	.25 % V/V								
16A	POAST	SL 1.5	0.05	1	0	1	0	5	4	3	0
16B	28% N	AD	1 GAL/A								
17A	POAST	SL 1.5	0.05	0	0	0	0	4	1	3	0
17B	10-34-0	AD	1 GAL/A								
18A	POAST	SL 1.5	0.05	0	0	0	0	5	1	3	0
18B	AMM-SULF	DG	2.5 LB/A								
19A	POAST	SL 1.5	0.05	44	3	4	0	83	81	42	15
19B	COC	CO	1 QT/A								
19C	28% N	AD	1 GAL/A								
20A	POAST	SL 1.5	0.05	75	5	26	0	78	72	30	28
20B	COC	CO	1 QT/A								
20C	10-34-0	AD	1 GAL/A								
21A	POAST	SL 1.5	0.05	58	19	9	1	83	84	11	6
21B	COC	CO	1 QT/A								
21C	AMM-SULF	DG	2.5 LB/A								
22A	POAST	SL 1.5	0.05	9	0	1	0	50	44	7	0
22B	X-77	%A	.25% V/V								
22C	28% N	AD	1 GAL/A								
23A	POAST	SL 1.5	0.05	8	0	0	0	30	23	5	0
23B	X-77	%A	.25% V/V								
23C	10-34-0	AD	1 GAL/A								
24A	POAST	SL 1.5	0.05	8	0	1	0	25	11	8	0
24B	X-77	%A	.25% V/V								
24C	AMM-SULF	DG	2.5 LB/A								

ASSURE (DPX-Y6202-38) AND POAST ADDITIVE STUDIES

TRT. NUM.	COMPOUND TESTED	FORMUL. AI/UNIT	RATE LBai/A	CHAMPAIGN GIFT 14	CHAMPAIGN GIFT 28	CHAMPAIGN VOL CORN 14	CHAMPAIGN VOL CORN 28	ORR CENTER GIFT 15	ORR CENTER GIFT 27	ORR CENTER VOL CORN 15	ORR CENTER VOL CORN 27
				(DAYS AFTER TREATMENT)							
25A	POAST	SL 1.5	0.05	40	4	14	1	78	60	31	18
25B	DASH	CO	1 QT/A								
26A	WEEDY-CHECK			NA	NA	NA	NA	NA	NA	NA	NA
	ASSURE TREATMENTS:										
			LSD(0.05) =	14	16	15	18	17	22	24	23
			STANDARD DEVIATION =	10	11	11	13	12	15	17	16
			COEFF. OF VARIABILITY =	14	19	29	32	14	18	26	26
	POAST TREATMENTS:										
			LSD(0.05) =	13	9	11	NS	17	18	10	13
			STANDARD DEVIATION =	9	6	7	--	12	13	7	9
			COEFF. OF VARIABILITY =	41	248	150	--	33	38	66	207

U N I V E R S I T Y   O F   I L L I N O I S

POSTDIRECTED BROADLEAF WEED CONTROL IN SOYBEANS

LOCATION: URBANA CRUSE FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:RICHARD STEVENS
PREVIOUS CROP:CORN   PLOT / Ft:10x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5.0 pH:6.0
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:HACK
PLANTING DATE:05/06/87 DEPTH/In:1.5"   SPACING/In:7-9/FT.ROW NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Dry conditions at planting time resulted in a good 4-6" height differential between soybean and weed foliage. Standard 8002 nozzles were used to maximize dose applied to weeds and minimize soybean exposure to the herbicides. Final weed control realized could have been dramatically improved with a timely cultivation. 2,4-DB alone at 0.2#/A proved to be a very economical and efficient treatment. Addition of Buctril to 2,4-DB improved jimsonweed control.

POSTDIRECTED BROADLEAF WEED CONTROL IN SOYBEANS

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST DIRCT				
APPLICATION DATE	06/19/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J170/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	: / :	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST DI				
AIR/SOIL TEMP (F)	90 / 80	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	90	0	0	0	0
WIND DIR. / VELOC	SW / 5	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLOUD/DRY	/	/	/	/
SOIL/LEAF MOIST.	LOW / LOW	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	18 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.52	0	0	0	0
NOZZLE TYPE /NUM.	8002 /4				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	GLYMA	SOYBEANS	/6T	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	JIWE	JIMSONWEED	H / 14"	/	/	/	/
2	SMPW	SMOOTH PIGWEED	H / 14"	/	/	/	/
3	VELE	VELVETLEAF	H / 14"	/	/	/	/
4	ANMG	ANUAL MORNINGGLORY	V /VINE	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

POSTDIRECTED BROADLEAF WEED CONTROL IN SOYBEANS

EXPT. LOCATION:C500W
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 6/29/87	VELE 6/29/87	SMPW 6/29/87	JIWE 6/29/87	ANMG 6/29/87
01	BUCTRIL	FL 2.0	0.25	PODIR	2	18	17	33	30
	COC	CO 1.0	0.50	PODIR					
02	BUCTRIL	FL 2.0	0.38	PODIR	0	39	18	67	62
	COC	CO 1.0	0.50	PODIR					
03	BUCTRIL	FL 2.0	0.25	PODIR	2	73	79	84	63
	2,4-DB	EC 2.0	0.20	PODIR					
	COC	CO 1.0	0.50	PODIR					
04	BUCTRIL	FL 2.0	0.25	PODIR	2	77	84	63	55
	LOROX	FL 4.0	0.50	PODIR					
	COC	CO 1.0	0.50	PODIR					
05	BUCTRIL	FL 2.0	0.25	PODIR	3	80	77	67	50
	SENCOR	FL 4.0	0.25	PODIR					
	COC	CO 1.0	0.50	PODIR					
06	2,4-DB	EC 2.0	0.20	PODIR	0	78	78	63	98
	COC	CO 1.0	0.50	PODIR					
07	LOROX	FL 4.0	0.50	PODIR	0	58	74	76	61
	COC	CO 1.0	0.50	PODIR					
08	SENCOR	FL 4.0	0.25	PODIR	0	59	70	60	72
	COC	CO 1.0	0.50	PODIR					
				LSD(0.05) =	4	48	23	43	50
				STANDARD DEVIATION =	2	27	13	25	28
				COEFF. OF VARIABILITY =	201	45	21	39	46

U N I V E R S I T Y   O F   I L L I N O I S

POSTEMERGENCE BROADLEAF WEED CONTROL IN SOYBEANS 1

LOCATION:URBANA SOUTH FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:LOYD WAX
PREVIOUS CROP:CORN   PLOT / Ft:7.5x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5.0   pH:6.0
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:WELLS II
PLANTING DATE:05/06/87   DEPTH/In:1.5"   SPACING/In:7-9/Ft/ROW   NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:ADQ
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

This study was conducted with a heavy stand of several annual broadleaf weeds. Stage of weed growth and environmental conditions were optimal for good postemergence activity.

A number of the treatments caused early injury to soybeans, rated 10 days after application. However, with most of the treatments the injury was greatly reduced by three weeks after treatment. The area was heavily infested with pigweed (mainly smooth but some powell ama--ranth). Pigweed was best controlled by treatments including Tackle or Pursuit. Combinations with Basagran provided very good contol of velevetleaf. Many treatments provided excellent control of jimsonweed in this study. The study also provided a comparison of the adjuvants; COC, X-77, BCH-815, and 28%N. Basagran or Tackle when applied with 28%N plus either BCH-815 or COC were the most active treatments across all weed species; however they also caused the greatest crop injury.

POST-EMERGENCE SOYBEAN BROADLEAF CONTROL STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/03/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J154/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	08:00/09:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	80 / 80	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	90	0	0	0	0
WIND DIR. / VELOC	NW / 05	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLDY /MOIST	/	/	/	/
SOIL/LEAF MOIST.	ABD / ABD	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	CO2 HND HLD				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.44	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0 /	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		SOYBEANS	- / 3T	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	SMPW	SMOOTH PIGWEED	H /1-4"	/	/	/	/
2	JIWE	JIMSON WEED	H /1-4"	/	/	/	/
3	VELE	VELVETLEAF	H /2-4"	/	/	/	/
4			/ .	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

POST-EMERGENCE SOYBEAN BROADLEAF CONTROL STUDY

EXPT. LOCATION:CRUSE 500-E
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 6/13/87	C. I. 6/25/87	SMPW 6/13/87	VELE 6/13/87	JIWE 6/13/87
01	BASAGRAN	EC 4.0	0.40	POST	0	0	77	80	94
	COC	CO 1.0	0.25	POST					
02	BASAGRAN	EC 4.0	0.40	POST	7	0	27	85	95
	BCH-815	CO 1.0	0.25	POST					
03	BASAGRAN	EC 4.0	0.40	POST	0	0	53	90	95
	28%N	CO 1.0	1.00	POST					
04	BASAGRAN	EC 4.0	0.40	POST	12	0	52	90	98
	COC	CO 1.0	0.25	POST					
	28%N	CO 1.0	1.00	POST					
05	BASAGRAN	EC 4.0	0.40	POST	10	3	35	92	97
	BCH-815	CO 1.0	0.25	POST					
	28%N	CO 1.0	1.00	POST					
06	BASAGRAN	EC 4.0	0.80	POST	13	0	52	92	96
	COC	CO 1.0	0.25	POST					
07	BASAGRAN	EC 4.0	0.80	POST	28	7	60	92	97
	BCH-815	CO 1.0	0.25	POST					
08	BASAGRAN	EC 4.0	0.80	POST	15	3	67	94	98
	28%N	CO 1.0	1.00	POST					
09	TACKLE	EC 2.0	0.25	POST	18	5	93	57	96
	COC	CO 1.0	0.25	POST					
10	TACKLE	EC 2.0	0.25	POST	17	7	95	60	96
	X-77	%S 1.0	0.25%	POST					
11	TACKLE	EC 2.0	0.25	POST	28	5	94	67	94
	BCH-815	CO 1.0	0.25	POST					
12	TACKLE	EC 2.0	0.25	POST	20	0	96	93	96
	28%N	CO 1.0	1.00	POST					

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POST-EMERGENCE SOYBEAN BROADLEAF CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 6/13/87	C. I. 6/25/87	SMPW 6/13/87	VELE 6/13/87	JIWE 6/13/87
13	CLASSIC	DF 25	0.005	POST	18	8	82	72	87
	X-77	%S 1.0	0.25%	POST					
14	CLASSIC	DF 25	0.005	POST	0	3	75	77	87
	28%N	CO 1.0	1.00%	POST					
15	CLASSIC	DF 25	0.005	POST	15	5	83	78	93
	COC	CO 1.0	0.25	POST					
16	CLASSIC	DF 25	0.005	POST	13	7	87	70	92
	BCH-815	CO 1.0	0.25	POST					
17	BASAGRAN	EC 4.0	0.40	POST	10	0	43	85	96
	COC	CO 1.0	0.25	POST					
	28%N	%S 1.0	1.00	POST					
18	BASAGRAN	EC 4.0	0.40	POST	3	0	43	70	90
	MYCROZ	CO 1.0	0.125	POST					
19	BASAGRAN	EC 4.0	0.40	POST	3	0	35	83	92
	MYCROZ	CO 1.0	0.125	POST					
	28%N	CO 1.0	1.00	POST					
20	TACKLE	EC 2.0	0.25	POST	30	20	88	85	97
	BASAGRAN	EC 4.0	0.40	POST					
	BCH-815	CO 1.0	0.25	POST					
21	TACKLE	EC 2.0	0.25	POST	22	3	92	78	97
	BASAGRAN	EC 4.0	0.40	POST					
	COC	CO 1.0	0.25	POST					
22	CHECK				0	0	0	0	0
23	TACKLE	EC 2.0	0.25	POST	37	20	99	97	99
	BASAGRAN	EC 4.0	0.40	POST					
	BCH-815	CO 1.0	0.25	POST					
	28%N	CO 1.0	1.00	POST					
24	TACKLE	EC 2.0	0.25	POST	37	25	96	98	99
	BASAGRAN	EC 4.0	0.40	POST					
	COC	CO 1.0	0.25	POST					
	28%N	CO 1.0	1.00	POST					

U N I V E R S I T Y   O F   I L L I N O I S

POST-EMERGENCE SOYBEAN BROADLEAF CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLICATION TYPE	C. I. 6/13/87	C. I. 6/25/87	SMPW 6/13/87	VELE 6/13/87	JIWE 6/13/87
25	BASAGRAN	EC 4.0	0.60	POST	13	5	85	87	97
	PURSUIT	EC 2.0	0.063	POST					
	COC	CO 1.0	0.25	POST					
26	BASAGRAN	EC 4.0	0.80	POST	13	12	95	90	97
	PURSUIT	EC 2.0	0.047	POST					
	COC	CO 1.0	0.25	POST					
				LSD(0.05) =	8	10	24	9	5
				STANDARD DEVIATION =	5	6	14	5	3
				COEFF. OF VARIABILITY =	33	113	20	7	3

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POSTEMERGENCE BROADLEAF WEED CONTROL IN SOYBEANS 2

LOCATION:URBANA SOUTH FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:JOHN CANTWELL
PREVIOUS CROP:CORN   PLOT / Ft:7.5x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5.0   pH:6.0
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:WELLS II
PLANTING DATE:05/06/87 DEPTH/In:1.5"   SPACING/In:7-9/Ft/ROW NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Herbicide treatments were applied 2 days after a series of soaking rainfalls. Temperature and humidity were high at the time of application. Soybean injury was severe in many cases, however good growing conditions allowed the soybeans to recover quickly. Reflex, Tackle, Cobra, and Buctril all produced the characterstic "burn", Classic, Scepter, Pursuit, and DPX-M6316 treatments resulted in soybean height reduction. Benazolin, Rescue, and alanap treated soybeans all showed epinastic symptoms including stem swelling, and leaf strapping.

Hoelon was applied at 1.5#/A to control giant foxtail which resulted in a dense stand of velvetleaf and pigweed with a good representation of jimsonweed. Several combinations afforded complete control of the broadleaf spectrum. However several weakness's were evidenced.

POST-EMERGENCE BROADLEAF CONTROL IN SOYBEANS 2

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	+ POST				
APPLICATION DATE	06/03/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J154/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	09:00/10:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	80 / 80	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	95	0	0	0	0
WIND DIR. / VELOC	N / 05	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/MOIST	/	/	/	/
SOIL/LEAF MOIST.	ABD / ABD	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	CO2 HND HLD				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.44	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		SOYBEANS	- / 3T	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	SMPW	SMOOTH PIGWEED	H /1-4"	/	/	/	/
2	JIWE	JIMSON WEED	H /1-4"	/	/	/	/
3	VELE	VELVETLEAF	H /1-4"	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y O F I L L I N O I S

POST-EMERGENCE BROADLEAF CONTROL IN SOYBEANS 2

EXPT. LOCATION:CRUSE 500-E
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 6/18/87	VELE 6/18/87	PIWE 6/18/87	JIWE 6/18/87		
01	COBRA	EC 2.0	0.20	POST	22	72	99	95		
02	COBRA	EC 2.0	0.20	POST	30	78	98	99		
	COC	CO 1.0	.0625	POST						
03	COBRA	EC 2.0	0.20	POST	30	85	99	99		
	COC	CO 1.0	0.125	POST						
04	COBRA	EC 2.0	0.20	POST	23	67	99	99		
	28%N	CO 1.0	1.00	POST						
05	COBRA	EC 2.0	0.20	POST	18	97	99	99		
	BASAGRAN	EC 4.0	0.38	POST						
	28%N	CO 1.0	1.00	POST						
06	COBRA	EC 2.0	0.20	POST	25	85	99	99		
	CLASSIC	DF 25	0.008	POST						
	X-77	%S 1.0	0.25%	POST						
07	REFLEX	EC 2.0	0.25	POST	30	77	86	99		
	X-77	%S 1.0	0.25%	POST						
08	REFLEX	EC 2.0	0.25	POST	8	88	99	99		
	28%N	CO 1.0	1.00	POST						
09	REFLEX	EC 2.0	0.25	POST	15	98	96	99		
	BASAGRAN	EC 4.0	0.38	POST						
	28%N	CO 1.0	1.00	POST						
10	BENAZOL	EC 4.0	0.38	POST	28	58	67	85		
	COC	CO 1.0	0.25%	POST						
11	BENAZOL	EC 4.0	0.38	POST	30	70	72	89		
	VARIQUAT	CO 1.0	0.5%	POST						
12	BENAZOL	EC 4.0	0.38	POST	28	80	90	99		
	TACKLE	SC 2.0	0.25	POST						
	X-77	%S 1.0	.25%%	POST						

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POST-EMERGENCE BROADLEAF CONTROL IN SOYBEANS 2

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 6/18/87	VELE 6/18/87	PIWE 6/18/87	JIWE 6/18/87	
13	BENAZOL	EC 4.0	0.38	POST	22	82	94	99	
	REFLEX	EC 2.0	0.125	POST					
	X-77	%S 1.0	.125%	POST					
14	MON11123	EC 3.0	0.125	POST	22	85	99	99	
	COC	CO 1.0	0.125	POST					
15	MON11123	EC 3.0	0.188	POST	10	72	75	88	
	COC	CO 1.0	0.125	POST					
16	MON11123	EC 3.0	0.25	POST	23	88	99	99	
	COC	CO 1.0	0.125	POST					
17	MON11123	EC 3.0	0.38	POST	22	88	98	96	
	COC	CO 1.0	0.125	POST					
18	MON11123	EC 3.0	0.25	POST	10	80	93	97	
	TACKLE	EC 2.0	0.25	POST					
19	SCEPTER	EC 1.5	0.03	POST	8	32	70	57	
	X-77	%S 1.0	0.25%	POST					
20	SCEPTER	EC 1.5	0.06	POST	15	47	98	73	
	X-77	%S 1.0	0.25%	POST					
21	TACKLE	SC 2.0	0.125	POST	8	37	95	96	
22	TACKLE	SC 2.0	0.25	POST	10	42	92	98	
23	TACKLE	SC 2.0	0.125	POST	17	65	95	99	
	SCEPTER	EC 1.5	0.03	POST					
	X-77	%S 1.0	0.25%	POST					
24	TACKLE	SC 2.0	0.125	POST	17	57	99	98	
	SCEPTER	EC 1.5	0.06	POST					
	X-77	%S 1.0	0.25%	POST					
25	TACKLE	SL 2.0	0.25	POST	15	63	96	99	
	SCEPTER	EC 1.5	0.03	POST					
	X-77	%S 1.0	0.25%	POST					

U N I V E R S I T Y   O F   I L L I N O I S

POST-EMERGENCE BROADLEAF CONTROL IN SOYBEANS 2

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 6/18/87	VELE 6/18/87	PIWE 6/18/87	JIWE 6/18/87		
26	TACKLE	SL 2.0	0.25	POST	15	60	99	98		
	SCEPTER	EC 1.5	0.06	POST						
	X-77	%S 1.0	0.25%	POST						
27	BUCTRIL	FL 2.0	0.05	POST	13	48	66	88		
28	BUCTRIL	FL 2.0	0.10	POST	20	72	50	89		
29	BUCTRIL	FL 2.0	0.05	POST	15	53	70	93		
	TACKLE	SL 2.0	0.25	POST						
30	BUCTRIL	FL 2.0	0.10	POST	27	58	99	99		
	TACKLE	SL 2.0	0.25	POST						
31	CLASSIC	DF 25	0.008	POST	17	72	95	99		
	X-77	%S 1.0	0.25%	POST						
32	CLASSIC	DF 25	0.012	POST	17	92	96	99		
	X-77	%S 1.0	0.25%	POST						
33	DPXM6316	DF 75	0.004	POST	18	90	99	88		
	X-77	%S 1.0	0.25%	POST						
34	DPXM6316	DF 75	0.006	POST	22	90	99	75		
	X-77	%S 1.0	0.25%	POST						
35	PURSUIT	EC 2.0	0.094	POST	10	92	69	91		
	X-77	%S 1.0	0.25%	POST						
36	PURSUIT	EC 2.0	0.063	POST	10	88	68	96		
	X-77	%S 1.0	0.25%	POST						
37	CHECK				0	0	0	0		
38	RESCUE	EC 2.06	1.5	@-14"	35	50	44	75		
	28%N	%S 1.0	0.25	POST						
39	RESCUE	EC 2.06	1.0	@-14"	32	77	98	80		
	SCEPTER	EC 1.5	0.07	POST						
	28%N	CO 1.0	0.25	POST						

U N I V E R S I T Y   O F   I L L I N O I S

POST-EMERGENCE BROADLEAF CONTROL IN SOYBEANS 2

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 6/18/87	VELE 6/18/87	PIWE 6/18/87	JIWE 6/18/87		
40	RESCUE	EC 2.06	1.0	@-14"	33	63	90	80		
	CLASSIC	DF 25	0.004	POST						
	X-77	%S 1.0	0.25%	POST						
41	RESCUE	EC 2.06	1.03	POST	35	50	50	50		
42	ALANAP	EC 2.0	2.0	POST	32	50	67	67		
43	BASAGRAN	EC 4.0	0.80	POST	13	98	96	98		
	PURSUIT	EC 2.0	0.047	POST						
	X-77	%S 1.0	0.25%	POST						
44	BASAGRAN	EC 4.0	0.80	POST	12	95	99	99		
	PURSUIT	EC 2.0	0.063	POST						
	X-77	%S 1.0	0.25%	POST						
45	BASAGRAN	EC 4.0	0.60	POST	10	96	96	99		
	PURSUIT	EC 2.0	0.047	POST						
	X-77	%S 1.0	0.25%	POST						
46	BASAGRAN	EC 4.0	0.60	POST	15	94	98	99		
	PURSUIT	EC 2.0	0.063	POST						
	X-77	%S 1.0	0.25%	POST						
			LSD(0.05) =		9	20	24	13		
			STANDARD DEVIATION =		5	12	15	8		
			COEFF. OF VARIABILITY =		27	17	17	9		

U N I V E R S I T Y   O F   I L L I N O I S

STUDY OF PIGWEED CONTROL IN SOYBEAN

LOCATION:URBANA SOUTH FARM
RESEARCH BY:CANTWELL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:JOHN CANTWELL
PREVIOUS CROP:CORN   PLOT / Ft:7.5x35   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5.0   pH:6.4
EXPT. DESIGN:RCBD   NUM. OF REPS:4
CROP:SOYBEANS   VARIETY:HACK
PLANTING DATE:05/23/87 DEPTH/In:1.5 SPACING/In:7-9/FT.ROW NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Smooth pigweed were quite large and growing vigourously at the time of appplication. DPX-M6316, Classic, Scepter, and Pursuit provided excellent smooth pigweed control yet all caused soybean height reduction. Acifluorfen, Reflex, and Cobra, burned the smooth pigweed back, however plants tillered from basal meristems and had significant regrowth. Due to hot-humid conditions at application time the above treatments caused crop injury syptoms, Cobra caused the worst crop injury and Reflex the least. A timely cultivation would have dramatically improved control from the treatments. Basagran had no effect on the smooth pigweed in this study.

STUDY OF PIGWEED CONTROL IN SOYBEAN

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/22/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J173/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	09:00/10:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	80 / 80	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	90	0	0	0	0
WIND DIR. / VELOC	SW / 5	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLD /MOIST	/	/	/	/
SOIL/LEAF MOIST.	ADQ / ADQ	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	.52	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		SOYBEANS	/6T	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	SMPW	SMOOTH PIGWEED	H /2-12"	/	/	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

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STUDY OF PIGWEED CONTROL IN SOYBEAN

EXPT. LOCATION:CHAMPAIGN, IL
RESEARCH BY:CANTWELL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C. I. 7/09/87	SMPW 7/09/87			
01	DPXM6316	DF 75	.0938	POST	19	98			
	X-77	%S 1.0	0.25%	POST					
02	DPXM6316	DF 75	.0625	POST	13	97			
	X-77	%S 1.0	0.25%	POST					
03	DPXM6316	DF 75	.0313	POST	5	91			
	X-77	%S 1.0	0.25%	POST					
04	CLASSIC	DF 25	.0938	POST	4	97			
	X-77	%S 1.0	0.25%	POST					
05	CLASSIC	DF 25	.0625	POST	5	92			
	X-77	%S 1.0	0.25%	POST					
06	CLASSIC	DF 25	.0313	POST	6	84			
	X-77	%S 1.0	0.25%	POST					
07	SCEPTER	EC 1.5	.0932	POST	0	95			
	X-77	%S 1.0	0.25%	POST					
08	SCEPTER	EC 1.5	.0625	POST	3	95			
	X-77	%S 1.0	0.25%	POST					
09	SCEPTER	EC 1.5	.0313	POST	1	92			
	X-77	%S 1.0	0.25%	POST					
10	PURSUIT	EC 2.0	.0932	POST	10	97			
	X-77	%S 1.0	0.25%	POST					
11	PURSUIT	EC 2.0	.0625	POST	5	99			
	X-77	%S 1.0	0.25%	POST					
12	PURSUIT	EC 2.0	.0313	POST	4	93			
	X-77	%S 1.0	0.25%	POST					
13	ACIFLUOR	EC 2.0	0.5	POST	9	60			
	X-77	%S 1.0	0.25%	POST					

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STUDY OF PIGWEED CONTROL IN SOYBEAN

TRT. NO.	PESTICIDE NAME	FORMU.	BDai/A	APPLI-CATION TYPE	C. I. 7/09/87	SMPW 7/09/87				
14	REFLEX	EC 2.0	0.25	POST	3	63				
	X-77	%S 1.0	0.25%	POST						
15	COBRA	EC 2.0	0.2	POST	13	60				
	X-77	%S 1.0	0.25%	POST						
16	BASAGRAN	EC 4.0	1.0	POST	0	0				
	X-77	%S 1.0	0.25%	POST						
			LSD(0.05) =		7	10				
		STANDARD DEVIATION =			5	7				
		COEFF. OF VARIABILITY =			84	8				

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN POST GRASS ANTAGONISM STUDY

LOCATION:URBANA CRUSE FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :GENE OLDHAM
REPORTED BY:REX LIEBL
PREVIOUS CROP:CORN   PLOT / Ft:7.5x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:5.0   pH:6.0
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:WELLS II
PLANTING DATE:05/06/87 DEPTH/In:1.5"   SPACING/In:7-9/Ft/ROW   NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Overall, giant foxtail control was good to excellent despite 0.7" rainfall 3.5 hours after application. Environmental conditions at the time of application were optimal for herbicide effectiveness and are likely the reason for the excellent grass contol and absence of antagonism. Significant crop injury was observed with Cobra and or Tackle; Cobra in combination with Poast was particularly phytotoxic to the soybeans. The activity of Poast and Fusilade were reduced when tank-mixed with Cobra. Both BCH-815 and COC performed equally well.

SOYBEAN POST GRASS ANTAGONISM STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/03/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J154/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	11:00/12:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	85 / 80	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	95	0	0	0	0
WIND DIR. / VELOC	SW / 05	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLDY /MOIST	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	CO2 HND HLD				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.44	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0.70 /	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		SOYBEANS	- / 3T	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	H /3-5Lf	/	/	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

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SOYBEAN POST GRASS ANTAGONISM STUDY

EXPT. LOCATION:CRUSE 500-E
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT %CONTL. 6/24/87	C.I. 6/24/87				
01	POAST	EC 1.5	0.10	POST	98	0				
	COC	CO 1.0	0.25	POST						
02	WHIP	EC 1.0	0.10	POST	99	3				
	COC	CO 1.0	0.25	POST						
03	FUSILADE	EC 1.0	0.15	POST	95	8				
	COC	CO 1.0	0.25	POST						
04	POAST	EC 1.5	0.10	POST	98	8				
	BCH-815	CO 1.0	0.25	POST						
05	WHIP	EC 1.0	0.10	POST	95	0				
	BCH-815	CO 1.0	0.25	POST						
06	FUSILADE	EC 1.0	0.15	POST	96	0				
	BCH-815	CO 1.0	0.25	POST						
07	POAST	EC 1.5	0.10	POST	92	0				
	BASAGRAN	EC 4.0	1.00	POST						
	COC	CO 1.0	0.25	POST						
08	WHIP	EC 1.0	0.10	POST	98	0				
	BASAGRAN	EC 4.0	1.00	POST						
	COC	CO 1.0	0.25	POST						
09	FUSILADE	EC 1.0	0.15	POST	95	0				
	BASAGRAN	EC 4.0	1.00	POST						
	COC	CO 1.0	0.25	POST						
10	POAST	EC 1.5	0.10	POST	98	0				
	BASAGRAN	EC 4.0	1.00	POST						
	BCH-815	CO 1.0	0.25	POST						
11	WHIP	EC 1.0	0.10	POST	98	0				
	BASAGRAN	EC 4.0	1.00	POST						
	BCH-815	CO 1.0	0.25	POST						

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN POST GRASS ANTAGONISM STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/24/87	C.I. 6/24/87				
12	FUSILADE	EC 1.0	0.15	POST	96	0				
	BASAGRAN	EC 4.0	1.00	POST						
	BCH-815	CO 1.0	0.25	POST						
13	POAST	EC 1.5	0.10	POST	76	50				
	COBRA	EC 2.0	0.20	POST						
	COC	CO 1.0	0.25	POST						
14	WHIP	EC 1.0	0.10	POST	94	32				
	COBRA	EC 2.0	0.20	POST						
	COC	CO 1.0	0.25	POST						
15	FUSILADE	EC 1.0	0.15	POST	86	30				
	COBRA	EC 2.0	0.20	POST						
	COC	CO 1.0	0.25	POST						
16	POAST	EC 1.5	0.10	POST	89	17				
	COBRA	EC 2.0	0.20	POST						
	BCH-815	CO 1.0	0.25	POST						
17	WHIP	EC 1.0	0.10	POST	94	8				
	COBRA	EC 2.0	0.20	POST						
	BCH-815	CO 1.0	0.25	POST						
18	FUSILADE	EC 1.0	0.15	POST	87	17				
	COBRA	EC 2.0	0.20	POST						
	BCH-815	CO 1.0	0.25	POST						
19	POAST	EC 1.5	0.10	POST	89	0				
	REFLEX	EC 2.0	0.25	POST						
	COC	CO 1.0	0.25	POST						
20	WHIP	EC 1.0	0.10	POST	99	0				
	COC	CO 1.0	0.25	POST						
21	FUSILADE	EC 1.0	0.15	POST	97	0				
	REFLEX	EC 2.0	0.25	POST						
	COC	CO 1.0	0.25	POST						
22	POAST	EC 1.5	0.10	POST	94	0				
	REFLEX	EC 2.0	0.25	POST						
	BCH-815	CO 1.0	0.25	POST						

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN POST GRASS ANTAGONISM STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/24/87	C.I. 6/24/87			
23	WHIP	EC 1.0	0.10	POST	97	0			
	REFLEX	EC 2.0	0.25	POST					
	BCH-815	CO 1.0	0.25	POST					
24	FUSILADE	EC 1.0	0.15	POST	94	0			
	REFLEX	EC 2.0	0.25	POST					
	BCH-815	CO 1.0	0.25	POST					
25	POAST	EC 1.5	0.10	POST	91	3			
	TACKLE	SL 2.0	0.40	POST					
	COC	CO 1.0	0.25	POST					
26	WHIP	EC 1.0	0.10	POST	94	0			
	TACKLE	SL 2.0	0.40	POST					
	COC	CO 1.0	0.25	POST					
27	FUSILADE	EC 1.0	0.15	POST	93	7			
	TACKLE	SL 2.0	0.40	POST					
	COC	CO 1.0	0.25	POST					
28	POAST	EC 1.5	0.10	POST	53	8			
	TACKLE	SL 2.0	0.40	POST					
	BCH-815	CO 1.0	0.25	POST					
29	WHIP	EC 1.0	0.10	POST	97	8			
	TACKLE	SL 2.0	0.40	POST					
	BCH-815	CO 1.0	0.25	POST					
30	FUSILADE	EC 1.0	0.15	POST	97	3			
	TACKLE	SL 2.0	0.40	POST					
	BCH-815	CO 1.0	0.25	POST					
33	FUSILADE	EC 1.0	0.15	POST	98	0			
	CLASSIC	DF 25	0.008	POST					
	COC	CO 1.0	0.25	POST					

U N I V E R S I T Y   O F   I L L I N O I S

SOYBEAN POST GRASS ANTAGONISM STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/24/87	C.I. 6/24/87				
34	POAST	EC 1.5	0.10	POST	94	0				
	CLASSIC	DF 25	0.008	POST						
	BCH-815	CO 1.0	0.25	POST						
35	WHIP	EC 1.0	0.10	POST	98	0				
	CLASSIC	DF 25	0.008	POST						
	BCH-815	CO 1.0	0.25	POST						
36	FUSILADE	EC 1.0	0.15	POST	97	0				
	CLASSIC	DF 25	0.008	POST						
	BCH-815	CO 1.0	0.25	POST						
37	BASAGRAN	EC 4.0	1.00	POST	0	0				
	COC	CO 1.0	0.25	POST						
38	COBRA	EC 2.0	0.20	POST	35	25				
	COC	CO 1.0	0.25	POST						
39	REFLEX	EC 2.0	0.25	POST	17	0				
	COC	CO 1.0	0.25	POST						
40	TACKLE	SL 2.0	0.40	POST	28	8				
	COC	CO 1.0	0.25	POST						
41	CLASSIC	DF 25	0.008	POST	0	0				
	COC	CO 1.0	0.25	POST						
42	CHECK				0	0				
43	PURSUIT	EC 2.0	0.094	POST	88	0				
	COC	CO 1.0	0.25	POST						
44	PURSUIT	EC 2.0	0.063	POST	83	0				
	COC	CO 1.0	0.25	POST						
45	PURSUIT	EC 2.0	0.094	POST	92	2				
	POAST	EC 1.5	0.10	POST						
	COC	CO 1.0	0.25	POST						
46	PURSUIT	EC 2.0	0.094	POST	93	0				
	POAST	EC 1.5	0.10	POST						
	COC	CO 1.0	0.25	POST						

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SOYBEAN POST GRASS ANTAGONISM STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/24/87	C.I. 6/24/87				
				LSD(0.05) =	16	10				
				STANDARD DEVIATION =	10	6				
				COEFF. OF VARIABILITY =	13	116				

U N I V E R S I T Y   O F   I L L I N O I S

THIAMETURON (DPX-M6316) AND CHLORIMURON COMBINATIONS

LOCATION: CHAMPAIGN
RESEARCH BY: FIELDING/STOLLER
COOPERATOR : GENE OLDHAM
REPORTED BY: R. FIELDING
PREVIOUS CROP: CORN   PLOT / Ft:10 x28   ROW WIDTH/In:30
PREVIOUS TILL: CONVENTIONAL
SOIL TEXTURE: SILTY CLAY LOAM   OM%:5.0   pH:6.0
EXPT. DESIGN:RCBD   NUM. OF REPS:4
CROP: SOYBEANS   VARIETY: WILLIAMS 82
PLANTING DATE:05/27/87 DEPTH/In: 1.5   SPACING/In:7 9/FT/ROW
SEASONAL RAINFALL DURING EXPERIMENT EARLY:LOW MID:ADQ LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Herbicides were applied when conditions were perfect for good herbicide activity (see the herbicide application section). The crop stunting seen in this study is probably the most severe we have seen with these combinations. Velvetleaf control by both chlorimuron and thiameturon (DPX-M6316) was improved by the addition of 28% nitrogen solution to the tank mixes. This was especially evident using the lower rates of each of the herbicides. The control of common lambsquarters was not greatly affected by the addition of the 28% nitrogen.

The thiameturon gave fairly good control of common lambsquarters even at the 1/32 oz ai/A rate. Some of the common lambsquarters that were not killed remained severely stunted. Higher rates of thiameturon tended to cause higher levels of stunting to the soybeans.

Grass control in this study was acheived by an application of 1.5 pints of Poast.

THIAMETURON (DPX-M6316) AND CHLORIMURON COMBINATIONS

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/22/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J173/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	14:00/16:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	90 / 0	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	70	0	0	0	0
WIND DIR. / VELOC	SW / 5	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/MOIST	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	CO2 BACK PK				
SPRAYER GPA / PSI	18 / 35	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.53	0	0	0	0
NOZZLE TYPE /NUM.	8002 / 5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIE CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	GLYMA	SOYBEANS	/3 TRI	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	VELE	VELVETLEAF	2FT/6-8LF	4-7/IN	/	/	/
2	COLQ	C. LAMBSQUARTERS	.5F/8+LF	3-5/IN	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/
	UNIFORM STANDARD TREATMENT						
	UNIFORM TRT. RATE AND UNIT						

U N I V E R S I T Y   O F   I L L I N O I S

THIAMETURON (DPX-M6316) AND CHLORIMURON COMBINATIONS

EXPT. LOCATION:CHAMPAIGN
RESEARCH BY: FIELDING/STOLLER
PRIMARY RATE UNIT:LBai/A

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 7 DAT 6/29/87	VELE 7 DAT 6/29/87	COLQ 7 DAT 6/29/87	C.I. 14 DAT 7/06/87	VELE 14 DAT 7/06/87	COLQ 14 DAT 7/06/87
01	CLASSIC	DF .25	.0625	POST	5	53	14	3	60	8
	X-77	%A	.25%	POST						
02	CLASSIC	DF .25	.0625	POST	11	78	19	5	90	11
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
03	CLASSIC	DF .25	.125	POST	13	71	19	5	82	13
	X-77	%A	.25%	POST						
04	CLASSIC	DF .25	.125	POST	15	81	20	4	95	10
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
05	DPXM6316	DF .75	.0313	POST	14	63	60	5	68	73
	X-77	%A	.25%	POST						
06	DPXM6316	DF .75	.0313	POST	18	73	64	6	89	75
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
07	DPXM6316	DF .75	.0313	POST	20	68	63	9	88	74
	CLASSIC	DF .25	.0625	POST						
	X-77	%A	.25%	POST						
08	DPXM6316	DF .75	.0313	POST	23	83	61	9	95	76
	CLASSIC	DF .25	.0625	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
09	DPXM6316	DF .75	.0313	POST	23	74	68	11	92	79
	CLASSIC	DF .25	.125	POST						
	X-77	%A	.25%	POST						
10	DPXM6316	DF .75	.0313	POST	30	85	68	14	97	78
	CLASSIC	DF .25	.125	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						

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THIAMETURON (DPX-M6316) AND CHLORIMURON COMBINATIONS

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 7 DAT 6/29/87	VELE 7 DAT 6/29/87	COLQ 7 DAT 6/29/87	C.I. 14 DAT 7/06/87	VELE 14 DAT 7/06/87	COLQ 14 DAT 7/06/87
11	DPXM6316	DF .75	.0625	POST	21	69	71	10	79	80
	X-77	%A	.25%	POST						
12	DPXM6316	DF .75	.0625	POST	25	79	73	12	95	84
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
13	DPXM6316	DF .75	.0625	POST	25	73	70	17	92	85
	CLASSIC	DF .25	.0625	POST						
	X-77	%A	.25%	POST						
14	DPXM6316	DF .75	.0625	POST	33	81	71	20	98	86
	CLASSIC	DF .25	.0625	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
15	DPXM6316	DF .75	.0625	POST	29	76	70	19	97	85
	CLASSIC	DF .25	.125	POST						
	X-77	%A	.25%	POST						
16	DPXM6316	DF .75	.0625	POST	36	86	74	22	97	84
	CLASSIC	DF .25	.125	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
17	DPXM6316	DF .75	.0833	POST	25	70	70	15	86	84
	X-77	%A	.25%	POST						
18	DPXM6316	DF .75	.0833	POST	30	83	78	13	96	86
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
19	DPXM6316	DF .75	.0833	POST	30	76	76	20	93	86
	CLASSIC	DF .25	.0625	POST						
	X-77	%A	.25%	POST						
20	DPXM6316	DF .75	.0833	POST	31	83	75	23	98	90
	CLASSIC	DF .25	.0625	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						

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THIAMETURON (DPX-M6316) AND CHLORIMURON COMBINATIONS

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 7 DAT 6/29/87	VELE 7 DAT 6/29/87	COLQ 7 DAT 6/29/87	C.I. 14 DAT 7/06/87	VELE 14 DAT 7/06/87	COLQ 14 DAT 7/06/87
21	DPXM6316	DF .75	.0833	POST	34	79	74	21	97	88
	CLASSIC	DF .25	.125	POST						
	X-77	%A	.25%	POST						
22	DPXM6316	DF .75	.0833	POST	36	88	75	23	98	88
	CLASSIC	DF .25	.125	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
23	CHECK				0	0	0	0	0	0
24	CHECK				0	100	100	0	100	100
	LSD(0.05) =				7	6	6	5	7	6
	STANDARD DEVIATION =				5	4	4	3	5	4
	COEFF. OF VARIABILITY =				23	5	7	28	6	6

U N I V E R S I T Y   O F   I L L I N O I S

THIAMETURON (DPX-M6316) AND CHLORIMURON COMBINATIONS

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 21 DAT 7/13/87	VELE 21 DAT 7/13/87	COLQ 21 DAT 7/13/87		
01	CLASSIC	DF .25	.0625	POST	1	58	10		
	X-77	%A	.25%	POST					
02	CLASSIC	DF .25	.0625	POST	2	95	10		
	28% N	%A	1 GAL	POST					
	X-77	%A	.25%	POST					
03	CLASSIC	DF .25	.125	POST	1	80	10		
	X-77	%A	.25%	POST					
04	CLASSIC	DF .25	.125	POST	4	96	10		
	28% N	%A	1 GAL	POST					
	X-77	%A	.25%	POST					
05	DPXM6316	DF .75	.0313	POST	3	71	82		
	X-77	%A	.25%	POST					
06	DPXM6316	DF .75	.0313	POST	4	89	86		
	28% N	%A	1 GAL	POST					
	X-77	%A	.25%	POST					
07	DPXM6316	DF .75	.0313	POST	6	88	88		
	CLASSIC	DF .25	.0625	POST					
	X-77	%A	.25%	POST					
08	DPXM6316	DF .75	.0313	POST	6	96	86		
	CLASSIC	DF .25	.0625	POST					
	28% N	%A	1 GAL	POST					
	X-77	%A	.25%	POST					
09	DPXM6316	DF .75	.0313	POST	7	94	87		
	CLASSIC	DF .25	.125	POST					
	X-77	%A	.25%	POST					
10	DPXM6316	DF .75	.0313	POST	10	96	89		
	CLASSIC	DF .25	.125	POST					
	28% N	%A	1 GAL	POST					
	X-77	%A	.25%	POST					
11	DPXM6316	DF .75	.0625	POST	7	81	87		
	X-77	%A	.25%	POST					

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THIAMETURON (DPX-M6316) AND CHLORIMURON COMBINATIONS

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 21 DAT 7/13/87	VELE 21 DAT 7/13/87	COLQ 21 DAT 7/13/87		
12	DPXM6316	DF .75	.0625	POST	9	97	94		
	28% N	%A	1 GAL	POST					
	X-77	%A	.25%	POST					
13	DPXM6316	DF .75	.0625	POST	11	93	93		
	CLASSIC	DF .25	.0625	POST					
	X-77	%A	.25%	POST					
14	DPXM6316	DF .75	.0625	POST	15	97	95		
	CLASSIC	DF .25	.0625	POST					
	28% N	%A	1 GAL	POST					
	X-77	%A	.25%	POST					
15	DPXM6316	DF .75	.0625	POST	12	97	94		
	CLASSIC	DF .25	.125	POST					
	X-77	%A	.25%	POST					
16	DPXM6316	DF .75	.0625	POST	14	98	95		
	CLASSIC	DF .25	.125	POST					
	28% N	%A	1 GAL	POST					
	X-77	%A	.25%	POST					
17	DPXM6316	DF .75	.0833	POST	10	93	93		
	X-77	%A	.25%	POST					
18	DPXM6316	DF .75	.0833	POST	10	97	95		
	28% N	%A	1 GAL	POST					
	X-77	%A	.25%	POST					
19	DPXM6316	DF .75	.0833	POST	16	94	95		
	CLASSIC	DF .25	.0625	POST					
	X-77	%A	.25%	POST					
20	DPXM6316	DF .75	.0833	POST	18	97	95		
	CLASSIC	DF .25	.0625	POST					
	28% N	%A	1 GAL	POST					
	X-77	%A	.25%	POST					
21	DPXM6316	DF .75	.0833	POST	17	97	95		
	CLASSIC	DF .25	.125	POST					
	X-77	%A	.25%	POST					

U N I V E R S I T Y   O F   I L L I N O I S

THIAMETURON (DPX-M6316) AND CHLORIMURON COMBINATIONS

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 21 DAT 7/13/87	VELE 21 DAT 7/13/87	COLQ 21 DAT 7/13/87		
22	DPXM6316	DF .75	.0833	POST	17	98	95		
	CLASSIC	DF .25	.125	POST					
	28% N	%A	1 GAL	POST					
	X-77	%A	.25%	POST					
23	CHECK				0	0	0		
24	CHECK				0	100	100		
	LSD(0.05) =				4	7	4		
	STANDARD DEVIATION =				3	5	3		
	COEFF. OF VARIABILITY =				35	5	4		

U N I V E R S I T Y   O F   I L L I N O I S

CLASSIC AND DPX M6316, ADDITIVE VS. RATE

LOCATION: CHAMPAIGN
RESEARCH BY: FIELDING/STOLLER
COOPERATOR : GENE OLDHAM
REPORTED BY:R. FIELDING
PREVIOUS CROP: CORN PLOT / Ft:10 x28 ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM OM%:5.0 pH:6.0
EXPT. DESIGN:RCBD NUM. OF REPS:4
CROP:SOYBEANS VARIETY:WILLIAMS 82'
PLANTING DATE:05/06/87 DEPTH/In:1.5" SPACING/In:7-9/FT/ROW
SEASONAL RAINFALL DURING EXPERIMENT EARLY:LOW MID:ADQ LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

The weeds were quite large at the time of application which resulted in poorer control overall. From the results of this study, it seems that X-77 rates can be reduced without greatly affecting weed control and possibly reducing crop injury in some cases. An X-77 rate of 0.063% v/v seemed to reduce the initial injury to the soybeans without greatly affecting the weed control.

The treatments with 28% nitrogen caused very little crop injury at all of the rates, but rates of 1 qt to 2 qts were needed to maintain good weed control (see velvetleaf ratings from 6/25/87).

Grasses were controlled with 1.5 pints of Poast which was sprayed 5/27/87.

ADDITIVE RATE STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/04/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J155/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	07:00/09:30	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	75 / 80	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	60	0	0	0	0
WIND DIR. / VELOC	W / 5	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/MOIST	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	CO2 HND HLD				
SPRAYER GPA / PSI	18 / 35	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.53	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0 / 0	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIE CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	GLYMA	SOYBEANS	- /3T	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	SMPW	SMOOTH PIGWEED	H /6+LF	/	/	/	/
2	VELE	VELVETLEAF	M /4-7LF	/	/	/	/
3	ILMG	MRNG., IVYLEAF	M /5-8LF	/	/	/	/
4	YENS	NUTSEDGE, YELLOW	L /12 LF	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/
	UNIFORM STANDARD TREATMENT						
	UNIFORM TRT. RATE AND UNIT						

U N I V E R S I T Y O F I L L I N O I S

ADDITIVE RATE STUDY

RESEARCH BY:FIELDING/STOLLER
PRIMARY RATE UNIT:LBai/A

TRT. NO.	PESTICIDE NAME	FORMU.		LBai/A	APPLICATION TYPE	C.I. 7 DAT 6/11/87	VELE 7 DAT 6/11/87	SMPW 7 DAT 6/11/87	ILMG 7 DAT 6/11/87	C.I. 14 DAT 6/18/87	VELE 14 DAT 6/18/87
01	CLASSIC	DF	.25	.125	POST	13	71	76	45	6	64
	X-77	%A		.25%	POST						
02	CLASSIC	DF	.25	.125	POST	14	71	81	48	6	64
	X-77	%A		.125%	POST						
03	CLASSIC	DF	.25	.125	POST	11	71	78	48	4	68
	X-77	%A		.063%	POST						
04	CLASSIC	DF	.25	.125	POST	8	68	76	44	2	59
	X-77	%A		.031%	POST						
05	CLASSIC	DF	.25	.125	POST	7	83	78	49	0	78
	28% N	%A		4 QT	POST						
06	CLASSIC	DF	.25	.125	POST	5	78	81	46	1	81
	28% N	%A		2 QT	POST						
07	CLASSIC	DF	.25	.125	POST	5	80	80	48	1	76
	28% N	%A		1 QT	POST						
08	CLASSIC	DF	.25	.125	POST	7	76	78	44	1	65
	28% N	%A		.5 QT	POST						
09	DPXM6316	DF	.75	.0625	POST	12	75	75	49	9	74
	X-77	%A		.25%	POST						
10	DPXM6316	DF	.75	.0625	POST	16	75	76	48	9	74
	X-77	%A		.125%	POST						
11	DPXM6316	DF	.75	.0625	POST	9	70	75	46	5	73
	X-77	%A		.063%	POST						
12	DPXM6316	DF	.75	.0625	POST	6	66	71	48	5	68
	X-77	%A		.031%	POST						
13	DPXM6316	DF	.75	.0625	POST	9	71	75	46	5	80
	28% N	%A		4 QT	POST						

U N I V E R S I T Y   O F   I L L I N O I S

ADDITIVE RATE STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 7 DAT 6/11/87	VELE 7 DAT 6/11/87	SMPW 7 DAT 6/11/87	ILMG 7 DAT 6/11/87	C.I. 14 DAT 6/18/87	VELE 14 DAT 6/18/87
14	DPXM6316 28% N	DF .75 %A	.0625 2 QT	POST POST	5	76	81	48	5	78
15	DPXM6316 28% N	DF .75 %A	.0625 1 QT	POST POST	3	73	76	48	4	75
16	DPXM6316 28% N	DF .75 %A	.0625 .5 QT	POST POST	8	73	74	45	5	75
17	CHECK				0	0	0	0	0	0
18	CHECK				0	99	99	99	0	99
				LSD(0.05) =	5	5	7	5	4	7
				STANDARD DEVIATION =	4	4	5	4	3	5
				COEFF. OF VARIABILITY =	47	5	6	8	82	7

U N I V E R S I T Y   O F   I L L I N O I S

ADDITIVE RATE STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	SMPW 14 DAT 6/18/87	ILMG 14 DAT 6/18/87	C.I. 21 DAT 6/25/87	VELE 21 DAT 6/25/87	SMPW 21 DAT 6/25/87	ILMG 21 DAT 6/25/87
01	CLASSIC	DF .25	.125	POST	75	50	1	63	76	44
	X-77	%A	.25%	POST						
02	CLASSIC	DF .25	.125	POST	74	49	1	61	78	44
	X-77	%A	.125%	POST						
03	CLASSIC	DF .25	.125	POST	79	51	0	65	76	46
	X-77	%A	.063%	POST						
04	CLASSIC	DF .25	.125	POST	66	49	0	60	68	43
	X-77	%A	.031%	POST						
05	CLASSIC	DF .25	.125	POST	78	50	0	79	78	48
	28% N	%A	4 QT	POST						
06	CLASSIC	DF .25	.125	POST	79	56	0	78	79	46
	28% N	%A	2 QT	POST						
07	CLASSIC	DF .25	.125	POST	78	50	0	75	81	49
	28% N	%A	1 QT	POST						
08	CLASSIC	DF .25	.125	POST	71	51	0	69	73	46
	28% N	%A	.5 QT	POST						
09	DPXM6316	DF .75	.0625	POST	83	54	1	80	80	48
	X-77	%A	.25%	POST						
10	DPXM6316	DF .75	.0625	POST	78	51	2	81	85	51
	X-77	%A	.125%	POST						
11	DPXM6316	DF .75	.0625	POST	78	54	0	74	79	49
	X-77	%A	.063%	POST						
12	DPXM6316	DF .75	.0625	POST	73	51	0	73	79	49
	X-77	%A	.031%	POST						
13	DPXM6316	DF .75	.0625	POST	84	55	0	85	89	49
	28% N	%A	4 QT	POST						
14	DPXM6316	DF .75	.0625	POST	79	50	1	84	90	46
	28% N	%A	2 QT	POST						

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U N I V E R S I T Y O F I L L I N O I S

ADDITIVE RATE STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	SMPW 14 DAT 6/18/87	ILMG 14 DAT 6/18/87	C.I. 21 DAT 6/25/87	VELE 21 DAT 6/25/87	SMPW 21 DAT 6/25/87	ILMG 21 DAT 6/25/87
15	DPXM6316	DF .75	.0625	POST	80	49	0	76	83	41
	28% N	%A	1 QT	POST						
16	DPXM6316	DF .75	.0625	POST	79	46	0	78	81	48
	28% N	%A	.5 QT	POST						
17	CHECK				0	0	0	0	0	0
18	CHECK				99	99	0	99	99	99
	LSD(0.05) =				8	7	2	10	10	6
	STANDARD DEVIATION =				6	5	1	7	7	4
	COEFF. OF VARIABILITY =				8	9	334	10	9	9

U N I V E R S I T Y O F I L L I N O I S

CHLORIMURON ADDITIVE STUDY

LOCATION: CHAMPAIGN
RESEARCH BY: FIELDING/STOLLER
COOPERATOR : GENE OLDHAM
REPORTED BY: ROBERT FIELDING
PREVIOUS CROP: CORN PLOT / Ft: 10 x28 ROW WIDTH/In:30
PREVIOUS TILL: CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM OM%:5.0 pH:6.0
EXPT. DESIGN:RCBD NUM. OF REPS:4
CROP: SOYBEANS VARIETY: WILLIAMS 82
PLANTING DATE:05/06/87 DEPTH/In:1.5" SPACING/In:7-9/FT/ROW
SEASONAL RAINFALL DURING EXPERIMENT EARLY:LOW MID:ADQ LATE:ABD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Herbicides sprayed when the weeds were quite large (see application information). The treatments with 28% nitrogen gave slightly better control of velvetleaf than did the treatments with X-77. The treatments with C.O.C. provided about the same control as did the treatments with 28% nitrogen, but the C.O.C. injured the soybeans more than 20%. The treatments that looked best overall on velvetleaf were the treatments which included both X-77 and 28% nitrogen in the same tank mixture.

The smooth pigweed was well controlled with almost all of the treatments. The morningglory was controlled best with the treaments which included both C.O.C. and 28% nitrogen.

Grass control was provided with 1.5 pints of Poast which was sprayed on 5/27/87.

CHLORIMURON ADDITIVE STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/03/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J154/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	07:00/09:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	75 / 80	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	65	0	0	0	0
WIND DIR. / VELOC	SW / 5	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/MOIST	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	CO2 HND HLD				
SPRAYER GPA / PSI	18 / 35	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.53	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0 / 0	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIE CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	GLYMA	SOYBEANS	/3T	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	SMPW	SMOOTH PIGWEED	H /2-4LF	/	/	/	/
2	VELE	VELVETLEAF	M /4-7LF	/	/	/	/
3	ILMG	MRNG., IVYLEAF	M /4-6LF	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

UNIFORM STANDARD TREATMENT					
UNIFORM TRT. RATE AND UNIT					

U N I V E R S I T Y   O F   I L L I N O I S

CHLORIMURON ADDITIVE STUDY

EXPT. LOCATION:CHAMPAIGN
RESEARCH BY: FIELDING/STOLLER
PRIMARY RATE UNIT:LBai/A

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 7 DAT 6/10/87	VELE 7 DAT 6/10/87	SMPW 7 DAT 6/10/87	ILMG 7 DAT 6/10/87	C.I. 14 DAT 6/17/87	VELE 14 DAT 6/17/87
01	CLASSIC	DF .25	.125	POST	1	64	81	35	0	59
02	CLASSIC	DF .25	.1875	POST	6	65	81	38	1	70
03	CLASSIC	DF .25	.125	POST	13	74	89	43	3	76
	X-77		.25%	POST						
04	CLASSIC	DF .25	.1875	POST	16	73	89	39	4	81
	X-77		.25%	POST						
05	CLASSIC	DF .25	.125	POST	20	76	88	40	7	89
	C.O.C.		1 QT	POST						
06	CLASSIC	DF .25	.1875	POST	23	84	90	43	13	93
	C.O.C.		1 QT	POST						
07	CLASSIC	DF .25	.125	POST	10	80	88	39	3	86
	28% N	.28	1 GAL	POST						
08	CLASSIC	DF .25	.1875	POST	6	81	81	41	0	91
	28% N	.28	1 GAL	POST						
09	CLASSIC	DF .25	.125	POST	16	88	93	44	6	94
	X-77		.25%	POST						
	28% N	.28	1 GAL	POST						
10	CLASSIC	DF .25	.1875	POST	23	88	91	43	9	97
	X-77		.25%	POST						
	28% N	.28	1 GAL	POST						
11	CLASSIC	DF .25	.125	POST	20	85	89	43	13	89
	C.O.C.		1 QT	POST						
	28% N	.28	1 GAL	POST						
12	CLASSIC	DF .25	.1875	POST	25	84	90	43	11	97
	C.O.C.		1 QT	POST						
	28% N	.28	1 GAL	POST						

U N I V E R S I T Y   O F   I L L I N O I S

CHLORIMURON ADDITIVE STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 7 DAT 6/10/87	VELE 7 DAT 6/10/87	SMPW 7 DAT 6/10/87	ILMG 7 DAT 6/10/87	C.I. 14 DAT 6/17/87	VELE 14 DAT 6/17/87
13	BASAGRAN	FL 4 LB	1 LB	POST	8	91	61	50	2	98
	C.O.C.		1 QT.	POST						
14	BASAGRON	FL 4 LB	1 LB	POST	6	93	61	53	3	97
	28% N	.28	1 GAL	POST						
15	CHECK				0	0	0	0	0	0
16	CHECK				0	99	99	99	0	99
	LSD(0.05) =				5	9	7	6	5	8
	STANDARD DEVIATION =				3	6	5	4	3	6
	COEFF. OF VARIABILITY =				27	8	6	10	70	7

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CHLORIMURON ADDITIVE STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLICATION TYPE	SMPW 14 DAT 6/17/87	ILMG 14 DAT 6/17/87	C.I. 21 DAT 6/24/87	VELE 21 DAT 6/24/87	SMPW 21 DAT 6/24/87	ILMG 21 DAT 6/24/87
01	CLASSIC	DF .25	.125	POST	74	54	0	61	73	41
02	CLASSIC	DF .25	.1875	POST	80	63	1	78	81	46
03	CLASSIC	DF .25	.125	POST	88	66	1	78	88	49
	X-77		.25%	POST						
04	CLASSIC	DF .25	.1875	POST	89	66	2	84	90	60
	X-77		.25%	POST						
05	CLASSIC	DF .25	.125	POST	91	70	4	86	91	54
	C.O.C.		1 QT	POST						
06	CLASSIC	DF .25	.1875	POST	97	76	10	92	97	61
	C.O.C.		1 QT	POST						
07	CLASSIC	DF .25	.125	POST	89	61	1	90	93	48
	28% N	.28	1 GAL	POST						
08	CLASSIC	DF .25	.1875	POST	93	61	0	91	90	55
	28% N	.28	1 GAL	POST						
09	CLASSIC	DF .25	.125	POST	95	64	3	95	95	56
	X-77		.25%	POST						
	28% N	.28	1 GAL	POST						
10	CLASSIC	DF .25	.1875	POST	94	71	5	96	93	61
	X-77		.25%	POST						
	28% N	.28	1 GAL	POST						
11	CLASSIC	DF .25	.125	POST	86	69	7	95	92	63
	C.O.C.		1 QT	POST						
	28% N	.28	1 GAL	POST						
12	CLASSIC	DF .25	.1875	POST	95	76	8	93	95	63
	C.O.C.		1 QT	POST						
	28% N	.28	1 GAL	POST						
13	BASAGRAN	FL 4 LB	1 LB	POST	66	61	1	97	70	58
	C.O.C.		1 QT.	POST						

U N I V E R S I T Y   O F   I L L I N O I S

CHLORIMURON ADDITIVE STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	SMPW 14 DAT 6/17/87	ILMG 14 DAT 6/17/87	C.I. 21 DAT 6/24/87	VELE 21 DAT 6/24/87	SMPW 21 DAT 6/24/87	ILMG 21 DAT 6/24/87
14	BASAGRON	FL 4 LB	1 LB	POST	68	74	2	97	66	63
	28% N		.28	1 GAL POST						
15	CHECK				0	0	0	0	0	0
16	CHECK				99	99	0	99	99	99
	LSD(0.05) =				8	9	3	7	8	12
	STANDARD DEVIATION =				6	6	2	5	6	8
	COEFF. OF VARIABILITY =				7	9	78	6	7	15

U N I V E R S I T Y   O F   I L L I N O I S

BROWNSTOWN CORN PREEMRGENCE STUDY

LOCATION:BROWNSTOWN RESEARCH STATION
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :BILL BRINK
REPORTED BY:REX LIEBL
PREVIOUS CROP:SOYBEANS PLOT / Ft:7.5x35   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILT LOAM   OM%:1.5   pH:6.4
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:CORN   VARIETY:PIONEER 3378
PLANTING DATE:04/29/87 DEPTH/In:1.5"   SPACING/In:7-9/FT.-ROW   NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:MOD
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Timely rainfall after application resulted in good to excellent weed control across most herbicide treatments. BAS-514 was the only treatment that caused significant injury.

BROWNSTOWN CORN PREEMRGENCE STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PRE				
APPLICATION DATE	04/30/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J120/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	08:00/10:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	PRE				
AIR/SOIL TEMP (F)	70 / 60	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	50	0	0	0	0
WIND DIR. / VELOC	NE / 07	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	25 / 30	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.462	0	0	0	0
NOZZLE TYPE /NUM.	8003/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/ .93	/	/	/	/
4-7 DAYS/2ND WEEK	0 / .62	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
			/	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1			/	/	/	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

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BROWNSTOWN CORN PREEMRGENCE STUDY

EXPT. LOCATION:BROWNSTOWN, IL
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 0/00/00	CORW 6/09/87	VELE 6/09/87	FAPA 6/09/87	ANMG 6/09/87
01	DUAL	EC 8.0	1.75	PRE	0	99	84	99	69
	ATRAZINE	DF 90%	1.00	PRE					
02	LASSO	EC 4.0	2.25	PRE	0	99	92	93	93
	ATRAZINE	DF 90%	1.00	PRE					
03	CG180937	EC 7.8	1.75	PRE	0	95	72	91	70
	ATRAZINE	DF 90%	1.00	PRE					
04	SAN-582	EC 6.0	1.50	PRE	0	95	90	93	82
	ATRAZINE	DF 90%	1.00	PRE					
05	HARNESS	EC 7.5	1.75	PRE	2	99	89	96	92
	ATRAZINE	DF 90%	1.00	PRE					
06	BICEP	FL 6.0	3.35	PRE	0	99	90	97	87
07	BICEP	FL 5.9	3.35	PRE	0	99	91	95	88
08	ATRAZINE	DF 90%	1.00	PRE	0	99	90	88	92
09	ATRAZINE	DF 90%	2.00	PRE	0	99	96	91	92
10	BAS-514	WP 50	0.50	PRE	8	99	62	95	91
11	BAS-514	WP 50	1.00	PRE	53	99	92	98	93
12	BAS-514	WP 50	0.50	PRE	25	99	99	99	95
	ATRAZINE	DF 90%	1.00	PRE					
13	BAS-514	WP 50	1.00	PRE	32	99	98	99	93
	ATRAZINE	DF 90%	1.00	PRE					
14	DUAL	EC 8.0	1.50	PRE	0	99	99	96	77
	PPG-4000	FL 4.8	1.20	PRE					
15	DUAL	EC 8.0	1.50	PRE	0	97	85	97	40
	PPG-1259	FL 3.0	0.20	PRE					

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BROWNSTOWN CORN PREEMRGENCE STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 0/00/00	CORW 6/09/87	VELE 6/09/87	FAPA 6/09/87	ANMG 6/09/87
16	DUAL	EC 8.0	1.50	PRE	0	99	95	94	69
	BLADEX	DF 90%	1.20	PRE					
	PPG-1259	FL 3.0	0.20	PRE					
17	PPG-4000	FL 4.8	1.20	PRE	0	99	98	90	84
18	PPG-1259	FL 3.0	0.20	PRE	0	94	74	63	37
19	ATRAZINE	DF 90%	1.00	PRE	0	99	94	92	73
	BLADEX	DF 90%	1.00	PRE					
20	ATRAZINE	DF 90%	0.67	PRE	0	99	96	89	93
	BLADEX	DF 90%	1.33	PRE					
21	ATRAZINE	DF 90%	0.50	PRE	0	99	91	89	88
	BLADEX	DF 90%	1.50	PRE					
22	SC-0735	WP 75	0.50	PRE	0	99	98	83	43
	SC-29148	WP 75	0.083	PRE					
23	SC-0735	WP 75	0.75	PRE	0	99	99	92	86
	SC-29148	WP 75	0.125	PRE					
24	SC-0774	WP 75	0.75	PRE	0	75	88	77	27
	SC-29148	WP 75	0.125	PRE					
25	SC-0774	WP 75	1.00	PRE	0	79	98	90	63
	SC-29148	WP 75	0.166	PRE					
	LSD(0.05) =				9	9	16	NA	NA
	STANDARD DEVIATION =				5	6	10	NA	NA
	COEFF. OF VARIABILITY =				112	6	11	NA	NA

U N I V E R S I T Y   O F   I L L I N O I S

NO-TILL SOYBEAN WEED CONTROL STUDY

LOCATION:BROWNSTOWN
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :BILL BRINK
REPORTED BY:REX LIEBL
PREVIOUS CROP:SORGHUM   PLOT / Ft:10x40   ROW WIDTH/In:30
PREVIOUS TILL:ZERO
SOIL TEXTURE:SILT LOAM   OM%:1.5   pH:6.8
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:WILLIAMS 82
PLANTING DATE:05/06/87   DEPTH/In:1.5   SPACING/In:7-9/FT.ROW   NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:ADQ
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Overall, better weed control was obtained with postmergence treatments when compared to treatments relying on soil activity. Due to extensive weed emergence at planting, the best weed control was provided by treatments postemergence activity but applied preemergence (eg. burndown herbicides, plus Pursuit or Chlorimuron). Verdict provided good grass control, Poast plus 2,4-D combinations did not. 2,4-D applied at planting caused little crop injury. The smartweed population was extremely variable and caused some inconsistencies in control rating.

NO-TILL SOYBEAN WEED CONTROL STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PRE	POST			
APPLICATION DATE	05/08/87	06/09/87	/ /	/ /	/ /
JULIAN DATE/YEAR	J128/87	J160/87	J 0/00	J 0/00	J 0/00
START HR / END HR	08:00/10:00	09:00/10:00	: / :	: / :	: / :
APPLIC. METHOD	PRE	POST			
AIR/SOIL TEMP (F)	75 / 60	85 / 80	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	70	90	0	0	0
WIND DIR. / VELOC	SE / 07	N / 5	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	CLEAR/ DRY	/	/	/
SOIL/LEAF MOIST.	/	LOW / LOW	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD	HAND HELD			
SPRAYER GPA / PSI	20 / 40	20 / 40	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.52	0.52	0	0	0
NOZZLE TYPE /NUM.	8002/5	8002/5			
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0 / .62	/	/	/	/
4-7 DAYS/2ND WEEK	.02 / 0	/	/	/	/
3RD WEEK/4TH WEEK	.21 / .02	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		SOYBEANS	/	/ 4T	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1		SORGHUM	M / 4-6"	M /BOOT	/	/	/
2	FAPA	FALL PANICUM	M / 4"	M /8"	/	/	/
3	PESW	PENN. SMARTWEED	M / 4-6"	M /24"	/	/	/
4	CORW	COMMON RAGWEED	M / 4-6"	M /24"	/	/	/
5	TAWH	TALL WATERHEMP	M / 4-6	M /20"	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

NO-TILL SOYBEAN WEED CONTROL STUDY

EXPT. LOCATION:BROWNSTOWN RESEARCH STATION
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 6/23/87	FAPA % CONT. 6/23/87	SORGHUM % CONT. 6/23/87	TAWH % CONT. 6/23/87	CORW % CONT. 6/23/87	PESW % CONT. 6/23/87
01	DUAL	EC 8.0	2.0	PRE	10	71	51	98	69	98
	IGNITE	EC 1.67	0.8	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	SC 2.0	0.25	POST						
	COC	CO 1.0	0.25	POST						
02	DUAL	EC 8.0	2.0	PRE	0	83	45	99	94	99
	IGNITE	EC 1.67	1.2	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	SC 2.0	0.25	POST						
	COC	CO 1.0	0.25	POST						
03	DUAL	EC 8.0	2.0	PRE	0	82	82	98	93	88
	ROUND-UP	EC 4.0	1.0	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	EC 2.0	0.25	POST						
	COC	CO 1.0	0.125	POST						
04	DUAL	EC 8.0	2.0	PRE	5	62	87	98	87	98
	ROUND-UP	EC 4.0	1.25	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	EC 2.0	0.25	POST						
	COC	CO 1.0	0.125	POST						
05	DUAL	EC 8.0	2.0	PRE	0	67	65	98	70	91
	PARAQUAT	EC 1.5	0.25	PRE						
	X-77	%S 1.0	0.25%	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	EC 2.0	0.25	POST						
	COC	CO 1.0	0.125	POST						
06	DUAL	EC 8.0	2.0	PRE	2	53	77	98	94	91
	PARAQUAT	EC 1.5	0.5	PRE						
	X-77	%S 1.0	0.25%	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	EC 2.0	0.25	POST						
	COC	CO 1.0	0.125	POST						

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NO-TILL SOYBEAN WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 6/23/87	FAPA % CONT. 6/23/87	SORGHUM % CONT. 6/23/87	TAWH % CONT. 6/23/87	CORW % CONT. 6/23/87	PESW % CONT. 6/23/87
07	LASSO	EC 4.0	2.5	PRE	5	59	90	98	89	98
	ROUND-UP	EC 4.0	1.0	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	EC 2.0	0.25	POST						
	COC	CO 1.0	0.125	POST						
08	CHECK									
	*ROUNDUP	EC 4.0	1.0	PRE						
09	CINCH	EC 7.0	1.5	PRE	13	88	91	99	90	89
	ROUND-UP	EC 4.0	1.0	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	EC 2.0	0.25	POST						
	COC	CO 1.0	0.125	POST						
10	VERDICT	EC 2.0	0.25	PRE	7	92	97	95	10	66
	METRIBUZ	DF 75	0.38	PRE						
	COC	CO 1.0	0.25	PRE						
11	VERDICT	EC 2.0	0.5	PRE	0	92	97	92	12	79
	METRIBUZ	DF 75	0.38	PRE						
	COC	CO 1.0	0.25	PRE						
12	IGNITE	EC 1.67	1.2	PRE	0	88	98	96	95	92
	PURSUIT	EC 2.0	0.094	POST						
13	VERDICT	EC 2.0	0.25	PRE	15	33	94	63	75	98
	METRIBZ	DF 75	0.38	PRE						
	24DLVE	EC 3.8	0.25	PRE						
	COC	CO 1.0	0.25	PRE						
14	POAST	FL 1.5	0.1	PRE	5	63	45	96	88	72
	2-4D-LVE	FL 3.8	0.5	PRE						
	COC	CO 1.0	0.25	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	FL 2.0	0.25	POST						
	COC	CO 1.0	0.125	POST						
15	POAST	FL 1.5	0.1	PRE	18	45	35	98	95	89
	2-4D-LVE	FL 3.8	0.5	PRE						
	METRIBUZ	DF 75	0.125	PRE						
	COC	CO 1.0	0.25	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	FL 2.0	0.25	POST						
	COC	CO 1.0	0.125	POST						

U N I V E R S I T Y   O F   I L L I N O I S

NO-TILL SOYBEAN WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 6/23/87	FAPA % CONT. 6/23/87	SORGHUM % CONT. 6/23/87	TAWH % CONT. 6/23/87	CORW % CONT. 6/23/87	PESW % CONT. 6/23/87
16	POAST	FL 1.5	0.1	PRE	5	58	63	98	93	95
	2-4D-LVE	FL 3.8	0.5	PRE						
	METRIBUZ	DF 75	.0625	PRE						
	COC	CO 1.0	0.25	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	FL 2.0	0.25	POST						
	COC	CO 1.0	0.125	POST						
17	POAST	FL 1.5	0.1	PRE	13	58	78	98	66	59
	2-4D-LVE	FL 3.8	0.5	PRE						
	090	CO 1.0	0.25	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	FL 2.0	0.25	POST						
	DAX	CO 1.0	0.125	POST						
18	POAST	FL 1.5	0.1	PRE	18	63	93	98	93	96
	2-4D-LVE	FL 3.8	0.5	PRE						
	090	CO 1.0	0.25	PRE						
	BASAGRAN	SC 4.0	0.5	POST						
	BLAZER	FL 2.0	0.25	POST						
	DAX	CO 1.0	0.25	POST						
19	PARAQUAT	SC 2.0	0.5	PRE	0	40	50	98	79	23
	DUAL MT	EC 8.0	2.0	PRE						
	X-77	%S 1.0	0.25%	PRE						
	COBRA	EC 2.0	0.2	POST						
20	PARAQUAT	SC 2.0	0.5	PRE	5	58	58	98	73	27
	DUAL	EC 8.0	2.0	PRE						
	X-77	%S 1.0	0.25%	PRE						
	COBRA	EC 2.0	0.15	POST						
21	PARAQUAT	SC 2.0	0.5	PRE	0	83	80	95	63	46
	DUAL	EC 8.0	2.0	PRE						
	X-77	%S 1.0	0.25%	PRE						
	COBRA	EC 2.0	0.2	POST						
	28%N	CO 1.0	1.0	POST						
22	BRONCO	FL 4.0	4.0	PRE	15	81	99	99	40	69
	*LASSO		2.6							
	*ROUNDUP		1.4							
	PURSUIT	EC 1.5	0.094	PRE						

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NO-TILL SOYBEAN WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 6/23/87	FAPA % CONT. 6/23/87	SORGHUM % CONT. 6/23/87	TAWH % CONT. 6/23/87	CORW % CONT. 6/23/87	PESW % CONT. 6/23/87
23	BRONCO	FL 4.0	4.0	PRE	0	43	93	98	12	69
	*LASSO		2.6							
	*ROUNDUP		1.4							
	SCEPTER	EC 1.5	0.125	PRE						
24	BRONCO	FL 4.0	4.0	PRE	5	54	60	99	13	99
	*LASSO		2.6							
	*ROUNDUP		1.4							
	METRIBZ	DF 75	0.38	PRE						
25	BRONCO	FL 4.0	4.0	PRE	0	93	94	99	93	99
	*LASSO		2.6							
	*ROUNDUP		1.4							
	PREVEIW	DF 75	0.4	PRE						
	*METRIBZ									
	*CLASSIC									
26	ROUND-UP	FL 4.0	1.4	PRE	0	17	40	98	23	76
	DUAL	EC 8.0	2.0	PRE						
	METRIBUZ	DF 75	0.38	PRE						
27	BRONCO	FL 4.0	4.0	PRE	7	61	25	98	17	88
	*LASSO		2.6							
	*ROUNDUP		1.4							
	AMIBEN	DF 75	2.7	PRE						
28	DUAL	EC 8.0	2.0	PRE	0	76	69	83	92	98
	IGNITE	SC 1.67	1.2	PRE						
	METRIBUZ	DF 75	0.38	PRE						
29	DUAL	EC 8.0	2.0	PRE	0	68	60	93	88	98
	IGNITE	SC 1.67	1.2	PRE						
	METRIBUZ	DF 75	0.38	PRE						
	24DAMINE	EC 1.0	0.5	PRE						
30	IGNITE	SC 1.67	1.0	PRE	0	94	99	98	97	99
	DUAL	EC 8.0	2.0	PRE						
	PURSUIT	EC 2.0	0.094	PRE						
31	IGNITE	SC 1.67	1.0	PRE	0	56	85	98	88	94
	DUAL	EC 8.0	2.0	PRE						
	SCEPTER	EC 1.5	0.125	PRE						

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NO-TILL SOYBEAN WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 6/23/87	FAPA % CONT. 6/23/87	SORGHUM % CONT. 6/23/87	TAWH % CONT. 6/23/87	CORW % CONT. 6/23/87	PESW % CONT. 6/23/87
32	IGNITE	SC 1.67	1.0	PRE	0	78	94	98	99	99
	DUAL	EC 8.0	2.0	PRE						
	PREVEIW	DG 75	0.4	PRE						
	*METRIBZ									
	*CLASSIC									
33	CHECK									
	*ROUNDUP	EC 4.0	1.0	PRE						
34	PARAQUAT	EC 1.5	0.25	PRE	7	70	48	94	82	95
	24DAMINE	EC 3.8	0.25	PRE						
	METRIBUZ	DF 75	0.5	PRE						
	DUAL	EC 8.0	2.0	PRE						
	X-77	%S 1.0	0.25%	PRE						
35	PARAQUAT	EC 1.5	0.25	PRE	0	50	88	89	89	98
	24DAMINE	EC 3.8	0.5	PRE						
	METRIBUZ	DF 75	0.5	PRE						
	DUAL	EC 8.0	2.0	PRE						
	X-77	%S 1.0	0.25%	PRE						
36	PARAQUAT	EC 1.5	0.5	PRE	0	83	78	96	93	98
	24DAMINE	EC 3.8	0.25	PRE						
	METRIBUZ	DF 75	0.38	PRE						
	DUAL	EC 8.0	2.0	PRE						
	X-77	%S 1.0	0.25%	PRE						
37	PARAQUAT	EC 1.5	0.5	PRE	0	79	58	82	85	98
	24DAMINE	EC 3.8	0.5	PRE						
	METRIBUZ	DF 75	0.38	PRE						
	DUAL	EC 8.0	2.0	PRE						
	X-77	%S 1.0	0.25%	PRE						
38	ROUND-UP	FL 4.0	1.0	PRE	12	92	97	98	83	93
	SURFLAN	DF 85	1.0	PRE						
	PURSUIT	EC 2.0	0.094	PRE						
39	ROUND-UP	FL 4.0	1.0	PRE	0	92	99	98	86	99
	PROWL	FL 4.0	1.0	PRE						
	PURSUIT	EC 2.0	0.094	PRE						

U N I V E R S I T Y   O F   I L L I N O I S

NO-TILL SOYBEAN WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. % CONT. 6/23/87	FAPA % CONT. 6/23/87	SORGHUM % CONT. 6/23/87	TAWH % CONT. 6/23/87	CORW % CONT. 6/23/87	PESW % CONT. 6/23/87
				LSD(0.05) =	13	37	NA	11	28	34
				STANDARD DEVIATION =	8	22	NA	7	17	21
				COEFF. OF VARIABILITY =	182	34	NA	7	24	25

U N I V E R S I T Y O F I L L I N O I S

BROWNSTOWN PRE-PLANT INCORPORATED VS PREEMERGENCE SOYBEANS

LOCATION: BROWNSTOWN RESEARCH STATION
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :BILL BRINK
REPORTED BY:JOHN CANTWELL
PREVIOUS CROP:CORN PLOT / Ft:7.5x35 ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILT LOAM OM%:1.5 pH:6.4
EXPT. DESIGN:RCBD NUM. OF REPS:3
CROP:SOYBEANS VARIETY:WILLIAMS 82
PLANTING DATE:05/08/87 DEPTH/In:1.5" SPACING/In:7-9/FT.ROW NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT. EARLY:LOW MID:ADQ LATE:ADQ
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

The field in which this study was conducted had a diverse population of "problem" annual weeds, with a dense population of annual morningglory (tall and ivy leaf 50/50) and common cocklebur. A field cultivator with sweeps was operated 2X parrallel to the plots to incorporate the preplant treatments. A 0.62" rainfall occurred within two days after preemergence applications, however only 0.25" rainfall followed in the next three weeks. As a result preplant treatments controlled the large seeded annual morningglory and common cocklebur better than preemergence treatments. Although a dense stand of giant foxtail was present in the check rows, control was excellant regardless of application method. A good stand of common ragweed, common lambsquarters, and tall waterhemp allowed accurate rating.

BROWNSTOWN PRE-PLANT INCORPORATED VS PREEMERGENCE SOYBEANS

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PPI VS. PRE				
APPLICATION DATE	05/08/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J128/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	08:00/10:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	PPI/PRE				
AIR/SOIL TEMP (F)	75 / 60	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	70	0	0	0	0
WIND DIR. / VELOC	SE / 07	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT	FIELD CULT.				
INCORP. DEPTH(in)	04	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	25 / 30	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.46	0	0	0	0
NOZZLE TYPE /NUM.	8003/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	00 / .62	/	/	/	/
4-7 DAYS/2ND WEEK	.02 /	/	/	/	/
3RD WEEK/4TH WEEK	.21 / .02	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		SOYBEANS	/	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	/	/	/	/	/
2	CORW	COMMON RAGWEED	/	/	/	/	/
3	COLQ	COMMON LAMBSQUARTE	RS /	/	/	/	/
4	TAWH	TALL WATERHEMP	/	/	/	/	/
5	COCB	COMMON COCKLEBUR	/	/	/	/	/
6	ANMG	ANNUAL MORNINGGLOR	Y /	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

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BROWNSTOWN PRE-PLANT INCORPORATED VS PREEMERGENCE SOYBEANS

EXPT. LOCATION:BROWNSTOWN, IL
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/09/87	CORW 6/09/87	COLQ 6/09/87	TAWH 6/09/87	COCB 6/09/87	ANMG 6/09/87
01	METRIBUZ	DF 75	0.38	PPI	98	99	99	99	72	60
	DUAL	EC 8.0	1.75	PPI						
02	SALUTE	FL 4.0	1.125	PPI	97	95	99	99	88	90
	*TREFLAN		0.75							
	*METRIBZ		0.38							
03	METRIBUZ	DF 75	0.38	PPI	95	99	99	99	88	90
	TREFLAN	EC 4.0	0.56	PPI						
04	SALUTE	FL 4.0	0.85	PPI	98	99	99	99	60	60
	*TREFLAN		0.56							
	*METRIBZ		0.28							
	COMMAND	EC 4.0	0.18	PPI						
05	COMMAND	EC 4.0	0.755	PPI	99	99	98	55	77	55
06	COMMENCE	EC 5.25	1.11	PPI	98	74	97	91	62	73
	*TREFLAN		0.65							
	*COMMAND		0.47							
07	COMMENCE	EC 5.25	1.11	PPI	98	98	99	93	77	68
	*TREFLAN		0.65							
	*COMMAND		0.47							
	METRIBUZ	DF 75	0.30	PPI						
08	TREFLAN	EC 4.0	0.75	PPI	99	75	91	98	45	80
09	PREVEIW	DF 75	0.33	PPI	97	99	99	99	93	93
	*CLASSIC		0.03							
	*METRIBZ		0.30							
	TREFLAN	EC 4.0	0.75	PPI						
10	PURSUIT	EC 2.0	0.045	PPI	96	99	99	99	91	79
	LASSO MT	FL 4.0	1.50	PPI						
11	PURSUIT	EC 2.0	.0705	PPI	90	99	99	99	96	89

U N I V E R S I T Y   O F   I L L I N O I S

BROWNSTOWN PRE-PLANT INCORPORATED VS PREEMERGENCE SOYBEANS

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/09/87	CORW 6/09/87	COLQ 6/09/87	TAWH 6/09/87	COCB 6/09/87	ANMG 6/09/87
12	SALUTE	FL 4.0	0.85	PPI	95	99	99	99	96	92
	*TREFLAN		0.56							
	*METRIBZ		0.33							
	SCEPTER	EC 1.5	0.125	PPI						
13	PARTNER	DG 74%	2.125	PPI	96	98	98	99	89	89
	*LASSO		2.0							
	*SCEPTER		0.125							
14	TURBO	EC 8.0	2.06	PPI	97	99	99	99	72	42
	*DUAL		1.68							
	*METRIBZ		0.38							
15	TURBO	EC 8.0	2.06	PPI	97	94	98	99	72	65
	*DUAL		1.68							
	*METRIBZ		0.38							
	COMMAND	EC 4.0	0.188	PPI						
16	DUAL	EC 8.0	1.5	PRE	98	20	40	94	28	25
17	PREVEIW	DF 75	0.33	PRE	98	NA	99	99	75	68
	*METRIBZ		0.30							
	*CLASSIC		0.03							
	LASSO	EC 4.0	2.0	PRE						
18	SQUADRON	FL 2.2	0.875	PPI	97	99	99	99	99	90
	*PROWL		0.75							
	*SCEPTER		0.125							
19	METRIBUZ	DF 75	0.38	PRE	97	95	98	99	52	44
	LASSO	EC 4.0	2.0	PRE						
20	SCEPTER	EC 1.5	0.094	PRE	94	95	96	99	94	73
	LASSO	EC 4.0	2.0	PRE						
21	TURBO	EC 8.0	2.06	PRE	99	89	99	99	57	47
	*METRIBZ		0.38							
	*DUAL		1.38							
22	PARTNER	DG 74%	2.125	PRE	96	99	93	99	92	67
	*LASSO		2.0							
	*SCEPTER		0.125							

U N I V E R S I T Y   O F   I L L I N O I S

BROWNSTOWN PRE-PLANT INCORPORATED VS PREEMERGENCE SOYBEANS

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/09/87	CORW 6/09/87	COLQ 6/09/87	TAWH 6/09/87	COCB 6/09/87	ANMG 6/09/87
23	SCEPTER	EC 1.5	0.125	PPI	99	99	99	99	92	86
	DUAL	EC 8.0	2.25	PPI						
24	PURSUIT	EC 2.0	0.063	PPI	99	99	99	99	91	88
	LASSO	EC 4.0	2.75	PPI						
25	CHECK				0	0	0	0	0	0
26	SONOLAN	EC 3.0	0.75	PRE	90	25	25	75	20	28
27	SONOLAN	EC 3.0	0.75	PRE	99	68	90	71	50	37
	COMMAND	EC 4.0	0.38	PRE						
	LSD(0.05) =				NA	NA	9	NA	22	21
	STANDARD DEVIATION =				NA	NA	5	NA	13	13
	COEFF. OF VARIABILITY =				NA	NA	6	NA	19	20

U N I V E R S I T Y   O F   I L L I N O I S

BROWNSTOWN POSTEMERGENCE SOYBEAN STUDY

LOCATION:BROWNSTOWN RESEARCH STATION
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :BILL BRINK
REPORTED BY:LOYD WAX
PREVIOUS CROP:CORN   PLOT / Ft:7.5x35   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILT LOAM   OM%:1.5   pH:6.8
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:WILLIAMS 82
PLANTING DATE:05/08/87 DEPTH/In:1.5   SPACING/In:7-9/FT.ROW NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:ADQ   LATE:
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Lasso was applied at 1.5#/A to suppress giant foxtail. A variety of annual broadleaf weeds emerged and were in good growing condition at the time of application, however were quite large. Moisture and temperature at the time of treatment and after provided good conditions for postemergence activity. Due to the size of weeds many treatments afforded only fair to good control, and rarely excellent. In general soybean injury was not severe. The greatest injury was caused by Cobra plus COC and by the high rate of Pursuit

Control of common lambsquarters and ivyleaf morningglory was only fair, Pursuit controlled these species best. Velvetleaf and jimsonweed were best controlled by Basagran or combinations including Basagran. Reasonable control of common ragweed was provided by; Classic, Pursuit, and Basagran. Scepter, Classic, and Pursuit were clearly the most effective in controlling pigweed. The above three herbicides with Basagran included were very effective in controlling common cocklebur.

BROWNSTOWN POSTEMERGENCE SOYBEAN STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/09/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J160/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	09:00/10:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	85 / 80	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	90	0	0	0	0
WIND DIR. / VELOC	SW / 5	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	HAZE /DRY	/	/	/	/
SOIL/LEAF MOIST.	ADQ / ADQ	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.4	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		SOYBEANS	/5T	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	COLG	COM. LAMBSQUARTERS	M / 12"	/	/	/	/
2	COCB	COM. COCKLEBUR	M / 12"	/	/	/	/
3	VELE	VELVETLEAF	M / 12"	/	/	/	/
4	SMPW	SMOOTH PIGWEED	M / 12"	/	/	/	/
5	ILMG	IVYLEAF M-GLORY	L /VINE	/	/	/	/
6	JIWE	JIMSONWEED	M / 12"	/	/	/	/
7	CORW	COMMON RAGWEED	M / 12"	/	/	/	/
8			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

BROWNSTOWN POSTEMERGENCE SOYBEAN STUDY

EXPT. LOCATION:BROWNSTOWN, IL
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 0/00/00	COLQ 6/23/87	SMPW 6/23/87	COCB 6/23/87	ILMG 6/23/87	VELE 6/23/87
01	COBRA	EC 2.0	0.20	POST	7	43	57	53	40	37
02	COBRA COC	EC 2.0 CO 1.0	0.20 0.125	POST POST	17	47	73	67	47	57
03	COBRA 28%N	EC 2.0 %S 1.0	0.20 1.00	POST POST	10	27	67	53	43	47
04	REFLEX 28%N	EC 2.0 %S 1.0	0.25 1.00	POST POST	0	43	55	40	37	37
05	SCEPTER X-77	EC 1.5 CO 1.0	0.09 0.25	POST POST	7	63	88	88	62	47
06	SCEPTER X-77	EC 1.5 CO 1.0	0.06 0.25	POST POST	7	60	77	87	60	30
07	CLASSIC X-77	DF 25 CO 1.0	0.008 0.25	POST POST	12	57	88	92	60	63
08	PURSUIT X-77	EC 2.0 CO 1.0	0.094 0.25	POST POST	22	77	93	93	68	55
09	PURSUIT X-77	EC 2.0 CO 1.0	0.063 0.25	POST POST	3	72	90	88	68	53
10	BASAGRAN 28%N	EC 4.0 %S 1.0	0.75 1.00	POST POST	0	33	47	92	27	72
11	BASAGRAN TACKLE 28%N	EC 4.0 EC 2.0 %S 1.0	0.50 0.25 1.00	POST POST POST	10	57	67	87	53	75
12	BUCTRIL TACKLE	EC 2.0 EC 2.0	0.05 0.25	POST POST	8	30	53	40	20	27
13	TACKLE COC	EC 2.0 CO 1.0	0.38 0.125	POST POST	13	53	73	50	60	47

U N I V E R S I T Y O F I L L I N O I S

BROWNSTOWN POSTEMERGENCE SOYBEAN STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 0/00/00	COLQ 6/23/87	SMPW 6/23/87	COCB 6/23/87	ILMG 6/23/87	VELE 6/23/87
14	TACKLE	EC 2.0	0.38	POST	5	23	53	37	40	37
	BCH-815	CO 1.0	0.125	POST						
15	TACKLE	EC 2.0	0.38	POST	12	63	73	47	43	50
	X-77	CO 1.0	0.25	POST						
16	TACKLE	EC 2.0	0.38	POST	3	43	60	40	40	40
	28%N	%S 1.0	1.00	POST						
				LSD(0.05) =	9	26	26	22	23	20
				STANDARD DEVIATION =	5	15	15	13	14	12
				COEFF. OF VARIABILITY =	61	31	22	20	28	24

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BROWNSTOWN POSTEMERGENCE SOYBEAN STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	CORW 6/23/87	JIWE 6/23/87				
01	COBRA	EC 2.0	0.20	POST	60	53				
02	COBRA	EC 2.0	0.20	POST	70	73				
	COC	CO 1.0	0.125	POST						
03	COBRA	EC 2.0	0.20	POST	63	67				
	28%N	%S 1.0	1.00	POST						
04	REFLEX	EC 2.0	0.25	POST	47	53				
	28%N	%S 1.0	1.00	POST						
05	SCEPTER	EC 1.5	0.09	POST	62	33				
	X-77	CO 1.0	0.25	POST						
06	SCEPTER	EC 1.5	0.06	POST	57	50				
	X-77	CO 1.0	0.25	POST						
07	CLASSIC	DF 25	0.008	POST	77	60				
	X-77	CO 1.0	0.25	POST						
08	PURSUIT	EC 2.0	0.094	POST	77	75				
	X-77	CO 1.0	0.25	POST						
09	PURSUIT	EC 2.0	0.063	POST	78	60				
	X-77	CO 1.0	0.25	POST						
10	BASAGRAN	EC 4.0	0.75	POST	83	92				
	28%N	%S 1.0	1.00	POST						
11	BASAGRAN	EC 4.0	0.50	POST	67	85				
	TACKLE	EC 2.0	0.25	POST						
	28%N	%S 1.0	1.00	POST						
12	BUCTRIL	EC 2.0	0.05	POST	33	37				
	TACKLE	EC 2.0	0.25	POST						
13	TACKLE	EC 2.0	0.38	POST	53	63				
	COC	CO 1.0	0.125	POST						
14	TACKLE	EC 2.0	0.38	POST	40	40				
	BCH-815	CO 1.0	0.125	POST						

U N I V E R S I T Y   O F   I L L I N O I S

BROWNSTOWN POSTEMERGENCE SOYBEAN STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLICATION TYPE	CORW 6/23/87	JIWE 6/23/87			
15	TACKLE	EC 2.0	0.38	POST	57	58			
	X-77	CO 1.0	0.25	POST					
16	TACKLE	EC 2.0	0.38	POST	47	43			
	28%N	%S 1.0	1.00	POST					
				LSD(0.05) =	22	27			
				STANDARD DEVIATION =	13	16			
				COEFF. OF VARIABILITY =	22	27			

U N I V E R S I T Y   O F   I L L I N O I S

1987 ELWOOD SCREENING STUDY

LOCATION:ELWOOD NE200
RESEARCH BY:W.S. CURRAN
COOPERATOR :L.E. PAUL
REPORTED BY:CURRAN
PREVIOUS CROP:ALFALFA/CLOVER PLOT / Ft:7.5 x40 ROW WIDTH/In:48
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:MEDIUM OM%:3.5 pH:6.5
EXPT. DESIGN:RCBD NUM. OF REPS:3
CROP:CORN AND SOYBEANS VARIETY:WELLS II, PIONEER 3540
PLANTING DATE:04/29/87 DEPTH/In:0-2 NUM./ PLANTS/ACR. @24,000
SPACING/In:7 9/FT.ROW
SEASONAL RAINFALL DURING EXPERIMENT EARLY:LOW MID:ADQ LATE:ADQ
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

SOIL MOISTURE AT PLANTING WAS FAIR, HOWEVER, SIGNIFICANT RAINFALL DID NOT OCCUR FOR 20 DAYS AFTER HERBICIDE APPLICATION. ALL SOIL APPLICATIONS WERE APPLIED PREEMERGENCE ON APRIL 29 AND RATED ON JUNE 5, 1987. LOW SOIL MOISTURE AND LACK OF RAINFLL MAY HELP EXPLAIN THE POOR WEED CONTROL OBTAINED WITH SOME OF THE HERBICIDES.

POSTEMERGENCE HERBICIDES WERE APPLIED ON JUNE 5 WHEN THE MAJORITY OF BROADLEAVES AND GRASSES WERE SMALL SEEDLINGS. HOWEVER, A WIDE VARIETY OF WEED SIZES EXISTED AT APPLICATION TIME WITH SOME BROADLEAVES QUITE LARGE (> 10"). POSTEMERGENCE WEED CONTROL RATINGS WERE MADE ON JUNE 24, 1987. ADDITIONALLY, WEED POPULATIONS VARIED SO WEED RATINGS WERE NOT TAKEN WITH ALL SPECIES IN ALL TREATMENTS AND REPLICATIONS. SOME MEANS REPRESENT LESS THAN THREE REPLICATIONS.

1987 ELWOOD SCREENING STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PREEMERGENC	POSTEMERGEN			
APPLICATION DATE	04/29/87	06/05/87	/ /	/ /	/ /
JULIAN DATE/YEAR	J119/87	J156/87	J 0/00	J 0/00	J 0/00
START HR / END HR	02:00/04:00	11:00/02:00	: / :	: / :	: / :
APPLIC. METHOD	PRE	POST			
AIR/SOIL TEMP (F)	69 / 71	79 / 81	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	40	80	0	0	0
WIND DIR. / VELOC	N / 15	N / 5	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/DRY	CLEAR/MOIST	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HANDHELD	HANDHELD			
SPRAYER GPA / PSI	20 / 35	20 / 35	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.50	0.5	0	0	0
NOZZLE TYPE /NUM.	11002	8002			
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0.0 / 0.0	0.0 / 0.0	/	/	/
4-7 DAYS/2ND WEEK	0.20 / 0.15	0.0 / 0.17	/	/	/
3RD WEEK/4TH WEEK	0.0 / 3.0	0.29 / 1.20	/	/	/

	SPECIE CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
			/	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	CORN	CORN	/	26 /3L	/	/	/
2	SOYBEAN	SOYBEAN	/	50 /V3	/	/	/
3	TAMG	TALL MORNINGGLORY	/	VAR/3-4L	/	/	/
4	VLVT	VELVETLEAF	/	VAR/5L	/	/	/
5	COLQ	COMMON LAMSQUARTER	/	VAR/3"	/	/	/
6	RRPW	REDROOT PIGWEED	/	VAR/4L	/	/	/
7	COCB	COMMON COCKLEBUR	/	VAR/7-10"	/	/	/
8	GIFT	GIANT FOXTAIL	/	VAR/2-3"	/	/	/
9			/	/	/	/	/
	UNIFORM STANDARD TREATMENT						
	UNIFORM TRT. RATE AND UNIT						

U N I V E R S I T Y   O F   I L L I N O I S

1987 ELWOOD SCREENING STUDY

EXPT. LOCATION:ELWOOD NE200
RESEARCH BY:W.S. CURRAN

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	CORN 0/00/00	SOYBEAN 0/00/00	TAMG 0/00/00	VTLF 0/00/00	COLQ 0/00/00	COCB 0/00/00
01	SCEPTER	SC 1.5	0.031	POST	20	0	10	5	0	95
	X-77	%S 1.0	0.25	POST						
02	SCEPTER	SC 1.5	.0625	POST	43	2	7	7	3	95
	X-77	%S 1.0	0.25	POST						
03	SCEPTER	SC 1.5	0.125	POST	55	3	18	15	5	96
	X-77	%S 1.0	0.25	POST						
04	PURSUIT	SC 2.0	0.031	POST	3	0	22	38	3	93
	X-77	%S 1.0	0.25	POST						
05	PURSUIT	SC 2.0	.0625	POST	14	1	40	40	10	97
	X-77	%S 1.0	0.25	POST						
06	PURSUIT	SC 2.0	0.094	POST	17	2	48	68	10	93
	X-77	%S 1.0	0.25	POST						
07	AC263222	SC 2.0	0.009	POST	10	5	12	28	0	83
	X-77	%S 1.0	0.25	POST						
08	AC263222	SC 2.0	0.018	POST	12	10	13	55	5	90
	X-77	%S 1.0	0.25	POST						
09	AC263222	SC 2.0	0.036	POST	18	12	28	82	5	91
	X-77	%S 1.0	0.25	POST						
10	CLASSIC	DF 25	.0078	POST	13	2	38	58	15	94
	X-77	%S 1.0	0.25	POST						
	28%N	AD 1.0	0.25	POST						
11	CLASSIC	DF 25	.0078	POST	7	4	40	57	8	96
	X-77	%S 1.0	0.25	POST						
12	HARMONY	DF 75	.0039	POST	7	2	10	72	90	55
	X-77	%S 1.0	0.25	POST						
13	HARMONY	DF 75	.0078	POST	8	8	23	65	95	62
	X-77	%S 1.0	0.25	POST						

U N I V E R S I T Y   O F   I L L I N O I S

1987 ELWOOD SCREENING STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	CORN 0/00/00	SOYBEAN 0/00/00	TAMG 0/00/00	VTLF 0/00/00	COLQ 0/00/00	COCB 0/00/00
14	HARMONY	DF 75	.0039	POST	3	2	13	68	80	68
	X-77	%S 1.0	0.25	POST						
	28%N	AD 1.0	0.25	POST						
15	HARMONY	DF 75	.0078	POST	5	5	35	90	95	63
	X-77	%S 1.0	0.25	POST						
	28%N	AD 1.0	0.25	POST						
16	HARMONY	DF 75	.0039	POST	7	3	37	92	95	95
	CLASSIC	DF 25	.0078	POST						
	X-77	%S 1.0	0.25	POST						
17	HARMONY	DF 75	.0039	POST	8	3	32	95	90	96
	CLASSIC	DF 25	.0078	POST						
	X-77	%S 1.0	0.25	POST						
	28%N	AD 1.0	0.25	POST						
18	BAS514	WP 50	0.25	POST	37	27	86	47	55	66
	0090	AD 1.0	0.25	POST						
19	BAS514	WP 50	0.5	POST	33	25	95	63	83	95
	0090	AD 1.0	0.25	POST						
20	MON1113	EC 3.0	0.125	POST	10	0	0	52	0	70
	COC	CO 1.0	0.25	POST						
21	MON1113	EC 3.0	0.25	POST	8	2	5	67	5	87
	COC	CO 1.0	0.25	POST						
22	PPG-1259	FL 3.0	0.10	POST	10	5	15	18	0	65
23	PPG-1259	FL 3.0	0.25	POST	28	10	30	33	NA	90
24	SC-0051	SL 3.0	0.25	POST	3	67	13	91	93	70
	TWEEN 20	%S 1.0	0.25	POST						
25	SC-0051	SL 3.0	0.50	POST	5	73	30	89	93	96
	TWEEN 20	%S 1.0	0.25	POST						
26	COBRA	EC 2.0	0.20	POST	20	10	35	70	5	95
	COC	CO 1.0	0.25	POST						

U N I V E R S I T Y   O F   I L L I N O I S

1987 ELWOOD SCREENING STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	CORN 0/00/00	SOYBEAN 0/00/00	TAMG 0/00/00	VTLF 0/00/00	COLQ 0/00/00	COCB 0/00/00
27	COBRA	EC 2.0	0.20	POST	15	5	38	75	5	95
	28%N	AD 1.0	0.25	POST						
28	REFLEX	EC 2.0	0.25	POST	8	5	35	45	10	75
	X-77	%S 1.0	0.25	POST						
29	REFLEX	EC 2.0	0.25	POST	13	3	30	60	NA	99
	X-77	%S 1.0	0.25	POST						
	28%N	AD 1.0	0.25	POST						
30	ATRAZINE	DF 90	0.92	POST	0	85	99	99	99	99
	BANVEL	EC 4.0	0.48	POST						
31	SCEPTER	SC 1.5	.0625	PRE	0	0	50	50	80	38
32	SCEPTER	SC 1.5	0.125	PRE	15	0	80	70	90	88
33	PURSUIT	SC 2.0	.0625	PRE	5	0	95	70	97	65
34	PURSUIT	SC 2.0	0.094	PRE	8	0	93	88	95	75
35	AC263222	SC 2.0	0.018	PRE	0	0	83	50	90	75
36	AC263222	SC 2.0	0.036	PRE	0	0	86	62	93	90
37	PREVEIW	DF 75	0.50	PRE	8	2	78	90	99	95
38	PREVEIW	DF 75	0.62	PRE	7	2	88	91	99	95
39	SCEPTER	AS 1.5	0.125	PRE	15	2	83	55	99	85
	LASSO	EC 4.0	2.00	PRE						
40	SCEPTER	SC 1.5	0.125	PRE	7	0	87	60	94	85
	DUAL	EC 8.0	2.00	PRE						
41	COMMAND	EC 4.0	0.75	PRE	12	0	50	99	99	80
42	COMMAND	EC 4.0	0.75	PRE	7	2	65	99	99	85
	LEXONE	DF 75	0.25	PRE						
43	COMMAND	EC 4.0	0.75	PRE	13	0	87	99	93	85
	SCEPTER	SC 1.5	0.094	PRE						

U N I V E R S I T Y O F I L L I N O I S

1987 ELWOOD SCREENING STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	CORN 0/00/00	SOYBEAN 0/00/00	TAMG 0/00/00	VTLF 0/00/00	COLQ 0/00/00	COCB 0/00/00
44	COMMAND	EC 4.0	0.50	PRE	13	2	88	98	96	75
	SCEPTER	SC 1.5	0.094	PRE						
45	COMMAND	EC 4.0	0.50	PRE	0	0	90	97	92	90
	PURSUIT	SC 2.0	.0625	PRE						
46	COMMAND	EC 4.0	0.75	PRE	5	0	80	99	99	98
	PREVEIW	DF 75	0.38	PRE						
47	CINCH	EC 7.0	1.50	PRE	5	3	83	99	99	95
	PREVEIW	DF 75	0.38	PRE						
48	PROWL	EC 4.0	1.00	PRE	3	3	75	50	99	70
	SCEPTER	SC 1.5	0.125	PRE						
				LSD(0.05) =	16	8	15	21	NA	8
				STANDARD DEVIATION =	9	5	9	13	NA	5
				COEFF. OF VARIABILITY =	89	74	21	22	NA	7

U N I V E R S I T Y   O F   I L L I N O I S

1987 ELWOOD SCREENING STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 0/00/00				
01	SCEPTER	SC 1.5	0.031	POST	0				
	X-77	%S 1.0	0.25	POST					
02	SCEPTER	SC 1.5	.0625	POST	5				
	X-77	%S 1.0	0.25	POST					
03	SCEPTER	SC 1.5	0.125	POST	5				
	X-77	%S 1.0	0.25	POST					
04	PURSUIT	SC 2.0	0.031	POST	18				
	X-77	%S 1.0	0.25	POST					
05	PURSUIT	SC 2.0	.0625	POST	40				
	X-77	%S 1.0	0.25	POST					
06	PURSUIT	SC 2.0	0.094	POST	43				
	X-77	%S 1.0	0.25	POST					
07	AC263222	SC 2.0	0.009	POST	12				
	X-77	%S 1.0	0.25	POST					
08	AC263222	SC 2.0	0.018	POST	15				
	X-77	%S 1.0	0.25	POST					
09	AC263222	SC 2.0	0.036	POST	25				
	X-77	%S 1.0	0.25	POST					
10	CLASSIC	DF 25	.0078	POST	0				
	X-77	%S 1.0	0.25	POST					
	28%N	AD 1.0	0.25	POST					
11	CLASSIC	DF 25	.0078	POST	0				
	X-77	%S 1.0	0.25	POST					
12	HARMONY	DF 75	.0039	POST	0				
	X-77	%S 1.0	0.25	POST					
13	HARMONY	DF 75	.0078	POST	5				
	X-77	%S 1.0	0.25	POST					
14	HARMONY	DF 75	.0039	POST	0				
	X-77	%S 1.0	0.25	POST					
	28%N	AD 1.0	0.25	POST					

U N I V E R S I T Y   O F   I L L I N O I S

1987 ELWOOD SCREENING STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 0/00/00				
15	HARMONY	DF 75	.0078	POST	0				
	X-77	%S 1.0	0.25	POST					
	28%N	AD 1.0	0.25	POST					
16	HARMONY	DF 75	.0039	POST	NA				
	CLASSIC	DF 25	.0078	POST					
	X-77	%S 1.0	0.25	POST					
17	HARMONY	DF 75	.0039	POST	0				
	CLASSIC	DF 25	.0078	POST					
	X-77	%S 1.0	0.25	POST					
	28%N	AD 1.0	0.25	POST					
18	BAS514	WP 50	0.25	POST	60				
	0090	AD 1.0	0.25	POST					
19	BAS514	WP 50	0.5	POST	48				
	0090	AD 1.0	0.25	POST					
20	MON1113	EC 3.0	0.125	POST	15				
	COC	CO 1.0	0.25	POST					
21	MON1113	EC 3.0	0.25	POST	18				
	COC	CO 1.0	0.25	POST					
22	PPG-1259	FL 3.0	0.10	POST	0				
23	PPG-1259	FL 3.0	0.25	POST	5				
24	SC-0051	SL 3.0	0.25	POST	22				
	TWEEN 20	%S 1.0	0.25	POST					
25	SC-0051	SL 3.0	0.50	POST	22				
	TWEEN 20	%S 1.0	0.25	POST					
26	COBRA	EC 2.0	0.20	POST	5				
	COC	CO 1.0	0.25	POST					
27	COBRA	EC 2.0	0.20	POST	5				
	28%N	AD 1.0	0.25	POST					

U N I V E R S I T Y   O F   I L L I N O I S

1987 ELWOOD SCREENING STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 0/00/00				
28	REFLEX	EC 2.0	0.25	POST	0				
	X-77	%S 1.0	0.25	POST					
29	REFLEX	EC 2.0	0.25	POST	3				
	X-77	%S 1.0	0.25	POST					
	28%N	AD 1.0	0.25	POST					
30	ATRAZINE	DF 90	0.92	POST	5				
	BANVEL	EC 4.0	0.48	POST					
31	SCEPTER	SC 1.5	.0625	PRE	30				
32	SCEPTER	SC 1.5	0.125	PRE	88				
33	PURSUIT	SC 2.0	.0625	PRE	85				
34	PURSUIT	SC 2.0	0.094	PRE	85				
35	AC263222	SC 2.0	0.018	PRE	60				
36	AC263222	SC 2.0	0.036	PRE	75				
37	PREVEIW	DF 75	0.50	PRE	77				
38	PREVEIW	DF 75	0.62	PRE	82				
39	SCEPTER	AS 1.5	0.125	PRE	90				
	LASSO	EC 4.0	2.00	PRE					
40	SCEPTER	SC 1.5	0.125	PRE	95				
	DUAL	EC 8.0	2.00	PRE					
41	COMMAND	EC 4.0	0.75	PRE	99				
42	COMMAND	EC 4.0	0.75	PRE	99				
	LEXONE	DF 75	0.25	PRE					
43	COMMAND	EC 4.0	0.75	PRE	93				
	SCEPTER	SC 1.5	0.094	PRE					
44	COMMAND	EC 4.0	0.50	PRE	93				
	SCEPTER	SC 1.5	0.094	PRE					

U N I V E R S I T Y   O F   I L L I N O I S

1987 ELWOOD SCREENING STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 0/00/00					
45	COMMAND	EC 4.0	0.50	PRE	95					
	PURSUIT	SC 2.0	.0625	PRE						
46	COMMAND	EC 4.0	0.75	PRE	99					
	PREVEIW	DF 75	0.38	PRE						
47	CINCH	EC 7.0	1.50	PRE	90					
	PREVEIW	DF 75	0.38	PRE						
48	PROWL	EC 4.0	1.00	PRE	80					
	SCEPTER	SC 1.5	0.125	PRE						
			LSD(0.05) =		11					
			STANDARD DEVIATION =		7					
			COEFF. OF VARIABILITY =		21					

UNIVERSITY OF ILLINOIS

THIAMETURON AND CHLORIMURON COMBINATIONS

LOCATION: ELWOOD
RESEARCH BY: FIELDING / STOLLER
COOPERATOR : LYLE PAUL
REPORTED BY: R. FIELDING
PREVIOUS CROP: SOYBEANS PLOT / Ft:10 x21 ROW WIDTH/In:30
PREVIOUS TILL: CONVENTIONAL
SOIL TEXTURE: SILTY LOAM OM%:4% pH:6.4
EXPT. DESIGN:RCBD NUM. OF REPS:4
CROP: SOYBEANS VARIETY: WELLS II
PLANTING DATE:05/29/87 DEPTH/In: 1.5 SPACING/In:7 9/FT/ROW
SEASONAL RAINFALL DURING EXPERIMENT EARLY:LOW MID:ADQ LATE:ADQ
PRIMARY RATE UNIT:OZ AI

EXPERIMENT COMMENTS

This is a replication of the thiameturon and chlorimuron combinations study at Urbana. The soybean stunting in this study was less than the stunting seen at Urbana. The temperature at the time of application was a little lower, and the soybeans were a little smaller than at Urbana.

The 28% nitrogen improved velvetleaf control and also tended to improve pigweed control slightly. The contol of common lambsquarters was not greatly affected by the addition of the 28% nitrogen solution to the herbicide.

Although there was not enough jimsonweed and yellow nutsedge in this study to consistently rate. The data indicated that chlorimuron provided excellent control of jimson weed and good yellow nutsedge control, thiameturon was fair to poor on jimson weed and had almost no activity on yellow nutsedge.

Grasses were controlled with 1.5 pints of Poast which was sprayed on 7/9/87.

THIAMETURON AND CHLORIMURON COMBINATIONS

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/24/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J175/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	10:00/12:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	85 / 0	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	65	0	0	0	0
WIND DIR. / VELOC	W / 5	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/MOIST	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	CO2 BACK PK				
SPRAYER GPA / PSI	18 / 35	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.53	0	0	0	0
NOZZLE TYPE /NUM.	8002 / 5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIE CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	GLYMA	SOYBEANS	/2-3TR	6IN/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	VELE	VELVETLEAF	1FT/4-6LF	3-8/IN	/	/	/
2	SMPW	SMOOTH PIGWEED	5FT/6-8LF	6-8/IN	/	/	/
3	COLQ	C. LAMBSQUARTERS	.2F/6+ LF	2-6/IN	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/
	UNIFORM STANDARD TREATMENT						
	UNIFORM TRT. RATE AND UNIT						

U N I V E R S I T Y   O F   I L L I N O I S

THIAMETURON AND CHLORIMURON COMBINATIONS

EXPT. LOCATION:ELWOOD
RESEARCH BY: FIELDING / STOLLER

TRT. NO.	PESTICIDE NAME	FORMU.	OZ AI	APPLI-CATION TYPE	C.I. 7 DAT 7/01/87	VELE 7 DAT 7/01/87	SMPW 7 DAT 7/01/87	COLQ 7 DAT 7/01/87	C.I. 14 DAT 7/08/87	VELE 14 DAT 7/08/87
01	CLASSIC	DF .25	.0625	POST	9	70	83	15	2	60
	X-77	%A	.25%	POST						
02	CLASSIC	DF .25	.0625	POST	8	79	84	18	2	83
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
03	CLASSIC	DF .25	.125	POST	13	74	83	15	7	75
	X-77	%A	.25%	POST						
04	CLASSIC	DF .25	.125	POST	12	81	84	18	5	91
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
05	DPXM6316	DF .75	.0313	POST	7	66	78	69	6	78
	X-77	%A	.25%	POST						
06	DPXM6316	DF .75	.0313	POST	6	70	80	66	5	78
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
07	DPXM6316	DF .75	.0313	POST	13	76	85	66	8	88
	CLASSIC	DF .25	.0625	POST						
	X-77	%A	.25%	POST						
08	DPXM6316	DF .75	.0313	POST	13	80	86	63	10	91
	CLASSIC	DF .25	.0625	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
09	DPXM6316	DF .75	.0313	POST	16	73	83	70	11	90
	CLASSIC	DF .25	.125	POST						
	X-77	%A	.25%	POST						
10	DPXM6316	DF .75	.0313	POST	18	83	85	73	13	95
	CLASSIC	DF .25	.125	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						

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THIAMETURON AND CHLORIMURON COMBINATIONS

TRT. NO.	PESTICIDE NAME	FORMU.	OZ AI	APPLI-CATION TYPE	C.I. 7 DAT 7/01/87	VELE 7 DAT 7/01/87	SMPW 7 DAT 7/01/87	COLQ 7 DAT 7/01/87	C.I. 14 DAT 7/08/87	VELE 14 DAT 7/08/87
11	DPXM6316	DF .75	.0625	POST	8	71	81	73	6	84
	X-77	%A	.25%	POST						
12	DPXM6316	DF .75	.0625	POST	14	76	86	71	8	87
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
13	DPXM6316	DF .75	.0625	POST	15	76	85	70	13	89
	CLASSIC	DF .25	.0625	POST						
	X-77	%A	.25%	POST						
14	DPXM6316	DF .75	.0625	POST	19	84	88	71	12	95
	CLASSIC	DF .25	.0625	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
15	DPXM6316	DF .75	.0625	POST	21	80	84	74	13	90
	CLASSIC	DF .25	.125	POST						
	X-77	%A	.25%	POST						
16	DPXM6316	DF .75	.0625	POST	23	89	90	75	17	97
	CLASSIC	DF .25	.125	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
17	DPXM6316	DF .75	.0833	POST	10	68	75	74	5	81
	X-77	%A	.25%	POST						
18	DPXM6316	DF .75	.0833	POST	12	81	81	74	11	91
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
19	DPXM6316	DF .75	.0833	POST	19	79	81	69	18	93
	CLASSIC	DF .25	.0625	POST						
	X-77	%A	.25%	POST						
20	DPXM6316	DF .75	.0833	POST	21	84	86	71	14	97
	CLASSIC	DF .25	.0625	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						

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THIAMETURON AND CHLORIMURON COMBINATIONS

TRT. NO.	PESTICIDE NAME	FORMU.	OZ AI	APPLI-CATION TYPE	C.I. 7 DAT 7/01/87	VELE 7 DAT 7/01/87	SMPW 7 DAT 7/01/87	COLQ 7 DAT 7/01/87	C.I. 14 DAT 7/08/87	VELE 14 DAT 7/08/87
21	DPXM6316	DF .75	.0833	POST	18	73	79	71	16	92
	CLASSIC	DF .25	.125	POST						
	X-77	%A	.25%	POST						
22	DPXM6316	DF .75	.0833	POST	21	84	89	73	19	96
	CLASSIC	DF .25	.125	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
23	CHECK				0	0	0	0	0	0
24	CHECK				0	75	100	100	0	100
	LSD(0.05) =				5	17	6	8	4	10
	STANDARD DEVIATION =				4	11	4	5	3	7
	COEFF. OF VARIABILITY =				28	16	5	9	30	8

U N I V E R S I T Y   O F   I L L I N O I S

THIAMETURON AND CHLORIMURON COMBINATIONS

TRT. NO.	PESTICIDE NAME	FORMU.		OZ AI	APPLI-CATION TYPE	SMPW 14 DAT 7/08/87	COLQ 14 DAT 7/08/87	C.I. 21 DAT 7/15/87	VELE 21 DAT 7/15/87	SMPW 21 DAT 7/15/87	COLQ 21 DAT 7/15/87
01	CLASSIC	DF	.25	.0625	POST	80	13	0	51	74	8
	X-77	%A		.25%	POST						
02	CLASSIC	DF	.25	.0625	POST	83	14	2	83	79	6
	28% N	%A		1 GAL	POST						
	X-77	%A		.25%	POST						
03	CLASSIC	DF	.25	.125	POST	86	14	5	81	85	10
	X-77	%A		.25%	POST						
04	CLASSIC	DF	.25	.125	POST	88	18	3	91	83	8
	28% N	%A		1 GAL	POST						
	X-77	%A		.25%	POST						
05	DPXM6316	DF	.75	.0313	POST	90	81	4	68	88	84
	X-77	%A		.25%	POST						
06	DPXM6316	DF	.75	.0313	POST	87	81	4	80	90	84
	28% N	%A		1 GAL	POST						
	X-77	%A		.25%	POST						
07	DPXM6316	DF	.75	.0313	POST	92	80	6	86	95	86
	CLASSIC	DF	.25	.0625	POST						
	X-77	%A		.25%	POST						
08	DPXM6316	DF	.75	.0313	POST	92	84	5	90	95	85
	CLASSIC	DF	.25	.0625	POST						
	28% N	%A		1 GAL	POST						
	X-77	%A		.25%	POST						
09	DPXM6316	DF	.75	.0313	POST	96	85	7	88	97	86
	CLASSIC	DF	.25	.125	POST						
	X-77	%A		.25%	POST						
10	DPXM6316	DF	.75	.0313	POST	96	84	10	95	96	89
	CLASSIC	DF	.25	.125	POST						
	28% N	%A		1 GAL	POST						
	X-77	%A		.25%	POST						
11	DPXM6316	DF	.75	.0625	POST	90	83	7	85	94	89
	X-77	%A		.25%	POST						

U N I V E R S I T Y   O F   I L L I N O I S

THIAMETURON AND CHLORIMURON COMBINATIONS

TRT. NO.	PESTICIDE NAME	FORMU.	OZ AI	APPLI-CATION TYPE	SMPW 14 DAT 7/08/87	COLQ 14 DAT 7/08/87	C.I. 21 DAT 7/15/87	VELE 21 DAT 7/15/87	SMPW 21 DAT 7/15/87	COLQ 21 DAT 7/15/87
12	DPXM6316	DF .75	.0625	POST	93	85	7	86	93	86
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
13	DPXM6316	DF .75	.0625	POST	95	85	11	86	96	86
	CLASSIC	DF .25	.0625	POST						
	X-77	%A	.25%	POST						
14	DPXM6316	DF .75	.0625	POST	95	85	10	96	95	89
	CLASSIC	DF .25	.0625	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
15	DPXM6316	DF .75	.0625	POST	94	84	9	90	95	90
	CLASSIC	DF .25	.125	POST						
	X-77	%A	.25%	POST						
16	DPXM6316	DF .75	.0625	POST	98	86	14	97	97	91
	CLASSIC	DF .25	.125	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
17	DPXM6316	DF .75	.0833	POST	90	85	7	85	93	86
	X-77	%A	.25%	POST						
18	DPXM6316	DF .75	.0833	POST	95	85	7	91	91	86
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
19	DPXM6316	DF .75	.0833	POST	94	69	11	93	94	89
	CLASSIC	DF .25	.0625	POST						
	X-77	%A	.25%	POST						
20	DPXM6316	DF .75	.0833	POST	96	86	12	98	97	91
	CLASSIC	DF .25	.0625	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
21	DPXM6316	DF .75	.0833	POST	96	86	12	93	97	90
	CLASSIC	DF .25	.125	POST						
	X-77	%A	.25%	POST						

U N I V E R S I T Y   O F   I L L I N O I S

THIAMETURON AND CHLORIMURON COMBINATIONS

TRT. NO.	PESTICIDE NAME	FORMU.	OZ AI	APPLI-CATION TYPE	SMPW 14 DAT 7/08/87	COLQ 14 DAT 7/08/87	C.I. 21 DAT 7/15/87	VELE 21 DAT 7/15/87	SMPW 21 DAT 7/15/87	COLQ 21 DAT 7/15/87
22	DPXM6316	DF .75	.0833	POST	95	85	14	97	98	91
	CLASSIC	DF .25	.125	POST						
	28% N	%A	1 GAL	POST						
	X-77	%A	.25%	POST						
23	CHECK				0	0	0	0	0	0
24	CHECK				100	100	0	100	100	100
			LSD(0.05) =		6	11	4	8	6	4
			STANDARD DEVIATION =		4	7	2	5	4	3
			COEFF. OF VARIABILITY =		5	11	37	6	4	4

U N I V E R S I T Y   O F   I L L I N O I S

FERTLIZER ADDITIVES FOR BLAZER AND BASAGRAN

LOCATION: ORR RESEARCH STATION
RESEARCH BY:KOPPATSCHEK
COOPERATOR :RAINES
REPORTED BY:KOPPATSCHEK
PREVIOUS CROP:CORN   PLOT / Ft:7.5x30   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILT LOAM   OM%:2.5   pH:6.0
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:WILLIAMS
PLANTING DATE:05/20/87   DEPTH/In:1.5   SPACING/In:7-8/FT.-ROW
SEASONAL RAINFALL DURING EXPERIMENT   EARLY:LOW   MID:LOW   LATE:LOW
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Results of the 1987 study are consistent with those reported in the previous two years. Fertlizer additives, such as 28% N, 10-34-0,and NH42SO4 were found to increase the level of velvetleaf control by 5 to 10% compared to when crop oil concentrate was used. The most dramatic increases occured with Blazer, however the control level was still unacceptable. Control of lambsquarter or cocklebur control where equal regardless of additive.

FERTLIZER ADDITIVES FOR BLAZER AND BASAGRAN

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/04/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J155/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	10:00/11:00	: / :	: / :	: / :	: / :
APPLIC. METHOD					
AIR/SOIL TEMP (F)	75 / 68	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	85	0	0	0	0
WIND DIR. / VELOC	SW / 12	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLDY /DRY	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT	NONE				
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	hand held				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	.40	0	0	0	0
NOZZLE TYPE /NUM.	8002				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		SOYBEAN	/2 TRI	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	COLQ	LAMBSQUARTERS	M /6 L	/	/	/	/
2	VELE	VELVETLEAF	M /4 L	/	/	/	/
3	COCB	COCKLEBUR	M /6 L	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

FERTLIZER ADDITIVES FOR BLAZER AND BASAGRAN

EXPT. LOCATION:PERRY, IL
RESEARCH BY:KOPPATSCHEK   INITIATED:06/04/87   COMPLETED:07/15/87

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	COLQ 6/25/87	VELE 6/25/87	COCB 6/25/87	COLQ 7/15/87	VELE 7/15/87	COCB 7/15/87
01	BLAZER	EC 2	.38	POST	67	91	92	47	83	90
	10-34-0	%S 1	.25	POST						
02	BLAZER	EC 2	.38	POST	86	89	85	69	92	73
	10-34-0	%S 1	1.0	POST						
03	BLAZER	EC 2	.38	POST	90	93	81	68	94	70
	28% N	%S 1	.50	POST						
04	BLAZER	EC 2	.38	POST	63	85	83	55	86	81
	28% N	%S 1	1.0	POST						
05	BLAZER	EC 2	.38	POST	65	87	75	60	86	63
	NH42SO4	DG 1	2.0	POST						
06	BLAZER	EC 2	.38	POST	67	88	82	33	81	67
	NH42SO4	DG 1	6.0	POST						
07	BLAZER	EC 2	.38	POST	67	68	80	45	58	58
	COC	%s 1	.125	POST						
08	BLAZER	EC 2	.38	POST	78	65	65	73	57	55
	COC	%s 1	0	POST						
09	BLAZER	EC 2	.50	POST	79	72	82	53	65	62
	COC	%s 1	.125	POST						
10	BASAGRAN	EC 4	.50	POST	78	95	95	63	91	93
	10-34-0	%s 1	.25	POST						
11	BASAGRAN	EC 4	.50	POST	95	95	95	92	93	95
	10-34-0	%s 1	1.0	POST						
12	BASAGRAN	EC 4	.50	POST	87	93	91	82	85	95
	28% N	%s 1	.50	POST						
13	BASAGRAN	EC 4	.50	POST	58	93	95	22	91	95
	28% N	%s 1	1.0	POST						

U N I V E R S I T Y   O F   I L L I N O I S

FERTLIZER ADDITIVES FOR BLAZER AND BASAGRAN

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	COLQ 6/25/87	VELE 6/25/87	COCB 6/25/87	COLQ 7/15/87	VELE 7/15/87	COCB 7/15/87
14	BASAGRAN	EC 4	.50	POST	65	93	92	50	88	85
	NH42SO4	DG 1	2.0	POST						
15	BASAGRAN	EC 4	.50	POST	60	94	95	40	93	95
	NH42SO4	DG 1	6.0	POST						
16	BASAGRAN	EC 4	.50	POST	66	90	90	63	81	91
	COC	%S 1	.25	POST						
17	BASAGRAN	EC 4	.50	POST	75	94	93	62	91	95
	COC	%S 1	00	POST						
18	BASAGRAN	EC 4	1.0	POST	93	94	95	93	93	93
	COC	%S 1	.25	POST						
				LSD(0.05) =	22	15	15	39	21	23
				STANDARD DEVIATION =	13	9	9	23	13	14
				COEFF. OF VARIABILITY =	18	10	10	39	15	17

U N I V E R S I T Y   O F   I L L I N O I S

FERTLIZER ADDITIVES FOR BLAZER AND BASAGRAN COMBINATIONS

LOCATION:ORR RESEARCH CENTER
RESEARCH BY:FRITZ KOPPATSCHEK
COOPERATOR :GLENN RAINES
REPORTED BY:FRITZ KOPPATSCHEK
PREVIOUS CROP:CORN   PLOT / Ft:7.5x30   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILT LOAM   OM%:2.0   pH:6.4
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:WILLIAMS
PLANTING DATE: 5 /20 /87   DEPTH/In:1.5   SPACING/In:7-9/FT/ROW
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:MOD   LATE:LOW
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

The low rate of a Blazer plus Basagran , .12 and .25 lb/ai/a when applied with fertlizer additives significantly enhanced velvetleaf control compared to treatments applied with crop oil.

There were no differences in weed control between the additives when herbicide rates were increased to near label recommended rates. No differences in lambsquarter control was observed between the fertlizer and crop oil treatments.

FERTLIZER ADDITIVES FOR BLAZER AND BASAGRAN COMBINATIONS

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/04/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J155/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	10:00/11:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	75 / 68	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	85	0	0	0	0
WIND DIR. / VELOC	SW / 12	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLDY /DRY	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT	NONE				
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	CO2				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	.40	0	0	0	0
NOZZLE TYPE /NUM.	8002				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		SOYBEAN	/2 TRI	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	COLQ	LAMBSQUARTERS	M /6 L	/	/	/	/
2	VELE	VELVETLEAF	M /4 L	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

FERTLIZER ADDITIVES FOR BLAZER AND BASAGRAN COMBINATIONS

EXPT. LOCATION: PERRY, IL
RESEARCH BY: FRITZ KOPPATSCHEK   INITIATED: 06/04/87   COMPLETED: 07/15/87

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	COLQ 6/25/87	VELE 6/25/87	COLQ 7/15/87	VELE 7/15/87		
01	BLAZER	EC 2	.12	POST	60	83	42	68		
	BASAGRAN	EC 4	.25	POST						
02	BLAZER	EC 2	.12	POST	65	82	63	87		
	BASAGRAN	EC 4	.25	POST						
	COC	%S 1	.125	POST						
03	BLAZER	EC 2	.12	POST	76	91	65	95		
	BASAGRAN	EC 4	.25	POST						
	10-34-0	%S 1	.25	POST						
04	BLAZER	EC 2	.12	POST	67	94	52	95		
	BASAGRAN	EC 4	.25	POST						
	28%	%S 1	.50	POST						
05	BLAZER	EC 2	.12	POST	75	92	60	90		
	BASAGRAN	EC 4	.25	POST						
	NH42S04	DG 100	2.0	POST						
06	BLAZER	EC 2	.25	POST	83	95	82	91		
	BASAGRAN	EC 4	.50	POST						
07	BLAZER	EC 2	.25	POST	84	91	82	90		
	BASAGRAN	EC 4	.50	POST						
	COC	%S 1	.125	POST						
08	BLAZER	EC 2	.25	POST	81	94	62	93		
	BASAGRAN	EC 4	.50	POST						
	10-34-0	%S 1	.25	POST						
09	BLAZER	EC 2	.25	POST	90	95	77	92		
	BASAGRAN	EC 4	.50	POST						
	28% N	%S 1	.50	POST						
10	BLAZER	EC 2	.25	POST	40	78	27	75		
	BASAGRAN	EC 4	.50	POST						
	NH42S04	DG 100	2.0	POST						

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FERTLIZER ADDITIVES FOR BLAZER AND BASAGRAN COMBINATIONS

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	COLQ 6/25/87	VELE 6/25/87	COLQ 7/15/87	VELE 7/15/87		
11	BLAZER	EC 2	.38	POST	92	96	85	94		
	BASAGRAN	EC 4	.50	POST						
12	BLAZER	EC 2	.38	POST	85	93	80	91		
	BASAGRAN	EC 4	.50	POST						
	COC	%S 1	.125	POST						
13	BLAZER	EC 2	.38	POST	93	95	93	95		
	BASAGRAN	EC 4	.50	POST						
	10-34-0	%S 1	.25	POST						
14	BLAZER	EC 2	.38	POST	73	94	76	92		
	BASAGRAN	EC 4	.50	POST						
	28% N	%S 1	.50	POST						
15	BLAZER	EC 2	.38	POST	88	94	83	92		
	BASAGRAN	EC 4	.50	POST						
	NH42SO4	DG 100	2.0	POST						
16	BLAZER	EC 2	.50	POST	73	85	63	82		
	COC	%S 1	.125	POST						
17	BASAGRAN	EC 4	1.0	POST	91	95	92	95		
	COC	%S 1	.25	POST						
18	BASAGRAN	EC 4	.50	POST	75	87	69	89		
	28% N	%S 1	.75	POST						
	MYCROZ	%S 1	.25	POST						
19	BASAGRAN	EC 4	.50	POST	82	93	83	93		
	BLAZER	EC 2	.25	POST						
	28% N	%S 1	.75	POST						
	MYCROZ	%S 1	.25	POST						
			LSD(0.05) =		17	11	27	14		
			STANDARD DEVIATION =		10	6	16	8		
			COEFF. OF VARIABILITY =		13	7	23	9		

U N I V E R S I T Y   O F   I L L I N O I S

MONMOUTH CORN PREEMERGENCE STUDY

LOCATION:MONMOUTH RESEARCH STATION
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :MIKE MAINZ
REPORTED BY:REX LIEBL
PREVIOUS CROP:SOYBEANS   PLOT / Ft:7.5x35   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:3.5   pH:6.0
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:CORN   VARIETY:PIONEER 3378
PLANTING DATE:05/06/87 DEPTH/In:1.5   SPACING/In:@24,000   NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:LOW   LATE:LOW
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

SOIL WAS DRY AND CLODDY AT THE TIME OF HERBICIDE APPLICATION. SEVERAL WEEKS OF DRY HOT WINDY WEATHER FOLLOWED APPLICATION. THESE FACTORS RESULTED IN COMPLETE FAILURE OF ALL HERBICIDE TREATMENTS, CONSEQUENTLY NO RATINGS WILL BE REPORTED.

MONMOUTH CORN PREEMERGENCE STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PRE				
APPLICATION DATE	04/28/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J118/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	08:00/10:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	PRE				
AIR/SOIL TEMP (F)	70 / 60	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	70	0	0	0	0
WIND DIR. / VELOC	SE / 04	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	20 / 30	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.4	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
			/	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1			/	/	/	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

MONMOUTH CORN PREEMERGENCE STUDY

EXPT. LOCATION:MONMOUTH, IL
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/04/87	VELE 6/04/87	SMPW 6/04/87		
01	DUAL	EC 8.0	2.50	PRE	0	0	0		
	ATRAZINE	DF 90%	1.50	PRE					
02	LASSO	EC 4.0	3.00	PRE	0	0	0		
	ATRAZINE	DF 90%	1.50	PRE					
03	CG180937	EC 7.8	2.50	PRE	0	0	0		
	ATRAZINE	DF 90%	1.50	PRE					
04	SAN-582	EC 6.0	2.00	PRE	0	0	0		
	ATRAZINE	DF 90%	1.50	PRE					
05	HARNESS	EC 7.5	2.50	PRE	0	0	0		
	ATRAZINE	DF 90%	1.50	PRE					
06	BICEP	FL 6.0	4.50	PRE	0	0	0		
07	BICEP	FL 5.9	4.50	PRE	0	0	0		
08	ATRAZINE	DF 90%	1.50	PRE	0	0	0		
09	ATRAZINE	DF 90%	3.00	PRE	0	0	0		
10	BAS-514	WP 50	0.50	PRE	0	0	0		
11	BAS-514	WP 50	1.00	PRE	0	0	0		
12	BAS-514	WP 50	0.50	PRE	0	0	0		
	ATRAZINE	DF 90%	1.50	PRE					
13	BAS-514	WP 50	1.00	PRE	0	0	0		
	ATRAZINE	DF 90%	1.50	PRE					
14	DUAL	EC 8.0	2.50	PRE	0	0	0		
	PPG-4000	FL 4.8	1.20	PRE					
15	DUAL	EC 8.0	2.50	PRE	0	0	0		
	PPG-1259	FL 3.0	0.20	PRE					

U N I V E R S I T Y   O F   I L L I N O I S

MONMOUTH CORN PREEMERGENCE STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/04/87	VELE 6/04/87	SMPW 6/04/87			
16	DUAL	EC 8.0	2.50	PRE	0	0	0			
	BLADEX	DF 90%	1.60	PRE						
	PPG-1259	FL 3.0	0.20	PRE						
17	PPG-4000	FL 4.8	1.20	PRE	0	0	0			
18	PPG-1259	FL 3.0	0.20	PRE	0	0	0			
19	ATRAZINE	DF 90%	1.50	PRE	0	0	0			
	BLADEX	DF 90%	1.50	PRE						
20	ATRAZINE	DF 90%	1.00	PRE	0	0	0			
	BLADEX	DF 90%	2.00	PRE						
21	ATRAZINE	DF 90%	0.75	PRE	0	0	0			
	BLADEX	DF 90%	2.25	PRE						
22	SC-0735	WP 75	0.75	PRE	0	0	0			
	SC-29148	WP 75	0.125	PRE						
23	SC-0735	WP 75	1.00	PRE	0	0	0			
	SC-29148	WP 75	0.167	PRE						
24	SC-0774	WP 75	1.00	PRE	0	0	0			
	SC-29148	WP 75	0.167	PRE						
25	SC-0774	WP 75	1.25	PRE	0	0	0			
	SC-29148	WP 75	0.21	PRE						
			LSD(0.05) =		NA	NA	NA			
			STANDARD DEVIATION =		NA	NA	NA			
			COEFF. OF VARIABILITY =		NA	NA	NA			

U N I V E R S I T Y   O F   I L L I N O I S

MONMOUTH POSTEMERGENCE CORN HERBICIDE STUDY

LOCATION:MONMOUTH RESEARCH STATION.
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :MIKE MAINZ
REPORTED BY:JOHN CANTWELL
PREVIOUS CROP:SOYBEANS   PLOT / Ft:7.5x40   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM OM%:4.0 pH:6.4
EXPT. DESIGN:RCBD NUMBER OF REPS.3
CROP:CORN   VARIETY:PIONEER 3378
PLANTING DATE:04/28/87 DEPTH/In:1.5   NUM.PLANTS/ACR. 28,000
SEASONAL RAINFALL DURING EXPERIMENT   EARLY:LOW   MID:LOW   LATE:
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

THE ONLY BROADLEAF SPECIES IN THE FIELD WAS VELVETLEAF. SHORTLY AFTER APPLICATION OF THE HERBICIDE TREATMENTS, A HOARDE OF GRASS-HOPPERS OVERTOOK THE FIELD AND SELECTIVELY REMOVED THE VELVETLEAF FROM THE FIELD BEFORE STARTING ON THE CORN. AT THE TIME OF RATING NO VELVETLEAF REMAINED IN THE CHECK PLOTS AND CORN WAS 30% DAMAGED. THEREFORE WEED CONTROL WAS NOT RATED , PERHAPS THIS IS AN EXAMPLE OF TRUE INTEGRATED PEST MANAGEMENT.

MONMOUTH POSTEMERGENCE CORN HERBICIDE STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/04/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J155/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	: / :	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	75 / 75	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	50	0	0	0	0
WIND DIR. / VELOC	NE / 5	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	/	/	/	/
SOIL/LEAF MOIST.	ADQ / ADQ	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HANDHELD				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.4	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		CORN	/7LF	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	VELE	VELVETLEAF	/12"	/	/	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y O F I L L I N O I S

MONMOUTH POSTEMERGENCE CORN HERBICIDE STUDY

EXPT. LOCATION: MONMOUTH
RESEARCH BY: CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 7/02/87	VELE 7/02/87				
01	STARANE	FL 1.67	0.50	@-5"	0	0				
02	DPXM6316	DF 75	3.54g	@-5"	0	0				
	X-77	%S 1.0	0.25%	@-5"						
03	BENAZOL	FL 4.0	0.50	@-5"	0	0				
	COC	CO 1.0	1.00	@-5"						
04	BAS-514	WP 50	0.25	@-5"	0	0				
	COC	CO 1.0	0.25	@-5"						
05	24DAMINE	EC 3.8	0.25	@-5"	0	0				
	PPG-1259	FL 3.0	0.10	@-5"						
06	PPG-4000	FL 4.8	0.60	@-5"	0	0				
	*ATRAZIN		0.50							
	*PPG1259		0.10							
07	BUCTRIL	EC 2.0	0.38	@-5"	0	0				
08	BUC/ATR	FL 3.0	0.75	@-5"	0	0				
	*BUCTRIL		0.25							
	*ATRAZIN		0.50							
09	MARKSMAN	FL 3.2	1.00	@-5"	0	0				
	*BANVEL		0.34							
	*ATRAZIN		0.66							
10	MARKSMAN	FL 3.2	1.40	@-5"	0	0				
	*BANVEL		0.48							
	*ATRAZIN		0.92							
11	LADDOCK	FL 3.33	1.00	@-5"	0	0				
	*BASAGRN		0.50							
	*ATRAZIN		0.50							
	COC	CO 1.0	0.25	@-5"						
12	TANDEM	FL 4.0	0.50	@-5"	0	0				
	ATRAZINE	DG 90%	1.50	@-5"						
	COC	CO 1.0	0.25	@-5"						

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MONMOUTH POSTEMERGENCE CORN HERBICIDE STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	C.I. 7/02/87	VELE 7/02/87				
13	ATRAZINE	DG 90%	2.00	@-5"	0	0				
	COC	CO 1.0	0.25	@-5"						
14	BLADEX	DG 90%	2.00	@-5"	0	0				
	TANDEM	FL 4.0	0.50	@-5"						
15	CHECK				0	0				
16	RS-012	EC 3.75	0.90	@-5"	0	0				
	ATRAZINE	DG 90%	1.50	@-5"						
				LSD(0.05) =	NA	NA				
				STANDARD DEVIATION =	NA	NA				
				COEFF. OF VARIABILITY =	NA	NA				

U N I V E R S I T Y   O F   I L L I N O I S

MONMOUTH PRE-PLANT INCORPORATED VS PREEMERGENCE SOYBEAN STUDY

LOCATION:MONMOUTH RESEARCH STATION
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :MIKE MAINZ
REPORTED BY:JOHN CANTWELL
PREVIOUS CROP:CORN   PLOT / Ft:7.5x35   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:4.0   pH:6.0
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:
PLANTING DATE:05/06/87   DEPTH/In:1.5   SPACING/In:7-9/FT.ROW   NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:LOW   LATE:
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Soil was dry and cloddy at the time of herbicide application. Preplant treatments were incorporated with a tillage disc. The result was streaking of herbicide treatments and consequently eradic control between and within treatments. This study exemplifies importance of proper incorporation, namely using a tool designed for incorporation.

The dry conditions at planting, combined with the continued dry weather that followed resulted in poor performance from preemergence applied herbicides.

MONMOUTH PRE-PLANT INCORPORATED VS PREEMERGENCE SOYBEAN STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	PPI VS. PRE				
APPLICATION DATE	05/06/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J126/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	08:00/10:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	PPI/PRE				
AIR/SOIL TEMP (F)	80 / 65	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	80	0	0	0	0
WIND DIR. / VELOC	NE / 09	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ DRY	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT	TILLAGE DSK				
INCORP. DEPTH(in)	04	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	25 / 30	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.46	0	0	0	0
NOZZLE TYPE /NUM.	8003/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		SOYBEANS	/	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	/	/	/	/	/
2	VELE	VELVETLEAF	/	/	/	/	/
3	SMPW	SMOOTH PIGWEED	/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

MONMOUTH PRE-PLANT INCORPORATED VS PREEMRGENCE SOYBEAN STUDY

EXPT. LOCATION:MONMOUTH, IL
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/09/87	VELE 6/09/87	SMPW 6/09/87			
01	METRIBUZ	DF 75	0.5	PPI	63	83	84			
	DUAL	EC 8.0	2.25	PPI						
02	SALUTE	FL 4.0	1.5	PPI	70	82	86			
	*TREFLAN		1.0							
	*METRIBZ		0.5							
03	METRIBUZ	DF 75	0.5	PPI	62	56	85			
	TREFLAN	EC 4.0	0.75	PPI						
04	SALUTE	FL 4.0	1.13	PPI	82	83	85			
	*TREFLAN		0.75							
	*METRIBZ		0.375							
	COMMAND	EC 4.0	0.25	PPI						
05	COMMAND	EC 4.0	1.00	PPI	93	90	78			
06	COMMENCE	EC 5.25	1.48	PPI	83	53	85			
	*TREFLAN		0.86							
	*COMMAND		0.63							
07	COMMENCE	EC 5.25	1.48	PPI	85	83	65			
	*TREFLAN		0.86							
	*COMMAND		0.63							
	METRIBUZ	DF 75	0.4	PPI						
08	TREFLAN	EC 4.0	1.0	PPI	87	67	90			
09	PREVEIW	DF 75	0.45	PPI	70	82	85			
	*CLASSIC		0.04							
	*METRIBZ		0.4							
	TREFLAN	EC 4.0	1.0	PPI						
10	PURSUIT	EC 2.0	0.063	PPI	76	85	94			
	LASSO MT	FL 4.0	2.0	PPI						
11	PURSUIT	EC 2.0	0.094	PPI	62	83	85			

U N I V E R S I T Y   O F   I L L I N O I S

MONMOUTH PRE-PLANT INCORPORATED VS PREEMRGENCE SOYBEAN STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/09/87	VELE 6/09/87	SMPW 6/09/87		
12	SALUTE	FL 4.0	1.13	PPI	70	78	80		
	*TREFLAN		0.75						
	*METRIBZ		0.375						
	SCEPTER	EC 1.5	0.094	PPI					
13	PARTNER	DG 74%	2.125	PPI	70	78	80		
	*LASSO		2.0						
	*SCEPTER		0.125						
14	TURBO	EC 8.0	2.75	PPI	72	78	83		
	*DUAL		2.25						
	*METRIBZ		0.5						
15	TURBO	EC 8.0	2.25	PPI	60	83	85		
	*DUAL		1.85						
	*METRIBZ		0.4						
	COMMAND	EC 4.0	0.25	PPI					
16	DUAL	EC 8.0	2.25	PRE	63	62	78		
17	PREVEIW	DF 75	0.45	PPI	80	83	77		
	*METRIBZ		0.41						
	*CLASSIC	0. 04							
	LASSO	EC 4.0	2.75	PPI					
18	SQUADRON	FL 2.2	0.875	PPI	87	82	87		
	*PROWL		0.75						
	*SCEPTER		0.125						
19	METRIBUZ	DF 75	0.5	PRE	75	67	60		
	LASSO	EC 4.0	2.75	PRE					
20	SCEPTER	EC 1.5	0.125	PRE	75	65	75		
	LASSO	EC 4.0	2.75	PRE					
21	TURBO	EC 8.0	2.25	PRE	68	75	82		
	*METRIBZ		0.4						
	*DUAL		1.85						
22	PARTNER	DG 74%	2.125	PRE	57	73	57		
	*LASSO		2.0						
	*SCEPTER		0.125						

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MONMOUTH PRE-PLANT INCORPORATED VS PREEMRGENCE SOYBEAN STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 6/09/87	VELE 6/09/87	SMPW 6/09/87			
23	SCEPTER	EC 1.5	0.125		77	77	77			
	DUAL	EC 8.0	2.25	PRE						
24	PURSUIT	EC 2.0	0.063	PRE	77	67	67			
	LASSO	EC 4.0	2.75	PRE						
25	SONOLAN	EC 3.0	0.94	PRE	50	63	58			
26	SONOLAN	EC 3.0	0.94	PRE	53	50	47			
	COMMAND	EC 4.0	0.50	PRE						
	LSD(0.05) =				29	25	NA			
	STANDARD DEVIATION =				18	15	NA			
	COEFF. OF VARIABILITY =				25	21	NA			

U N I V E R S I T Y   O F   I L L I N O I S

MONMOUTH SOYBEAN POST GRASS ANTAGONISM STUDY

LOCATION:MONMOUTH RESEARCH STATION
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :MIKE MAINZ
REPORTED BY:JOHN CANTWELL
PREVIOUS CROP:CORN   PLOT / Ft:10x35   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SILTY CLAY LOAM   OM%:4.0   pH:6.4
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:
PLANTING DATE:05/06/87   DEPTH/In:1.5   SPACING/In:7-9/FT.ROW   NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:LOW   MID:LOW   LATE:
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

Note that no rain occured between planting and application, and also that 4 week old soybeans were only at third trifoliate. A dense stand of drouthy giant foxtail, velvetleaf, and smooth pigweed was present at application. Poast in general was more effective than Fusilade in controlling giant foxtail. When applied alone Poast afforded equal foxtail control whether applied with COC vs BCH-815(Dash). Giant foxtail with Fusilade was improved by addition of BCH-815 over COC. Both Poast and Fusilade were severely antagonized by addition of Basagran, Cobra, or Tackle. Poast control of foxtail was not antagonized by Classic whereas Fusilade was antagonized.

BCH-815 alleviated the Basagran induced antagonism of Poast foxtail control however Fusilade control of foxtail antagonized by Basagran whether COC or BCH-815 was added. Poast activity on giant foxtail was equally antagonized by Tackle or Cobra whether COC or BCH-815 was added. Addition of BCH-815 to Fusilade plus Cobra or Tackle resulted in greater foxtail control when compared to COC.

In the Fusilade plots many of the uncontrolled giant foxtail plants had dead leaves yet had tillered at the basal meristem to produce new growth. At the time of rating most soybeans had grown out of any injury symptoms, with exception to the Poast+Cobra + either adjuvant + 28%N treatments which significantly stunted soybeans.

MONMOUTH SOYBEAN POST GRASS ANTAGONISM STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	06/04/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J155/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	08:00/09:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	75 / 80	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	70	0	0	0	0
WIND DIR. / VELOC	SW / 5	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/MOIST	/	/	/	/
SOIL/LEAF MOIST.	LOW / LOW	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HANDHELD				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.4	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	0 / 0	/	/	/	/
4-7 DAYS/2ND WEEK	0 / 0	/	/	/	/
3RD WEEK/4TH WEEK	0 / 0	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		SOYBEANS	/3T	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	GIFT	GIANT FOXTAIL	/4"	/	/	/	/
2	VELE	VELVETLEAF	/6"	/	/	/	/
3	SMPW	SMOOTH PIGWEED	/4"	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

MONMOUTH SOYBEAN POST GRASS ANTAGONISM STUDY

EXPT. LOCATION:MONMOUTH, IL
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 7/02/87	VELE 7/02/87	SMPW 7/02/87			
01	POAST	EC 1.5	0.15	POST	95	0	0			
	COC	AD 1.0	0.25	POST						
	28%N	AD 1.0	1.0	POST						
02	FUSILADE	EC 1.0	.188	POST	88	0	0			
	COC	AD 1.0	0.25	POST						
	28%N	AD 1.0	1.0	POST						
03	POAST	EC 1.5	0.15	POST	95	0	0			
	BCH815	AD 1.0	0.25	POST						
	28%N	AD 1.0	1.0	POST						
04	FUSILADE	EC 1.0	.188	POST	95	25	0			
	BCH815	AD 1.0	0.25	POST						
	28%N	AD 1.0	1.0	POST						
05	POAST	EC 1.5	0.15	POST	70	96	63			
	BASAGRAN	EC 4.0	1.0	POST						
	COC	AD 1.0	0.25	POST						
	28%N	AD 1.0	1.0	POST						
06	FUSILADE	EC 1.0	.188	POST	68	96	73			
	BASAGRAN	EC 4.0	1.0	POST						
	COC	AD 1.0	0.25	POST						
	28%N	AD 1.0	1.0	POST						
07	POAST	EC 1.5	0.15	POST	93	93	77			
	BASAGRAN	EC 4.0	1.0	POST						
	BCH815	AD 1.0	0.25	POST						
	28%N	AD 1.0	1.0	POST						
08	FUSILADE	EC 1.0	.188	POST	62	99	80			
	BASAGRAN	EC 4.0	1.0	POST						
	BCH815	AD 1.0	0.25	POST						
	28%N	AD 1.0	1.0	POST						
09	POAST	EC 1.5	0.15	POST	77	83	96			
	COBRA	EC 2.0	0.20	POST						
	COC	AD 1.0	0.25	POST						
	28%N	AD 1.0	1.0	POST						

U N I V E R S I T Y   O F   I L L I N O I S

MONMOUTH SOYBEAN POST GRASS ANTAGONISM STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 7/02/87	VELE 7/02/87	SMPW 7/02/87		
10	FUSILADE	EC 1.0	.188	POST	62	83	95		
	COBRA	EC 2.0	0.20	POST					
	COC	AD 1.0	0.25	POST					
	28%N	AD 1.0	1.0	POST					
11	POAST	EC 1.5	0.15	POST	80	77	86		
	COBRA	EC 2.0	0.20	POST					
	BCH815	AD 1.0	0.25	POST					
	28%N	AD 1.0	1.0	POST					
12	FUSILADE	EC 1.0	.188	POST	78	82	88		
	COBRA	EC 2.0	0.20	POST					
	BCH815	AD 1.0	0.25	POST					
	28%N	AD 1.0	1.0	POST					
13	POAST	EC 1.5	0.15	POST	80	85	85		
	TACKLE	EC 2.0	0.40	POST					
	COC	AD 1.0	0.25	POST					
	28%N	AD 1.0	1.0	POST					
14	FUSILADE	EC 1.0	.188	POST	67	87	87		
	TACKLE	EC 2.0	0.40	POST					
	COC	AD 1.0	0.25	POST					
	28%N	AD 1.0	1.0	POST					
15	POAST	EC 1.5	0.15	POST	78	92	88		
	TACKLE	EC 2.0	0.40	POST					
	BCH815	AD 1.0	0.25	POST					
	28%N	AD 1.0	1.0	POST					
16	FUSILADE	EC 1.0	.188	POST	92	83	88		
	TACKLE	EC 2.0	0.40	POST					
	BCH815	AD 1.0	0.25	POST					
	28%N	AD 1.0	1.0	POST					
17	POAST	EC 1.5	0.15	POST	92	92	85		
	CLASSIC	DF 25	0.008	POST					
	COC	AD 1.0	0.25	POST					
	28%N	AD 1.0	1.0	POST					
18	FUSILADE	EC 1.0	.188	POST	85	93	80		
	CLASSIC	DF 25	0.008	POST					
	COC	AD 1.0	0.25	POST					
	28%N	AD 1.0	1.0	POST					

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MONMOUTH SOYBEAN POST GRASS ANTAGONISM STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	GIFT 7/02/87	VELE 7/02/87	SMPW 7/02/87			
19	POAST	EC 1.5	0.15	POST	93	85	83			
	CLASSIC	DF 25	0.008	POST						
	BCH815	AD 1.0	0.25	POST						
	28%N	AD 1.0	1.0	POST						
20	FUSILADE	EC 1.0	.188	POST	63	93	80			
	CLASSIC	DF 25	0.008	POST						
	BCH815	AD 1.0	0.25	POST						
	28%N	AD 1.0	1.0	POST						
			LSD(0.05) =		18	19	13			
			STANDARD DEVIATION =		11	11	8			
			COEFF. OF VARIABILITY =		13	16	12			

U N I V E R S I T Y   O F   I L L I N O I S

POSTEMERGENCE CRABGRASS CONTROL IN SOYBEANS

LOCATION: SAND FARM
RESEARCH BY:CANTWELL/LIEBL/WAX
COOPERATOR :STAN SIPP
REPORTED BY:RICHARD STEVENS
PREVIOUS CROP:CORN   PLOT / Ft:7.5 x25   ROW WIDTH/In:30
PREVIOUS TILL:CONVENTIONAL
SOIL TEXTURE:SANDY LOAM OM%:1.0 pH:0.0
EXPT. DESIGN:RCBD NUM. OF REPS:3
CROP:SOYBEANS   VARIETY:
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

This study was conducted on a solid stand of large crabgrass. Select afforded superior control of large crabgrass in this study. Whip afforded excellent crabgrass control at the highest rate tested. Higher rates of Poast or Fusilade will be required to provide adequate control of large crabgrass.

CRABGRASS CONTROL STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	07/02/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J183/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	10:00/11:00	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	77 / 85	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	60	0	0	0	0
WIND DIR. / VELOC	S / 3	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	CLEAR/ADQ	/	/	/	/
SOIL/LEAF MOIST.	ABD / ABD	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	HAND HELD				
SPRAYER GPA / PSI	20 / 40	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	0.3	0	0	0	0
NOZZLE TYPE /NUM.	8002/5				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		SOYBEAN	/ 4T	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	LACG	LARGE CRABGRASS	H /1-3LV	/	/	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y O F I L L I N O I S

CRABGRASS CONTROL STUDY

EXPT. LOCATION:SAND FARM, IL
RESEARCH BY:CANTWELL/LIEBL/WAX

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	LACG 7/24/87					
01	POAST	EC 1.5	0.15	POST	38					
	COC	CO 1.0	0.25	POST						
02	POAST	EC 1.5	0.10	POST	47					
	COC	CO 1.0	0.25	POST						
03	POAST	EC 1.5	0.075	POST	27					
	COC	CO 1.0	0.25	POST						
04	FUSILADE	EC 1.0	0.15	POST	47					
	COC	CO 1.0	0.25	POST						
05	FUSILADE	EC 1.0	0.10	POST	32					
	COC	CO 1.0	0.25	POST						
06	FUSILADE	EC 1.0	0.075	POST	35					
	COC	CO 1.0	0.25	POST						
07	WHIP	EC 1.0	0.15	POST	89					
	COC	CO 1.0	0.25	POST						
08	WHIP	EC 1.0	0.10	POST	88					
	COC	CO 1.0	0.25	POST						
09	WHIP	EC 1.0	0.075	POST	84					
	COC	CO 1.0	0.25	POST						
10	SELECT	EC 2.0	0.15	POST	98					
	COC	CO 1.0	0.25	POST						
11	SELECT	EC 2.0	0.10	POST	97					
	COC	CO 1.0	0.25	POST						
12	SELECT	EC 2.0	0.075	POST	93					
	COC	CO 1.0	0.25	POST						
				LSD(0.05) =	12					
				STANDARD DEVIATION =	7					
				COEFF. OF VARIABILITY =	11					

U N I V E R S I T Y   O F   I L L I N O I S

EARLY PREPLANT SOYBEAN WEED CONTROL STUDY

LOCATION:SANDOVAL/CLINTON
RESEARCH BY:ROGER GAST
COOPERATOR :FRED WEIDLE
REPORTED BY:ROGER GAST
PREVIOUS CROP:CORN   PLOT / Ft:10x30   ROW WIDTH/In:0
PREVIOUS TILL:NOTILL
SOIL TEXTURE:SILT LOAM   OM%:2.0   pH:6.0
EXPT. DESIGN:RCBD   NUM. OF REPS:4
CROP:SOYBEANS   VARIETY:WILLIAMS 82
PLANTING DATE:06/06/87   DEPTH/In:1"   SPACING/In:7   NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:ADQ   MID:ADQ   LATE:ADQ
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

1. DUAL - 2.5LB./A EPP
   DUAL - 2.0LB./A PRE

2. X-77 - (.25% V/V) = ALL TREATMENTS, EPP & PRE

3. PARAQUAT - .75Lb./A = PRE TREATMENTS ONLY, INCL. CHECK.

4. EVALUATION INFORMATION:

   % CONTROL - VISUAL EVALUATIONS CONDUCTED 5/22/87 (EPP TRTS ONLY) AND 7/8/87 (BOTH EPP AND PRE TREATMENTS).

   % WIGA WT. RED. - PERCENT WILD GARLIC WHOLE PLANT DRY WEIGHT REDUCTION WITH RESPECT TO CHECKS WITHIN REP. PERFORMED ON THE THE 20 PLANTS WHICH WERE PREVIOUSLY TAGGED AND THEN REMOVED 5/22/87.

   BULB WT. RED. - TOTAL OFFSET BULB WEIGHT FROM 20 PLANTS/TRT WHICH WERE REMOVED 5/22/87.

5. SOYBEANS WERE DRILLED INTO CORN STUBBLE. SOIL MOISTURE WAS ADEQUATE, HOWEVER SOYBEAN STANDS IN THE EPP TREATMENTS WERE USUALLY BETTER, PROBABLY DUE TO LESS WEED RESIDUE IN THESE PLOTS.

EARLY PREPLANT SOYBEAN WEED CONTROL STUDY

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	EPP	PRE			
APPLICATION DATE	04/17/87	06/08/87	/ /	/ /	/ /
JULIAN DATE/YEAR	J107/87	J159/87	J 0/00	J 0/00	J 0/00
START HR / END HR	06:00/07:00	08:00/09:00	: / :	: / :	: / :
APPLIC. METHOD					
AIR/SOIL TEMP (F)	68 / 60	80 / 75	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	80	70	0	0	0
WIND DIR. / VELOC	S / 05	SW / 10	/ 0	/ 0	/ 0
SKY / SOIL COND.	P/C /MOIST	CLEAR/M-D	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	Co2 HND HLD	Co2 HND HLD			
SPRAYER GPA / PSI	18 / 35	18 / 35	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	.528	.528	0	0	0
NOZZLE TYPE /NUM.	FF 8003	FF 8003			
RAINFALL (in.)					
0-24 HR/1-3 DAYS	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
4-7 DAYS/2ND WEEK	0.2 / 0	0.4 / 0.9	0 / 0	0 / 0	0 / 0
3RD WEEK/4TH WEEK	1.7 / 0.1	0 / 3.5	0 / 0	0 / 0	0 / 0

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
	GLYMA	SOYBEANS	- /HT IN	- /HT IN	0 /	0 /	0 /
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	PRLE	PRICKLY LETTUCE	L / 6-8	L /24-30	0 /	0 /	0 /
2	VIPW	VIR. PEPPERWEED	M / 5-7	M / 18	0 /	0 /	0 /
3	COCW	COMMON CHICKWEED	H / 4-5	H / 6-8	0 /	0 /	0 /
4	ANBG	ANNUAL BLUEGRASS	M / 3-5	M / 6-8	0 /	0 /	0 /
5	WIGA	WILD GARLIC	H / 6-10	H /18-24	0 /	0 /	0 /
6	HOWE	HORSEWEED	L / 4-6	L /18-30	0 /	0 /	0 /
7	PRSI	PRICKLY SIDA	0 /	M /PRE	0 /	0 /	0 /
8	VELE	VELVETLEAF	0 /	M /PRE	0 /	0 /	0 /
9	GIFT	GIANT FOXTAIL	0 /	M /PRE	0 /	0 /	0 /

UNIVERSITY OF ILLINOIS

EARLY PREPLANT SOYBEAN WEED CONTROL STUDY

EXPT. LOCATION:SANDOVAL/CLINTON, IL
RESEARCH BY:ROGER GAST

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% WIGA CONTROL 5/22/87	% WIGA WT.RED. 5/22/87	BULB WT (gm) 5/22/87	% ANBG CONTROL 5/22/87	% HOWE CONTROL 5/22/87	% VIPW CONTROL 5/22/87
01	LOROXPLU	DF 60%	.525	PPLNI	98	65	6.1	89	100	100
	*LINURON	60%	.5							
	*F6025	*	.027							
02	LOROXPLU	DF 60%	.675	PPLNI	99	69	5.5	91	100	100
	*LINURON	*	.64							
	*F6025	*	.035							
03	PREVIEW	DF 75%	.375	PPLNI	96	67	7.8	85	100	100
	*METRIBU	*	.34							
	*F6025	*	.0325							
04	PREVIEW	DF 75%	.469	PPLNI	98	74	6.1	95	99	100
	*METRIBU	*	.43							
	*F6025	*	.041							
05	HARMONY	DF 75%	.0156	PPLNI	96	62	12.8	60	76	89
	LINURON	DF 60%	.5	PPLNI						
06	HARMONY	DF 75%	.0156	PPLNI	95	63	9.4	69	85	87
	METRIBUZ	DF 75%	.375	PPLNI						
07	SCEPTER	SC 1.5	.125	PPLNI	56	50	25.6	88	56	90
08	SCEPTER	SC 1.5	.156	PPLNI	70	42	34.6	78	59	90
09	PURSUIT	SC 2.0	.06	PPLNI	79	36	43.2	81	51	95
10	PURSUIT	SC 2.0	.09	PPLNI	80	42	39.9	89	61	97
11	LOROXPLU	DF 60%	.525	PRE	0	0	0	0	0	0
12	PREVIEW	DF 75%	.375	PRE	0	0	0	0	0	0
13	LOROX	DF 60%	.5	PRE	0	0	0	0	0	0
14	METRIBUZ	DF 75%	.375	PRE	0	0	0	0	0	0

U N I V E R S I T Y   O F   I L L I N O I S

EARLY PREPLANT SOYBEAN WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% WIGA CONTROL 5/22/87	% WIGA WT.RED. 5/22/87	BULB WT (gm) 5/22/87	% ANBG CONTROL 5/22/87	% HOWE CONTROL 5/22/87	% VIPW CONTROL 5/22/87
15	SCEPTER	SC 1.5	.125	PRE	0	0	0	0	0	0
16	PURSUIT	SC 2.0	.06	PRE	0	0	0	0	0	0
17	CONTROL				0	0	54.0	0	0	0
			LSD(0.05) =		8	21	15.1	11	10	8
			STANDARD DEVIATION =		6	15	10.5	8	7	5
			COEFF. OF VARIABILITY =		11	44	72.7	16	15	9

U N I V E R S I T Y   O F   I L L I N O I S

EARLY PREPLANT SOYBEAN WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% COCW CONTROL 5/22/87	% PRLE CONTROL 5/22/87	% PRSI CONTROL 7/08/87	% HOWE CONTROL 7/08/87	% VELE CONTROL 7/08/87	% GIFT CONTROL 7/08/87
01	LOROXPLU	DF 60%	.525	PPLNI	97	94	88	96	91	82
	*LINURON	60%	.5							
	*F6025	*	.027							
02	LOROXPLU	DF 60%	.675	PPLNI	99	99	94	98	95	88
	*LINURON	*	.64							
	*F6025	*	.035							
03	PREVIEW	DF 75%	.375	PPLNI	98	99	96	91	90	74
	*METRIBU	*	.34							
	*F6025	*	.0325							
04	PREVIEW	DF 75%	.469	PPLNI	99	100	87	91	95	84
	*METRIBU	*	.43							
	*F6025	*	.041							
05	HARMONY	DF 75%	.0156	PPLNI	97	84	65	53	70	73
	LINURON	DF 60%	.5	PPLNI						
06	HARMONY	DF 75%	.0156	PPLNI	91	78	69	68	70	70
	METRIBUZ	DF 75%	.375	PPLNI						
07	SCEPTER	SC 1.5	.125	PPLNI	93	86	96	74	80	89
08	SCEPTER	SC 1.5	.156	PPLNI	92	84	97	69	90	91
09	PURSUIT	SC 2.0	.06	PPLNI	90	67	96	68	86	95
10	PURSUIT	SC 2.0	.09	PPLNI	96	60	96	66	88	98
11	LOROXPLU	DF 60%	.525	PRE	0	0	97	97	96	98
12	PREVIEW	DF 75%	.375	PRE	0	0	96	98	95	98
13	LOROX	DF 60%	.5	PRE	0	0	93	97	90	98
14	METRIBUZ	DF 75%	.375	PRE	0	0	97	98	91	94
15	SCEPTER	SC 1.5	.125	PRE	0	0	98	97	94	98
16	PURSUIT	SC 2.0	.06	PRE	0	0	98	98	95	93

U N I V E R S I T Y   O F   I L L I N O I S

EARLY PREPLANT SOYBEAN WEED CONTROL STUDY

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	% COCW CONTROL 5/22/87	% PRLE CONTROL 5/22/87	% PRSI CONTROL 7/08/87	% HOWE CONTROL 7/08/87	% VELE CONTROL 7/08/87	% GIFT CONTROL 7/08/87
17	CONTROL				0	0	0	0	0	0
	LSD(0.05) =				7	12	10	12	15	15
	STANDARD DEVIATION =				5	8	7	8	10	10
	COEFF. OF VARIABILITY =				8	17	8	11	12	12

U N I V E R S I T Y   O F   I L L I N O I S

STUDY OF WILD GARLIC CONTROL IN WHEAT

LOCATION:SANDOVAL/CLINTON
RESEARCH BY:GAST / LIEBL
COOPERATOR :FRED WEIDLE
REPORTED BY:ROGER GAST
PREVIOUS CROP:SOYBEANS   PLOT / Ft:10x30   ROW WIDTH/In:0
PREVIOUS TILL:DISK
SOIL TEXTURE:SILT LOAM   OM%:2.0   pH:0.0
EXPT. DESIGN:RCBD   NUM. OF REPS:3
CROP:WHEAT   VARIETY:CALDWELL
PLANTING DATE:09/25/87 DEPTH/In:1   SPACING/In:7"   NUM.PLANTS:
SEASONAL RAINFALL DURING EXPERIMENT: EARLY:ADQ   MID:ADQ   LATE:ADQ
PRIMARY RATE UNIT:LBai/A

EXPERIMENT COMMENTS

1. RATED 6/7/87: GARLIC IS A PERENNIAL MONOCOT.
2. OTHER WEEDS PRESENT BUT TOO ERRATIC TO RATE.
3. REST OF GROWERS FIELD SPRAYED WITH HARMONY, 0.5 OZ. OF PRODUCT/ACR. SEEMED TO WORK WELL. MISSED YELLOW ROCKET (Berteroa incana).

STUDY OF WILD GARLIC CONTROL IN WHEAT

** SET 1 OF 1 **	APPLIC. 1	APPLIC. 2	APPLIC. 3	APPLIC. 4	APPLIC. 5
GEN. APPLIC. TYPE	POST				
APPLICATION DATE	04/11/87	/ /	/ /	/ /	/ /
JULIAN DATE/YEAR	J101/87	J 0/00	J 0/00	J 0/00	J 0/00
START HR / END HR	05:30/06:30	: / :	: / :	: / :	: / :
APPLIC. METHOD	POST				
AIR/SOIL TEMP (F)	68 / 60	0 / 0	0 / 0	0 / 0	0 / 0
% REL. HUMIDITY	90	0	0	0	0
WIND DIR. / VELOC	S / 05	/ 0	/ 0	/ 0	/ 0
SKY / SOIL COND.	FOGGY/MOIST	/	/	/	/
SOIL/LEAF MOIST.	/	/	/	/	/
INCORP. EQUIPMENT					
INCORP. DEPTH(in)	0	0	0	0	0
SPRAYER TYPE	Co2 BACKPAC				
SPRAYER GPA / PSI	18 / 35	0 / 0	0 / 0	0 / 0	0 / 0
MIX SIZE (Gallon)	.528	0	0	0	0
NOZZLE TYPE /NUM.	FF8803				
RAINFALL/IRRIG.in					
0-24 HR/1-3 DAYS	/	/	/	/	/
4-7 DAYS/2ND WEEK	/	/	/	/	/
3RD WEEK/4TH WEEK	/	/	/	/	/

	SPECIES CODE	SPECIES	APPLIC. 1 DEN./STG.	APPLIC. 2 DEN./STG.	APPLIC. 3 DEN./STG.	APPLIC. 4 DEN./STG.	APPLIC. 5 DEN./STG.
	*******	****** CROP ******	*********	*********	*********	*********	*********
		WHEAT	6-8/TILLR	/	/	/	/
	*******	****** PEST ******	*********	*********	*********	*********	*********
1	WIGA	WILD GARLIC	M / 6-8"	/	/	/	/
2			/	/	/	/	/
3			/	/	/	/	/
4			/	/	/	/	/
5			/	/	/	/	/
6			/	/	/	/	/
7			/	/	/	/	/
8			/	/	/	/	/
9			/	/	/	/	/

U N I V E R S I T Y   O F   I L L I N O I S

EXPT.LOCATION:SANDOVAL/CLINTON, IL
RESEARCH BY:GAST / LIEBL

TRT. NO.	PESTICIDE NAME	FORMU.	LBai/A	APPLI-CATION TYPE	%ALLVI CONTL 6/08/87
01	EXPRESS	DF 75%	.0038	TILLR	63
02	EXPRESS	DF 75%	.0078	TILLR	86
03	EXPRESS	DF 75%	.0156	TILLR	92
04	EXPRESS	DF 75%	.0234	TILLR	95
05	MATRIX	DF 75%	.0038	TILLR	62
06	MATRIX	DF 75%	.0078	TILLR	94
07	MATRIX	DF 75%	.0156	TILLR	95
08	MATRIX	DF 75%	.0234	TILLR	95
09	HARMONY	DF 75%	.0038	TILLR	87
10	HARMONY	DF 75%	.0078	TILLR	93
11	HARMONY	DF 75%	.0156	TILLR	93
12	HARMONY	DF 75%	.0234	TILLR	96
13	CHECK				0
				LSD(0.05) =	13
				STANDARD DEVIATION =	8
				COEFF. OF VARIABILITY =	10

APPENDIX A

HERBICIDES EVALUATED IN 1987

TRADE NAME	COMMON NAME	EXP. #	COMPANY
AAtrex; others	atrazine	--	several
Amiben	chloramben	--	Union Carbide
Assure	quizalofop	--	DuPont
Banvel	dicamba	--	Sandoz
Basagran	bentazon	--	BASF
Benazolin	benazolin	--	Nor-Am
Butoxone/Butyrac	2,4-DB	--	several
Bladex	cyanazine	--	DuPont
Blazer	acifluorfen	--	Rhom & Haas
Brominal	bromoxynil	--	Union Carbide
Buctril	bromoxynil	--	Rhone-Poulenc
Cinch	cinmethylin	--	DuPont
Classic	chlorimuron ethyl	--	DuPont
Cobra	lactofen	--	PPG
Command	--	--	FMC
Dual	metolachlor	--	CIBA-GEIGY
Eradicane Encap.	EPTC	--	Stauffer
Eradicane Extra	EPTC+R25788	--	Stauffer
Fusilade 2000	fluazifop	--	ICI
Glean	chlorsulfuron	--	DuPont
Gramoxone	paraquat	--	ICI
Harness	acetochlor	--	Monsanto
Hoelon	diclofop	--	Hoechst-Roussel
Ignite	glufosinate	HOE 39866	Hoechst-Roussel
Lasso	alachlor	--	Monsanto
Lexone	metribuzin	--	DuPont
Linex	linuron	--	Griffin
Lorox	linuron	--	DuPont
Lontrel	clopyralid	--	Dow
Marathon	cycloate+safener	--	Stauffer
Modown	bifenox	--	Rhone-Poulenc
Paraquat	paraquat	--	Chevron
Poast	seyhoxydin	--	BASF
Princep	simazine	--	CIBA-GIEGY
Prowl	pendimethalin	--	Am Cyanamid
Pursuit	imezethapyr	AC 263,499	Am Cyanimid
Reflex	fomesafen	--	ICI
Round-Up	glyphosate	--	Monsanto
Scepter	imazaquin	--	Am Cyanamid
Select	cloproxydin	--	Chevron
Sencor	metribuzin	--	Mobay
Sonalan	ethalfluralin	--	Elanco

APPENDIX A (cont.)

HERBICIDES EVALUATED IN 1987

TRADE NAME	COMMON NAME	EXP. #	COMPANY
Starane	fluroxypyr	--	Dow
Surflan	oryzalin	--	Elanco
Sutan Encap	butylate	--	Stauffer
Sutan +	butylate+R25788	--	Stauffer
Tackle	acfluorfen	--	Rhone-Poulenc
Tandem	tridiphane	--	Dow
Treflan	trifluralin	--	Elanco
Weedone/Weedar ect.	2,4-D	--	several
Verdict	haloxyfop methyl	--	Dow
Vernam	vernolate	--	Stauffer
Whip	fenoxaprop	--	Hoechst-Roussel
--	--	BAS-514	BASF
--	Cycloxydim	BAS-517	BASF
--	--	CGA-180937	CIBA-GIEGY
--	--	DPX-M6316	DuPont
Assure	quizalofop	DPX-Y6202-38	DuPont
--	--	PPG-1259	PPG
--	pyridate	RS-0102	Terra
--	--	San 582	Sandoz
--	--	SC-0051	Stauffer
--	--	SC-0735	Stauffer
--	--	SC-0774	Stauffer
--	--	SC-0098	Stauffer
--	--	SC-29148	Stauffer

ADDITIVES EVALUATED IN 1987

ADDITIVE	CLASSIFICATION	COMPANY
Triton AG-98	surfactant	Rohm & Haas
Dash (BCH-815)	crop oil	BASF
COC	crop oil concentrate	several
X-77	surfactant	Chevron
Tween 20	surfactant	Am Cyanamid
10-34-0	fluid fertilizer	several
28% N	fluid fertilizer	several
SC-29148	safener	Stauffer

APPENDIX B

INDEX OF WEED SPECIES REPORTED

ABBREVIATION	COMMON NAME	BOTANICAL NAME
ANBG	Annual Bluegrass	Poa annua
ANMG	Morningglory species	Ipomea species
COCB	Common Cocklebur	Xanthium strumarium
COCH	Common Chickweed	Stellaria media
CODA	Common Dandelion	Taraxacum officinale
COLQ	Common Lambsquarters	Chenopodium Album
CORW	Common Ragweed	Ambrosia artemisiifolia
COSF	Common Sunflower	Helianthus annuus
EBNS	E. Black Nightshade	Solanum ptycanthum
FAPA	Fall Panicum	Panicum dichotomiflorum
GIFT	Giant Foxtail	Setaria faberi
GIRW	Giant Ragweed	Ambrosia trifida
HOWE	Horseweed	Conyza canadensis
ILMG	Ivyleaf Morningglory	Ipomea hederacea
JIWE	Jimsonweed	Datura stramonium
LACG	Large Crabgrass	Digitaria sanguinalis
PESW	Penn. Smartweed	Polygonum pennsylvanicum
PRLE	Prickly Lettuce	Lactuca serriola
PRSI	Prickly Sida	Sida spinosa
RRPW	Redroot Pigweed	Amaranthus retroflexus
SHCA	Shattercane	Sorghum bicolor
SHPU	Sheppardspurse	Capsella bursa-pastoris
SMPW	Smooth Pigweed	Amaranthus hybridus
TAMG	Tall Morningglory	Ipomea purpurea
TAMU	Tansy Mustard	Descurainia pinnata
VELE	Velvetleaf	Abutilon theophrasti
WIGA	WIld Garlic	Allium vineale

APPENDIX C

Table 1. Liquid herbicide combinations for corn and soybeans.

Name and Form (Company)	Active Ingredients (a.i.) (lbs a.i./gallon)	Formulation Equivalents (FEQ) (gallons FEQ per gallon)
Bicep 6L (Ciba-Geigy)	metolachlor + atrazine (3.33 + 2.67)	Dual 8E + AAtrex 4L (0.42 + 0.67)
Bronco 4E (Monsanto)	alachlor + glyphosate (2.60 + 1.40)	Lasso 4E + Roundup 4S (0.65 + 0.35)
Buctril/Atrazine 3S (Rhone-Poulenc)	bromoxynil + atrazine (1.00 + 2.00)	Buctril 2E + Atrazine 4L (0.50 + 0.50)
Conquest 4L (Shell/DuPont)	cyanazine + atrazine (3.00 + 1.00)	Bladex 4L + Atrazine 4L (0.75 + 0.25)
Commence 5.25E (FMC)	Trifluralin + FMC 57020 (3.00 + 2.25)	Treflan 4E + Command 4E (0.75 + 0.56)
Extrazine 4L (Shell)	cyanazine + atrazine (2.67 + 1.33)	Bladex 4L + Atrazine 4L (0.67 + 0.33)
Laddok 3.33L (BASF)	bentazon + atrazine (1.66 + 1.66)	Basagran 4E + Atrazine 4L (0.42 + 0.42)
Lasso/Atrazine 4L (Monsanto)	alachlor + atrazine (2.50 + 1.50)	Lasso 4E + Atrazine 4L (0.62 + 0.38)
Marksman 3.2L (Sandoz)	dicamba + atrazine (1.10 + 2.10)	Banvel 4S + Atrazine 4L (0.28 + 0.53)
Ramrod/Atrazine 4L (Monsanto)	propachlor + atrazine (3.00 + 1.00)	Ramrod 4L + Atrazine 4L (0.75 + 0.25)
Rescue 2.06S (Uniroyal)	naptalam + 2,4-DB (2.00 + 0.06)	Alanap 2S + Butoxone 2S (1.00 + 0.03)
Rhino 4L (PPG)	butylate + atrazine (4.3 + 1.7)	Genate 6.7E + Atrazine 4L (0.64 + 0.33)
Salute 4L (Mobay)	trifluralin + metribuzin (2.67 + 1.33)	Treflan 4E + Sencor 4L (0.67 + 0.33)
Squadron 2.33L (Amer. Cyan.)	pendimethalin + imazaquin (2.00 + 0.33)	Prowl 4E + Scepter 1.5E (0.50 + 0.22)
Sutazine+ 6L (Stauffer)	butylate + atrazine (4.80 + 1.20)	Sutan+ 6.7E + Atrazine 4L (0.72 + 0.30)
Turbo 8E (Mobay)	metolachlor + metribuzin (6.55 + 1.45)	Dual 8E + Sencor 4L (0.82 + 0.36)

APPENDIX C (cont.)

Table 2. Formulated dry herbicide formulations for corn or soybeans.

Name and Form (Company)	Form	Active Ingredients (percentage a.i.)	Formulation Equivalents (FEQ) (pounds FEQ per pound)
Canopy (DuPont)	75DF	metribuzin + chlorimuron (64.3 + 10.7)	Lexone 75DF + Classic 25 DF (0.86 + 0.43)
Conquest (DuPont)	90DF	cyanazine + atrazine (67.5 + 22.51)	Bladex 90DF + Atrazine 90DF (0.75 + 0.25)
Extrazine (DuPont)	90DF	cyanazine + atrazine (60.0 + 30.0)	Bladex 90DF + Atrazine 90DF (0.67 + 0.33)
Gemini (DuPont)	60DF	linuron + chlorimuron (55.5 + 4.5)	Lorox 50DF + Classic 25DF (1.11 + 0.18)
Lorox Plus (DuPont)	60DF	linuron + chlorimuron (56.9 + 3.1)	Lorox 50DF + Classic 25DF (1.14 + 0.12)
Prozine (Amer. Cyan.)	70DF	pendimethalin + atrazine (35.0 + 35.0)	Prowl 4E + Atrazine 4L (Above are liquids)
Preview (DuPont	75DF	metribuzin + chlorimuron (68.2 + 6.8)	Lexone 75DF + Classic 25DF (0.91 + 0.27)
Sutazine (Stauffer)	18-6	butylate + atrazine (18.0 + 6.0)	Sutan 6.7E + Atrazine 4L (Above are liquids)

APPENDIX D

MAP SHOWING LOCATIONS OF 1987 WEED SCIENCE RESEARCH STUDIES IN ILLINOIS.

APPENDIX E

RAINFALL SUMMARY FOR THE MONTH OF APRIL

DATE	BROWNSTOWN	MONMOUTH	URBANA
	precip	precip	precip
1	0	0	0
2	0	0	0.13
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0.03
8	0	0	0
9	0	0	0
10	0	0	0
11	0	trace	0.47
12	0	trace	0.16
13	0.30	0.29	0
14	1.90	0.75	1.21
15	0.15	0.03	0.42
16	0.02	trace	0.25
17	0	0	0
18	0	0	0
19	0	0	0
20	0	0	0
21	0	0	0
22	0	0.18	0.28
23	0.02	0.21	0.04
24	0	trace	0.16
25	0	0	0
26	0	0	0
27	0	0.03	0.39
28	0	0	0
29	0	0	0
30	0	0	0
TOTAL	2.39	1.50	3.54

APPENDIX E (cont.)

RAINFALL SUMMARY FOR THE MONTH OF MAY

DATE	BROWNSTOWN	MONMOUTH	URBANA
	precip	precip	precip
1	0	0	0
2	0	0	0
3	0.82	0.05	0
4	0	trace	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0.62	0.50
13	0	0	0
14	0	0	0
15	0	0.02	0.02
16	0	0	0
17	0	0	0
18	0.21	trace	1.52
19	0.02	0	0.07
20	0	0.23	0
21	0	0.05	0.10
22	0	0	0
23	0	0	0
24	0	0	0
25	0	0.03	0.34
26	0.17	0.22	0.04
27	0	0	0
28	0	trace	0
29	0	0	0
30	0	trace	0
31	0	0.78	0.57
TOTALS	1.97	1.36	3.16

APPENDIX E (cont.)

RAINFALL SUMMARY FOR THE MONTH OF JUNE

DATE	BROWNSTOWN	MONMOUTH	URBANA
	precip	precip	precip
1	0	0.40	0.01
2	0	0.05	0.38
3	0.82	trace	0.78
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0.20	0
13	0	0	0
14	0.08	0	0
15	0	0	0
16	0	0	0
17	0.02	0	0
18	0	0	0
19	0.20	0	0
20	0.56	0.79	0
21	0	0.39	0
22	0	0	1.17
23	0.45	0	0
24	0	0	0
25	0	0.20	0
26	0	0.06	1.08
27	0	0	0
28	0	0	0
29	0	trace	0.02
30	0	0.01	0.92
TOTAL	2.13	2.10	4.36

1987 Illinois Weed Science Research Report Part II

Department of Agronomy
Agricultural Experiment Station
College of Agriculture
University of Illinois at Urbana-Champaign

INDEX

INTRODUCTION

This is one of two reports for 1987 research by the weed science staff at the University of Illinois. Many individuals have been involved with this research:

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In addition, inputs have been made by state weed science staff, including Rex Liebl, Loyd Wax, Ed Stoller, Marshal McGlamery, Diane Anderson and George Kapusta.

Appreciation is expressed to the administration of the Department of Agronomy, the Agricultural Experiment Station and others of the College of Agriculture, particularly for land, facilities, equipment and personnel at the research centers.

We are also very grateful to the many industry representatives who have provided valuable suggestions and encouragement. We especially acknowledge:

Don Taylor - CIBA-Geigy Corp.
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Dan Schroeder - Monsanto
Randy Myers - Mobay Corporation
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Robert McKelvey - DuPont
Bryan Gentsch and Fred Arnold - American Cyanamid

Rod Schultz - Elanco
Dewane Bishop and Arthur Fulford - Chevron Chemical Co.
Ed Foland - Uniroyal
Richard Beardmore and Bill Bertges - American Hoechst
Mike McNeely - Northrup King

More than two dozen experiments were conducted at six different locations in the state with a wide variety of soil and climatic conditions. Land area used is estimated at about 50 acres. Emphasis is placed on research that will help farmers operate more efficiently and help to assure safety for their crops and themselves while conserving their land and energy resources.

Although a variety of weed control practices are considered, considerable effort is devoted to herbicides since an estimated $350,000,000 worth of herbicides are used in Illinois by about 90,000 farmers and over 10,000 commercial applicators on about 20 million acres.

As the research results are moved into the technology transfer system, hopefully the information will be helpful to farmers, dealers, applicators and others faced by the increasing complexity for making their decisions for designing weed control programs. Hopefully, the results will also be helpful to industry as they plan their development strategy for Illinois.

We have attempted to place emphasis on research that will help farmers obtain broad-spectrum weed control at a reasonable cost. Where we visualize new needs and opportunities, we attempt to design systems to fit changing production practices. However, we also continue what might be considered more routine research to delineate optimum rates of herbicides for each major weed species. We evaluate crop tolerance and potential for affecting subsequent crops.

We sincerely appreciate the suggestions, help and support of those involved with our weed science research program.

SUMMARY

Research included in this report can be divided into several main categories:

Multi-species trials with soil-applied herbicides.

Multi-species trials for postemergence herbicides.

Postemergence herbicides for corn.

Postemergence herbicides for soybeans.

Herbicides for weed control in small-seeded legumes.

Control of wheat and rye cover crops.

Weed control for conservation tillage systems.

Weed control for land set-aside from corn production.

Persistence studies with Command, Scepter, Pursuit and chlorimuron.

Multi-species trials with soil-applied herbicides

About 20 different hybrids and varieties of major crops are included to evaluate crop tolerance to herbicides and about 20 weed species are included to delineate degree of susceptibility to various herbicides and combinations.

For control of grass weeds in soybeans, the dinitroanilines and acetanilides remain as major considerations in the soil-applied category. However, Command or Amiben can also provide good grass control and Cinch will likely be a new addition.

For broadening the spectrum of broadleaf weed control in soybeans, several new opportunities are emerging. Ivyleaf and tall morningglory are the two major species of morningglory in Illinois. The two species have generally responded in a similar manner to herbicides and control with soil-applied treatments has been a challenge. Although there may be some escapes, the imidazolinones offer some help in the soil-applied category for control of morningglory.

Cocklebur has been another challenge in the soil-applied category. The 1987 trials suggest that incorporation can be helpful. Combinations with Command plus metribuzin or plus an imidazolinone showed promise.

Control of pigweed is relatively easy to achieve, but Command needs help on it and Cinch is weak. Control of lambsquarters is also relatively easy to control with most soil-applied treatments, but it can be a challenge for many of the postemergence treatments.

Velvetleaf may be only partially controlled by some of the soil-applied treatments such as the imidazolinones. Command offers additional strength on velvetleaf but rates may need to be a little higher PPI than PRE.

The combination of Treflan and Command as Commence performed relatively well but results suggested caution in reducing rates of the components.

Caution was also suggested for reducing rates of Pursuit if control of jimsonweed, velvetleaf, common ragweed, common sunflower, and morningglory is to be achieved.

The 1987 trials again suggested relatively good activity of the imidazolinones on eastern black nightshade and that incorporation may not be necessary if moisture is adequate.

Preview can provide some improvement in broadleaf control compared to metribuzin alone but help is still needed for grass control. Except for morningglory and cocklebur, Salute and Turbo performed relatively well.

Of the "coded compounds", CGA-180937 performed in a similar manner as Dual. While PPG-1259 alone was not outstanding, PPG-4000 appeared to offer some potential, perhaps for reducing atrazine rates, but additional strength on grass may be needed. SC-0774 continued to show promise.

Multi-species trials for postemergence herbicides.

These trials included about 40 different hybrids, varieties and weed species with nearly all of the crops and major annual weed species common to Illinois.

Observations with Scepter and Pursuit further confirmed the greater tolerance of corn to Pursuit but the opposite for sorghum with implications for control of shattercane. Results also suggested good tolerance of alfalfa and red clover to Pursuit postemergence but some injury from Scepter. The rate response for most weed species suggested caution in reducing rates.

Good activity of Classic on pigweed, cocklebur, and common sunflower was indicated. Compared to Classic, Harmony also gave good control of pigweed and was better on lambsquarters than Classic. The risk of using Preview on soybeans postemergence, even at a reduced rate, was indicated by about 50% soybean injury.

Bromoxynil performance generally improved with increased rate and addition of atrazine. However, when combined with atrazine, the higher rate may not be necessary for some species under favorable conditions.

Laddok performed quite well on most annual broadleaf weeds but with some weakness on jimsonweed. In addition to controlling grass, Tandem plus atrazine gave excellent control of most broadleaf species, perhaps better than would be expected from this rate of atrazine alone. Results with low rates of Poast broadcast in corn for grass control were not encouraging.

With Basagran, 0.5 lb/A appeared adequate for some species such as smartweed and cocklebur but control of some other species such as velvetleaf can be improved with the 1.0 lb/A rate. Performance of Cobra was similar with either COC or 28% UAN.

PPG-4000 exhibited activity primarily on broadleaf weeds but control was improved with the addition of 2,4-D, Banvel, or Bladex.

SC-0051 displayed good activity, particularly on most broadleaf weeds, and addition of a limited amount of atrazine gave further improvement.

There was a nice rate response with UBI-1237 but little selectivity except perhaps at a low rate for wheat.

The main strength of BAS-51400 appeared to be on annual morningglory and common ragweed. The main activity of Lontrel was on broadleaf weeds with corn, sorghum, oats and wheat showing good tolerance.

With Poast, Dash performed well with no additional benefit from using 28% UAN in addition to Dash. Results suggested the possibility of some antagonism when Classic is added to Assure. Fusilade and Select both performed well on annual grass weeds.

Postemergence herbicides for corn.

Trials with Tandem plus triazines demonstrated good control of both annual grass and broadleaf weeds. Combinations with Tandem plus atrazine or Bladex or both gave similar results and gave better control, particularly of grass, than Bladex alone postemergence. The combination of Tandem plus Basagran was disappointing when only 0.5 lb/A of atrazine was used but excellent results were achieved when 2.0 lb/A of atrazine was included.

In trials with Marksman, Buctril plus atrazine, Laddok and PPG-4000 following an earlier treatment of Dual, excellent weed control was achieved with all. There was no significant difference for COC, 28% UAN or Dash used with Laddok. Harmony activity on lambsquarters was very slow but addition of Bladex enhanced control.

In one experiment, where control of giant foxtail was not quite complete, Tandem plus atrazine complemented the earlier treatment to give excellent control. An Eradicane plus atrazine treatment could also have benefited from a Tandem plus triazine treatment to extend control. It may still often be desirable to use a PPI or preemergence treatment early and then Tandem plus triazine as needed. However, in this study, a total postemergence approach with Laddok plus Tandem plus atrazine gave excellent results.

Postemergence herbicides for soybeans.

One of the major purposes of one study was to try and determine optimum rates of the imidazolinones on some of the major annual weeds - cocklebur, annual morningglory and velvetleaf. Although some control can be achieved at reduced rates, best control of all three species was achieved with 0.125 lb/A Scepter or 0.094 lb/A Pursuit. Control of cocklebur was similar with both herbicides early, but Scepter provided a longer period of control. However, Pursuit gave better control of velvetleaf than Scepter. In one trial, Scepter appeared better than Pursuit for morningglory control but the opposite was observed at another location.

Similarly with Classic, the 0.125 oz/A rate gave fair control of cocklebur and velvetleaf, however, control was better with the higher rate of 0.188 oz/A. Although control of morningglory improved with the higher rate, it was still only fair. For all three species, control was better with Classic than with Harmony.

With Basagran, Dash generally gave a little better result than COC or 28% UAN. BAS-51400 as well as Blazer combined with Basagran improved control of annual morningglory, however rates of 0.025 and 0.25 lb/A, respectively for BAS-51400 and Blazer, were not adequate for good control. In another trial 0.1 lb/A BAS-51400 gave excellent control of ivyleaf and tall morningglory and of common ragweed.

Reflex gave good control of cocklebur with good residual activity but was weak on velvetleaf.

Cobra gave good control of cocklebur and velvetleaf and fair control of morningglory.

In one trial we attempted to evaluate herbicide combinations for improving control of pigweed and velvetleaf postemergence. Scepter, Pursuit and Harmony all provided good pigweed control but some caution was suggested for reducing rates. Cobra also offered good pigweed control and appeared to do well in combinations. Some of these herbicides may offer potential with Basagran for improving pigweed control.

Scepter and Pursuit each gave only partial control of velvetleaf with Pursuit outranking Scepter. Results suggested the possibility of adding Basagran or Cobra to Pursuit to improve velvetleaf control. Harmony outranked Classic for velvetleaf control and there was little benefit from adding other compounds to Harmony. Amiben at the full 3 lb/A rate gave some of the best control but combinations with chloramben at reduced rates did not appear promising.

<u>Herbicides for weed control in small-seeded legumes</u>.

Trials included alfalfa, medium red clover, mammoth red clover, ladino clover, alsike clover and sweet clover. Emphasis was placed on the potential for these legumes for acreage set-aside from production. However, potential for legumes for hay and pasture was also considered. One objective was to explore opportunities for lowering cost of legume seed for set-aside.

Although high quality alfalfa seed may seem a little costly, some types are less expensive and alfalfa may be easier to establish and provide good longevity. Creeping type alfalfa may provide very good longevity and might be explored for CRP acres (10 year program). Our experiences with mammoth red and medium red clover have been similar and mammoth may have some cost advantage. Although longevity may not be as great as for alfalfa, our experience in 1987 indicated potential for red clover to reseed naturally.

The potential for production of red clover seed subsequent to set-aside and the possibility of modifying ASCS regulations to allow clover seed production may be worth exploring further.

Since ladino and alsike seed are very small and there are a lot of seeds per pound, relatively few pounds of seed are needed per acre and this may present some potential for reducing seed cost, especially with alsike. However, since the seed are quite small, more careful management may be required for seedbed preparation and method and time of seeding.

Eptam and Genep offer relatively good legume tolerance. Eradicane could offer a good alternative if priced similarly and if adequately labeled. The EPTC of these three can offer help on nutsedge and quackgrass as well as some annual broadleaf weeds in addition to controlling annual grass weeds quite well. Considering their benefits, they can be quite cost effective and might be promoted more for legume establishment.

Balan also provides good legume tolerance and can be quite effective where annual grass is the primary concern. Treflan, Sonalan and Prowl can all provide control of annual grass and a few annual broadleaf weeds although legume tolerance is not quite as good as with EPTC or Balan. Prowl may have a little tolerance advantage. And cost would be quite reasonable. However, Treflan is the only one of these three that has had some labeling for such use.

In the past, EPTC has generally been incorporated. And previous studies with the dinitroanilines indicated significant legume injury with Prowl or Surflan surface applied, thus limiting the dinitroanilines to incorporation. If a herbicide were available for surface application initially, it might permit mixing of seed with herbicide and fertilizer. Preliminary studies suggested that Cinch may have some potential as a preemergence for small seeded legumes. However, 1987 studies indicated inadequate tolerance for most of the clovers and questionable tolerance for alfalfa with good tolerance in one trial and some injury in another.

An encapsulated formulation of EPTC or impregnation of EPTC on dry fertilizer might allow surface application. With this approach in 1987, the encapsulated formulation gave only fair grass control. With impregnation, grass control was very good but control of nutsedge much poorer than with incorporation. Alfalfa tolerance remained good but tolerance of some of the clovers may merit further attention. Possible potential was suggested for mixing alfalfa seed with dry fertilizer impregnated with EPTC and applying the mixture ahead of corrugated rollers that would firm the mixture into the soil.

Studies with Fusilade, Poast, Whip, Select, Assure, and Verdict further confirmed the potential for such herbicides to control grass weeds for successful legume establishment. Observations suggested that the "nurse crop" effect from a small grain or weeds like foxtail might sometimes actually be beneficial early if then adequately controlled. Where the postemergence herbicides were used very successfully in 1986 for alfalfa and red clover establishment, the benefits were still very vivid and dramatic in 1987.

For broadleaf weed control to establish legumes, 2,4-DB remains the primary herbicide. Although a little antagonism might sometimes be possible when 2,4-DB is mixed with a postemergence herbicide for grass control, this is not considered a significant problem. In an attempt to reduce costs, 2,4-D amine was tried as a substitute for 2,4-DB on ladino and alsike clovers. While ladino and alsike appeared to tolerate 0.25 lb/A 2,4-D amine fairly well, 0.5 lb/A caused significant injury of seedlings. Established stands may be more tolerant. Trials with bromoxynil were not encouraging. Scepter caused significant injury preemergence and postemergence for new seedings of alfalfa and red clover. It also caused injury to established stands of alfalfa and red clover. Although Pursuit gave significant injury to alfalfa and red clover when soil-applied, it appeared to have good potential postemergence on new seedings or established stands. Ladino and alsike also appeared to have relatively good tolerance with Pursuit giving good control of pigweed and suppression of yellow nutsedge but demonstrating weakness on lambsquarters and velvetleaf.

Although many farmers are hesitating to invest in weed control for legumes, some progressive farmers, very conscientious about weed control, have even sought treatments for established legumes. If good management, including good weed control, is used the first year and a good competitive legume stand is established, this can help considerably to control weeds. However, for weed control in established alfalfa and red clover we evaluated Prowl, Surflan, Lasso, Dual, Cinch, Scepter, Pursuit, Princep and metribuzin. All gave relatively good weed control but Scepter gave significant injury to both clover and alfalfa. Metribuzin also gave injury, probably due to the relatively late date of application.

Postemergence applications of Poast, Fusilade and Whip gave good annual grass control in established legumes and would have the advantage of not treating until a problem is evident. Roundup at relatively low rates was effective but some injury to both alfalfa and clover was noted.

Control of wheat and rye cover crops.

Wheat or rye may sometimes be used as cover crops to protect the soil from erosion. This provides potential for no-till corn or soybeans by using herbicides to kill the wheat or rye. Similarly, when there is an inadequate stand of the wheat or rye due to unfavorable weather or other factors, some farmers ask how they can finish killing the small grain crop to no-till plant corn or soybeans.

In our 1987 trials for corn in wheat and rye, Gramoxone or Roundup with atrazine gave the best control of the wheat and rye. Bladex was not as effective as atrazine and the triazines alone did not give the best control.

For soybeans, Roundup gave excellent control of wheat at 1.0 lb/A with control decreasing at lower rates. The 1.0 lb/A rate of Roundup gave the best control of rye. Ignite was not as effective as Roundup. Fusilade, Assure, and Verdict gave good control of wheat. Poast, Whip and Select were less effective. Rye was generally more difficult to control than wheat but Roundup or Gramoxone had relatively good activity.

Weed control for conservation tillage systems.

With continuous no-till corn, fall panicum frequently becomes a problem. Long-term trials with panicum were continued. Some modest tillage or periodic tillage has helped considerably for panicum control. Use of an acetanilide or simazine provides a good start for panicum control followed by Bladex early postemergence to control escapes. Addition of Prowl to Bladex postemergence can help to extend length of control. Tandem plus Bladex performed well as an early postemergence treatment following an acetanilide or simazine.

For no-till corn in clover sod, atrazine or Bladex or a combination of the two have generally given good control of clover. For alfalfa or clover, a combination of 2,4-D and dicamba has given good control. Appropriate amounts of triazines and acetanilides can be added, if needed, for preemergence control of annual weeds.

For no-till corn in oats mulch, Conquest or Eradicane plus atrazine impregnated on dry fertilizer were the two best treatments. For no-till soybeans in oats mulch, Preview complemented with Lasso EC, Lasso Microtech, Dual or Cinch allowed good success.

For no-till soybeans there are four main considerations: burndown of grass weeds, burndown of broadleaf weeds, residual control of grass and residual control of broadleaf weeds. In addition to control of annual weeds, some attention may be needed for perennials. Roundup or Gramoxone have generally provided good options for burndown of most annuals and some perennials. In 1987 trials, burndown of annual grass was achieved with Gramoxone, Roundup, Verdict, Assure and Select. Fusilade and Poast are also possibilities. Verdict at an adequate rate and perhaps Select appear to offer residual control of grass as well as burndown. Preview and Lorox Plus provided good control of annual broadleaf weeds, having both burndown and residual. Lorox Plus did not provide as much burndown of grass as anticipated. Addition of herbicides such as Verdict and Assure to Preview and Lorox Plus improved grass control significantly. Addition of 2,4-D to Scepter and Pursuit enhanced control of lambsquarters. Although Lasso, Dual, Prowl and Surflan can provide preemergence grass control, the need for burndown should not be neglected. Bronco was able to fill this role early. The longevity of Dual is also a consideration. Lorox Plus gave fairly good control of horseweed and combinations including Preview did even better. The combination of Bladex plus Dual plus 2,4-D gave good broad spectrum control and was one of the best treatments.

Weed control for land set-aside from production.

Many farmers have seeded oats on their set-aside land. In general, they seem to be doing a better job of seeding than a few years ago. However, where the oats seeding is not uniform and sufficiently dense or the oats not mowed or disked, weeds have proliferated drastically in many fields. Additional weed seeds and some new species have been introduced where oats were not adequately cleaned. However, in 1987, an increasing number of farmers allowed oats to mature and then disked the field to help control weeds while also moving the oats seed into the soil to enhance germination. Where moisture is adequate, a very dense stand of oats can develop to help control weeds. The oats is killed by the cold of winter but can provide a dense protective cover. Where we tried this approach in 1986 and planted corn and soybeans in the dead oats mulch in 1987, we were fairly successful with some treatments.

Sorghum-sudan can provide considerable shade and good weed control. However, it may present somewhat of a challenge for mowing or tillage. And since the seed may not be completely sterile, volunteer plants have sometimes appeared the following year.

Winter wheat seeded in the spring has been used by some farmers and it can offer relatively good weed control. But in wheat producing areas there are disease and insect considerations.

An increasing number of farmers are seeding alfalfa or clover on set-aside. These legumes can improve soil structure, add nitrogen, provide protective cover for the soil and wildlife and aid in weed control. Our research during the past several years has indicated the convenience and economic feasibility of seeding legumes on set-aside and using herbicides to aid in weed control during establishment. We have had good success with Eptam and Genep with potential also for Eradicane. Balan has performed well and Treflan in a similar manner at lower cost. Prowl and Sonalan have also demonstrated potential. Poast is already cleared for use on alfalfa even where it is to be used for forage and both Poast and Fusilade are cleared for "set-aside". We have had some excellent results from these as well as with Whip, Select, Assure and Verdict for control of giant foxtail, our major annual grass species, as well as control of some other grass species. Farmers can benefit from use of herbicides for establishing legumes in a similar manner as they benefit from using them in corn and soybeans. The opportunity exists but encouraging greater adoption of this practice remains a challenge.

Persistence studies with Command, Scepter, Pursuit and chlorimuron.

These studies are still in progress, but preliminary results suggest rather definite relationships for the chlorimuron in Preview, Lorox Plus and Classic. As pH and rate are increased, the risk of persistence and effect on corn and some other crops following soybeans increases. Applications should be accurate and uniform and label precautions adhered to. Since the rates for Classic postemergence mean less chlorimuron than with Preview and Lorox Plus soil applied, risk of carryover problems are expected to be less.

Carryover of Command can occur, especially if excessive amounts are applied and applications are not accurate and uniform. Fortunately, symptoms can be quite dramatic. Effect can range from some plants dieing where excessive amounts exist to plants outgrowing the early season injury rather well. Label precautions should be considered well in advance when planning cropping sequence.

Carryover of Scepter can occur, but symptoms may sometimes be rather subtle. Applications should be accurate and uniform and postemergence applications not made too late. Pursuit appears to present less risk of injury to corn but more to sorghum.

Use of more than one compound with carryover potential in combinations may increase risk and additional research is needed. While some of these new herbicides can offer new help for weed control, considerable precaution is suggested. In addition to the factors indicated, there are also genetic differences in hybrids and varieties with some more sensitive than others.

NORTHERN ILLINOIS AGRONOMY RESEARCH CENTER - DEKALB

Herbicides for establishment of ladino and alsike clovers

Knake, Ellery L. and Lyle E. Paul.

Objective: The primary purpose of this study was to explore ways to reduce cost of weed control when establishing legumes on land set-aside from production.

Procedure: Plots were established in 1987 at the Northern Illinois Agronomy Research Center near DeKalb, Illinois, on area SW500 with Drummer silty clay loam and Flanagan silt loam having 5 to 6% organic matter. Fertilizer applied the previous fall was 120 lb/A P_2O_5 and 120 lb/A K_2O. The field was plowed and disked once in early spring followed by use of a field cultivator with harrow on April 20. Preplant incorporated herbicides were applied between 10:30 and 11:30 a.m. on April 28 and incorporated using a tandem disk and harrow twice. The cinmethylin treatment was surface applied at 5:00 p.m. the same day. A tractor mounted compressed air spray unit was used with flat fan nozzle tips, 28 psi pressure and 3 mph to give 25 gpa. Postemergence treatments were applied 3:00 to 4:00 p.m. on June 23 with the same spray unit and three replications were used. At time of treatment, clover was 3 inches tall with three trifoliolate leaves, redroot pigweed was 12 inches tall, Pennsylvania smartweed 10 inches, yellow nutsedge 10 inches, velvetleaf 8 inches and quackgrass 12 inches. The 2,4-DB and 2,4-D were dimethylamine salt formulations. Ratings were visual estimates on June 22 for the preplant and preemergence treatments and July 9 for the postemergence treatments.

On April 28 the air temperature ranged from 37 to 64°F and bare soil temperature at 4 inches was 54 to 57°F. Wind was NNW at 3 mph and sky was clear. Relative humidity was 35-70% and soil was moist. There was 1.53 inches of rain the previous week and 0.49 inch the following week. On June 23 the air temperature was 55 to 86°F and bare soil temperature at 4 inches was 74 to 76°F. Wind was calm and sky was clear. Humidity for the day ranged from 47 to 100%. There was 0.2 inch of rain the previous week and 0.42 inch the following week. Soil was dry.

Results: For the soil-applied treatments, ladino clover was suppressed slightly by EPTC and benefin and a little more by trifluralin, ethalfluralin and pendimethalin. Results were similar for alsike clover with benefin having the best crop tolerance. Surface-applied cinmethylin caused excessive injury to both ladino and alsike clovers. EPTC gave good control of yellow nutsedge and quackgrass and excellent control of giant foxtail. Addition of dichlormid to EPTC had no significant effect on crop tolerance or weed control. While the dinitroaniline herbicides did not control giant foxtail as well as EPTC, they gave better control of pigweed. Smartweed control was only fair to poor with the soil-applied treatments.

With the postemergence treatments, ladino and alsike both exhibited good tolerance to 2,4-DB. While 0.25 lb/A 2,4-D caused only slight injury, the 0.5

lb/A rate caused significantly more injury, especially for alsike. Ladino was less tolerant than alsike to bromoxynil but both were injured. Both ladino and alsike exhibited relatively good tolerance to imazethapyr and it suppressed nutsedge as well as controlling large pigweed. The check plot was treated with fluazifop-P and it provided excellent tolerance for the clovers and gave good control of annual grass and quackgrass. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Herbicides for establishment of ladino and alsike clovers. (Knake and Paul)

		Injury		Control				
Treatment	Rate	Ladino	Alsike	Gift	Pesw	Rrpw	Yens	Qugr
	(lb/A)	----	----	----	(%)	----	----	----
PPI								
EPTC + dichlormid	3.0	10	20	100	30	70	90	90
EPTC	3.0	10	20	100	30	70	90	90
Benefin	1.5	10	0	90	30	95	0	0
Trifluralin	1.0	20	20	90	60	95	0	0
Ethalfluralin	1.0	15	20	90	70	100	0	0
Pendimethalin	1.0	20	15	80	45	90	0	0
PRE								
Cinmethylin	1.5	90	95	100	0	0	20	0
POST								
2,4-D amine	0.25	5	7					
2,4-D amine	0.5	25	38					
Imazethapyr	0.094	7	5					
Bromoxynil	0.38	82	35					
2,4-DB	0.25	0	0					
2,4-DB	0.5	0	0					
LSD (0.05) for POST		2.9	11					

Multi-species evaluation with preplant and preemergence soil-applied herbicides

Knake, Ellery L., Lyle E. Paul, Jeffery C. West,
Dale L. Baird, and Ann M. Carrick

Objective: The primary purpose of these trials was to evaluate crop tolerance and weed susceptibility for most of the crops and annual weed species common to Illinois. A variety of herbicides and herbicide combinations were included. Both current and experimental herbicides are included with half of the treatments preplant incorporated and half surface-applied preemergence.

Procedure: The evaluation was conducted at the Northern Illinois Agronomy Research Center near DeKalb, Illinois on Drummer silty clay loam with 5 to 6% organic matter. The field is in a high state of fertility. The area was moldboard plowed the previous summer after a similar trial. On April 20, 1987, a field cultivator with harrow was used once and PPI treatments applied between 8:30 and 10:00 a.m. on April 21. These were then incorporated using a tandem disk and harrow and then a field cultivar and harrow. All crop and weed species were then planted using a conventional planter for corn, soybeans, sorghum, Austrian winter pea and Tangier flat pea. The wheat and oats were seeded with a grain drill. Cocklebur was planted in hills with a hand corn planter and the remaining species were seeded with a Brillion seeder.

Rainfall of 0.53 inch on the evening of April 21, followed by 0.89 inch on April 22 and 0.11 on April 23, delayed application of the surface-applied preemergence treatments until april 28 when they were applied between 7:30 and 9:30 a.m. This application was followed by 0.49 inch of rain on May 2 with no further significant rainfall for the next two weeks.

A tractor mounted compressed air spray unit was used with flat fan nozzle tips, 28 psi pressure and 3 mph to give 25 gpa. The seeding had been done in a N-S direction and herbicides applied in an E-W direction to plots 10 ft x 150 ft. Crop tolerance was rated May 27 and weed control on June 3 and 4 by visual estimate.

Conditions at time of herbicide application:

	April 21	April 28
Air temperature °F - Range for the day	40-61	37-64
Bare soil temperature @ 4" - °F - Range for the day	56-59	54-57
Wind speed (mph) and direction	15 N	0-3 WNW
Sky - % cloud cover	10	5
Relative humidity - % - Range for the day	57-100	35-70
Rainfall previous week - inches	0.75	1.53
Rainfall following week - inches	1.53	0.49

Results: Degree of crop injury and weed control are reported in the table. The preplant incorporated treatments generally performed quite well. Although application of the surface-applied treatments was delayed for a week after planting, they also generally performed quite well. This suggests that delaying application until after weed seeds have germinated and the weeds are about to emerge is a feasible time for application, providing field conditions permit.

For corn, the PPI treatments caused greater injury than the preemergence treatments, but it should be noted that the majority of the treatments were for soybeans rather than corn. This suggests at least partial control of volunteer corn with PPI treatments of many of the herbicides for soybeans. The degree of injury to grain sorghum and the degree of shattercane control with treatments that included a dinitroaniline and imazethapyr suggest good potential for control of some of the sorghum complex. Soybeans generally exhibited relatively good tolerance to herbicides intended for soybeans but some caution was occasionally suggested for combinations that included both metribuzin and clomazone. Soybean tolerance appeared to be better with the surface-applied than with the PPI treatments. This was also true for Austrian winter pea and Tangier flat pea. These two introductions had relatively good tolerance to trifluralin, ethalfluralin, alachlor, metolachlor, imazaquin, imazethapyr, and chloramben. However, they appear to be less tolerant of metribuzin than soybeans.

Most treatments gave suppression of wheat and oats but seldom complete kill. Most treatments injured alfalfa and red clover significantly except for trifluralin alone. Although imazethapyr caused less injury than imazaquin, injury was still considered sufficient to preclude use soil-applied for new seedings of alfalfa or red clover. Control of annual grass weeds was generally good with all PPI treatments that included a dinitroaniline, an acetanilide or clomazone. The surface-applied treatments were, in general, slightly less effective on the annual grasses. The deficiency of imazaquin and imazethapyr on grass was largely overcome by combinations with a dinitroaniline, an acetanilide, cinmethylin or clomazone. Pigweed control was relatively good except for clomazone. Observations suggested some caution for combinations with clomazone if the rate of the other component is too low for good pigweed control. Imazaquin, imazethapyr and metribuzin plus chlorimuron all demonstrated excellent strength on pigweed. Observations on July 10 indicated weakness of the imidazolinones on lambsquarters.

Although clomazone did very well on velvetleaf, observations suggested caution in reducing rate too low in combinations for incorporation which may cause dilution. For example, 0.84 trifluralin plus 0.64 clomazone may need to be increased for more consistent control of both pigweed and velvetleaf. Of the imidazolinones, imazethapyr gave better control of velvetleaf than imazaquin and AC-263,222 better than imazethapyr. Complete control of jimsonweed appeared a little difficult to achieve but combinations with clomazone and metribuzin helped.

Good control of cocklebur was difficult to achieve. However, incorporation helped and combinations with both metribuzin and clomazone at adequate rates did rather well. The imidazolinones were helpful when incorporated. The morningglory was primarily ivyleaf but some tall. Over the years, the response of these two has been quite similar in our trials. Although morningglory has been quite difficult to control with most soil-applied treatments, the imidazolinones offer some new hope. Rates need to be relatively high. Control appears rather erratic with some plants severely stunted but a few may survive and grow rather well. In these trials, surface applications may have had a little advantage over incorporated treatments with some dilution. Addition of a dinitroaniline may be helpful and a combination of 0.063 imazethapyr plus 0.036 of AC 263,222 was one of the better treatments in this trial for control of morningglory.

For eastern black nightshade, the imidazolinones did well either incorporated or on the surface. For common sunflower, imazaquin and imazethapyr gave relatively good control if rates were adequate. Metribuzin and metribuzin plus chlorimuron gave some help on sunflower while clomazone did not give good control. For common ragweed, control was somewhat marginal and adequate rates appeared important. Clomazone, metribuzin, and metribuzin plus chlorimuron generally gave relatively good control of common ragweed and imazaquin and imazethapyr were effective. AC-263,222 at 0.36 was not adequate.

Reviewing some of the specific herbicides and combinations, clomazone was quite effective on most annual grasses PPI, but was a little more marginal applied to the surface. Control of velvetleaf was excellent but it was weak on pigweed. Control of jimsonweed and common ragweed was a little marginal. It did not give good control of ivyleaf morningglory, common sunflower or eastern black nightshade but did well on lambsquarters. The combination of clomazone plus trifluralin improved pigweed control but care should be taken to maintain adequate rates for this combination incorporated to maintain both pigweed and velvetleaf control. Adding metribuzin to clomazone gave good control of pigweed and this combination was one of the best on cocklebur but with a little increased risk of soybean injury. Adding imazethapyr to clomazone improved pigweed control while helping imazethapyr with grass control and maintaining good soybean tolerance.

Combining clomazone, metribuzin, metribuzin plus chlorimuron or imazethapyr with ethalfluralin broadened the control spectrum but control of pigweed and velvetleaf may be marginal for some of these combinations, especially with incorporated treatments if adequate rates are not maintained.

Combining clomazone with imazaquin or imazethapyr can improve velvetleaf control while helping clomazone with pigweed, morningglory and cocklebur.

Adding metribuzin or metribuzin plus chlorimuron to clomazone can enhance pigweed control and improve cocklebur control but rates need to be adequate and there may be some increased risk of soybean injury.

Trifluralin combined with metribuzin plus chlorimuron performed well except for control of cocklebur, annual morningglory and nightshade. Adding imazethapyr to trifluralin can help broaden the spectrum to include nightshade and give some help on morningglory but there may still be some weakness on cocklebur and velvetleaf.

Trifluralin plus metribuzin performed well except for nightshade, morningglory and cocklebur. Adding clomazone for a three-way had little advantage. Adding imazethapyr to trifluralin plus metribuzin improved control of nightshade and may help on morningglory.

Chloramben at 1.35 lb/A plus clomazone at 0.5 lb/A gave good grass control but rates were too low for good control of pigweed, velvetleaf and some other broadleaves. Adding metribuzin at 0.25 lb/A while reducing the rate of chloramben improved velvetleaf control.

Alachlor or metolachlor added to clomazone provided relatively good grass control and may help on pigweed, but when incorporated, the clomazone rate of 0.5 lb/A was too low for complete velvetleaf control.

Surface-applied treatments indicated the weakness of imazaquin and imazethapyr on grass with imazethapyr having a little advantage of the two. Similarly, imazethapyr was better on velvetleaf. Imazaquin at 0.125 lb/A gave relatively broad spectrum control of broadleaves with strength on pigweed and more activity than most soil-applied herbicides on morningglory. However good control of cocklebur was not achieved. A comparison of 0.031, 0.063 and 0.094 lb/A of imazethapyr indicated a good rate response with 0.094 being superior on several species. Compared to imazaquin and imazethapyr, AC-263,222 appeared to be more active and at 0.036 lb/A was similar to the higher rates of the other two for nightshade, cocklebur, jimsonweed, and morningglory but perhaps poorer on common ragweed. Like imazethapyr, AC-263,222 appeared to be a little better than imazaquin on velvetleaf, the foxtails and shattercane. The combination of 0.063 lb/A imazethapyr plus 0.036 lb/A AC-263,222 gave results similar to 0.063 lb/A imazethapyr alone. The major advantage for combining alachlor or metolachlor with imazaquin or imazethapyr was improved grass control.

Although performance of cinmethylin plus metribuzin and chlorimuron was fairly good, cinmethylin plus imazethapyr was superior and was one of the best treatments.

Although clomazone is no longer approved for surface application, it was included in this manner alone and in combination with metribuzin and with imazethapyr. Except for morningglory and only partial control of cocklebur and common sunflower, the clomazone plus metribuzin was a very good treatment. Use of imazethapyr instead of metribuzin gave similar results except better control of sunflower and morningglory and incorporation improved cocklebur control. With reduced rates of 0.75 lb/A clomazone and 0.063 of imazethapyr being so effective surface-applied or incorporated this combination appears quite promising.

Metribuzin plus metolachlor performed well except on morningglory and cocklebur but the 1.64 lb/A metolachlor did appear marginal. CGA-180937 performed in a similar manner as metolachlor with good activity on annual grasses except fall panicum. Addition of atrazine helped considerably on broadleaves.

SC-0774 + R29148 gave relatively good control of the foxtails, was very good on crabgrass, but poor on shattercane. Addition of atrazine improved control of broadleaf weeds, particularly morningglory.

PPG-1259 gave only fair weed control but PPG-4000 performed relatively well, especially on nearly all broadleaf weeds except cocklebur. Yellow foxtail appeared to be more sensitive than giant or green. It did not give good control of shattercane or fall panicum. Observations on July 10 also indicated very good control of pigweed, lambsquarters, velvetleaf, jimsonweed, common ragweed and black nightshade, with control not quite as good for common sunflower and annual morningglory and less for cocklebur. Some crabgrass was also present July 10. Addition of metolachlor to atrazine plus PPG-1259 gave little change except slightly better control of green foxtail and crabgrass. The degree of improvement in control between PPG-1259 and atrazine plus PPG-1259 suggested the possibility of synergism since the lower amount of atrazine would not be expected to give this degree of control. The possibility of atrazine plus PPG-1259 allowing reduced concern about atrazine residue is an interesting one. Corn appeared to have good tolerance to PPG-1259 but some effect was noted on sorghum. The combination of PPG-1259 and atrazine with butylate plus PPG-1294 gave broad spectrum control of both grass and broadleaf weeds with relatively good corn tolerance.

Conclusions: Performance of clomazone incorporated was similar to surface application with good control of annual grass but help was needed for pigweed, annual morningglory, cocklebur and black nightshade. Addition of metribuzin added control of pigweed and cocklebur but might present some increased risk to soybeans. Addition of imazaquin or imazethapyr to clomazone improved control of pigweed, cocklebur, nightshade and helped some on morningglory. Addition of a dinitroaniline to clomazone improved pigweed control and the combination generally performed well except on morningglory and cocklebur.

Metribuzin in combination with a dinitroaniline or acetanilide generally performed well except on morningglory and cocklebur. Performance of metribuzin plus chlorimuron gave relatively good control of most broadleaf weeds except morningglory, cocklebur, and sunflower but was weak on annual grass. Addition of cinmethylin improved grass control but the imazethapyr combination with cinmethylin was even better. Incorporating metribuzin plus chlorimuron appeared to sometimes improve control of sunflower and cocklebur and addition of a dinitroaniline improved grass control.

Both imazaquin and imazethapyr offered opportunities to improve control of pigweed, nightshade and to some degree morningglory but were weak on grass and sometimes cocklebur. Imazethapyr generally performed better than imazaquin on velvetleaf and grass weeds, including shattercane. Imazethapyr plus a dinitroaniline appeared to have good potential for shattercane control.

SC-0774 appeared to have relatively good potential for weed control in corn. And PPG-4000 also appeared to offer good corn tolerance and good weed control along with an opportunity for further reducing atrazine rates. (Dep. of Agronomy, University of Illinois at Urbana-Champaign)

Table 1. Multi-species evaluation with preplant and preemergence soil-applied herbicides. (Knake, Paul, West, Baird and Carrick).

Preplant Incorporated:	Rate lb/A	Corn injury % — Illinois Foundation Seeds 87451	87453	87454	87455	87456	Pioneer 3377	3352	3475	3540	3615	Grain sorghum injury
Clomazone	1.0	30	20	20	30	40	20	10	30	30	40	50
Trifluralin + clomazone	0.84 + 064	30	30	50	20	20	20	20	50	70	40	90
Trifluralin + clomazone + metribuzin	0.84 + 0.64 + 0.38	10	40	60	30	30	50	60	70	60	40	90
Trifluralin + clomazone + imazethapyr	0.84 + 0.64 + 0.094	20	70	70	40	40	60	60	60	70	60	90
Ethalfluralin + clomazone	0.75 + 0.5	20	70	70	60	20	50	60	70	70	60	80
Ethalfluralin + clomazone + metribuzin	0.75 + 0.5 + 0.25	30	70	60	70	50	50	80	80	60	50	80
Ethalfluralin + metribuzin + chlorimuron	0.94 + 0.43 + 0.043	40	70	60	70	60	70	80	80	80	60	90
Ethalfluralin + imazethapyr	0.94 + 0.094	50	60	60	80	80	70	70	80	80	70	100
Clomazone + imazaquin	0.75 + 0.094	60	70	50	70	90	50	60	80	80	70	50
Clomazone + imazethapyr	0.75 + 0.063	50	70	50	60	70	40	50	80	70	50	80
Clomazone + metribuzin	1.0 + 0.38	50	60	70	60	50	60	50	90	100	50	70
Clomazone + metribuzin + chlorimuron	0.5 + 0.35 + 0.035	60	60	80	60	60	50	60	70	80	70	80
Trifluralin + metribuzin + chlorimuron	1.0 + 0.43 + 0.043	60	70	60	70	60	80	80	80	80	70	100
Trifluralin + imazethapyr	1.0 + 0.094	60	80	60	70	60	80	80	80	80	70	100
Trifluralin + metribuzin	0.75 + 0.38	20	40	40	20	20	40	70	60	80	20	100
Trifluralin + metribuzin + clomazone	0.75 + 0.38 + 0.25	40	50	50	20	20	40	60	60	70	30	100
Trifluralin + metribuzin + clomazone	0.75 + 0.25 + 0.25	40	50	40	20	20	40	60	60	70	30	100
Trifluralin + metribuzin + imazethapyr	0.75 + 0.38 + 0.063	40	50	60	30	40	60	70	60	30	50	100
Chloramben + clomazone	1.35 + 0.5	40	60	70	40	30	30	20	20	30	40	60
Chloramben + clomazone + metribuzin	1.35 + 0.5 + 0.25	50	40	40	50	40	40	40	30	40	50	40
Alachlor + clomazone	2.5 + 0.5	30	20	20	20	20	30	30	20	30	40	40
Metolachlor + clomazone	2.0 + 0.5	30	20	20	20	20	30	30	20	30	40	50
Trifluralin	1.0	50	60	70	50	40	60	50	80	10	60	90
Butylate + PPG-1294 + atrazine + PPG-1259	3.5 + 0.3 1.0 + 0.2	0	10	0	0	10	0	0	0	0	10	50

Baird and Carrick).

Preemergence:	Rate lb/A	Corn injury % Illinois Foundation Seeds 87451	87453	87454	87455	87456	Pioneer 3377	3352	3475	3540	3615	Grain sorghum injury
Imazaquin	0.125	10	10	10	10	10	10	10	10	10	20	30
Imazethapyr	0.031	0	0	0	0	0	0	0	0	0	5	30
Imazethapyr	0.063	5	5	5	5	5	5	5	5	5	10	60
Imazethapyr	0.094	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	15	60
Pendimethalin + imazethapyr	0.75 + 0.094	10	10	10	10	10	10	10	10	10	20	70
AC-263,222	0.036	10	10	10	10	10	10	10	10	10	20	60
Imazethapyr + AC-263,222	0.063 + 0.036	10	10	10	10	10	10	10	10	10	20	60
Alachlor + imazaquin	2.0 + 0.125	10	10	10	10	10	10	10	10	10	20	40
Alachlor + imazethapyr	2.0 + 0.094	10	10	10	10	10	10	10	10	10	20	60
Metolachlor + imazethapyr	2.0 + 0.094	10	10	10	10	10	10	10	10	10	20	60
Metribuzin + chlorimuron	0.43 + 0.043	10	10	10	10	10	10	10	10	10	10	30
Cinmethylin + metribuzin + chlorimuron	1.5 + 0.35 + 0.035	10	10	10	10	10	10	10	10	10	10	40
Cinmethylin + imazethapyr	1.5 + 0.094	10	10	10	10	10	10	10	10	10	10	60
Clomazone	1.0	20	20	20	20	20	30	20	20	20	30	50
Clomazone + metribuzin	1.0 + 0.25	25	25	25	25	25	35	25	25	25	35	60
Clomazone + imazethapyr	0.75 + 0.063	20	20	20	20	20	30	20	20	20	30	70
Metolachlor + metribuzin	1.64 + 0.36	5	5	5	5	5	5	5	5	5	5	30
PPG-1259	0.2	0	0	0	0	0	0	0	0	0	0	20
Atrazine + PPG-1259	1.0 + 0.2	0	0	0	0	0	0	0	0	0	0	40
Metolachlor + atrazine + PPG-1259	2.0 + 1.0 + 0.2	0	0	0	0	0	0	0	0	0	0	40
CGA-180937	2.5	0	0	0	0	0	0	0	0	0	0	40
CGA-180937 + atrazine	2.5 + 2.0	0	0	0	0	0	0	0	0	0	0	40
SC-0774 + R29148	1.0 + 0.166	0	0	0	0	0	0	0	0	0	0	70
SC-0774 + R29148 + atrazine	1.0 + 0.166 + 1.0	0	0	0	0	0	0	0	0	0	0	70

Table 3. Multi-species evaluation with preplant and preemergence soil-applied herbicides. (Knake, Paul, West, Baird and Carrick)

Preplant Incorporated	Rate (lb/A)	Soybean injury % BSR101	Carter	Cham-berlain	Pella	Preston	Crop injury % Austrian Winter Pea	Tangier Flat Pea	Wheat	Oats	Alfalfa	Red Clover
Clomazone	1.0	0	0	0	0	0	0	20	60	60	20	70
Trifluralin + clomazone	0.84 + 064	0	0	0	0	0	0	30	90	70	30	70
Trifluralin + clomazone + metribuzin	0.84 + 0.64 + 0.38	0	0	10	0	10	50	70	80	90	80	100
Trifluralin + clomazone + imazethapyr	0.84 + 0.64 + 0.094	0	0	0	0	0	0	10	80	70	50	90
Ethalfluralin + clomazone	0.75 + 0.5	0	10	10	0	0	0	10	70	70	20	50
Ethalfluralin + clomazone + metribuzin	0.75 + 0.5 + 0.25	0	0	10	0	0	20	70	80	70	50	100
Ethalfluralin + metribuzin + chlorimuron	0.94 + 0.43 + 0.043	10	0	10	0	0	50	30	80	80	40	100
Ethalfluralin + imazethapyr	0.94 + 0.094	10	0	10	0	0	0	0	70	70	70	90
Clomazone + imazaquin	0.75 + 0.094	0	0	0	0	0	0	10	60	60	30	40
Clomazone + imazethapyr	0.75 + 0.063	0	0	0	0	0	0	10	60	60	30	30
Clomazone + metribuzin	1.0 + 0.38	10	10	30	0	10	50	70	90	80	80	100
Clomazone + metribuzin + chlorimuron	0.5 + 0.35 + 0.035	10	0	10	0	10	50	70	100	50	90	100
Trifluralin + metribuzin + chlorimuron	1.0 + 0.43 + 0.043	0	0	0	0	0	50	20	80	80	80	90
Trifluralin + imazethapyr	1.0 + 0.094	0	0	0	0	0	0	0	70	70	70	70
Trifluralin + metribuzin	0.75 + 0.38	20	20	0	0	0	50	90	80	80	80	90
Trifluralin + metribuzin + clomazone	0.75 + 0.38 + 0.25	20	10	0	0	0	50	80	100	50	90	100
Trifluralin + metribuzin + clomazone	0.75 + 0.25 + 0.25	0	0	0	0	0	30	70	90	80	90	100
Trifluralin + metribuzin + imazethapyr	0.75 + 0.38 + 0.063	0	0	0	0	0	50	70	90	80	90	100
Chloramben + clomazone	1.35 + 0.5	0	0	0	0	0	0	0	70	70	80	100
Chloramben + clomazone + metribuzin	1.35 + 0.5 + 0.25	0	0	0	0	0	30	30	80	80	80	100
Alachlor + clomazone	2.5 + 0.5	0	0	0	0	0	30	10	90	50	80	100
Metolachlor + clomazone	2.0 + 0.5	0	0	0	0	0	0	0	70	40	80	80
Trifluralin	1.0	0	0	0	0	0	0	0	60	50	10	10
Butylate + PPG-1294 + atrazine + PPG-1259	3.5 + 0.3 1.0 + 0.2	90	90	90	90	100	80	30	90	80	90	100

Table 4. Multi-species evaluation with preplant and preemergence soil-applied herbicides. (Knake, Paul, West, Baird and Carrick)

Preplant Incorporated	Rate (lb/A)	Soybean injury % BSR101	Carter	Cham-berlain	Pella	Preston	Crop injury % Austrian Winter Pea	Tangier Flat Pea	Wheat	Oats	Alfalfa	Red Clover
Imazaquin	0.125	0	0	0	0	0	0	0	30	30	80	90
Imazethapyr	0.031	0	0	0	0	0	0	0	10	20	20	30
Imazethapyr	0.063	0	0	0	0	0	0	0	15	30	30	40
Imazethapyr	0.094	0	0	0	0	0	0	0	20	40	40	50
Pendimethalin + imazethapyr	0.75 + 0.094	0	0	0	0	0	0	0	20	40	60	60
AC-263,222	0.036	0	0	0	0	0	0	0	10	30	50	50
Imazethapyr + AC-263,222	0.063 + 0.036	0	0	0	0	0	0	0	10	50	60	70
Alachlor + imazaquin	2.0 + 0.125	0	0	0	0	0	0	0	10	50	50	90
Alachlor + imazethapyr	2.0 + 0.094	0	0	0	0	0	0	0	20	50	30	70
Metolachlor + imazethapyr	2.0 + 0.094	0	0	0	0	0	0	0	20	50	70	70
Metribuzin + chlorimuron	0.43 + 0.043	0	0	0	0	0	0	10	20	40	90	100
Cinmethylin + metribuzin + chlorimuron	1.5 + 0.35 + 0.035	0	0	0	0	0	0	0	30	60	90	100
Cinmethylin + imazethapyr	1.5 + 0.094	0	0	0	0	0	0	0	30	70	70	80
Clomazone	1.0	0	0	0	0	0	0	10	70	60	80	80
Clomazone + metribuzin	1.0 + 0.25	0	0	0	0	0	20	20	70	70	80	70
Clomazone + imazethapyr	0.75 + 0.063	0	0	0	0	0	0	10	70	60	90	80
Metolachlor + metribuzin	1.64 + 0.36	0	0	0	0	0	0	0	20	20	100	100
PPG-1259	0.2	10	10	10	10	10	0	0	10	10	80	100
Atrazine + PPG-1259	1.0 + 0.2	20	20	20	20	20	0	0	10	10	100	100
Metolachlor + atrazine + PPG-1259	2.0 + 1.0 + 0.2	20	20	20	20	20	0	0	10	20	100	100
CGA-180937	2.5	0	0	0	0	0	0	0	10	10	50	50
CGA-180937 + atrazine	2.5 + 2.0	30	30	30	30	30	20	0	20	30	100	100
SC-0774 + R29148	1.0 + 0.166	20	20	20	20	20	0	10	30	10	100	100
SC-0774 + R29148 + atrazine	1.0 + 0.166 + 1.0	40	40	40	40	40	20	20	40	20	100	100

Table 5. Multi-species evaluation with preplant and preemergence soil-applied herbicides. (Knake, Paul, West, Baird and Carrick).

Preplant Incorporated	Rate (lb/A)	Weed Control % Gift	Yeft	Grft	Lacq	Bygr	Shca	Rrpw	Colq	Pesw	Vele	Jiwe	Corw	Cosf	Ilmg	Cocb	Ebns
Clomazone	1.0	100	100	100	100	85	50	80	100	100	100	90	85	10	10	30	50
Trifluralin + clomazone	0.84 + 0.64	100	100	100	100	90	70	100	100	100	90	90	80	10	40	10	90
Trifluralin + clomazone + metribuzin	0.84 + 0.64 + 0.38	100	100	100	100	90	70	100	100	100	100	95	90	90	50	90	100
Trifluralin + clomazone + imazethapyr	0.84 + 0.64 + 0.094	100	100	100	100	90	90	100	100	100	90	100	90	90	70	80	100
Ethalfluralin + clomazone	0.75 + 0.5	100	100	100	100	90	80	90	100	100	80	90	50	10	60	10	100
Ethalfluralin + clomazone + metribuzin	0.75 + 0.5 + 0.25	100	100	100	100	90	80	95	100	100	90	100	90	30	60	70	100
Ethalfluralin + metribuzin + chlorimuron	0.94 + 0.43 + 0.043	100	100	100	100	90	80	100	100	100	90	100	90	90	60	90	50
Ethalfluralin + imazethapyr	0.94 + 0.094	100	100	100	100	90	90	100	100	100	95	100	90	90	70	80	100
Clomazone + imazaquin	0.75 + 0.094	100	100	95	100	80	50	100	100	100	90	95	90	90	70	80	100
Clomazone + imazethapyr	0.75 + 0.063	100	100	100	100	85	80	100	100	100	95	90	80	90	70	90	100
Clomazone + metribuzin	1.0 + 0.38	100	100	100	100	100	70	100	100	100	95	100	90	50	10	90	90
Clomazone + metribuzin + chlorimuron	0.5 + 0.35 + 0.035	100	100	100	100	90	60	100	100	100	95	100	90	90	10	60	50
Trifluralin + metribuzin + chlorimuron	1.0 + 0.43 + 0.043	100	100	100	100	90	90	100	100	100	80	85	90	90	60	10	0
Trifluralin + imazethapyr	1.0 + 0.094	100	100	100	100	95	90	100	100	100	90	95	90	90	75	30	100
Trifluralin + metribuzin	0.75 + 0.38	100	100	100	100	90	80	80	100	100	80	90	90	100	60	10	0
Trifluralin + metribuzin + clomazone	0.75 + 0.38 + 0.25	100	100	100	100	90	80	90	100	100	85	90	90	100	60	20	0
Trifluralin + metribuzin + clomazone	0.75 + 0.25 + 0.25	100	100	100	100	90	70	70	100	100	85	90	90	100	60	20	90
Trifluralin + metribuzin + imazethapyr	0.75 + 0.38 + 0.063	100	100	100	100	90	80	100	100	100	90	95	90	100	70	30	90
Chloramben + clomazone	1.35 + 0.5	100	95	90	100	80	50	70	100	100	80	90	70	10	10	30	30
Chloramben + clomazone + metribuzin	1.35 + 0.5 + 0.25	100	100	95	100	80	60	70	100	100	95	90	80	80	10	50	20
Alachlor + clomazone	2.5 + 0.5	100	95	95	100	95	30	90	100	100	80	90	70	10	10	20	50
Metolachlor + clomazone	2.0 + 0.5	100	95	95	100	95	30	70	90	100	70	80	70	10	10	10	50
Trifluralin	1.0	95	95	90	100	90	80	90	90	70	0	80	10	0	50	10	0
Butylate + PPG-1294 + atrazine + PPG-1259	3.5 + 0.3 1.0 + 0.2	100	95	90	100	100	70	100	100	100	95	100	90	100	80	40	90

Table 6. Multi-species evaluation with preplant and preemergence soil-applied herbicides. (Knake, Paul, West, Baird and Carrick).

Preemergence	Rate (lb/A)	Weed Control %															
		Gift	Yeft	Grft	Lacq	Bygr	Shca	Rrpw	Colq	Pesw	Vele	Jiwe	Corw	Cosf	Ilmg	Cocb	Ebns
Imazaquin	0.125	60	60	70	70	40	40	100	100	100	90	95	100	100	90	20	100
Imazethapyr	0.031	20	40	50	20	20	40	90	90	80	80	50	10	40	20	0	100
Imazethapyr	0.063	60	60	70	40	50	60	100	100	100	95	85	80	70	50	10	100
Imazethapyr	0.094	80	80	80	80	70	80	100	100	100	100	90	100	100	80	20	100
Pendimethalin + imazethapyr	0.75 + 0.094	90	90	80	90	90	80	100	100	100	100	90	100	100	90	20	100
AC-263,222	0.036	50	70	60	60	50	70	100	100	100	100	85	20	50	80	10	100
Imazethapyr + AC-263,222	0.063 + 0.036	60	90	70	80	80	80	100	100	100	100	100	80	90	90	10	100
Alachlor + imazaquin	2.0 + 0.125	90	90	70	95	90	40	100	95	100	80	100	90	100	80	20	100
Alachlor + imazethapyr	2.0 + 0.094	90	90	80	100	95	80	100	100	100	95	100	100	100	80	10	100
Metolachlor + imazethapyr	2.0 + 0.094	90	90	80	100	100	80	100	100	100	90	100	100	100	80	10	100
Metribuzin + chlorimuron	0.43 + 0.043	10	0	50	80	80	80	100	100	100	90	90	100	50	50	30	60
Cinmethylin + metribuzin + chlorimuron	1.5 + 0.35 + 0.035	80	80	70	90	100	80	100	100	100	100	80	100	50	50	20	60
Cinmethylin + imazethapyr	1.5 + 0.094	100	100	90	95	100	95	100	100	100	100	100	100	90	90	10	100
Clomazone	1.0	100	95	70	85	100	50	50	95	100	100	85	90	50	10	30	70
Clomazone + metribuzin	1.0 + 0.25	100	100	95	100	100	80	100	100	100	100	100	100	50	10	40	100
Clomazone + imazethapyr	0.75 + 0.063	100	100	90	100	100	80	100	100	100	100	100	100	100	90	50	100
Metolachlor + metribuzin	1.64 + 0.36	90	100	80	100	90	30	100	100	100	100	100	100	80	20	20	100
PPG-1259	0.2	20	70	40	60	60	20	70	50	50	80	50	90	0	20	30	100
Atrazine + PPG-1259	1.0 + 0.2	40	80	60	90	80	20	100	100	100	100	100	100	90	90	0	100
Metolachlor + atrazine + PPG-1259	2.0 + 1.0 0.2	90	100	70	100	100	20	100	100	100	100	100	100	90	90	10	100
CGA-180937	2.5	90	90	60	95	100	20	100	0	100	80	100	0	0	0	10	100
CGA-180937 + atrazine	2.5 + 2.0	90	90	80	95	100	30	100	100	100	90	100	90	90	90	20	100
SC-0774 + R29148	1.0 + 0.166	90	90	70	100	90	80	95	100	100	100	100	100	70	30	10	100
SC-0774 + R29148 + atrazine	1.0 + 0.166 + 1.0	90	90	80	100	100	80	100	100	100	100	100	100	80	90	10	100

Multi-species evaluation with postemergence herbicides

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Jeffery C. West and Ann M. Carrick

Objective: The primary purpose of this study was to evaluate various herbicides, combinations, rates and adjuvants for post emergence use on major crops and weed species common to Illinois.

Procedure: The study was conducted in 1987 at the Northern Illinois Agronomy Research Center near DeKalb, Illinois on Drummer silty clay loam with 5 to 6% organic matter. The field is in a high state of fertility. The area was in corn the previous year and was moldboard plowed after harvest. On April 20, 1987 a field cultivator with harrow was used to prepare the seedbed and all crops and weeds seeded April 21. A conventional planter was used for corn, soybeans, sorghum, Austrian winter pea and Tangier flat pea. The wheat and oats were seeded with a grain drill. Cocklebur was planted in hills with a hand corn planter. the alfalfa, clover and remainder of the weed species were seeded with a Brillion seeder.

Postemergence herbicides were applied May 29 between 7:00 and 9:30 a.m. A tractor mounted compressed air spray unit was used with flat fan nozzle tips, a pressure of 25 psi and a speed of 3 mph to give 25 gpa.

Conditions on the day of herbicide application were:

Air temperature °F - Range for the day	62-84
Bare soil temperature @ 4 inches - Range for the day	66-69
Wind speed and direction	0-5 S
Sky - % cloud cover	0.0
Relative humidity - % - Range for the day	44-97

There was .38 inch of rain during the week prior to spraying and .64 inch during the week after. Ratings were made for corn, sorghum and soybeans on June 19 and the remainder were rated June 20-21. Ratings were visual estimates.

Growth stage of plants at time of postemergence application:

	Height - inches (free-standing)	Number of true leaves
Corn	9	8
Sorghum	6	5
Soybeans	5	3
Austrian winter pea	9.5	18
Tangier flat pea	8.5	23
Wheat	5	18
Oats	10.5	6
Alfalfa	4	9
Red clover	2.5	3
Giant foxtail	6	4
Yellow foxtail	3.5	4

Green foxtail	4	6
Large crabgrass	2.5	3
Barnyardgrass	5	4
Shattercane	4.25	8
Pigweed	1.5	6
Lambsquarters	1.75	9
Velvetleaf	2.0	5
Jimsonweed	3.5	5
Smartweed	4.0	6
Common ragweed	1.0	6
Common sunflower	2.75	6
Ivyleaf morningglory	2	4
Cocklebur	3.75	6

Results: Evaluating three rates each of imazaquin and imazethapyr indicated less injury to corn from imazethapyr but greater injury to sorghum. Although soybeans were tolerant of both, imazaquin injured Austrian winter pea and Tangier flat pea. Oat tolerance was similar for the two but wheat injury was greater with imazethapyr. Red clover was injured by imazaquin and alfalfa to a lesser degree. Both red clover and alfalfa displayed good tolerance to imazethapyr. Cocklebur control was slightly better with imazaquin but not complete. Control of annual grasses was better with imazethapyr but not complete except for shattercane. Pigweed control was similar with the two and quite good but both were poor on lambsquarters. Control of velvetleaf was best with imazethapyr but still only fair and the same was true for jimsonweed. Imazaquin appeared better but only fair on annual morningglory. Both were good on common sunflower at the highest rates but only fair on common ragweed.

UBI 1237 gave a good rate response with significant injury to nearly all crops. Most broadleaf weeds were controlled with 0.031 lb/A and grasses with 0.125. Soybeans and wheat had good tolerance to chlorimuron but corn was injured and sorghum more so. It provided good control of pigweed and cocklebur at the higher rate and controlled common sunflower but it was poor on grasses, lambsquarters and morningglory and only fair on velvetleaf. DPX-M6316 also did well on pigweed and was better than chlorimuron on lambsquarters but also did poorly on grass.

Clopyralid controlled several broadleaves, including cocklebur, common sunflower, common ragweed, jimsonweed, clover and alfalfa. The higher rate of bromoxynil was preferable and addition of atrazine improved control of several broadleaf weeds. Tridiphane plus atrazine gave good control of grass weeds and very good control of most broadleaf weeds. Although it has been promoted primarily for grass control, this treatment performs very well on broadleaves while allowing use of a modest rate of atrazine. Bentazon plus atrazine gave very good broadleaf weed control. Adding low rates of sethoxydim to bentazon plus atrazine did not give good grass control and caused corn injury. Main strengths of BAS-51400 were control of common ragweed and morningglory but it caused injury to both corn and soybeans.

Corn had good tolerance to PPG-1259 but weed control was poor. Corn had good tolerance to atrazine plus PPG-1259 and it gave fairly good control of some broadleaf weeds including pigweed, lambsquarters, morningglory and common ragweed. Adding 2,4-D or cyanazine to PPG-1259 improved control of most broadleaf weeds except for jimsonweed with 2,4-D, and pigweed with cyanazine.

SC-10051 gave good control of lambsquarters, velvetleaf, jimsonweed and common ragweed with addition of atrazine improving control of pigweed, morningglory and sunflower.

Comparing the 0.5 and 1.0 lb/A bentazon, the lower rate appeared adequate for cocklebur and smartweed but the higher rate had some advantage for velvetleaf, jimsonweed, sunflower, and lambsquarters while neither rate gave good control of pigweed or morningglory. The degree of bentazon injury to clover and alfalfa would appear to preclude use for weed control in establishing these legumes. Acifluorfen did fairly well on pigweed and common ragweed but was weak on cocklebur and did not give good control of velvetleaf and lambsquarters. Lactofen performed about the same with either COC or 28% UAN, giving good control of pigweed and common ragweed as well as being fairly good on velvetleaf and jimsonweed.

Applied postemergence, clomazone caused a little injury to corn, but not to soybeans and it suppressed most grasses with wheat being affected less than oats. It also suppressed most broadleaf weeds but had little effect on morningglory.

DPX-Y6202-31 killed corn, sorghum, wheat and oats and controlled grass weeds, but when chlorimuron was mixed with it, some antagonism was noted on some grass species, particularly oats. Sethoxydim performed better with Dash than with COC and there was no advantage for adding 28% UAN to Dash. Clethodim gave good control of grass weeds but was not quite as good as fluazifop-P on "volunteer" corn. Mixing reduced rates of sethoxydim and fluazifop-P gave control about equal to that of a higher rate of fluazifop-P alone except control of "volunteer" corn was reduced.

Conclusions: With better corn tolerance and the likelihood of less risk of residue with imazethapyr than with imazaquin plus some advantage on grass weeds and velvetleaf, imazethapyr appears to have some advantage over imazaquin. Results suggest reduced weed control with reduced rates below 0.125 imazaquin and 0.094 imazethapyr. Imazethapyr also shows promise for weed control in small seeded legumes. UBI 1237 has significant herbicidal activity but little selectivity except perhaps on wheat. Chlorimuron has good strength on pigweed, cocklebur, and sunflowers and the higher rate appears advantageous. DPX-M6316 has some advantage on lambsquarters. Metribuzin plus chlorimuron gave weed control somewhat similar to chlorimuron plus better control of lambsquarters but it caused significant soybean injury. Clopyralid should have potential for control of broadleaf weeds in small grain and previous studies indicated good control of alfalfa and clover for no-till corn. At another location where clopyralid and fluroxypyr were applied in 1986 at rates up to 0.5 and 1.0 lb/A respectively, there was no evidence of effect on subsequent crops in 1987. Bromoxynil plus atrazine and bentazon plus atrazine provide good broadleaf weed control with good corn tolerance. The advantage for tridiphane plus atrazine for improving grass control has been promoted but similar relationships appear to exist for broadleaf weeds and this may merit more attention for improving broadleaf control with reduced rates of atrazine reducing residue concerns. Use of sethoxydim for grass control in corn did not appear promising.

While degree of weed control with PPG-1259 alone did not appear promising, addition of 2,4-D, dicamba or a triazine improved the potential. SC-0051, primarily for control of broadleaf weeds in corn, showed potential and addition of atrazine was beneficial. The feasibility of reduced rates of bentazon depends on the target species. With significant differences in control of cocklebur, morningglory, velvetleaf, pigweed and lambsquarters between bentazon and acifluorfen, a combination of the two continues to be quite logical. Lactofen performed similarly with COC or 28% UAN. While a combination of DPX-Y6202-31 with chlorimuron may appear logical, some antagonism was suggested, even with a relatively high rate of DPX-Y6262-31. Dash appeared to be an improvement over COC but there was no advantage for adding 28% UAN to Dash. Clethodim performed well and fluazifop-P continued to show excellence for control of "volunteer corn." (Dep. of Agronomy, University of Illinois at Urbana-Champaign)

Table 1. Multi-species evaluation with postemergence herbicides. (Knake, Paul, Baird, West and Carrick)

Postemergence:	Rate lb/A	Corn injury %										% Grain sorghum injury
		Illinois Foundation Seeds					Pioneer					
		87451	87453	87454	87455	87456	3377	3352	3475	3540	3615	
Imazaquin + X-77	0.031	50	50	50	50	50	50	50	50	50	50	40
Imazaquin + X-77	0.063	70	70	70	70	70	70	70	70	60	70	40
Imazaquin + X-77	0.125	90	80	80	80	80	80	80	80	80	80	40
Imazethapyr + X-77	0.031	10	10	10	10	10	10	10	10	10	10	60
Imazethapyr + X-77	0.063	20	20	20	20	20	20	30	30	20	20	70
Imazethapyr + X-77	0.094	30	30	30	30	30	40	40	40	30	30	80
UBI 1237	0.031	40	40	40	40	40	40	40	40	40	40	40
UBI 1237	0.063	50	50	50	50	60	50	50	50	50	50	50
UBI 1237	0.125	70	70	70	70	70	70	70	70	70	70	70
Chlorimuron + X-77	0.008	10	10	10	10	10	10	10	20	10	10	40
Chlorimuron + X-77	0.012	20	20	20	20	30	20	20	20	20	20	50
DPX-M6316 +X-77	0.016	10	10	10	10	10	0	0	0	0	10	30
Metribuzin + chlorimuron + X-77	0.11 + 0.011	0	0	0	0	0	0	0	0	0	0	40
Clopyralid	0.125	0	0	0	0	0	0	0	0	0	0	40
Bromoxynil	0.25	0	0	0	0	0	0	0	0	0	0	0
Bromoxynil	0.38	0	0	0	0	0	0	0	0	0	0	0
Bromoxynil + atrazine	0.25 + 0.5	0	0	0	0	0	0	0	0	0	0	0
Bromoxynil + atrazine	0.38 + 0.75	0	0	0	0	0	0	0	0	0	0	0
Tridiphane + atrazine + COC	0.5 + 1.5	0	0	0	0	10	10	0	0	0	0	0
Bentazon + atrazine	0.5 + 0.5	0	0	0	0	0	0	0	0	0	0	0
Bentazon + atrazine	0.75 + 0.75	0	0	0	0	0	0	0	0	0	0	0
Sethoxydim + bentazon + atrazine	0.047 + 0.42 + 0.42	20	20	20	20	20	20	20	20	20	20	10
Sethoxydim + bentazon + atrazine	0.094 + 0.42 + 0.42	40	40	40	40	40	40	40	50	30	30	30
BAS-51400 + Dash	0.1 + 1 qt	40	40	40	40	40	50	50	40	40	40	10

Table 1 continued. Multi-species evaluation with postemergence herbicides. (Knake, Paul, Baird, West and Carrick)

		Corn injury %										% Grain
		Illinois Foundation Seeds					Pioneer					sorghum
Postemergence:	Rate lb/A	87451	87453	87454	87455	87456	3377	3352	3475	3540	3615	injury
PPG-1259	0.1	0	0	0	0	0	0	0	0	0	0	0
Atrazine + PPG-1259	0.5 + 0.1	0	0	0	0	0	0	0	0	0	0	10
PPG-1259 + 2,4-D LVE	0.1 + 0.25	0	0	0	0	0	0	0	0	0	0	0
PPG-1259 + dicamba	0.1 + 0.25	0	0	0	0	0	0	0	0	0	0	0
PPG-1259 + cyanazine	0.1 + 1.0	10	0	0	10	0	0	0	0	0	0	10
SC-0051 + Tween 20	0.5	0	0	0	0	0	0	0	0	0	0	20
SC-0051 + atrazine + Tween 20	0.5 + 1.0	0	0	0	0	0	0	0	0	0	0	20
Bentazon + COC	0.5	0	0	0	0	0	0	0	0	0	0	0
Bentazon + COC	1.0	0	0	0	0	0	0	0	0	0	0	0
Acifluorfen + COC	0.5	10	10	10	10	10	10	10	10	10	10	40
Lactofen + COC	0.2 + 1 pt	20	20	20	20	20	20	20	20	20	20	20
Lactofen + 28% UAN	0.2	20	20	20	20	10	10	20	20	20	20	20
Clomazone	1.0	20	20	20	20	20	20	20	20	20	20	40
DPX-Y6202-31 + COC	0.1	100	100	100	100	100	100	100	100	100	100	100
DPX-Y6202-31 + chlorimuron + COC	0.1 + 0.008	100	100	100	100	100	100	100	100	100	100	100
Sethoxydim + COC	0.15	70	70	70	70	70	70	70	70	70	70	80
Sethoxydim + COC + 28% UAN	0.15	80	80	80	80	80	80	80	80	80	80	90
Sethoxydim + Dash	0.15	90	90	90	90	90	90	90	90	90	90	100
Sethoxydim + Dash + 28% UAN	0.15	90	90	90	90	90	90	90	90	90	90	100
Fluazifop-P + COC	0.1875	100	100	100	100	100	100	100	100	100	100	100
Clethodim + COC	0.125	90	90	90	90	90	90	90	90	90	90	100
Fluazifop + sethoxydim + COC	0.063 + 0.063	90	90	90	90	90	90	90	90	90	90	100
Fluazifop + sethoxydim + COC	0.125 + 0.125	90	90	90	90	90	90	90	90	90	90	100

Unless otherwise indicated: X-77 and Tween 20 @ 0.25%; COC @ 1 qt/A; 28% UAN @ 1 gal/A; DASH @ 1 qt/A.

Table 2. Multi-species evaluation with postemergence herbicides. (Knake, Paul, Baird, West and Carrick)

Postemergence:	Rate (lb/A)	Soybean injury % BSR101	Carter	Cham-berlain	Pella	Preston	Crop injury % Austrian Winter Pea	Tangier Flat Pea	Wheat	Oats	Alfalfa	Red Clover
Imazaquin + X-77	0.031	0	0	0	0	0	20	20	30	50	0	20
Imazaquin + X-77	0.063	0	0	0	0	0	40	30	50	60	10	50
Imazaquin + X-77	0.125	0	0	0	0	0	60	40	70	70	20	80
Imazethapyr + X-77	0.031	0	0	0	0	0	0	0	60	50	0	0
Imazethapyr + X-77	0.063	0	0	0	0	0	0	0	70	60	0	0
Imazethapyr + X-77	0.094	0	0	0	0	0	0	0	80	70	0	0
UBI 1237	0.031	50	50	50	50	50	70	50	0	20	60	80
UBI 1237	0.063	60	60	60	60	60	80	70	5	30	70	90
UBI 1237	0.125	80	80	80	80	90	90	80	20	50	90	100
Chlorimuron + X-77	0.008	0	0	0	0	0	50	50	0	40	10	30
Chlorimuron + X-77	0.012	0	0	0	0	0	60	70	0	50	20	50
DPX-M6316 + X-77	0.016	20	20	20	20	20	40	40	0	0	30	90
Metribuzin + chlorimuron + X-77	0.11 + 0.011	50	50	50	50	50	70	60	20	50	30	50
Clopyralid	0.125	80	80	80	80	90	90	100	0	0	90	100
Bromoxynil	0.25	40	40	40	40	40	40	60	0	0	5	10
Bromoxynil	0.38	50	50	50	50	50	50	80	0	0	10	20
Bromoxynil + atrazine	0.25 + 0.5	80	80	85	90	90	90	90	10	10	60	100
Bromoxynil + atrazine	0.38 + 0.75	100	100	100	100	100	100	100	20	20	70	100
Tridiphane + atrazine + COC	0.5 + 1.5	100	100	100	100	100	100	90	40	30	80	100
Bentazon + atrazine	0.5 + 0.5	80	80	80	80	80	70	40	5	10	40	60
Bentazon + atrazine	0.75 + 0.75	90	90	90	90	90	80	50	10	20	50	70
Sethoxydim + bentazon + atrazine	0.047 + 0.42 + 0.42	70	70	70	70	70	50	30	20	10	20	60
Sethoxydim + bentazon + atrazine	0.094 + 0.42 + 0.42	70	70	70	70	70	60	30	40	50	20	60
BAS-51400 + Dash	0.1 + 1 qt	40	40	40	40	40	30	60	0	20	20	80

Table 2 continued. Multi-species evaluation with postemergence herbicides. (Knake, Paul, Baird, West and Carrick)

Postemergence:	Rate (lb/A)	Soybean injury % BSR101	Carter	Cham-berlain	Pella	Preston	Crop injury % Austrian Winter Pea	Tangier Flat Pea	Wheat	Oats	Alfalfa	Red Clover
PPG-1259	0.1	40	40	40	40	40	40	10	0	0	0	10
Atrazine + PPG-1259	0.5 + 0.1	80	80	80	80	80	50	40	10	20	20	100
PPG-1259 + 2,4-D LVE	0.1 + 0.25	90	90	90	90	90	90	70	10	5	90	95
PPG-1259 + dicamba	0.1 + 0.25	90	90	90	90	90	80	80	0	0	70	100
PPG-1259 + cyanazine	0.1 + 1.0	80	80	80	80	80	60	20	0	10	30	100
SC-0051 + Tween 20	0.5	80	80	80	80	80	100	100	10	10	90	100
SC-0051 + atrazine + Tween 20	0.5 + 1.0	100	100	100	100	90	100	100	20	15	100	100
Bentazon + COC	0.5	0	0	0	0	0	30	0	0	0	30	100
Bentazon + COC	1.0	0	0	0	0	0	40	0	0	0	40	100
Acifluorfen + COC	0.5	10	10	10	10	10	30	20	0	10	30	90
Lactofen + COC	0.2 + 1 pt	10	10	10	10	10	40	40	0	0	50	90
Lactofen + 28% UAN	0.2	10	10	10	10	10	40	40	0	0	40	90
Clomazone	1.0	0	0	0	0	0	30	10	10	50	20	70
DPX-Y6202-31 + COC	0.1	0	0	0	0	0	0	0	100	100	0	0
DPX-Y6202-31 + chlorimuron + COC	0.1 + 0.008	0	0	0	0	0	70	60	100	80	10	80
Sethoxydim + COC	0.15	0	0	0	0	0	0	0	60	90	0	0
Sethoxydim + COC + 28% UAN	0.15	0	0	0	0	0	0	0	75	97	0	0
Sethoxydim + Dash	0.15	0	0	0	0	0	0	0	90	100	0	0
Sethoxydim + Dash + 28% UAN	0.15	0	0	0	0	0	0	0	85	100	0	0
Fluazifop-P + COC	0.1875	0	0	0	0	0	0	0	100	100	0	0
Clethodim + COC	0.125	0	0	0	0	0	0	0	90	100	0	0
Fluazifop + sethoxydim + COC	0.063 + 0.063	0	0	0	0	0	0	0	90	90	0	0
Fluazifop + sethoxydim + COC	0.125 + 0.125	0	0	0	0	0	0	0	100	100	0	0

Unless otherwise indicated: X-77 and Tween 20 @ 0.25%; COC @ 1 qt/A; 28% UAN 1 gal/A.

Table 3. Multi-species evaluation with postemergence herbicides. (Knake, Paul, Baird, West and Carrick)

Postemergence	Rate lb/A	Weed Control %														
		Gift	Yeft	Grft	Lacq	Bygr	Shca	Rrpw	Colq	Pesw	Vele	Jiwe	Corw	Cosf	Ilmg	Cocb
	(lb/A)	(%)														
Imazaquin + X-77	0.031	10	30	20	20	10	20	80	0	40	0	0	10	80	20	50
Imazaquin + X-77	0.063	20	40	40	40	50	40	90	0	50	5	10	30	90	30	70
Imazaquin + X-77	0.125	30	50	60	50	80	60	100	0	60	10	20	70	100	40	90
Imazethapyr + X-77	0.031	50	60	30	20	70	80	80	0	50	20	20	10	60	0	40
Imazethapyr + X-77	0.063	70	70	50	50	80	90	90	0	60	30	30	40	80	0	60
Imazethapyr + X-77	0.094	80	80	70	70	90	100	100	10	70	40	40	80	100	0	80
UBI 1237	0.031	60	80	50	60	50	70	100	100	100	100	100	90	100	100	50
UBI 1237	0.063	70	90	80	70	60	80	100	100	100	100	100	100	100	100	70
UBI 1237	0.125	90	100	100	80	80	100	100	100	100	100	100	100	100	100	100
Chlorimuron + X-77	0.008	10	10	20	0	30	40	85	0	50	40	20	60	90	0	80
Chlorimuron + X-77	0.012	20	20	30	0	40	60	100	0	70	40	40	75	90	0	90
DPX-M6316 + X-77	0.016	10	20	0	0	20	20	100	100	100	70	0	10	100	0	70
Metribuzin + chlorimuron + X-77	0.11 + 0.011	10	10	40	40	30	40	85	90	90	60	30	80	80	0	60
Clopyralid	0.125	10	0	0	0	30	30	10	70	10	5	90	100	100	70	90
Bromoxynil	0.25	0	0	0	0	0	0	80	90	80	50	20	90	100	90	70
Bromoxynil	0.38	0	0	0	0	10	0	90	100	90	70	30	100	100	100	100
Bromoxynil + atrazine	0.25 + 0.5	0	0	10	5	20	0	100	100	100	90	40	100	100	100	100
Bromoxynil + atrazine	0.38 + 0.75	10	10	10	10	20	10	100	100	100	100	100	100	100	100	100
Tridiphane + atrazine + COC	0.5 + 1.5	80	80	50	80	50	10	100	100	100	100	97	100	100	100	85
Bentazon + atrazine	0.5 + 0.5	10	10	10	5	0	0	100	100	100	90	60	90	100	95	100
Bentazon + atrazine	0.75 + 0.75	20	20	20	10	10	10	100	100	100	90	80	100	100	100	100
Sethoxydim + bentazon + atrazine	0.047 + 0.42 + 0.42	30	30	40	30	0	30	100	100	100	80	50	90	100	90	80
Sethoxydim + bentazon + atrazine	0.094 + 0.42 + 0.42	50	50	60	50	50	40	100	100	100	80	50	90	100	90	80
BAS-51400 + Dash	0.1 + 1 qt	20	10	40	50	40	20	0	40	0	40	80	100	30	100	30

Table 3 continued. Multi-species evaluation with postemergence herbicides. (Knake, Paul, Baird, West and Carrick)

Postemergence	Rate lb/A	Weed Control % Gift	Yeft	Grft	Lacq	Bygr	Shca	Rrpw	Colq	Pesw	Vele	Jiwe	Corw	Cosf	Ilmg	Cocb
	(lb/A)	(%)														
PPG-1259	0.1	30	30	20	10	0	0	0	0	100	0	20	0	0	40	50
Atrazine + PPG-1259	0.5 + 0.1	40	40	30	20	10	0	80	90	100	60	60	100	90	90	100
PPG-1259 + 2,4-D LVE	0.1 + 0.25	30	30	30	20	10	10	90	100	100	100	30	100	100	100	100
PPG-1259 + dicamba	0.1 + 0.25	30	30	30	20	0	0	50	100	100	80	100	100	100	100	100
PPG-1259 + cyanazine	0.1 + 1.0	40	40	40	60	10	0	20	100	100	100	90	100	100	100	100
SC-0051 + tween 20	0.5	0	0	50	100	90	40	10	100	100	100	100	100	80	80	100
SC-0051 + atrazine + tween 20	0.5 + 1.0	10	10	70	100	100	40	100	100	100	100	100	100	100	100	100
Bentazon + COC	0.5	0	0	0	0	0	0	10	70	100	90	80	100	70	20	90
Bentazon + COC	1.0	0	0	0	0	0	0	30	80	100	100	100	100	80	40	90
Acifluorfen + COC	0.5	10	0	20	20	30	80	80	0	100	10	60	90	40	60	50
Lactofen + COC	0.2 + 1 pt	0	0	10	10	50	40	100	0	90	75	80	100	80	60	100
Lactofen + 28% UAN	0.2	0	0	10	10	30	20	100	0	100	80	75	100	60	50	100
Clomazone	1.0	60	50	20	50	50	50	0	60	50	50	50	90	60	0	80
DPX-Y6202-31 + COC	0.1	100	100	95	90	100	100	0	0	0	0	0	0	0	0	0
DPX-Y6202-31 + chlorimuron + COC	0.1 + 0.008	97	90	90	90	100	100	90	0	100	30	10	60	10	0	90
Sethoxydim + COC	0.15	80	100	90	90	100	100	0	0	0	0	0	0	0	0	0
Sethoxydim + COC + 28% UAN	0.15	90	100	95	100	100	100	0	0	0	0	0	0	0	0	0
Sethoxydim + Dash	0.15	95	100	100	100	100	100	0	0	0	0	0	0	0	0	0
Sethoxydim + Dash + 28% UAN	0.15	90	100	100	100	100	100	0	0	0	0	0	0	0	0	0
Fluazifop-P + COC	0.1875	90	100	95	100	100	100	0	0	0	0	0	0	0	0	0
Clethodim + COC	0.125	90	100	95	100	100	100	0	0	0	0	0	0	0	0	0
Fluazifop + sethoxydim + COC	0.063 + 0.063	90	100	95	100	100	100	0	0	0	0	0	0	0	0	0
Fluazifop + sethoxydim + COC	0.125 + 0.125	95	100	100	100	100	100	0	0	0	0	0	0	0	0	0

Unless otherwise indicated: X-77 and Tween 20 @ 0.25%; COC @ 1 qt/A; 28% UAN 1 gal/A. COC - crop oil concentrate - petroleum oil additive with 17% emulsifier. UAN - a 28% mixture of urea and ammonium nitrate. Dash - an adjuvant formulated by BASF.

Postemergence herbicide treatments for corn

Knake, Ellery L., Lyle E. Paul, and David R. Lindgren

Objective: The purpose of this study was to evaluate several current and new experimental herbicides primarily for control of broadleaf weeds in corn.

Procedure: The study was established in 1987 at the Northern Illinois Agronomy Research Center near DeKalb on area 1400N. The soil is Drummer silty clay loam with 5 to 6% organic matter. The experimental design was a randomized complete block with treatments replicated four times and individual plots 10 x 50 ft. The previous fall 120 lb/A P_2O_5 and 120 lb/A K_2O were applied, and in the spring 140 lb/A nitrogen as anhydrous ammonia. The corn hybrid 'Pioneer 3475' was planted on April 29 in 30-inch rows for a population of 28,100 plants per acre. The field had been moldboard plowed and a disk with harrow used once on April 20 and twice on April 29. On April 30, 2 lb/A metolachlor was applied to the entire plot area primarily for the control of annual grass weeds since the treatments to be applied were primarily for broadleaf weeds. This worked well, leaving predominantly common lambsquarters but also some velvetleaf and Pennsylvania smartweed, and a small amount of giant foxtail.

The postemergence treatments were applied May 28 between 8:30 and 10:00 a.m. with a tractor mounted compressed air sprayer with flat fan nozzle tips, 30 psi pressure and 3 mph to give 25 gpa. Corn was 8 inches tall free-standing and 11 inches with leaf extended and had 5 leaves. Common lambsquarters was one inch tall with 8 leaves and Pennsylvania smartweed was 1.5 inches tall with 4 leaves. Soil was moist but not wet. Air temperature ranged from 64 to 85°F and bare soil temperature at 4 inches from 66 to 69°F. Wind was 2 to 8 mph from the south. The sky had 10% cloud cover and relative humidity ranged from 43 to 95%. There was 0.2 inch of rain the previous week and 0.73 inch the following week. Weed control ratings were made by visual estimate on June 3, corn heights were measured June 30 and corn stalk diameters measured July 1, at the center of the fourth internode.

Results: Dicamba, bromoxynil, or bentazon plus atrazine all gave excellent control of annual broadleaf weeds. Bentazon plus atrazine performed well regardless of which adjuvant was used. Cyanazine gave good control of common lambsquarters and Pennsylvania smartweed but left just a little velvetleaf. PPG 1259 plus atrazine performed well. DPX-M6316 was the weakest of the treatments on common lambsquarters, however, the treated lambsquarters were only about 1 to 3 inches at rating compared to untreated lambsquarters about 18 inches tall. The higher rate of DPX-M6316 gave better control than the lower rate and addition of cyanazine helped significantly.

The 2 lb/A rate of metolachlor on the entire area gave about 90% control of giant foxtail and some of the treatments appeared to give a little additional giant foxtail control. The bromoxynil treatments caused some necrosis of corn leaf tissue soon after treatment but by the time of rating, little effect was evident. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Postemergence weed control in corn. (Knake, Paul, and Lindgren)

Treatment	Rate	Control 6/22/87 Colq	Pesw	Vele	Gift	Corn Height July 2	Corn Yield Bu/A
	(lb/A)	---------	(%)		--------	(inches)	
Dicamba + atrazine	0.48 + 0.92	100	100	98	97	83.5	176.4
Bromoxynil + atrazine	0.25 + 0.50	100	100	100	95	80.8	167.8
Bromoxynil + atrazine	0.38 + 0.75	100	100	100	98	81.7	168.8
Bentazon + atrazine + COC	0.5 + 0.5 + 1 qt	100	100	98	95	82.1	167.5
Bentazon + atrazine + 28% UAN	0.5 + 0.5 + 1 gal	100	100	97	96	83.8	173.1
Bentazon + atrazine + Dash	0.5 + 0.5 + 1 qt	100	100	95	93	85.6	174.1
Cyanazine + X-77	2.0 + 0.25% v/v	100	100	93	99	80.4	170.9
Atrazine + PPG 1259	0.5 + 0.1	98	100	95	95	80.7	168.4
DPX-M6316 + X-77	0.008 + 0.25% v/v	80	100	92	88	84.7	177.1
DPX-M6316 + X-77	0.016 + 0.25% v/v	88	100	95	89	84.3	172.3
DPX-M6316 + cyanazine + X-77	0.016 + 1.5 + 0.25% v/v	100	100	99	100	79.2	169.4
Check		0	0	0	90	77.9	150.7
LSD (0.05)		2.3	0.76	6.3	5.5	3.6	8.7

Metolachlor @ 2 lb/A on entire area, including check.
X-77 surfactant.
COC - crop oil concentrate - a petroleum oil additive with 17% emulsifier.
UAN - A 28% mixture of urea and ammonium nitrate.

Tridiphane combinations for postemergence weed control in corn

Knake, Ellery L., Lyle E. Paul, and David R. Lindgren

Objective: The primary purpose of this study was to evaluate tridiphane in combination with atrazine and cyanazine.

Procedure: The study was established at the Northern Illinois Agronomy Research Center near DeKalb on Drummer silty clay loam with 5 to 6% organic matter. Fertilizer consisted of 120 lb/A each of P_2O_5 and K_2O applied the previous fall and 240 lb/A nitrogen as ammonium nitrate applied after planting. Pioneer 3377 corn was planted in untilled soybean stubble on April 29 in 30 inch rows for a population of 28,100 plants per acre. The corn was planted about 5 inches to the side of the old soybean rows. Plots were not cultivated. A randomized complete block design was used with treatments replicated four times and individual plots 10 ft x 60 ft.

Herbicide treatments were applied May 13 between 1:30 and 2:30 p.m. with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi and 3 mph to give 25 gpa broadcast. The 90DF formulations of atrazine and cyanazine were used. Crop oil concentrate was used at 1 qt/A and X-77 at 0.25% v/v. The plot area had a dense infestation of giant foxtail and velvetleaf. At time of spraying the giant foxtail was 1 to 2 inches tall with 3 to 5 leaves and velvetleaf was 0.5 to 1.5 inches tall and was from cotyledon to 3 true leaf stage. Corn was 2.5 inches tall free standing and 4 inches with leaf extended and had 3 leaves. Weed control ratings were made June 3, corn heights measured June 30, and corn stem diameter at the center of the fourth internode on July 1.

Air temperature on May 13 ranged from 36 to 76°F and bare soil temperature at 4 inches 61 to 64°F. Wind was south at 5 to 10 mph and the sky had 10% cloud cover. Relative humidity was 48 to 86%. There was no rain the previous week and soil was dry but there was 3.21 inches the following week.

Results: No significant corn injury was noted from any of the treatments. Tridiphane plus atrazine or cyanazine or a combination of atrazine and cyanazine gave very good control of giant foxtail with control rated 95% or better. These same treatments also gave good control of velvetleaf averaging 94% or better. Cyanazine alone gave only 80% control of giant foxtail and 82% control of velvetleaf. Tridiphane plus bentazon and atrazine at 0.5 lb/A of each gave only 70% control of giant foxtail. This combination controlled the first flush of velvetleaf but a second flush appeared. There was also some Pennsylvania smartweed, redroot pigweed, common lambsquarters, and common ragweed in the untreated check plots but all herbicide treatments controlled these species. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Tridiphane combinations for postemergence weed control in corn. (Knake, Paul, and Lindgren).

Treatment	Rate	Control 6/3 Gift	Vele	Rrpw	Colq	Pesw	Corw	Corn Stalk Height 6/30	Corn Stalk Diameter 7/1	Corn Yield Bu/A
	(lb/A)	-------------- (%)					---------------	(inches)	(inches)	
Tridiphane + atrazine + COC	0.5 + 1.5 + 1 qt	98	94	100	100	100	100	86.1	0.94	173.9
Tridiphane + cyanazine	0.5 + 1.6	99	97	100	100	100	100	83.6	0.97	165.6
Tridiphane + atrazine + cyanazine	0.5 + 0.8 + 0.8	95	100	100	100	100	100	85.5	0.97	164.6
Tridiphane + bentazon + atrazine + COC	0.5 + 0.5 0.5 + 1 qt	79	60	100	100	100	100	81.6	0.92	147.8
Cyanazine + X-77	2.0 + 0.25%	80	82	100	100	100	100	84.6	0.96	169.1
Check-Untreated		0	0	0	0	100	100	71.9	0.67	74.1
LSD (0.05)		7.2	15.6	0.05	0.05	0.05	0.05	3.5	0.06	20.4

X-77 surfactant.
COC - crop oil concentrate - a petroleum oil additive with 17% emulsifier.

Evaluation of soybean postemergence herbicide combinations for control of redroot pigweed and velvetleaf

Knake, Ellery L., Lyle E. Paul, Ann M. Carrick, and Dale L. Baird

Objective: The purpose of this study was to delineate rate response of redroot pigweed and velvetleaf to several postemergence herbicides.

Prodcedures: The study was established at the Northern Illinois Agronomy Research Center near DeKalb on Drummer silty clay loam with 5 to 6% organic matter. The previous fall, 120 lb/A each of P_2O_5 and K_2O was applied. The area was moldboard plowed and on April 20 was tilled once with a tandem disk with harrow. On April 29 the same implement was used twice and then redroot pigweed and velvetleaf seeded in separate strips with a Brillion seeder. Postemergence herbicides were applied June 4 between 10:00 and 12:00 a.m. with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi and 3 mph to give 25 gpa broadcast. Redroot pigweed was one inch tall with 4 leaves and velvetleaf one inch with 3 leaves. On June 4 air temperature ranged from 48 to 70°F and bare soil temperature at 4 inches 67 to 69°F. Soil was moist. Wind was 2 to 3 mph WNW and sky was clear. Relative humidity ranged from 41 to 93%. There was 0.73 inch of rain the previous week and 1.96 inches the following week. A cross-hatch design was used with bentazon, acifluorfen, chlorimuron, lactofen and fomesafen applied in an E-W direction and the other treatments in a N-S direction. The E-W treatments were applied first and then the N-S treatments. The herbicides were not tank-mixed as combinations but applied separately. No crop was planted in the area. Weed control ratings were made June 21 by visual estimate. A later rating would likely have indicated more complete control for some treatments.

Results: Imazaquin and imazethapyr gave similar redroot pigweed control but imazethapyr appeared slightly more active. Chloramben gave partial control of redroot pigweed with a definite rate response. DPX-M6316 was more active than chlorimuron on redroot pigweed and DPX-M6316 gave excellent control at 0.125 oz/A. Results indicated the weakness of bentazon on redroot pigweed but control was improved with addition of an imidazolinone or sulfonylurea herbicide. Field observations suggested the possibility of bentazon having an antagonistic effect on control of redroot pigweed with chlorimuron but this was not confirmed. There appeared to be little or no advantage for adding acifluorfen to the imidazolinones or sulfonylureas. Lactofen gave good control of redroot pigweed.

For velvetleaf, the imidazolinones did not give complete control but imazethapyr was more effective than imazaquin. Chloramben gave good control of velvetleaf postemergence but with a definite rate response indicating the need for 3 lb/A for best control. The addition of other herbicides to chloramben did not change the level of control. DPX-M6316 was more effective than chlorimuron on velvetleaf. There appeared to be little potential for the other herbicides tested to improve control of velvetleaf with the sulfonylureas. Acifluorfen appeared to have an antagonistic effect on control of velvetleaf with chlorimuron or DPX-M6316. The weakness of acifluorfen and fomesafen on velvetleaf was indicated. (Dep. of Agronomy, University of Illinois, Urbana)

Table 1. Percent control of pigweed with herbicide combinations. (Knake, Paul, Carrick, and Baird)

	Rate	Check	Bentazon 0.5 lb/A	Acifluorfen 0.25 lb/A	Chlorimuron 0.063 oz/A	Lactofen 0.15 lb/A	Fomesafen 0.188 lb/A
	(lb/A)						
Imazaquin	0.042	80	80	80	85	100	80
Imazaquin	0.083	85	85	90	90	100	85
Imazaquin	0.125	90	90	100	95	100	90
Imazethapyr	0.031	85	90	85	90	100	85
Imazethapyr	0.063	90	95	90	95	100	90
Imazethapyr	0.094	95	100	95	100	100	95
Chloramben	0.75	40	50	40	60	90	40
Chloramben	1.5	60	70	70	80	100	60
Chloramben	3.0	80	90	100	100	100	80
	(oz/A)						
Chlorimuron	0.063	30	--	50	60	100	30
Chlorimuron	0.125	60	--	70	70	100	60
Chlorimuron	0.188	80	--	80	80	100	80
DPX-M6316	0.063	80	80	80	80	100	80
DPX-M6316	0.083	90	90	90	90	100	90
DPX-M6316	0.125	100	100	100	100	100	100
Check		0	0	40	30	80	--

Table 2. Percent control of velvetleaf with herbicide combinations. (Knake, Paul, Carrick, and Baird)

	Rate	Check	Bentazon 0.5 lb/A	Acifluorfen 0.25 lb/A	Chlorimuron 0.063 oz/A	Lactofen 0.15 lb/A	Fomesafen 0.188 lb/A
	(lb/A)						
Imazaquin	0.042	20	40	20	30	35	35
Imazaquin	0.083	30	50	30	40	40	40
Imazaquin	0.125	40	60	40	50	50	50
Imazethapyr	0.031	50	70	50	55	60	55
Imazethapyr	0.063	55	75	55	60	70	60
Imazethapyr	0.094	60	80	60	70	80	70
Chloramben	0.75	30	30	30	30	30	30
Chloramben	1.5	60	60	60	60	60	60
Chloramben	3.0	90	90	90	90	90	90
	(oz/A)						
Chlorimuron	0.063	30	40	10	40	35	30
Chlorimuron	0.125	40	40	15	50	45	40
Chlorimuron	0.188	50	35	20	60	55	50
DPX-M6316	0.063	50	60	30	60	55	50
DPX-M6316	0.083	70	80	60	80	75	70
DPX-M6316	0.125	90	90	80	90	90	90
Check		0	40	0	30	30	30

Herbicides for establishing alfalfa

Knake, Ellery L., Lyle E. Paul, Ann M. Carrick, and Dale L. Baird

Objective: The primary purpose of this study was to evaluate several herbicides for weed control for establishing alfalfa.

Procedure: This study was established in 1987 at the Northern Illinois Agronomy Research Center near DeKalb on a field with Drummer and Harpster silty clay loam having about 5% organic matter and pH of 7.0 to 8.0. Fertilizer applied the previous fall after corn harvest was 120 lb/A each of P_2O_5 and K_2O. The field was moldboard plowed and on April 20 a field cultivator with harrow was used once. On April 28 a tandem disk with harrow was used twice for herbicide incorporation and final seedbed preparation. The PPI herbicides were applied April 28 between 11:00 and 11:30 a.m. and incorporated immediately. The preemergence treatments were applied between 5:30 and 6:00 p.m. after seeding the alfalfa with a Brillion seeder. A tractor mounted compressed air spray unit was used with flat fan nozzle tips, 28 psi, and 3 mph to give 25 gpa broadcast. Treatments were replicated four times in a randomized complete block design with individual plots 10 x 60 ft. Crop injury and weed control ratings were made June 22 by visual estimate.

On April 28 air temperature ranged from 37 to 64°F and bare soil at 4 inches 54 to 57°F. The soil was moist. Wind was WNW at 5 mph and the sky had 5% cloud cover. Relative humidity was 35 to 70%. There was 1.53 inches of rain the previous week and 0.49 inch the following week.

Results: Alfalfa exhibited good tolerance to EPTC while the dinitroanilines caused slight injury and cinmethylin significant injury. All herbicides gave excellent control of giant foxtail. Partial control of velvetleaf and of Venice mallow was achieved and EPTC helped to control yellow nutsedge. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Herbicides for establishing alfalfa. (Knake, Paul, Carrick, and Baird)

	Rate	Alfalfa Injury	Percent Control			
			Giant Foxtail	Velvetleaf	Venice Mallow	Yellow Nutsedge
	(lb/A)	(%)				
Check-Untreated		0	0	0	0	0
EPTC + dichlormid	3.0	0	100	73	73	63
Trifluralin	1.0	9	100	10	48	0
Ethalfluralin	1.0	7	100	8	50	0
Pendimethalin	1.0	3	100	38	20	0
Cinmethylin	1.5	23	100	83	23	13
Cinmethylin	3.0	43	100	93	25	30
LSD (0.05)		11.0	0.4	9.4	12.0	6.7

Time and method of herbicide application for a reduced tillage cropping sequence

Knake, Ellery L., Lyle E. Paul, Ann M. Carrick, David R. Lindgren, and David R. Pike.

Objective: The purpose of this study was to compare PPI, preemergence and postemergence applications for weed control in corn and soybeans with various tillage systems.

Procedure: This long-term study is located at the Northern Illinois Agronomy Research Center near DeKalb on Drummer silty clay loam with 5 to 6% organic matter. The study includes two areas planted to corn, two to soybeans and one to clover. One corn area follows soybeans and tillage consisted of disking the soybean stubble twice. The other corn area is no-till corn following red clover sod. For soybeans following corn, one area was chisel plowed and disked three times while the other was not chiseled and only disked once. Fertility consisted of 120 lb/A each of P_2O_5 and K_2O for the entire area and 240 lb/A nitrogen as ammonium nitrate for corn. 'Pioneer 3475' corn was planted April 29, in 30 inch rows for a corn plant population of 28,100 plants per acre. 'Pioneer 9271' soybeans were planted the same day at a rate of 55 lb/A. Medium red clover was also seeded the same day with a Brillion seeder.

All PPI treatments were applied between 8:00 and 9:00 a.m. on April 29 and incorporated with a tandem disk with a harrow. Preemergence treatments were applied between 10:00 and 11:00 a.m. the same day. The only significant rainfall between April 24 and May 17 was 0.49 inch on May 2. By May 15 the clover into which corn was planted was only controlled about 70% from the triazine treatments so 0.25 lb/A dicamba was applied to all of the no-till corn in clover sod. Attributed to the dry weather, the surface applied treatment of alachlor plus atrazine had given only fair control so a postemergence treatment of 0.5 lb/A tridiphane plus 1.5 lb/A atrazine and 1 qt/A COC was added on May 15. The corn plots with only postemergence herbicides were treated 9:30 to 10:30 a.m. on May 15. All other postemergence treatments were applied May 28 and May 29 with the herbicides intended for broadleaf weed control being applied 7:45 to 8:15 a.m. on May 28 and those for grass control at 10:15 to 11:00 a.m. on May 29. On May 28 rain started at 3:50 p.m. and 0.08 inch fell.

A tractor mounted compressed air spray unit with flat fan nozzle tips was used for all herbicide treatments. Weed control ratings were made June 22 by visual estimate. The plots were not cultivated.

Conditions at time of herbicide application:

	April 29	May 15	May 28	May 29
Air temperature - F° Range for day	42-79	41-66	64-85	62-84
Bare soil temperature @ 4" - F° - Range for day	55-58	61-64	66-69	66-69
Wind speed (mph) and direction	5-10 W	5-10 ENE	0-2 S	5-10 S
Sky - % cloud cover	5	0	0	20
Relative humidity % - Range for day	38-60	39-86	43-95	44-97
Rainfall previous week - inches	1.00	0.00	0.49	0.37
Rainfall previous 2 weeks - inches	1.53	0.49	3.70	3.78
Rainfall following week - inches	0.49	3.41	0.65	0.64

Growth stage:	ht in	lvs	ht in	lvs	ht in	lvs	ht in	lvs
Corn			3.0	3			7.0	7
Soybeans (trifoliolates)					4.0	1		
Clover (trifoliolates)	7.0				1.5	2		
Giant foxtail			1.5	3	3.0	5		
Redroot pigweed			0.25	2	1.0	4		
Lambsquarters					1.5	6		
Velvetleaf			0.5	1	1.5	4		
Pennsylvania smartweed			1.0	3	2.0	5		

Results: With soybeans most treatments gave good control of broadleaf weeds. However, weakness of lactofen and chlorimuron on common lambsquarters was noted. With relatively dry conditions, PPI and postemergence gave better control of giant foxtail than did preemergence herbicides. Reduced tillage and only one pass incorporation was associated with less weed control. Applying lactofen only about one day prior to application of sethoxydim may have decreased effectiveness of sethoxydim. Postemergence treatments were advantageous for volunteer corn control.

Where tillage was used for corn, broadleaf control was excellent for all treatments. The PPI treatment with EPTC and atrazine gave very good early control but a little giant foxtail was evident later. With the dry conditions, the preemergence treatment of alachlor plus atrazine did not give good control early but the subsequent application of tridiphane complemented the earlier treatment to give excellent giant foxtail control. While bentazon plus atrazine combined with tridiphane did not give good control in another study where only 0.5 lb/A atrazine was used, the combination gave excellent control in this study where atrazine totaled 2.0 lb/A.

For corn in clover sod, the triazines gave only about 70% control of clover and may have performed better with greater moisture. However, a subsequent postemergence application of 0.25 lb/A of dicamba as well as additional moisture resulted in excellent control of the clover. All ratios of atrazine/cyanazine performed relatively well but as atrazine was decreased and cyanazine increased, a little less redroot pigweed control was noted but perhaps slightly better grass control. Corn grew well in the killed clover sod but was only 80 inches tall compared to 90 inches for corn with tillage when measurements were taken July 2.

For establishing clover, EPTC and trifluralin each aided in weed control with little or no significant clover injury. However, fluazifop-P gave excellent grass control. Bromoxynil gave good control of broadleaf weeds except redroot pigweed, but caused severe injury of the clover. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Time and method of herbicide application for a reduced tillage cropping sequence. (Knake, Paul, Carrick, Lindgren, and Pike)

Crop 1987	Crop 1986	Tillage 1987	Type of Application	Herbicides	Rate	Control Cift	Control Rrpw	Control Colq	Control Vele	Control Pesw	Yield Bu/A
					(lb/A)	-----------	(%)			-----------	
Soybeans	Corn	Chisel, disk 3X	PPI	Trifluralin + clomazone + metribuzin	0.84 + 0.63 + 0.38	92	97	100	100	100	39
			PRE	Metolachlor + metribuzin	2 + 0.45	80	98	100	99	98	26
			POST	Fluazifop-P + COC + 28% UAN	0.188 + 1 qt + 2 qt	99	99	97	92	99	45
				Bentazon + acifluorfen + 28% UAN	0.5 + 0.38 + 1 pt						
Soybeans	Corn	Disk 1X	PPI	Ethalfluralin + metribuzin	1.12 + 0.5	75	99	100	100	99	20
			PRE	Cinmethylin + metribuzin + chlorimuron	1.5 + 0.43 + 0.043	77	98	100	100	97	29
			POST	Sethoxydim + Dash + 28% UAN	0.188 + 1 qt + 2 qt	77	100	77	93	77	23
				Lactofen + chlorimuron + X-77	0.15 + 0.008 + 0.25%						
Corn	Soybeans	Disk 2X	PPI	EPTC + dichlormid + atrazine	4 + 2	93	100	100	100	100	180
			PRE-POST	Alachlor + atrazine - Tridiphane + atrazine + COC	2.5 + 1.5 - 0.5 + 1.5 + 1 qt	99	100	100	100	100	170
			POST	Tridiphane + atrazine + COC + bentazon + atrazine + COC + 28% UAN	0.5 + 1.5 + COC + 0.5 + 0.5 + 1 qt + 2 qt	99	100	100	100	100	172
Corn	Clover	None	PRE	Atrazine + cyanazine	2 + 2	90	93	100	97	100	171
			PRE	Atrazine + cyanazine	1.5 + 3	95	93	100	100	100	156
			PRE	Atrazine + cyanazine	1.25 + 3.75	93	80	100	100	100	169
Clover	Soybeans	Disk 2X	PPI-POST	EPTC + dichlormid - 2,4-DB	3 + 1	63	70	100	97	90	
			PPI-POST	Trifluralin - 2,4-DB	1 + 1	70	90	100	90	77	
			POST	Fluazifop-P + COC	0.188 + 1 qt	100	0	100	100	100	
				Bromoxynil	0.25						
LSD (0.05)	Soybeans					15.9	5.1	19.0	8.5	19.1	13.6
	Corn					4.5	4.3	0.1	4.4	0.1	29.4
	Clover					43.3	26.0	0.1	8.7	37.8	

X-77 surfactant. COC - crop oil concentrate - a petroleum oil additive with 17% emulsifier. UAN - a 28% mixture of urea and ammonium nitrate.

Response of four corn hybrids to reduced rates of clomazone, imazaquin, imazethapyr, and chlorimuron

Curran, William S. and Lyle E. Paul

Objective: The objective of this experiment was to examine differences in corn hybrid susceptibility to four new or experimental soybean herbicides. These herbicides, all used in soybeans, may persist in the soil and potentially injure a subsequent corn crop.

Procedure: Herbicides were applied preplant and incorporated on May 8, 1987, to a Drummer silty clay loam with a soil pH of 6.2 and 6.0% organic matter content. Corn planting was delayed three weeds after herbicide application due to wet soil conditions. The previous fall, 120 lb/A each P_2O_5 and K_2O were applied to the plot. The field was moldboard plowed and spring tilled with a tandem disk and harrow. Herbicides were applied at three rates using a CO_2 pressurized hand-held sprayer in 20 gpa water with 8002 nozzle tips. Alachlor 4 EC at 3.0 lb/A was broadcast over the plot area to insure adequate weed control. Plot size measured 7.5 by 30 ft in a randomized complete block design with three replications. Visual injury ratings were taken four weeks after crop emergence when corn was in the 5 leaf stage of growth.

Results: Little injury occurred with any of the herbicides. All four hybrids responded similarly to clomazone and imazethapyr. 'Pioneer 3377' displayed the greatest injury from imazaquin and chlorimuron. Varietal injury and differences between hybrids was greatest with chlorimuron. Crop response might have been greater without the planting delay. (Dep. of Agronomy, University of Illinois at Urbana-Champaign)

Table. Response of four corn hybrids to reduced rates of clomazone, imaqaquin imagethapry, and chlorimuron. Curran and Paul

Herbicide	Rate	Pioneer 3377	Pioneer 3475	Pioneer 3615	DeKalb-Pfizer Genetics 636
		Corn variety			
	lb/A	Injury (%)			
Clomazone	0.125	1	1	0	0
Clomazone	0.25	0	0	0	0
Clomazone	0.50	0	1	0	1
Imazaquin	0.015	0	2	1	1
Imazaquin	0.031	1	1	1	1
Imazaquin	0.062	2	7	1	2
Imazethapyr	0.012	0	2	0	1
Imazethapyr	0.023	0	1	1	1
Imazethapyr	0.047	0	2	2	2
Chlorimuron	0.005	1	2	2	1
Chlorimuron	0.010	2	6	2	3*
Chlorimuron	0.020	4*	16*	8*	4*
Check		0	0	0	0
LSD (0.05)		3	10	5	2

NORTHEASTERN ILLINOIS AGRONOMY RESEARCH CENTER - ELWOOD

Postemergence broadleaf weed control for soybeans

Knake, Ellery L., Lyle E. Paul, and Dale E. Harshbarger

Objective: The primary purpose of this study was to determine optimum rates of the imidazolinone and sulfonylurea herbicides for postemergence control of cocklebur, ivyleaf morningglory and velvetleaf in soybeans. In addition, various rates, additives, and combinations for bentazon were evaluated for improving efficacy and broadening spectrum of control. Acifluorfen, lactofen, and fomesafen were also included for evaluation.

Procedure: The study was established in 1987 at the Northeastern Illinois Agronomy Research Center near Elwood. The soil is predominantly Andres silt loam with some Drummer silty clay loam with 2 to 5% organic matter. A randomized complete block design with four replications was used. Individual plots were 10 x 60 ft. The field had been in soybeans the previous year and the weed species established in previous years so that there were very few broadleaf weeds other than cocklebur, ivyleaf morningglory and velvetleaf. Some tall morningglory was also present and it responded in a similar manner as ivyleaf morningglory. A large tandem disk was used on June 8 followed by a smaller tandem disk with harrow and on June 9 a field cultivator with harrow was used for final seedbed preparation. 'Wells II' soybeans were seeded in 30 inch rows at a rate of 55 lb/A on June 9. On May 27, 0.38 lb/A of paraquat was applied to control existing vegetation and 3 lb/A of alachlor for grass control. On June 10, an additional 2 lb/A of alachlor was applied preemergence to supplement the earlier treatment that had been applied prior to tillage.

Postemergence treatments were applied June 24 from 10:00 a.m. to 12:00 noon with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi and 3 mph to give 25 gpa broadcast. Ratings were made July 9 by visual estimate.

Conditions on the day of spraying, June 24, were:

Air temperature - F° - Range for day	64-87
Bare soil temperature @ 4" F° - Range for day	69-92
Wind speed (mph) and direction	1-2 S
Sky - % cloud cover	10%
Relative humidity % - Range for day	44-96
Most recent rain prior to spraying	6/21 - 0.29 inch
Most recent rain following spraying	6/26 - 0.60 inch
Rainfall during 2 week period prior to spraying - inches	0.46
Rainfall during week after spraying - inches	1.45

Growth stage	Height inches	Number of leaves
Soybeans	3.5	1
Cocklebur	1.0-2.5	2-4
Ivyleaf morningglory	1.0-2.0	1-3
Velvetleaf	0.5-1.0	1-3

Results: Imazaquin and imazethapyr gave similar control of cocklebur at equivalent rates and control was good at the higher rates. Control of ivyleaf morningglory was significantly better with imazethapyr than with imazaquin but not complete. Control of velvetleaf was significantly better with imazethapyr than with imazaquin and quite good.

With the sulfonylureas, cocklebur control was good with slightly better control with chlorimuron than with DPX-M6316. Control of ivyleaf morningglory was only fair, with chlorimuron better than DPX-M6316. Velvetleaf control was relatively good with the highest rate of chlorimuron and it was better than DPX-M6316.

Bentazon gave good control of cocklebur and fairly good control of velvetleaf but not very good control of morningglory. Effectiveness of Dash was equal to or slightly better than COC. The 28% UAN was about equal to COC for morningglory and velvetleaf but appeared to be less effective for cocklebur. Addition of BAS-51400 plus BAS 09002S to bentazon or addition of acifluorfen to bentazon improved control of morningglory but not of common cocklebur or velvetleaf. However, control of morningglory with any of the bentazon combinations was only fair. Aciflurofen gave fair control of morningglory. Lactofen gave relatively good control of common cocklebur and velvetleaf, and fair control of morningglory spp. Fomesafen gave good control of common cocklebur but was less effective for velvetleaf.

Soybean tolerance was rated good for the imidazolinones and bentazon. The sulfonylureas appeared to cause very slight crop injury. Lactofen gave the most soybean injury and acifluorfen and fomesafen caused some but none of the injury was rated over 10%.

Conclusions: Although some control of cocklebur can be achieved with reduced rates of the imidazolinones, best control was with the higher rates. Imazaquin and imazethapyr gave about equal control for cocklebur but imazethapyr was significantly better on morningglory and velvetleaf. Comparing imazaquin, imazethapyr and chlorimuron, all three gve good control of cocklebur. Imazethapyr and chlorimuron gave the best control of velvetleaf. Although control of morningglory was not complete, imazethapyr rated highest. DPX-M6316 did not appear to have any advantage over chlorimuron for control of cocklebur, ivyleaf morningglory or velvetleaf. With bentazon, the 1.0 lb/A rate appeared to have no advantage over 0.5 lb/A for cocklebur control but did for velvetleaf. Dash performed as well or better than COC. In this study, the 28% UAN at 2qt/A had no advantage over COC for morningglory or velvetleaf and was less effective than COC or Dash for cocklebur. BAS-51400 or acifluorfen added to bentazon improved control of morningglory. Although lactofen caused some soybean injury, it appeared temporary and relatively good control of weeds was achieved with it. Fomesafen gave good control of cocklebur with slight temporary injury to soybeans. The imidazolinones had the advantage of some soil residual activity for control of the second flush of cocklebur and morningglory. A similar observation was made for fomesafen on cocklebur. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Postemergence broadleaf weed control for soybeans. (Knake, Paul, and Harshbarger)

Treatment	Rate	Soybean Injury	Control Cocb	Control Ilmg	Control Vele	Soybean Yield	Soybean Yield as % of check
	(lb/A)	(%)	(%)	(%)	(%)	(bu/A)	
Imazaquin + X-77	0.031	0	78	10	15	7.5	84
Imazaquin + X-77	0.063	0	86	20	25	11.3	127
Imazaquin + X-77	0.094	0	95	30	35	20.2	226
Imazaquin + X-77	0.125	0	99	50	45	15.5	174
Imazethapyr + X-77	0.031	0	71	30	86	6.2	70
Imazethapyr + X-77	0.063	0	86	50	92	10.7	120
Imazethapyr + X-77	0.094	0	94	80	99	13.1	147
Chlorimuron + X-77	0.008	2.5	89	58	85	10.5	117
Chlorimuron + X-77	0.012	5.0	93	68	97	13.5	151
DPX-M6316 + X-77	0.008	1.3	78	33	76	8.1	91
DPX-M6316 + X-77	0.016	3.8	86	53	80	11.3	127
Bentazon + COC	1.0 + 1 qt	0	86	35	88	19.2	215
Bentazon + COC	0.5 + 1 qt	0	93	30	79	14.6	164
Bentazon + Dash	0.5 + 1 qt	0	94	40	86	8.6	96
Bentazon + 28% UAN	0.5 + 2 qt	0	76	30	78	6.5	73
Bentazon + BAS-51400 + BAS-09002S	0.5 + 0.025 + 1qt	5	82	53	79	6.7	75
Bentazon + acifluorfen + Dash	0.5 + 0.25 + 1 qt	5	86	55	78	9.5	107
Acifluorfen + COC	0.5 + 1 qt	8.8	91	73	68	12.6	141
Lactofen + COC	0.2 + 1 qt	10	95	85	90	9.0	101
Fomesafen + COC	0.25 + 1 qt	6.3	95	55	48	18.5	207
Weedy check		0	0	0	0	8.9	
LSD (0.05)		1.4	7.5	5.0	6.5	8.4	

X-77 @ 0.25% v/v.
COC - crop oil concentrate - a petroleum oil additive with 17% emulsifier.
Dash - an adjuvant from BASF.
UAN - a mixture of urea and ammonium nitrate.
BAS-09002S - an adjuvant from BASF, also referred to as Lutensol.

Control of wheat and rye cover crops for no-till corn and soybeans

Knake, Ellery L., Lyle E. Paul, Joe P. Roth, and Dale E. Harshbarger

Objective: The primary purpose of this study was to evaluate various herbicide treatments for controlling wheat and rye where these are used as soil-conserving cover crops. The information would also be helpful where wheat or rye intended for small grain production have been partially damaged by weather conditions and the farmer decides on an alternative of no-tilling corn or soybeans in the field.

Procedure: This study was established at the Northeastern Illinois Agronomy Research Center near Elwood on a field with Drummer silty clay loam and Andres silt loam with 2 to 5% organic matter. Wheat and rye were seeded in blocks on October 21, 1986.

Herbicides were applied April 25 between 8:00 and 10:00 a.m. A tractor mounted compressed air sprayer with flat fan nozzle tips, 30 psi, and 30 mph was used to give 25 gpa broadcast. Wheat was 7 inches with 6 tillers and about 5 leaves per tiller. Rye was 10 inches with 6 tillers and about 4 leaves per tiller. For corn, alachlor at 3 lb/A and 1 qt/A crop oil concentrate were added to each treatment, including the check. For soybeans, metolachlor at 2.5 lb/A, metribuzin at 0.5 lb/A and 1 qt/A crop oil concentrate were added to each treatment, including the check. There was 0.34 inch of rain on April 22 and 0.19 on April 23 prior to spraying on April 25. After spraying, the only significant rainfall until May 18 was 0.20 inch on May 3 and 0.15 inch on May 12. Randomized complete block designs with four replications were used for corn and for soybeans. Control ratings were made June 14 by visual estimate.

Air temperature on April 25 ranged from 36 to 59°F and bare soil at 4 inches 46 to 61°F. Wind was east at 3 mph and the sky clear. Relative humidity was 28 to 64% and the soil was moist. There was 0.53 inch of rain the previous week and none the following week but 0.2 inch during the second week following treatment.

'Pioneer 3540' corn was planted on May 5 in 30 inch rows for a population of 26,600 plants per acre. 'Wells II' soybeans were planted on May 14 at 55 lb/A in 30 inch rows. No tillage or cultivation was used on the plots.

Results: For corn, response of wheat and rye to the herbicides was similar. Atrazine gave better control than cyanazine but control was not considered adequate with either one alone. Combinations of atrazine plus cyanazine gave fair control with some advantage for the higher rates and higher ratio of atrazine to cyanazine. Paraquat plus atrazine gave good control and cyanazine had no advantage over atrazine for the combinations with paraquat. Glyphosate plus atrazine gave excellent control of wheat and good control of rye. With the glyphosate combinations, cyanazine had no advantage over atrazine. Dalapon alone at 3 lb/A did not give adequate control. Combining dalapon with tridiphane and atrazine gave fair control.

Most treatments for soybeans, except paraquat, gave better control of wheat than of rye. Control with dalapon was not considered adequate.

Glyphosate was most effective at the 1.0 lb/A rate. However, a lower rate may be adequate for wheat if complete control is not considered necessary. HOE-39866 was less effective than glyphosate. Paraquat at 0.5 lb/A gave about 80% control and was not as effective as glyphosate at 1.0 lb/A. Fluazifop-P gave good control of wheat but was less effective on rye. The same was true for DPX-Y6202-31 which was more effective than quizalofop. Haloxyfop also gave good control of wheat but was less effective on rye. Control with sethoxydim, fenoxaprop and clethodim was not considered adequate at rates used. The addition of crop oil concentrate to all treatments likely contributed to success. Addition of alachlor for all corn treatments and metolachlor plus metribuzin for soybeans helped to achieve good control of annual grass and broadleaf weeds. (Dep. of Agronomy, University of Illinois, Urbana) able 1. Control of wheat and rye cover for no-till corn. (Knake, Paul, Roth, and Harshbarger)

reatment	Rate	Control Wheat	Control Rye	Corn Yield Wheat	Corn Yield Rye
	(lb/A)	(%)	(%)	(bu/A)	(bu/A)
alapon	3.0	40	10	62.8	26.9
trazine	1.5	30	43	70.4	87.2
trazine	3.0	65	69	108.7	94.6
yanazine	2.0	18	23	62.7	74.1
yanazine	4.0	35	54	79.4	109.5
trazine + cyanazine	1.5 + 1.5	55	51	92.4	99.2
trazine + cyanazine	2.0 + 2.0	65	80	102.3	119.3
trazine + cyanazine	1.5 + 3.0	65	79	100.7	109.6
trazine + cyanazine	1.0 + 3.0	54	75	81.3	100.6
araquat + atrazine	0.4 + 2.0	90	89	113.0	132.3
araquat + atrazine	0.5 + 2.0	95	94	124.7	112.7
araquat + cyanazine	0.5 + 3.0	86	86	115.9	107.0
araquat + cyanazine + atrazine	0.25 + 3.0 + 1.0	82	88	114.2	124.2
lyphosate + atrazine	1.6 + 2.0	100	94	122.2	125.8
lyphosate + cyanazine + atrazine	1.0 + 3.0 + 1.0	96	91	117.4	124.1
alapon + tridiphane + atrazine	2.0 + 0.5 + 2.0	76	66	94.0	96.5
heck		0	0	32.9	32.3
SD (0.05)		10.3	6.5	23.3	29.9

rop oil concentrate - a petroleum oil additive with 17% emulsifier was added to each reatment @ 1 qt/A.

Table 2. Control of wheat and rye cover for no-till soybeans. (Knake, Paul, Roth, and Harshbarger)

Treatment	Rate	Control Wheat	Control Rye	Soybean Yield Wheat	Soybean Yield Rye
	(lb/A)	(%)	(%)	(bu/A)	(bu/A)
Check		0	0	22.9	29.6
Dalapon	2.0	28	5	25.7	29.3
Dalapon	3.0	40	11	27.8	27.4
Dalapon	4.0	58	15	30.7	29.2
Glyphosate	0.5	84	50	35.8	33.6
Glyphosate	0.75	89	63	34.5	34.0
Glyphosate	1.0	99	89	41.7	42.0
HOE-39866	0.5	35	20	21.7	25.7
HOE-39866	0.75	74	30	36.6	28.6
HOE-39866	1.0	79	40	29.4	26.8
Paraquat	0.25	65	70	22.7	35.5
Paraquat	0.5	83	80	37.9	33.3
Sethoxydim	0.25	40	31	22.5	25.2
Fluazifop-P	0.25	94	53	36.9	27.4
Quizalofop (DPX-Y6202)	0.125	84	45	38.1	34.8
DPX-Y6202-31 (Resolved isomer)	0.1	95	60	35.4	36.8
Haloxyfop	0.125	91	53	37.8	32.2
Fenoxaprop	0.125	10	10	23.5	29.2
Clethodim	0.125	48	28	29.3	26.8
Fluazifop-P + glyphosate	0.125 + 0.5	84	58	33.9	34.0
Quizalofop + glyphosate	0.063 + 0.5	93	59	35.5	38.8
Quizalofop + fluazifop-P	0.063 + 0.125	91	40	35.0	34.4
LSD (0.05)		9.1	7.3	9.2	8.4

Crop oil concentrate - a petroleum oil additive with 17% emulsifier was added to each treatment @ 1 qt/A.

Herbicides for legume establishment on land set-aside from production

Knake, Ellery L., Lyle E. Paul, Barbara J. Hook,
Dale E. Harshbarger, and David R. Pike

Objective: The primary purpose of this study was to evaluate several herbicides for crop tolerance and weed control with several legume species that have potential for use on land set-aside from production as well as for forage production.

Procedure: This study was established in 1987 at the Northeastern Illinois Agronomy Research Center near Elwood on Drummer silty clay loam with about 5% organic matter. The field had been in no-till soybeans the previous year and was fall plowed. The field was worked once with a tandem disk and harrow on April 21 and twice on April 25. Legumes were seeded on April 25 with a Brillion seeder. The preplant incorporated herbicides were applied between 1:30 and 2:30 p.m. on April 25 prior to disking. The EPTC + dichlormid and cinmethylin treatments were applied to the surface after seeding.

A tractor mounted compressed air spray unit was used with flat fan nozzle tips, 30 psi, and 3 mph to give 25 gpa broadcast. The EPTC + dichlormid impregnated on 13-13-13 dry fertilizer was applied at 350 lb/A by hand on May 7. A randomized complete block design with three replications was used for herbicide treatments across the legume species seeded in strips each 16 ft wide. Crop injury and weed control ratings were made by visual estimate on June 5.

On April 25, air temperature ranged from 36 to 59°F and bare soil temperature at 4 inches was 46 to 61°F. Relative humidity was 28 to 64% and soil was moist. Wind was ESE at 3 mph and sky was clear. There was 0.53 inch of rain the previous week, none the following week and 0.12 inch the second week after spraying.

Results: Incorporated treatments of trifluralin, ethalfluralin and EPTC all gave excellent control of giant foxtail. EPTC had a significant advantage for control of yellow nutsedge and velvetleaf. Alfalfa tolerance appeared better with pendimethalin and EPTC than with trifluralin and ethalfluralin, however, alfalfa injury did not exceed 10%. There was also slight clover injury from the incorporated treatments but it did not exceed 10%. EPTC + dichlormid in encapsulated form sprayed on the soil surface gave only fair control and a little injury to some of the clovers. EPTC + dichlormid impregnated on dry fertilizer and applied to the surface gave good control of giant foxtail but was not as effective as incorporated EPTC on nutsedge and velvetleaf. Although alfalfa had good tolerance to the impregnated material some of the clovers appeared to be injured. Cinmethylin gave good control of foxtail without significant injury to alfalfa in this trial. However, most of the clovers were injured significantly by cinmethylin. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Herbicides for legume establishment. (Knake, Paul, Hook, Harshbarger, and Pike)

Treatment	Rate	Crop Injury					Control		
		Alfalfa	Red Clover	Alsike	Ladino	Sweet Clover	Gift	Vele	Yens
	(lb/A)	(%)							
PPI									
Trifluralin	1.0	10	7	3	3	3	100	47	0
Ethalfluralin	1.0	10	3	3	10	7	100	43	0
Pendimethalin	1.0	0	7	3	3	3	87	40	0
EPTC	3.0	0	0	10	10	10	100	93	97
Preemergence									
EPTC + dichlormid 3S (encapsulated)	3.0	0	0	7	23	13	77	40	5
EPTC + dichlormid 6.7E (impregnated on dry fertilizer)	3.0	0	13	6	80	40	93	40	5
Cinmethylin	1.5	0	80	90	87	30	83	60	0
Check-Untreated	0	0	0	0	0	0	0	0	0
LSD (0.05)		0.1	9.7	23.0	15.3	15.7	9.0	12.8	3.6

Corn and soybeans no-till in oats mulch

Knake, Ellery L., Lyle E. Paul, Barbara J. Hook, and Dale E. Harshbarger

Objective: There are currently over 3 million acres of land in Illinois set-aside from production. Many farmers seed oats on this land. Some allow the oats to mature and reseed or some disk the oats into the soil after they mature to provide weed control as well as some soil coverage of the oats seed. This second crop of oats from the dense reseeding can form a dense cover which helps to control weeds and protect the soil. If undisturbed, the oats is killed by the cold of winter and the dead mulch left to protect the soil. The purpose of this study was to evaluate the potential for no-till corn or soybeans in oats mulch in the spring.

Procedure: This study was established at the Northern Illinois Agronomy Research Center near Elwood on Andres and associated silt loam with about 2% organic matter. Oats was seeded in the spring of 1986 and left to reseed when mature. On April 25, 1987, 200 lb/A P_2O_5 and 120 lb/A K_2O was applied. Because of an infestation of dandelions, 0.5 lb/A 2,4-D LVE was applied April 23 and again on May 1 to the entire area. Pioneer 3540 corn was planted May 5 in 30 inch rows to give a population of 26,600 plants per acre. Terbufos soil insecticide was applied at 1.3 lb/A at planting. On May 14, Wells II soybeans were planted at 55 lb/A on the west portion. Due to the presence of some annual grass, 0.25 lb/A sethoxydim was applied to the soybean area on June 12 and 1.5 lb/A cyanazine plus 0.25% v/v X-77 to the corn plots. Randomized complete block designs, each with four replications, were used. Individual plots were 10 x 50 ft. Ratings were made by visual estimate on June 5.

Herbicide treatments were applied April 25 between 4:00 and 5:00 p.m. with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi and 3 mph to give 25 gpa broadcast. All treatments were surface applied with no incorporation. The EPTC + dichlormid impregnated on dry 13-13-13 fertilizer at a rate of 350 lb/A was applied by hand May 7. On April 25 air temperature ranged from 36 to 59°F and bare soil at 4 inches was 46 to 61°F. Relative humidity was 28 to 64% and soil was moist. Wind was ESE at 3 mph and sky was clear. There was 0.53 inch of rain the previous week, and 0.2 inch on the eighth day after spraying.

Results: Annual broadleaf weed control was good with all treatments in both corn and soybeans. The major grass infestation which was not anticipated was fall panicum. The EPTC + dichlormid and atrazine impregnated on dry fertilizer treatment and the 3 lb/A cyanazine plus 1.0 lb/A atrazine treatment each gave excellent grass control. The other EPTC + dichlormid formulations with atrazine were less satisfactory.

For soybeans metribuzin plus chlorimuron performed very well under these no-till conditions for annual broadleaf weed control. Alachlor 4E and MT formulations gave similar results with the MT being at least as good or slightly better than the 4E. Metolachlor performed very well and may have had some advantage for longer residual. Cinmethylin in conjunction with metribuzin plus chlorimuron also gave good control. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Weed control for no-till corn and soybeans in oats mulch following set-aside. (Knake, Paul, Hook, and Harshbarger)

Treatment	Rate	Fapa Control	Vema Control	Yield
	(lb/A)	(%)	(%)	(bu/A)
Corn				
EPTC/dichlormid 6.7E + atrazine	4.0 + 1.5	78	100	112.2
EPTC/dichlormid 3S + atrazine	4.0 + 1.5	53	100	116.1
EPTC/dichlormid + atrazine (impregnated)	4.0 + 1.5	100	100	119.8
Dicamba + atrazine	0.48 + 0.92	48	100	101.4
Bromoxynil + atrazine	0.38 + 0.75	43	100	107.5
Bentazon + atrazine + COC	0.75 + 0.75 + 1 qt	38	100	117.5
Cyanazine + atrazine + COC	3.0 + 1.0 + 1 qt	100	100	134.1
Check		0	0	62.4
LSD (0.05)		12.3	0.05	19.3
Soybeans				
Alachlor 4E + metribuzin + chlorimuron	2.5 + 0.35 + 0.035	85	100	47.3
Alachlor MT + metribuzin + chlorimuron	2.5 + 0.35 + 0.035	88	100	46.4
Metolachlor + metribuzin + chlorimuron	2.0 + 0.35 + 0.035	93	100	43.7
Cinmethylin + metribuzin + chlorimuron	1.5 + 0.35 + 0.035	90	100	47.4
Check		0	0	35.0
LSD (0.05)		7.4	0.05	6.6

COC - crop oil concentrate - a petroleum oil additive with 17% emulsifier.

Fall panicum control

Knake, Ellery L., Lyle E. Paul, Dale E. Harshbarger, and David R. Pike

Objective: The primary purpose of this study was to evaluate herbicide treatments for control of fall panicum with various tillage systems.

Procedure: This long-term study is located at the Northeastern Illinois Agronomy Research Center near Elwood on Blount silt loam with about 2% organic matter. The tillage treatments have been used continuously on the same plots for about 13 years. The tillage treatments are randomized and replicated three times with the tillage plots each split for the four herbicide treatments. Corn has been grown continuously. Main plots for tillage were 20 x 120 ft and subplots for herbicide treatments were 10 x 60 ft.

In 1987 the corn stalks from 1986 were shredded on March 20. The plots designated for moldboard plowing were plowed on March 24 and the plots to be disked were disked on March 27. The plowed plots were disked and harrowed on April 7 followed by a field cultivator plus harrow on April 29. Ammonium nitrate was applied uniformly to all plots on April 28 to give 240 lb/A nitrogen. On April 30, Pioneer 3540 corn was planted in 30-inch rows to give 26,600 plants per acre and terbufos soil insecticide was applied at 1.3 lb/A.

Preemergence herbicide treatments were surface applied on May 1 between 8:30 and 10:30 a.m. Postemergence herbicide treatments were applied on May 30 between 7:00 and 8:00 a.m. A tractor mounted compressed air spray unit was used with flat fan nozzle tips, 30 psi, and 3 mph to give 25 gpa. Since some of the preemergence treatments were designed primarily for control of grass weeds and the postemergence treatments were delayed due to wet weather, some broadleaf weeds grew beyond the ideal stage for cyanazine so 0.5 lb/A dicamba was applied uniformly to all plots on June 1. This, plus the cyanazine treatments, controlled the broadleaf weeds quite well on all plots, however, some corn injury did occur. The MT formulation of alachlor and the 90DF formulation of cyanazine were used. All postemergence treatments for fall panicum included X-77 at 0.25% v/v.

At the time of the preemergence treatments, there was very little weed growth except for a few Pennsylvania smartweed on some plots with reduced or no-till. It was evident on the continuous no-till plots that the rather dense mulch of crop residue helped to give some early weed control. At the time of the postemergence treatments on May 30, corn was 8 inches tall with 5 leaves and fall panicum was from 0.25 inch with 2 leaves to 4 inches tall with 4 leaves. Pennsylvania smartweed and common lambsquarters were up to 12 inches tall and velvetleaf up to 5.5 inches tall. The first rain following postemergence application was 0.15 inch the next day and then there was rainfall on each of the next three days totaling 1.90 inches. Fall panicum control ratings were made on June 26 by visual estimate.

When the preemergence treatments were applied on May 1, air temperature ranged from 38 to 86°F and bare soil temperature 52 to 77°F. Relative humidity was 24 to 67% and soil was dry. Wind was ESE at 3 mph and the sky had 10% cloud cover. There had been 0.19 inch of rain 8 days earlier and 0.34 the day before that. There was 0.2 inch on May 3. At time of postemergence application on May 30, air temperature was 67 to 91°F and bare soil temperature at 4 inches was 69 to 86°F. Relative humidity was 36 to 96% and soil was moist. Wind was WSW at 0 to 2 mph and there was 80% cloud cover. There was 0.28 inch of rain the previous week, 3.44 inches during the previous two weeks and 1.85 inches the week following application.

Results: Where tillage included use of a moldboard plow or disk in 1987, control of fall panicum was excellent with all herbicide treatments. Where a plow was used in 1986 and no tillage was used in 1987, control was also excellent. Where a disk was used in 1986 and no tillage in 1987, control still averaged 98%. However, where zero tillage had been used continuously, control averaged only 67% and was similar for all herbicide treatments. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Fall panicum control. (Knake, Paul, Harshbarger, and Pike)

Herbicides PRE	Herbicides POST	Rate PRE	Rate POST	Control of Fall Panicum: Plow '86 & '87	Disk '86 & '87	Zero '86 Plow '87	Zero '86 Disk '87	Plow '86 Zero '87	Disk '86 Zero '87	Zero '86 & '87	Mean
		- (lb/A) -		(%)							
Alachlor	cyanazine + tridiphane	3	2.0 0.5	100	100	100	100	100	99	65	95
Alachlor	cyanazine + pendimethalin	3	2.0 1.0	100	100	100	100	100	99	64	95
Simazine	cyanazine + tridiphane	2	2.0 0.5	100	100	100	100	100	99	69	95
Simazine	cyanazine + pendimethalin	2	2.0 1.0	100	100	100	100	100	95	69	95
Mean				100	100	100	100	100	98	67	95
				% Corn Injury							
Alachlor	cyanazine + tridiphane	3	2.0 0.5	5	6	3	10	17	10	8	8
Alachlor	cyanazine + pendimethalin	3	2.0 1.0	10	3	13	3	10	10	15	9
Simazine	cyanazine + tridiphane	2	2.0 0.5	15	0	5	13	10	2	3	7
Simazine	cyanazine + pendimethalin	2	2.0 1.0	0	12	43	10	0	7	6	11
Mean				8	5	16	9	9	7	8	9

X-77 surfactant @ 0.25% v/v added to each postemergence treatment.

Fall Panicum
1987
Corn Yields Bu/A

Tillage 1986	Tillage 1987	Pre: Alachlor / Post: Tridiphane Cyanazine	Pre: Alachlor / Post: Cyanazine Pendimethalin	Pre: Simazine / Post: Tridiphane Cyanazine	Pre: Simazine / Post: Cyanazine Pendimethalin	Mean
Plow	Plow	100	127	125	117	117
Disk	Disk	134	129	126	130	130
0	Plow	136	137	131	95	125
0	Disk	127	123	142	121	128
Plow	0	132	129	137	135	133
Disk	0	139	132	141	133	136
0	0	143	136	133	138	138
Mean		130	130	134	124	130

LSD.05 Tillage 7.9
Herbicide 6.0

Rates Lbs/A a.i. Alachlor - 3 Cyanazine - 2 Tridiphane - 0.5
Simazine - 2 Pendimethalin - 1

Effect of pH, tillage and chlorimuron rate on residual effect on corn

Knake, Ellery L., Lyle E. Paul, Dale E. Harshbarger, and David R. Pike

Objective: The primary purpose of this study was to evaluate the potential for chlorimuron applied for soybeans to carryover and affect corn the following year. Variables include soil pH, tillage and chlorimuron rate.

Procedure: This study was established at the Northeastern Illinois Agronomy Research Center near Elwood on soil ranging from Drummer silty clay loam to Andres silt loam and organic matter of 2 to 5%. Corn and soybeans are alternated each year. Tillage for all soybeans after corn consisted of chisel plowing the corn stalks in the fall (November 22, 1986) and in the spring using a tandem disk with harrow (May 14, 1987) and then a field cultivator with harrow (May 14). For corn after soybeans, three tillage systems are compared: (1) chisel (November 26, 1986) plus tandem disk and harrow (May 4, 1987), (2) large disk (May 30, 1987) followed by a smaller tandem disk and harrow (May 4), and (3) no-till corn into soybean stubble. Main plots with tillage are replicated three times and subplots have soil pH adjusted to 5.5, 6.5 and 7.5. The soybean plots are further divided for four rates of chlorimuron which was applied on May 6 in 1986. Tillage plots are 40 x 240 ft, pH plots 40 x 80 ft and herbicide rate plots 10 x 80 ft.

All plots received 120 lb/A each of P_2O_5 and K_2O in November 1986. For corn, anhydrous ammonia was applied April 27, 1987 to give 240 lb/A nitrogen. 'Pioneer 3475' corn was planted on May 4, 1987 to give 26,600 plants per acre. 'BSR 201' soybeans were planted on May 14, 1987 at 55 lb/A. On May 7, 1987 3 lb/A alachlor plus 2 lb/A atrazine was applied to all corn plots. Chlorimuron was applied between 12:00 noon and 2:00 p.m. on May 14 with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi and 3 mph to give 25 gpa. Chlorimuron rates were 0, 0.5, 1.0 and 1.5 oz/A a.i. In addition, all soybean plots were treated with 1 lb/A bentazon plus 1 qt/A COC on June 10 and 0.25 lb/A fluazifop-P plus 1 qt/A COC on June 19. The corn was cultivated but not the soybeans. Hand weeding was done as needed to maintain all plots weed free. The highest chlorimuron rate is approximately two to three times the rate as would be used in soil-applied treatments. Corn plant populations were counted in 10 feet of row per plot on June 10, 1987. Corn heights and diameter of stem at the center of the 4th internode were measured on July 8, 1987. Tassel emergence and silk emergence were determined July 10, 1987. Weed control ratings were made on June 5 by visual estimate prior to the June 10 bentazon application.

When chlorimuron was applied May 14, 1987, air temperature ranged from 54 to 83°F and bare soil temperature at 4 inches from 54 to 79°F. Relative humidity was 34 to 92% and soil was dry. Wind was SSW at 5 to 10 mph and there was 80% cloud cover. There was 0.15 inch of rain the previous week and 3 inches the following week.

Results: Tillage, pH, or herbicide rate had little significant effect on corn plant population. For corn height, pH or herbicide rate had little effect where no tillage was used after soybeans for corn. However, where the disk or chisel plus disk was used after soybeans for corn, the corn was shorter and stem diameter tended to be smaller as herbicide rate was increased, particularly at pH 7.5. The higher herbicide rates applied to the higher soil pH plots also delayed emergence of tassels and silks of corn. Degree of weed control improved as herbicide rate and pH were increased. There was no significant effect on soybean yields attributed to soil pH or chlorimuron. There was little significant effect on corn yield attributed to soil pH or chlorimuron except at the high pH and rate that exceeded label guidelines. (Dep. of Agronomy, University of Illinois, Urbana)

Table 1. Effect of pH, tillage and chlorimuron rate on residual effect on corn. (Knake, Paul, Harshbarger, and Pike)

Chlorimuron 1986	0-Till			Disk			Chisel		
	pH			pH			pH		
	5.5	6.5	7.5	5.5	6.5	7.5	5.5	6.5	7.5
(oz/A)									
	Corn Height - Inches 7/8/87								
0	93	95	94	95	93	93	99	98	97
0.5	95	92	92	95	96	91	95	92	91
1.0	93	91	93	94	95	86	90	93	88
1.5	92	91	93	91	94	82	95	95	85
	Stem Diameter - Inches 7/8/87								
0	0.88	0.87	0.89	0.90	0.90	0.92	0.94	0.93	0.93
0.5	0.92	0.88	0.87	0.92	0.92	0.91	0.93	0.92	0.91
1.0	0.90	0.89	0.86	0.92	0.88	0.88	0.93	0.89	0.89
1.5	0.92	0.88	0.89	0.92	0.88	0.86	0.90	0.89	0.88
	Corn Plants/10 ft of Row 6/10/87								
0	14.3	15.3	14.7	13.7	13.9	13.5	13.1	13.5	13.3
0.5	13.8	14.6	14.7	13.8	13.8	12.2	13.9	14.7	14.3
1.0	14.8	14.4	14.5	13.4	13.1	13.7	12.5	13.9	14.3
1.5	13.8	14.8	14.3	13.9	13.9	14.8	14.0	14.2	13.6

Table 2. Effect of pH, tillage and chlorimuron rate on residual effect on corn. (Knake, Paul, Harshbarger, and Pike)

Chlorimuron 1986	O-Till pH 5.5	O-Till pH 6.5	O-Till pH 7.5	Disk pH 5.5	Disk pH 6.5	Disk pH 7.5	Chisel pH 5.5	Chisel pH 6.5	Chisel pH 7.5
(oz/A)									
	% Tassel Emergence 7/10/87								
0	100	100	100	100	100	100	100	100	100
0.5	100	100	100	100	100	97	100	100	97
1.0	97	100	97	100	87	80	100	100	97
1.5	100	100	100	100	100	100	100	100	73
	% Silk Emergence 7/10/87								
0	77	80	93	60	90	50	80	93	93
0.5	27	53	43	67	77	63	73	73	37
1.0	57	47	7	80	70	27	77	73	53
1.5	30	70	23	67	63	20	63	73	13

% Silk Emergence 7/10/87
Means for Tillage

	pH 5.5	pH 6.5	pH 7.5
0	72	88	79
0.5	56	68	48
1.0	71	63	29
1.5	53	69	19

Table 3. Effect of pH and chlorimuron rate on weed control in soybeans. (Knake, Paul, Harshbarger, and Pike)

Chlorimuron 1987	pH 5.5	pH 6.5	pH 7.5
(oz/A)	(%)		
0	0	0	0
0.5	83	94	99
1.0	83	96	99
1.5	88	99	100

Table 4. Effect of tillage, pH, and chlorimuron residual on corn. Elwood 1987.

Tillage	pH	Corn bu/A oz/A Chlorimuron 1986				
		0	0.5	1.0	1.5	Mean
Zero	5.5	127	162	153	156	149
	6.5	135	160	150	159	151
	7.5	133	156	151	151	148
	Mean	132	159	151	155	149
Disk	5.5	149	152	147	156	151
	6.5	156	157	153	157	156
	7.5	154	150	138	139	145
	Mean	153	153	146	150	151
Chisel	5.5	158	160	159	157	158
	6.5	161	164	164	151	160
	7.5	161	152	156	140	152
	Mean	160	159	160	149	157
Mean		148	157	152	152	152

Table 5. Effect of chlorimuron on soybean yield. Elwood 1987.

pH	Chlorimuron oz/A a.i.				
	0	0.5	1.0	1.5	Mean
5.5	45.9	48.7	47.6	46.7	47.2
6.5	48.1	48.3	47.4	48.4	48.1
7.5	46.8	46.3	46.6	48.5	47.1
Mean	46.9	47.8	47.2	47.9	47.5

Preemergence and postemergence screening study

Curran, William S., Lyle E. Paul and Dale E. Harshbarger

Objective: Preemergence (PRE) and postemergence (POE) herbicides were evaluated for crop tolerance and efficacy on six weed species common to Illinois.

Procedure: The study was conducted on a variable soil containing Beecher, Drummer, and Blount silt loam to silty clay loams with 2 to 5% organic matter. The field was moldboard plowed and spring disked. Individual crop and weed species were planted in separate rows using a conventional four row planter for corn and soybeans or a Brillion seeder for all weed species except common cocklebur which was hand planted. Soil applied treatments were rated on June 5, while postemergence treatments were rated on June 24, 1987.

Date	April 29, 1987	June 5, 1987
Treatment	PRE	POE
Sprayer		
gpa	20	20
psi	35	35
Soil	dry	moist
Temperature - F		
air	69	79
soil (4 in)	71	81
Wind (mph)	5-15 N	5 N
Sky	clear	clear
Relative humidity (%)	40	80
Corn leaf no.	none	3
Soybean stage	none	V3
Tall morningglory leaf no.	none	3-4
Velvetleaf leaf no.	none	5
Redroot pigweed leaf no.	none	4
C. lambsquarters height (in)	none	3
Common cocklebur height (in)	none	7-10
Giant foxtail height (in)	none	2-3

Soil moisture on the April 29 application was dry and significant rainfall did not occur for 20 days after application. This may explain why some of the less water soluble soil applied treatments did not perform well. No rain fell for two weeks following postemergence applications. Weed growth stages varied at application with the larger seedlings surviving many of the tretments. (Dep. of Agronomy, University of Illinois at Urbana-Champaign)

Table. Weed control with preemergence and postemergence herbicide, 1987 (Curran, Paul and Harshbarger)

Treatment	Method of Appli-cation	Rate (lb/A)	Corn	Soybean	Tamg	Vele	Colq	Cocb	Gift
			---	---	---	(%)	---	---	---
Imazaquin + X-77[1]	Post	0.031 + 0.25%	20	0	10	5	0	95	0
Imazaquin + X-77	Post	0.0625 + 0.25%	43	2	7	7	3	95	5
Imazaquin + X-77	Post	0.125 + 0.25%	55	3	18	15	5	96	5
Imazethapyr + X-77	Post	0.031 + 0.25%	3	0	22	38	3	93	18
Imazethapyr + X-77	Post	0.0625 + 0.25%	14	1	40	40	10	97	40
Imazethapyr + X-77	Post	0.094 + 0.25%	17	2	48	68	10	97	43
AC 263,222 + X-77	Post	0.009 + 0.25%	10	5	12	28	0	83	12
AC 263,222 + X-77	Post	0.018 + 0.25%	12	10	13	55	5	90	15
AC 263,222 + X-77	Post	0.036 + 0.25%	18	12	28	82	5	91	25
Chlorimuron + X-77 + 28% N[2]	Post	0.0078 + 0.25% + 1.0 qt	13	2	38	58	15	94	0
Chlorimuron + X-77	Post	0.0078 + 0.25%	7	4	40	57	8	96	0
DPX-M6316 + X-77	Post	0.0039 + 0.25%	7	2	10	72	90	55	0
DPX-M6316 + X-77	Post	0.0078 + 0.25%	8	8	23	65	95	62	5
DPX-M6316 + X-77 + 28% N	Post	0.0039 + 0.25% + 1.0 qt	3	2	13	68	80	68	0
DPX-M6316 + X-77 + 28% N	Post	0.0078 + 0.25% + 1.0 qt	5	5	35	90	95	63	0
DPX-M6316 + Chlorimuron + X-77	Post	0.0039 + 0.0078 + 0.25%	7	3	37	92	95	63	-
DPX-M6316 + Chlorimuron + X-77 + 28% N	Post	0.0039 + 0.0078 + 0.25%	8	3	32	95	90	96	0
		+ 1.0 qt	8	3	32	95	90	96	0
BAS-51400 + 0090[3]	Post	0.25 + 0.25%	37	27	86	47	55	66	60
BAS-51400 + 0090	Post	0.50 + 0.25%	33	25	95	63	83	95	48
MON-1113 + COC[4]	Post	0.125 + 1.0 qt	10	0	0	52	0	70	15
MON-1113 + COC	Post	0.25 + 1.0 qt	8	2	5	67	5	87	18
PPG 1259	Post	0.10	10	5	15	18	0	65	0
PPG 1259	Post	0.25	28	10	30	33	-	90	5
SC-0051 + TWEEN 20	Post	0.25 + 0.25%	3	67	13	91	93	70	22
SC-0051 + TWEEN 20	Post	0.50 + 0.25%	5	73	30	89	93	96	22
Lactofen + COC	Post	0.20 + 1.0 qt	20	10	35	70	5	95	5
Lactofen + 28%N	Post	0.20 + 1.0 qt	15	5	38	75	5	95	5
Fomesafen + X-77	Post	0.25 + 0.25%	8	5	35	45	10	75	0
Fomesafen + X-77, 28% N	Post	0.25 + 0.25% + 1.0 qt	13	3	30	60	-	99	3
Atrazine + Dicamba	Post	0.92 + 0.48	0	85	99	99	99	99	5

Table continued. Weed control with preemergence and postemergence herbicide, 1987 (Curran, Paul and Harshbarger)

Treatment	Method of Appli- cation	Rate (lb/A)	Corn	Soybean	Tamg	Vele	Colq	Cocb	Gift
			(%)						
Imazaquin	Pre	0.625	0	0	50	50	80	38	30
Imazaquin	Pre	0.125	15	0	80	70	90	88	88
Imazethapyr	Pre	0.0625	5	0	95	70	97	65	85
Imazethapyr	Pre	0.094	8	0	93	88	95	75	85
AC 263,222	Pre	0.018	0	0	83	50	90	75	61
AC 263,222	Pre	0.036	0	0	86	62	93	90	75
Chlorimuron + Metribuzin	Pre	0.50	8	2	78	90	99	95	77
Chlorimuron + Metribuzin	Pre	0.62	7	2	88	91	99	95	82
Imazaquin + Alachlor	Pre	0.125 + 2.00	15	2	83	55	99	85	90
Imazaquin + Metolachlor	Pre	0.125 + 2.00	7	0	87	60	94	85	95
Clomazone	Pre	0.75	12	0	50	99	99	80	99
Clomazone + Lexone	Pre	0.75	7	2	65	99	99	85	99
Clomazone + Imazaquin	Pre	0.75 + 0.094	13	0	87	99	93	85	93
Clomazone + Imazaquin	Pre	0.50 + 0.094	13	2	88	98	96	75	93
Clomazone + Imazethapyr	Pre	0.50 + 0.625	0	0	90	97	92	90	95
Clomazone + Chlorimuron + Metribuzin	Pre	0.75 + 0.38	5	0	80	99	99	98	99
Cinmethylin + Chlorimuron + Metribuzin	Pre	1.50 + 0.38	5	3	83	99	99	95	90
Pendimethalin + Imazaquin	Pre	1.00 + 0.125	3	3	75	50	99	70	80
		LSD (0.05) =	16	8	15	21	*	8	11

* Insufficient data for statistical analysis
1 Nonionic surfactant
2 Aqueous nitrogen solution
3 BASF surfactant
4 FS crop oil concentrate

NORTHWESTERN ILLINOIS AGRONOMY RESEARCH CENTER - MONMOUTH

Herbicides for established alfalfa and red clover

Knake, Ellery L., Michael J. Mainz, and John J. Sutor

Objective: The primary purpose of this study was to evaluate the potential need and usefulness of herbicides for weed control in alfalfa and red clover established for set-aside land or for forage.

Procedure: This study was established at the Northwestern Illinois Agronomy Research Center near Monmouth, Illinois, on Tama silt loam with 3% organic matter, 4 to 7% slope, slight to moderate erosion, and pH of 5.5. Soil was high in phosphorus and potassium. The clover and alfalfa were seeded in individual strips in the spring of 1986 and well established for 1987. A randomized complete block design with four replications was used. Individual plots were 10 x 45 ft. The herbicides were applied with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi and 3 mph to give 25 gpa. The preemergence treatments were applied on April 23 between 8:30 and 10:30 a.m. and the postemergence treatments on June 2 between 1:00 and 2:00 p.m. At the time of the preemergence treatments, alfalfa was 9 inches tall and clover 5 inches tall with both actively growing. The dense stand of alfalfa and clover precluded much weed growth but some giant foxtail was just emerging. At the time of the postemergence treatments, alfalfa was 24 inches tall, clover 12 inches tall and giant foxtail 11 inches tall. Alfalfa was at 30% bloom and clover 40% bloom stage. Weed control ratings were made by visual estimate on July 4.

When the first application was made on April 23, air temperature was 45 to 52°F for the day and bare soil temperature at 4 inches 51 to 56°F. Relative humidity was 86 to 100% and soil was moist. Wind was NNW at 5 to 10 mph and the sky was cloudy with a very light mist. Rainfall the previous week was 0.18 inch and 0.24 inch the following week. When the postemergence application was made on June 2, air temperature ranged from 67 to 85°F for the day and bare soil temperature at 4 inches 68 to 80°F. Relative humidity was 58 to 100% and soil was moist. Wind was NW at 0 to 2 mph and sky was cloudy. There was 1.4 inches of rain the previous week, 0.05 inch on June 2 and 0.2 inch on June 12.

Results: These results suggest that a well established stand of clover or alfalfa can compete well and weeds may not become a serious problem. However, in a few areas where weed control was not used at legume establishment or a treatment did not perform well the previous year, the legume stand was thinner and weeds more prevalent. In 1987, most of the preemergence treatments gave good control but the postemergence treatments generally gave the best control. Legume tolerance with the preemergence treatments was good except for metribuzin applied later than recommended and imazaquin which also injured the legumes. Crop tolerance was excellent with the postemergence treatments except for glyphosate which gave good control but a little crop injury. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Herbicide treatments for established alfalfa and red clover. (Knake, Mainz, and Sutor)

Treatment	Rate	Injury		Control	
		Alfalfa	Red Clover	Gift in Alfalfa	Gift in Red Clover
	(lb/A)	-----------	----------- (%)	-----------	-----------
Preemergence					
Pendimethalin	1.0	0	0	93	85
Oryzalin	1.0	0	0	88	100
Alachlor	3.0	0	0	90	98
Metolachlor	2.5	0	0	94	100
Cinmethylin	1.5	0	3	83	83
Imazaquin	0.125	35	48	85	95
Imazethapyr	0.094	3	5	100	100
Simazine	2.0	0	0	90	88
Metribuzin	0.375	20	43	83	78
Postemergence					
Sethoxydim + COC	0.188 + 1 qt	0	0	96	100
Fluazifop-P + COC	0.188 + 1 qt	0	0	98	100
Fenoxaprop + COC	0.125 + 1 qt	0	0	100	100
Glyphosate	0.25	10	10	100	100
Glyphosate	0.5	20	20	100	100
Check-Untreated	--	0	0	0	0
LSD (0.05)		5.0	8.7	14.2	20.4

COC - crop oil concentrate - a petroleum oil additive with 17% emulsifier.

ORR AGRICULTURAL RESEARCH AND DEMONSTRATION CENTER - PERRY

Weed control for no-till soybeans

Koethe, Robert W., Ellery L. Knake, Gary D. Bickmeier, and Glenn A. Raines

Objective: The purpose of this study was to evaluate herbicide treatments for weed control in no-till soybeans.

Procedure: This study was established in 1987 at the University of Illinois Orr Agricultural Research and Demonstration Center in western Illinois near Perry on Rozetta silt loam with 2% organic matter and 2 to 7% slope with slight to moderate erosion. A randomized complete block design with four replications was used and individual plots 10 x 55 ft. The field was in no-till corn in legume sod the previous year. No tillage was used in 1987. FS 348 soybeans were planted on May 20 in 30 inch rows using 67 lb/A of seed. A tractor mounted compressed air spray unit with flat fan nozzle tips was used with 30 psi and 3 mph to give 25 gpa broadcast.

Herbicides were applied on May 7 except for the one postemergence treatment which was applied on May 28. On May 7, air temperature ranged from 47 to 75°F, soil temperature at 4 inch depth under sod from 56 to 65°F, and relative humidity 25 to 85%. Wind was 6 mph and sky was 5% overcast. There was about 80% residue cover on the soil. Major weed species were giant foxtail, redroot pigweed, common lambsquarters, Pennsylvania smartweed and horseweed. The 2,4-D used was a butoxyethyl low volatile ester. Weed control ratings were made by visual estimate on June 11. The only appreciable rain during the 13 days before the May 7 herbicide application was 0.23 inch three days earlier. There was no rain following the May 7 application until May 18 with 0.72 inch.

Results: Paraquat and glyphosate were effective for burndown of existing vegetation. Alachlor and metolachlor were effective for residual grass control when used in conjunction with paraquat or glyphosate for initial burndown. However, metolachlor provided longer residual for grass control than alachlor. Haloxyfop and clethodim were effective for controlling existing grass and also provided residual grass control. Imazethapyr supplemented by 2,4-D to improve common lambsquarters control gave good burndown and residual control of broadleaf weeds. Metribuzin plus chlorimuron gave very good control of broadleaf weeds, including horseweed. Linuron plus chlorimuron gave good control of broadleaf weeds but was not as effective on existing grass weeds as anticipated. Bentazon plus 2,4-D supplemented by a later application of chlorimuron plus DPX-M6316 provided broad spectrum broadleaf control. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Weed control for no-till soybeans. (Koethe, Knake, Bickmeier, and Raines)

Treatment	Rate	Control 6/11/87				
		Gift	Rrpw	Colq	Pesw	Howe
	(lb/A)	-------------	-------------	(%)	-------------	-------------
Paraquat + metolachlor + metribuzin + chlorimuron	0.5 + 2.0 + 0.35 + 0.035	94	100	100	98	88
Glyphosate + alachlor + metribuzin + chlorimuron	1.05 + 1.95 + 0.35 + 0.035	83	100	100	100	94
Linuron + chlorimuron + pendimethalin	0.47 + 0.03 + 1.0	53	100	100	100	85
Linuron + chlorimuron + metolachlor	0.47 + 0.03 + 1.0	38	100	100	95	85
Linuron + chlorimuron + cinmethylin	0.47 + 0.03 + 1.0	58	100	98	88	88
Linuron + chlorimuron + haloxyfop	0.47 + 0.03 + 0.25	90	100	100	95	83
Fluazifop-P + pendimethalin + imazaquin + 2,4-D	0.188 + 1.0 + 0.125 + 0.25	73	100	98	85	83
Imazethapyr + 2,4-D + clethodim	0.094 + 0.25 + 0.25	93	100	100	90	68
Paraquat + pendimethalin	0.5 + 1.0	70	78	78	38	18
Fluazifop-P + oryzalin + DPX-M6316	0.188 + 1.0 + 0.008	85	100	100	88	33
Paraquat + lactofen + metolachlor	0.5 + 0.2 + 2.0	80	58	100	43	35
Paraquat + lactofen + pendimethalin	0.25 + 0.2 + 1.0	60	75	88	25	13
Sethoxydim + pendimethalin (LATE POST) + bentazon + 2,4-D (LATE POST: chlorimuron + DPX-M6316)	0.188 + 1.0 + 0.5 + 0.25 0.008 + 0.004	73	100	100	100	93
Check-Untreated		0	0	0	0	0
LSD (0.05)		21.0	14.9	20.3	24.9	26.8

X-77 surfactant added to each treatment @ 0.25%.

Herbicides for no-till soybeans

Koethe, Robert W., Ellery L. Knake, Gary D. Bickmeier, and Glenn A. Raines

Objective: The primary purpose of this study was to evaluate herbicide combinations for weed control in no-till soybeans.

Procedure: The study was conducted in 1987 at the Orr Agricultural Research and Demonstration Center near Perry in western Illinois on Fayette silt loam with 2% organic matter and 7% slope. The design was a randomized complete block with four replications. 'FS 348' soybeans were planted on May 20 in 30 inch rows using 67 lb/A seed. The herbicides were applied on May 7 with a tractor mounted compressed air sprayer using flat fan nozzle tips, 30 psi, and 3 mph to give 25 gpa broadcast. Air temperature for the day ranged from 47 to 75°F and soil temperature at 4 inches under sod ranged from 56 to 65°F. Relative humidity ranged from 25 to 86% for the day. Wind speed was 6 mph and the sky was 25% overcast. Residue cover on the soil surface was 90% from soybeans the previous year and corn stalks the year before that. Weed control ratings were made on June 11 by visual estimate. The only appreciable rain during the 13 days prior to the May 7th herbicide application was 0.33 inch three days earlier. There was no rain following the May 7 application until the 11th day with 0.72 inch.

Results: Since grass had emerged by time of herbicide application, paraquat or glyphosate complemented pendimethalin; DPX-Y6202-31 or paraquat complemented cinmethylin; and cyanazine complemented metolachlor. Although imazaquin and imazethapyr were weak on common lambsquarters that was 2 to 4 inches at time of application, 2,4-D, DPX-M6316 or paraquat appeared to complement metribuzin plus chlorimuron and linuron plus chlorimuron to enhance control. Linuron plus chlorimuron did not give the degree of grass burndown anticipated. Although linuron plus chlorimuron gave fair control of horseweed, control with metribuzin plus chlorimuron was better. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Herbicides for no-till soybeans. (Koethe, Knake, Bickmeier, and Raines)

Treatment	Rate	Control			Yield
		Fapa	Colq	Howe	
	(lb/A)	(%)	(%)	(%)	(bu/A)
Paraquat + imazaquin + pendimethalin	0.25 + 0.125 + 1.0	89	73	90	34.5
Glyphosate + imazethapyr + pendimethalin	0.5 + 0.094 + 1.0	85	75	100	49.8
Metribuzin + chlorimuron + 2,4-D + cinmethylin	0.35 + 0.035 + 0.5 + 1.0	70	98	98	50.9
Metribuzin + chlorimuron + 2,4-D + cinmethylin + DPX-Y6202-31	0.35 + 0.035 + 0.5 + 1.0 + 0.125	88	100	96	47.6
Metribuzin + chlorimuron + DPX-M6316 + cinmethylin	0.35 + 0.035 + 0.008 + 1.0	60	98	95	42.0
Metribuzin + chlorimuron + DPX-M6316 + cinmethylin + DPX-Y6202-31	0.35 + 0.035 + 0.008 + 1.0 + 0.125	93	98	85	58.2
Paraquat + metribuzin + chlorimuron + cinmethylin	0.25 + 0.35 + 0.035 + 1.0	98	98	100	59.9
Paraquat + metribuzin + chlorimuron + metolachlor	0.25 + 0.35 + 0.035 + 2.0	95	100	90	60.7
Linuron + chlorimuron + oryzalin	0.47 + 0.03 + 1.0	63	100	88	34.5
Linuron + chlorimuron + pendimethalin	0.47 + 0.03 + 1.0	68	100	88	37.3
Linuron + chlorimuron + cinmethylin	0.47 + 0.03 + 1.0	73	100	88	40.5
Linuron + chlorimuron + metolachlor	0.47 + 0.03 + 2.0	75	100	83	49.7
Cyanazine + 2,4-D + metolachlor	2.0 + 0.5 + 2.0	95	100	100	47.9
Check-Untreated		0	0	0	31.3
LSD (0.05)		22.2	18.5	14.9	22.8

Added to each: X-77 surfactant @ 0.25%.
2,4-D-butoxyethyl low volatile ester.

No-till corn in alfalfa and mammoth red clover sod

Koethe, Robert W., Gary D. Bickmeier, Ellery L. Knake,
Glenn A. Raines and Mike Vose.

Objective: The primary purpose of this study was to evaluate several herbicide treatments for no-till corn in alfalfa or clover sod.

Procedure: The study was conducted at the University of Illinois Orr Agricultural Research and Demonstration Center near Perry on Fayette and Downs silt loam with 1 to 2% organic matter and 4 to 7% slope. Vernal alfalfa and mammoth red clover were seeded in separate strips on May 3, 1986. A randomized complete block design with four replications was used in 1987. Herbicides were applied on the afternoon of May 1, 1987 using a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi, and 3 mph to give 25 gpa. FS 6933 corn was planted at 22,500 seeds per acre in 30 inch rows. Weather conditions on May 1, the day of spraying, were: air temperature 40 to 68°F, soil temperature at 4 inches under sod 57 to 64°F, relative humidity 32 to 92% and wind speed 8 mph. Residue cover was 90%. The 2,4-D was a butoxyethyl low volatile ester formulation. Anhydrous ammonia was applied on June 11 to give 200 lb/A nitrogen. Weed control ratings were made on June 11 by visual estimate. There was 0.26 inch of rain a little over a week before the May 1, spraying and 0.33 inch three days after spraying, but no further rain for the next 13 days.

Results: The 0.5 lb/A 2,4-D plus 0.25 lb/A dicamba gave very good control of alfalfa and clover and was better than 0.5 lb/A 2,4-D. Clopyralid at 0.25 lb/A also gave good control of clover and alfalfa. Control of annual grass with metolachlor or cyanazine plus atrazine was only fair and clopyralid is not intended for grass control. The metolachlor or cyanazine plus atrazine treatments gave excellent control of redroot pigweed. Most treatments except clopyralid alone gave good control of velvetleaf and most treatments gave good control of dandelion. The major weakness was in control of annual grass which might have been improved by addition of an adjuvant with the triazines or by earlier treatment prior to grass emergence. Use of paraquat or tridiphane would be other possibilities. (Dep. of Agronomy, University of Illinois, Urbana)

Table. No-till corn in alfalfa and mammoth red clover sod. (Koethe, Bickmeier, Knake, Raines and Vose)

Treatment	Rate	Control						Corn Yield	
		Alfalfa	Red Clover	Gift	Rrpw	Vele	Dali	Alfalfa	Red Clover
	(lb/A)	--------------------		(%)			--------------------	------(bu/A)	-----
2,4-D + metolachlor + atrazine	0.5 + 1.5 + 1.5	86	88	70	100	100	95	56.8	47.1
2,4-D + dicamba + metolachlor + atrazine	0.5 + 0.5 + 1.5 + 1.5	96	100	73	100	95	100	73.9	75.6
Clopyralid	0.25	94	95	0	78	38	88	3.2	6.2
Glyphosate + 2,4-D + dicamba + cyanazine + atrazine	1.0 + 0.5 + 0.25 + 1.5 + 1.5	98	100	68	100	88	98	112.5	99.6
2,4-D + dicamba + cyanazine + atrazine	0.5 + 0.25 + 1.5 + 1.5	96	100	70	100	98	98	100.4	84.8
LSD (0.50)		8.4	9.8	22.3	26.9	29.6	17.0	46.5	39.9

Herbicides for establishing alfalfa

Koethe, Robert W., Ellery L. Knake, Gary D. Bickmeier,
Glenn A. Raines and Mike Vose

Objective: The primary purpose of this study was to evaluate several herbicide treatments for control of weeds when establishing a new seeding of alfalfa.

Procedure: This study was established in 1987 at the University of Illinois Orr Agricultural Research and Demonstration Center near Perry on Fayette and Rozetta silt loam. The field had been in no-till soybeans the previous year. The field was moldboard plowed and disked on May 2. On May 4, 120 lb/A P_2O_5 and 400 lb/A K_2O was applied. On May 7 a cultimulcher was used, then 18 lb/A of Jubilee alfalfa was seeded with a drill and a cultimulcher used again for firming. A randomized complete block design with three replications was used. Individual plots were 10 x 60 ft.

Herbicides were applied 10:00 to 11:00 a.m. on May 28 with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi, and 3 mph to give 25 gpa. The dimethylamine salt formulation of 2,4-DB was tank mixed with the herbicides intended for grass control. At time of application, annual grass was 4 inches tall and velvetleaf 6 inches. In addition to fall panicum, some giant foxtail and large crabgrass were present. Weed control ratings were made on June 11 by visual estimate. There was 2 inches of rain during the 10 days prior to the May 28 spraying and 1.5 inches during the week after spraying.

Results: All herbicides intended for annual grass control gave excellent results with no injury to the alfalfa. The 2,4-DB gave excellent control of common lambsquarters but only fair control of velvetleaf. Subsequent mowing helped to provide further control of velvetleaf. The area had significant potential for dense weed growth but the herbicide treatments gave very good weed control, resulting in a good stand of alfalfa. Although no direct comparison was made, addition of 2,4-DB did not appear to be antagonistic with the herbicides used for grass control. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Herbicides for establishing alfalfa. (Koethe, Knake, Bickmeier, Raines and Vose)

Treatment	Rate	Control		
		Fapa	Colq	Vele
	(lb/A)	(%)	(%)	(%)
Sethoxydim	0.25	100	100	50
Fluazifop-P	0.25	100	100	50
DPX-Y6202-31	0.063	100	100	50
Fenoxaprop	0.125	100	100	50
LSD (0.05)		0.1	0.1	0.1

2,4-DB @ 0.5 lb/A and 1 qt/A COC (crop oil concentrate - a petroleum oil additive with 17% emulsifier) was added to each treatment.

Herbicides for no-till corn

Koethe, Robert W., Gary D. Bickmeier, Ellery L. Knake,
Glenn A. Raines and Mike Vose

Objective: The purpose of this study was to evaluate several herbicide treatments for no-till corn on sloping land subject to erosion.

Procedure: This study was established at the University of Illinois Orr Agricultural Research and Demonstration Center near Perry on a field with Rozetta silt loam with 2% organic matter and 2 to 7% slope. The field was in no-till corn in clover sod the previous year. Herbicides were applied on May 1, 1987. Air temperature ranged from 40 to 68°F for the day, soil temperature at 4 inches under sod 57 to 64°F and relative humidity 32 to 92%. Wind was 8 mph. Plant residue gave 90% cover of the soil. A tractor mounted compressed air sprayer was used with flat fan nozzle tips, 30 psi, and 3 mph to give 25 gpa broadcast. 'FS 6933' corn was planted at 22,500 seeds per acre in 30 inch rows on May 7. Anhydrous ammonia was applied on June 11 to give 200 lb/A nitrogen. Weed control ratings were made on June 11 by visual estimate. Giant foxtail had emerged and was one inch tall at time of spraying. There was 0.26 inch of rain a little over a week before spraying and 0.33 inch three days after spraying but no further rain for the next 13 days.

Results: All treatments gave excellent control of redroot pigweed and velvetleaf. Treatments including both metolachlor and cyanazine gave fair control of giant foxtail but best control was with the treatment that included paraquat. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Herbicides for no-till corn. (Koethe, Bickmeier, Knake, Raines and Vose)

Treatment	Rate	Control Gift	Control Rrpw	Control Vele	Corn Yield
	(lb/A)	(%)	(%)	(%)	bu/A
Cyanazine + atrazine + COC	2.0 + 1.0 + 1 qt	73	100	100	58.7
Cyanazine + atrazine + metolachlor + COC	2.0 + 1.0 + 2.0 + 1 qt	83	100	100	69.8
Atrazine + metolachlor + COC	2.0 + 2.0 + 1 qt	73	100	100	61.0
Paraquat + atrazine + X-77	0.4 + 2.0 + 0.25%	90	100	100	111.1
LSD (0.05)		12.1	0.1	0.1	47.8

Herbicides for soybeans no-till

Koethe, Robert W., Gary D. Bickmeier, Ellery L. Knake,
Glenn A. Raines and Mike Vose

Objective: The primary purpose of this study was to evaluate several herbicide combinations for no-till soybeans.

Procedure: This study was conducted at the University of Illinois Orr Agricultural Research and Demonstration Center near Perry on Rozetta and Elco silt loam with 1 to 2% organic matter on 7 to 12% slope subject to severe erosion. Herbicides were applied on May 7 with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi and 3 mph to give 25 gpa. Air temperature for the day ranged from 40 to 68°F, soil temperature at 4 inches under sod 57 to 64°F and relative humidity 32 to 92%. Wind speed was 6 mph and the sky had 5% cloud cover. The 2,4-D was a butoxyethyl low volatile ester formulation. The plant residue from the previous year gave 60% cover. X-77 surfactant at 0.25% was added to each treatment. Giant foxtail was one inch tall and tall fescue 12 inches tall at time of application. 'FS 348' soybeans were planted on May 20 using 67 lb/A seed in 30-inch rows. The design was a randomized complete block with three replications. Ratings were made on June 11 by visual estimate. The only appreciable rain during the 13 days prior to the May 7th spraying was 0.33 inch on May 4. There was no rain following the May 7 application until the 11th day with 0.72 inch.

Results: All treatments gave good control of redroot pigweed and most other annual broadleaf weeds. Control of giant foxtail ranged from 83 to 93% with haloxyfop at 0.25 lb/A controlling grass as well or better than oryzalin, cinmethylin or pendimethalin. Paraquat and haloxyfop each gave partial control of tall fescue. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Herbicides for soybeans no-till. (Koethe, Bickmeier, Knake, Raines and Vose)

Treatment	Rate	Control		
		Gift	Rrpw	Tall Fescue
	(lb/A)	(%)	(%)	(%)
Oryzalin + linuron + chlorimuron	1.0 + 0.47 + 0.03	83	100	0
Cinmethylin + linuron + chlorimuron	1.0 + 0.47 + 0.03	83	100	0
Paraquat + pendimethalin + fomesafen	0.25 + 1.0 + 0.25	90	100	57
Haloxyfop + imazaquin + 2,4-D	0.25 + 0.125 + 0.25	93	100	43
LSD (0.05)		12.1	0.1	24.0

Control of grass weeds in clover

Koethe, Robert W., Ellery L. Knake, Gary D. Bickmeier, and Glenn A. Raines

Objective: The purpose of this study was to evaluate several herbicides for postemergence control of annual and perennial grasses in red clover.

Procedure: This study was conducted at the University of Illinois Orr Agricultural Research and Demonstration Center near Perry on Atlas silt loam with 1 to 2% organic matter and 12 to 18% slope subject to severe erosion. Red clover was established by seeding in the spring of 1986. Observations in the spring of 1987 indicated that the established clover had winter-killed but there was a dense new growth of clover seedlings from seed produced in 1986. The area had been in tall fescue several years earlier and some fescue had reinvaded.

Herbicides were applied in the afternoon of May 1, using a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi and 3 mph for 25 gpa broadcast. Air temperature for the day ranged from 40 to 68°F, soil temperature at 4 inches under sod was 57 to 64°F and relative humidity 32 to 92%. Wind was 8 mph. Tall fescue was 12 inches tall and giant foxtail one inch tall at time of application. Ratings were made on June 11 by visual estimate. The design was a randomized complete block with three replications. There was 0.26 inch of rain a little over a week before the May 1, spraying and 0.33 inch three days after spraying but no further rain for the next 13 days.

Results: All treatments gave excellent control of giant foxtail. All treatments except fenoxaprop gave significant suppression of tall fescue but not complete kill. Annual broadleaf weeds were controlled by the 2,4-DB. (Dep. of Agronomy, University of Illinois, Urbana)

Table. Control of grass in clover. (Koethe, Knake, Bickmeier, and Raines)

		Control	
Treatment	Rate	Gift	Tall Fescue
	(lb/A)	(%)	(%)
Sethoxydim	0.25	100	83
Fluazifop-P	0.25	100	63
DPX-Y6202-31	0.125	100	80
Fenoxaprop	0.125	100	10
LSD (0.05)		0.1	9.3

Each treatment included 0.5 lb/A dimethylamine salt formulation of 2,4-DB and 1 qt/A COC (crop oil concentrate - a petroleum oil additive with 17% emulsifier).

MULTIPLE LOCATIONS

Rotational crop injury potential for corn following clomazone, imazaquin, imazethapyr and chlorimuron in Illinois

Curran, William S. and Ellery L. Knake

Objective: The objective of this study is to determine the potential of four soybean herbicides to persist and affect corn the year following application.

Procedure: Studies were initiated in 1986 with imazaquin, imazethapyr, clomazone and chlorimuron at three locations in Illinois. Herbicides were surface-applied for soybeans in 1986 using four different rates of each at DeKalb and Monmouth, Illinois, and three different rates of each at Urbana, Illinois. Chloramben was applied at 3.0 lb/A for the check treatments in 1986. Locations at Urbana and DeKalb were on Drummer silty clay loam with approximately 6.0% organic matter and soil pH levels of 6.2 and 6.0 respectively. The Monmouth study was on a Muscatine silt loam with 4.5% organic matter and a soil pH of 7.2. All studies were established as randomized complete block designs with four replications. Tillage prior to 1986 soybean planting included fall chiseling and spring disking at DeKalb and Monmouth and moldboard plowing followed by spring disking at Urbana. Herbicides were applied May 7 at DeKalb, May 8 at Monmouth, and May 15, 1986 at Urbana, with a tractor mounted compressed air sprayer operated at 30 psi calibrated to give 25 gpa. Soybeans were grown in 1986 and evaluated for crop tolerance. Soil moisture was low both at planting time and late in the season in 1986. At Urbana, soybeans were cultivated once in 1986, while the DeKalb and Monmouth studies were not cultivated. Both soybeans and corn were maintained weed-free by hand weeding. In 1987, Pioneer 3377 corn was planted no-till in the soybean stubble to give 26,000 plants/A at all three locations. Fertility levels at Urbana prior to corn planting were P_1 = 73, K test = 376, and Nitrogen was applied at 200 lb/A. At DeKalb 120 lb/A each of P_2O_5 and K_2O, plus 240 lb/A N were applied prior to corn planting. Monmouth fertility levels were P_1 = 75, and K test of 350. Nitrogen was applied at 180 lb/A. Alachlor at 3.0 lb/A and 2.0 lb/A of atrazine were broadcast over the entire plot areas for annual weed control. In 1987, soil moisture was low at planting and through early plant development at all three locations. Normal rainfall occurred thereafter at Urbana and DeKalb, but Monmouth soil moisture remained low throughout the season. Corn was evaluated for plant emergence and stand, early and late season visual injury, early and late season plant height, seedling dry weight, stalk diameter, and grain yield. Visual injury ratings were expressed as a percent bleaching or "whiteness" for clomazone and percent stunting and/or chlorosis for imazaquin, imazethapyr, and chlorimuron. The study is being repeated in the 1987-88 rotational season.

Results: Soybean tolerance in 1986 was considered good at all rates and locations except for the high rate of imazaquin and the two highest rates of chlorimuron at Monmouth. Soybeans appeared slightly stunted with these treatments and there was a small yield reduction (Table 1). In 1987, early season corn injury was moderate with clomazone at Urbana. Injury averaged 39 percent with occasional plant death from the 2.0 lb/A rate (Table 2). Other locations showed little visual injury. By mid-season, corn had almost completely recovered from any clomazone injury at Urbana and the other locations. Imazaquin injury was only slight at all three locations. Corn seedling dry weight and height were both slightly depressed at Urbana and DeKalb, but by mid-season the crop had recovered. No significant injury from imazethapyr was noted at any location. For chlorimuron at the highest rate, early season corn injury, as indicated visually, by seedling dry weight, and by seedling plant height, was slight at Urbana and DeKalb and moderate at Monmouth. By mid-season, corn at Urbana and DeKalb showed recovery, while at the Monmouth location, both visual ratings and plant height measurements indicated significant effect from the two highest rates of chlorimuron. High soil pH may have prolonged chlorimuron persistence at Monmouth. However, corn yields indicated no statistically significant yield reductions from any of the four herbicides at any of the three locations. (Dep. of Agronomy, University of Illinois, Urbana)

Table 1. Effect of herbicides on weed-free soybeans (1986)

	lb/A	bu/A DeKalb	Monmouth	Urbana
Clomazone	0.75	54.10	57.21	-
Clomazone	1.0	54.40	61.23	34.21
Clomazone	1.5	54.88	60.60	37.58
Clomazone	2.0	54.55	60.24	36.80
Imazaquin	0.062	53.73	59.40	-
Imazaquin	0.125	52.95	57.32	36.80
Imazaquin	0.187	55.47	58.23	32.65
Imazaquin	0.25	55.43	54.21*	34.21
Imazethapyr	0.047	55.88	58.70	-
Imazethapyr	0.094	55.23	57.13	34.21
Imazethapyr	0.141	55.38	56.31*	31.88
Imazethapyr	0.188	54.40	57.18	34.73
Chlorimuron	0.016	54.55	59.84	-
Chlorimuron	0.031	55.52	59.08	37.84*
Chlorimuron	0.063	54.30	55.30*	36.28
Chlorimuron	0.094	53.98	54.27*	37.06
Amiben - Check	3	53.02	59.27	32.65
LSD 0.05		2.89	2.62	4.99

* Significantly differs from check.

Table 2. Effect of clomazone, imazaquin, imazethapyr and chlorimuron on rotational corn at Urbana (1987)

Herbicide	Rate	Injury Early	Injury Late	Seedling dry wt.	Plant ht. Early	Plant ht. Late	Grain Yield
	(lb/A)	------%------		--(g)--	-----(cm)-----		(bu/A)
Clomazone	1.0	6	1	4.78	37.2	237	211.2
Clomazone	1.5	18*	0	4.28	37.2	236	216.0
Clomazone	2.0	39*	2	3.43	35.3	232*	209.2
Imazaquin	0.125	0	3	4.31	35.6	232*	211.8
Imazaquin	0.188	3	5*	4.58	36.7	233	209.7
Imazaquin	0.25	0	5*	3.37	33.8*	235	207.5
Imazethapyr	0.094	0	0	3.73	35.5	237	213.9
Imazethapyr	0.141	0	2	3.67	35.5	233	210.4
Imazethapyr	0.188	0	1	3.45	36.8	238	208.8
Chlorimuron	0.031	3	3	4.18	34.2*	233	212.9
Chlorimuron	0.063	0	3	3.94	35.5	234	211.8
Chlorimuron	0.094	0	1	3.20*	33.2*	233	210.6
Check	0.0	0	0	4.30	39.0	239	213.3
LSD (0.05)		8	3	1.02	4.5	6	7.9

* Significantly differs from check.

Table 3. Effect of clomazone, imazaquin, imazethapyr, and chlorimuron on rotational corn at DeKalb (1987)

Herbicide	Rate	Injury Early	Injury Late	Seedling dry wt.	Plant ht. Early	Plant ht. Late	Grain Yield
	(lb/A)	------%------		--(g)--	----(cm)----		(bu/A)
Clomazone	0.75	0	1	2.47	26.8	200	171.3
Clomazone	1.0	2	0	2.43	28.8	198	163.9
Clomazone	1.50	1	2	2.24	30.0	197	165.2
Clomazone	2.0	4*	1	1.94*	27.3	193	165.8
Imazaquin	0.062	0	2	2.10	29.3	190	164.3
Imazaquin	0.125	1	1	2.42	27.0	194	163.3
Imazaquin	0.188	1	3	2.03*	26.8	189	167.3
Imazaquin	0.25	2	4	1.75*	26.0*	189	159.0
Imazethapyr	0.047	0	2	2.05*	27.5	197	170.4
Imazethapyr	0.094	0	1	2.10	27.8	198	165.9
Imazethapyr	0.141	2	2	2.28	28.0	194	162.5
Imazethapyr	0.188	1	2	2.16	26.8	196	159.2
Chlorimuron	0.016	1	1	2.08*	28.0	192	165.1
Chlorimuron	0.031	0	1	1.93*	27.8	195	162.2
Chlorimuron	0.063	0	2	2.14	26.8	195	161.0
Chlorimuron	0.094	5*	5*	1.93*	27.8	188	159.6
Check		0	0	2.45	28.3	195	164.1
LSD (0.05)		3	3	0.36	1.7	8	8.4

* Significantly differs from check.

Table 4. Effect of clomazone, imazaquin, imazethapyr, and chlorimuron on rotational corn at Monmouth (1987)

Herbicide	Rate	Injury Early	Injury Late	Seedling dry wt.	Plant ht. Early	Plant ht. Late	Grain Yield
	(lb/A)	------%------		--(g)--	----(cm)----		(bu/A)
Clomazone	0.75	0	0	3.53	38.5	256	179.5
Clomazone	1.00	0	0	3.57	39.0	258	180.2
Clomazone	1.50	0	1	3.34	38.2	256	174.1
Clomazone	2.00	0	1	4.02*	41.0*	261	185.7
Imazaquin	0.062	2	0	2.89	35.7	252	180.9
Imazaquin	0.125	1	0	3.53	37.1	255	182.6
Imazaquin	0.188	0	0	3.80	38.2	262	177.9
Imazaquin	0.25	1	2	3.09	34.9	255	181.5
Imazethapyr	0.047	0	0	3.81	40.9*	261	179.7
Imazethapyr	0.094	0	0	3.57	40.6*	258	175.1
Imazethapyr	0.141	1	0	3.64	39.7	254	180.0
Imazethapyr	0.188	0	0	3.00	35.0	259	183.7
Chlorimuron	0.016	1	1	2.98	36.1	252	179.9
Chlorimuron	0.031	5*	1	2.69	34.4	252	176.9
Chlorimuron	0.063	8*	4*	2.25*	31.4*	245	168.5
Chlorimuron	0.094	12*	7*	2.35*	31.8*	243*	172.1
Check		0	0	3.25	36.2	254	179.1
LSD (0.05)		3	2	0.66	4.38	10	10.8

* Significantly differs from check.

Soybean tolerance to clomazone, imazaquin imazethapyr and chlorimuron (1987)

Curran, William S. and Ellery L. Knake

Objective: This is a continuation of a herbicide persistence study initiated in 1986 at three locations in Illinois. The objective of this study is 1) to evaluate soybean tolerance and yield to chlomazone, imazaquin, imazethapyr, and chlorimuron, and 2) determine rotational crop injury potential the following year for these four herbicides.

Procedure: In 1987, this study was continued at the Northern Illinois Agronomy Research Center near DeKalb, and the Northwestern Illinois Agricultural Research and Demonstration Center near Monmouth. At DeKalb, herbicides were applied preemergence on May 8, 1987 to a Drummer silty clay loam with an approximate soil pH of 6.2 and 6.0% organic matter content. The previous fall, 120 lb each P_2O5 and K_2O were applied to the plot area. The field was moldboard plowed and spring disked and harrowed. At application time, the sky was clear and the soil was dry with an air temperature of 68 F. The soil temperature was 60 F at a two inch depth. Herbicides were applied using a tractor mounted compressed air sprayer equiped with 8003 nozzle tips delivering 25 gallons per acre. BSR 201 soybeans were seeded in 30 inch rows. At Monmouth, herbicides were applied preemergence May 6, 1987 to a Sable silty clay loam with approximately 5.5% organic matter and a soil pH of 7.0. The field was fall chiseled and spring disked and field cultivated. Fertility levels at planting were P1 = 75 and a K-test of 350. Herbicides were applied with a tractor mounted compressed air sprayer using 8003 nozzle tips delivering 25 gallons per acre. The sky was clear and the soil was dry at application time. The air temperature was 80 F with a soil temperature of 70 F at a two inch depth. Shawnee II soybeans were seeded in 30 inch rows. DeKalb remained dry for 9 days after application, but then received approximately 3.0 inches of rain from day 10 to day 15. Monmouth received no rain for 14 days after application and then received approximately 1.2 inches of rain from day 14 to day 24. The Monmouth location remained relatively dry throughout the summer. Both the Monmouth and DeKalb locations were maintained weed-free by the addition of 0.2 lb/A fluazifop and 1.0 lb/A bentazon approximately three weeks after emergence and by handweeding.

Results: Weed control was erratic at both locations. Additional annual grass and yellow nutsedge control measures were needed at both locations. Crop tolerance was excellent even at the highest herbicide rates. No significant difference in soybean yield occurred with any of the treatments.

Table. Effect of clomazone, imazaquin, imazethapyr and chlorimuron on weed-free soybean yield at two locations (1987). (Curran and Knake)

Herbicide	Rate	DeKalb	Monmouth
	(lb/A)	-------(bu\A)--------	
Clomazone	0.75	43.8	51.1
	1.0	42.1	50.2
	1.5	42.8	50.5
	2.0	44.9	49.8
Imazaquin	0.062	43.0	50.4
	0.125	43.8	49.4
	0.188	42.7	50.2
	0.25	45.7	50.6
Imazethapyr	0.047	42.8	47.7
	0.094	42.8	51.1
	0.141	43.4	49.8
	0.188	41.3	50.0
Chlorimuron	0.016	42.0	50.8
	0.031	40.5	47.4
	0.062	41.2	48.0
	0.094	42.6	50.4
Amiben-check	3.0	41.4	49.0
LSD (0.05)		4.9	3.8

APPENDIX

WEATHER CONDITIONS - 1987

NORTHERN ILLINOIS AGRONOMY RESEARCH CENTER AT DEKALB
APRIL 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	28	49	43	45	45	85	0.02
2	20	36	42	43	43	81	--
3	17	38	41	43	37	82	--
4	20	47	41	42	50	74	--
5	28	54	41	43	40	72	--
6	35	61	42	45	54	86	--
7	30	67	44	46	36	73	--
8	28	60	45	47	36	96	--
9	22	69	46	49	32	94	--
10	37	61	46	50	46	97	0.10
11	38	53	48	51	64	100	0.24
12	37	55	48	50	54	100	0.05
13	34	50	49	50	76	100	0.26
14	45	57	50	51	82	100	0.75
15	36	56	50	52	63	100	--
16	41	62	51	53	49	99	--
17	36	68	51	54	48	98	--
18	39	71	52	55	41	98	--
19	43	75	53	56	40	96	--
20	47	86	55	57	35	93	--
21	40	61	56	59	57	100	0.53
22	41	48	57	58	94	100	0.89
23	40	51	55	57	72	98	0.11
24	32	55	52	55	40	84	--
25	32	63	52	54	34	83	--
26	37	69	52	54	36	82	--
27	44	64	53	55	32	94	--
28	37	64	54	57	35	70	--
29	42	79	55	58	38	60	--
30	33	58	55	58	38	84	--

NORTHERN ILLINOIS AGRONOMY RESEARCH CENTER AT DEKALB
MAY 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	35	70	56	58	37	67	--
2	46	57	56	58	65	100	0.49
3	36	48	55	57	66	100	--
4	32	58	54	56	36	94	--
5	33	65	54	57	37	89	--
6	38	72	55	58	34	86	--
7	43	70	56	59	40	70	--
8	43	71	57	60	38	84	--
9	49	80	58	61	37	57	--
10	58	83	60	62	40	78	T
11	49	86	61	64	44	74	T
12	39	62	61	64	44	76	--
13	36	76	61	64	48	86	--
14	51	80	61	64	49	87	T
15	41	66	61	64	39	86	T
16	39	80	61	64	38	76	--
17	49	85	62	65	48	99	0.39
18	58	77	63	67	59	100	0.46
19	57	80	64	68	59	100	0.55+
20	56	78	65	68	80	100	1.81
21	58	83	66	69			0.20
22	48	60	65	68			--
23	43	48	63	65	54	100	--
24	42	51	62	63			--
25	43	66	61	62			0.28
26	66	80	61	64	58	92	0.01
27	64	85	63	67	48	95	--
28	64	85	66	69	43	95	0.08
29	62	84	66	69	44	97	0.01
30	61	75	67	69	59	98	0.04
31	57	82	67	70	41	98	0.37

NORTHERN ILLINOIS AGRONOMY RESEARCH CENTER AT DEKALB
JUNE 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	59	80	67	70	53	100	T
2	62	75	67	70	74	100	0.23
3	53	74	68	69	39	100	--
4	48	70	67	69	41	93	--
5	52	82	67	70	42	82	--
6	60	81	67	70	44	74	--
7	62	87	68	70	43	82	--
8	58	87	69	72	50	88	--
9	46	72	70	73	47	94	--
10	43	75	68	73	46	93	--
11	60	82	69	74	63	100	1.96
12	68	85	70	74	50	100	--
13	59	89	70	77	42	100	--
14	66	93	72	78	46	94	--
15	58	82	73	78	40	91	--
16	56	88	73	77	40	88	--
17	58	89	73	76	46	88	--
18	60	89	74	77	42	100	--
19	64	83	74	77	51	98	--
20	66	82	74	77	60	100	0.20
21	67	78	74	76	72	100	T
22	66	77			81	100	T
23	55	86			47	100	T
24	60	86					--
25	56	75					0.11
26	54	73					--
27	48	70					--
28	56	82					--
29	58	77					0.23
30	64	76					0.08

NORTHEASTERN ILLINOIS AGRONOMY RESEARCH CENTER - ELWOOD
APRIL 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1							0.01
2							--
3							--
4							--
5							--
6							--
7	37	60	45	49			--
8	31	69	42	63			--
9	20	70	41	64			--
10	34	71	41	66			--
11	40	75	46	61	26	98	0.68
12	43	59	48	57	98	98	0.23
13	39	61	45	60	98	98	--
14	48	58	45	52	98	100	0.39
15	42	61	48	54	100	100	0.64
16	47	60	47	56	100	100	0.04
17	44	63	50	60	100	100	0.02
18	45	71	49	68	44	100	--
19	48	76	49	70	38	100	--
20	52	80	55	69	34	96	--
21	54	88	56	75	30	96	--
22	45	65	52	66	58	100	0.34
23	43	54	50	53	100	100	0.19
24	40	62	48	62	50	96	--
25	36	59	46	61	28	64	--
26	40	67	45	63	22	62	--
27	44	73	47	69	25	100	--
28	36	71	49	71	18	94	--
29	46	69	49	71	18	50	--
30	38	86	52	77	24	67	--

NORTHEASTERN ILLINOIS AGRONOMY RESEARCH CENTER - ELWOOD
MAY 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	35	59	51	71	36	84	--
2	51	72	51	72	22	96	--
3	51	62	51	71	80	96	0.02
4	35	54	47	57	60	98	--
5	33	62	46	67	28	96	--
6	37	69	48	71	22	95	--
7	50	77	50	76	20	60	--
8	44	75	57	79	26	96	--
9	48	76	57	80	20	50	--
10	59	85	59	79	22	76	--
11	60	89	63	81	30	72	--
12	48	89	58	81	36	96	0.15
13	42	65	55	74	22	94	--
14	54	83	54	79	34	92	--
15	51	87	61	79	38	94	--
16	42	70	59	79	22	96	--
17	53	84	59	82	22	78	--
18	63	90	63	84	38	98	1.19
19	62	81	67	76	72	100	1.69
20	60	86	66	80	55	96	0.14
21	62	83	66	79	78	96	--
22	59	90	66	81	46	96	0.14
23	51	63	60	69	70	96	--
24	47	58	57	66	66	96	--
25	48	60	55	66	70	98	--
26	57	72	58	66	96	98	0.28
27	66	86	63	79	54	96	--
28	67	90	67	83	42	90	--
29	64	90	68	85	36	96	--
30	67	79	69	86	36	96	--
31	62	85	68	84	54	96	0.15

NORTHEASTERN ILLINOIS AGRONOMY RESEARCH CENTER - ELWOOD
JUNE 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	64	88	67	86	33	98	0.70
2	64	84	68	82	50	96	0.40
3	60	79	67	78	70	96	0.60
4	49	79	62	80	28	96	--
5	51	75	62	81	34	96	--
6	59	86	62	86	36	96	--
7	63	85	67	87	32	96	--
8	67	88	70	88	38	78	--
9	55	90	69	90	50	96	--
10	47	70	63	85	34	96	--
11	58	77	63	84	34	96	--
12	66	84	67	80	50	96	0.17
13	59	91	71	91	40	96	--
14	65	93	72	95	34	98	--
15	68	99	74	98	30	98	--
16	62	87	74	93	26	86	--
17	58	91	74	95	32	96	--
18	65	94	73	96	34	96	--
19	66	93	76	97	36	93	--
20	68	86	76	88	48	97	--
21	66	87	74	89	60	96	0.29
22	66	83	72	82	69	100	--
23	58	81	69	81	70	96	--
24	64	87	69	92	44	96	--
25	66	89	74	95	46	96	--
26	58	81	68	83	60	96	0.60
27	51	80	65	86	36	96	--
28	55	77	67	85	36	96	--
29	61	84	67	89	34	98	--
30	67	83	70	78	54	96	0.85

NORTHWESTERN ILLINOIS AGRONOMY RESEARCH CENTER - MONMOUTH
APRIL 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	26	44	34	41	36	92	--
2	25	52	34	43	50	92	0.01
3	21	41	34	43	30	84	--
4	21	43	34	45	30	80	--
5	29	51	34	48	24	74	--
6	41	62	40	54	32	70	--
7	34	66	42	54	26	66	--
8	36	70	42	60	22	74	--
9	34	68	46	62	22	68	--
10	45	75	46	64	20	90	--
11	33	55	44	52	68	100	T
12	32	59	43	52	46	100	T
13	41	63	43	60	42	100	0.29
14	41	56	49	50	88	100	0.75
15	45	68	50	61	48	100	0.03
16	48	60	50	56	52	100	T
17	46	68	50	62	44	100	--
18	50	76	50	68	32	100	--
19	52	74	54	67	34	100	--
20	58	82	57	72	32	84	--
21	58	92	60	77	24	98	--
22	44	72	54	69	52	100	0.18
23	45	52	51	56	86	100	0.21
24	39	52	46	54	54	100	T
25	38	63	46	61	26	78	--
26	45	74	46	65	24	70	--
27	53	80	55	72	30	100	0.03
28	39	72	52	71	18	86	--
29	48	72	52	72	22	54	--
30	39	89	58	78	26	76	--

NORTHWESTERN ILLINOIS AGRONOMY RESEARCH CENTER - MONMOUTH
MAY 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	39	65	55	73	30	72	--
2	47	84	55	74	30	72	--
3	53	75	59	68	52	100	0.05
4	46	62	54	60	44	100	T
5	39	68	53	70	18	66	--
6	41	69	53	72	24	82	--
7	50	76	55	77	18	68	--
8	46	77	60	78	22	78	--
9	46	78	60	80	21	60	--
10	57	86	60	79	28	86	--
11	60	88	65	81	26	84	--
12	49	90	63	81	34	74	--
13	45	72	60	79	28	88	--
14	56	85	61	81	28	86	--
15	51	87	64	83	24	94	--
16	47	75	63	81	24	76	--
17	60	86	62	82	22	84	--
18	62	90	67	82	40	100	T
19	63	89	69	85	69	96	--
20	66	90	73	89	38	100	0.23
21	65	91	70	85	48	100	0.05
22	51	93	70	87	38	100	--
23	45	63	63	78	56	100	--
24	46	63	63	79	54	100	--
25	49	61	61	66	72	100	0.03
26	55	78	60	69	74	100	0.22
27	67	89	64	82	46	100	--
28	65	91	70	86	36	100	T
29	67	86	77	85	44	96	--
30	68	88	74	85	39	96	T
31	64	85	69	84	57	98	0.78

NORTHWESTERN ILLINOIS AGRONOMY RESEARCH CENTER - MONMOUTH
JUNE 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	60	85	67	79	48	98	0.40
2	67	85	68	80	58	100	0.05
3	54	76	63	75	62	100	T
4	47	78	63	82	32	100	--
5	51	75	64	85	32	100	--
6	55	84	66	87	32	100	--
7	57	85	69	87	38	100	--
8	65	88	71	87	34	88	--
9	61	90	73	90	48	100	--
10	55	75	68	82	46	90	--
11	59	78	68	77	54	100	--
12	68	84	70	80	74	100	0.20
13	65	94	72	91	34	100	--
14	68	96	74	94	28	100	--
15	67	100	78	97	30	100	--
16	59	93	76	96	34	80	--
17	65	95	76	95	42	100	--
18	69	94	76	96	44	100	--
19	65	93	80	97	38	100	--
20	69	86	77	90	68	100	0.79
21	68	83	75	84	78	100	0.39
22	65	84	73	84	66	100	--
23	68	86	73	89	60	100	--
24	67	85	76	87	54	100	--
25	65	89	77	95	48	100	0.20
26	59	79	69	83	54	100	0.60
27	48	76	67	85	34	100	--
28	53	77	68	78	35	100	--
29	65	84	70	90	41	100	T
30	67	83	74	83	55	100	0.01

URBANA AGRONOMY RESEARCH CENTER
APRIL 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil	Humidity %		Precipitation inches
	Min.	Max.	Ave.	Min.	Max.	
1	37	42	39	34	78	--
2	26	55	39	52	100	0.13
3	22	39	37	40	100	--
4	23	46	40	32	100	--
5	33	51	42	28	80	--
6	38	57	44	50	100	--
7	40	60	46	48	84	0.03
8	39	71	51	18	80	--
9	30	67	53	24	100	--
10	39	71	55	16	48	--
11	38	73	53	28	100	0.47
12	33	60	48	68	100	0.16
13	44	59	49	66	100	--
14	47	57	49	94	100	1.21
15	44	63	53	86	100	0.42
16	48	54	50	100	100	0.25
17	45	60	52	100	100	--
18	46	67	57	62	100	--
19	55	74	60	46	100	--
20	55	79	64	42	100	--
21	56	85	67	32	100	--
22	48	87	69	36	100	0.28
23	45	68	58	100	100	0.04
24	45	58	54	72	100	0.16
25	38	63	54	30	86	--
26	44	66	57	28	74	--
27	50	74	62	32	100	0.39
28	38	70	58	26	100	--
29	52	68	60	28	68	--
30	44	88	64	28	56	--

URBANA AGRONOMY RESEARCH CENTER
MAY 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil	Humidity %		Precipitation inches
	Min.	Max.	Ave.	Min.	Max.	
1	38	63	64	34	56	--
2	50	78	64	36	100	--
3	55	85	68	30	100	--
4	43	77	64	60	100	--
5	39	68	60	32	92	--
6	46	70	63	32	82	--
7	53	77	66	28	82	--
8	48	76	71	30	100	--
9	44	77	69	28	76	--
10	54	83	68	34	100	--
11	58	85	70	40	100	--
12	52	87	70	44	100	0.50
13	48	72	66	36	100	--
14	59	83	68	40	100	--
15	56	90	75	34	100	0.02
16	51	74	71	24	96	--
17	56	85	72	24	90	--
18	64	89	75	54	100	1.52
19	67	80	73	84	100	0.07
20	69	88	75	56	100	--
21	65	90	78	64	100	0.10
22	62	90	76	40	100	--
23	54	76	76	60	100	--
24	46	69	74	56	100	--
25	60	77	74	38	100	0.34
26	64	81	72	64	100	0.04
27	67	88	76	44	100	--
28	65	90	79	36	100	--
29	67	90	79	38	100	--
30	69	91	79	38	100	--
31	66	84	76	64	100	0.57

URBANA AGRONOMY RESEARCH CENTER
JUNE 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil	Humidity %		Precipitation inches
	Min.	Max.	Ave.	Min.	Max.	
1	65	85	75	58	100	0.01
2	68	88	77	44	100	0.38
3	65	85	74	64	100	0.78
4	56	78	71	28	100	--
5	53	75	73	36	100	--
6	58	83	76	28	100	--
7	58	84	79	36	100	--
8	64	88	79	36	100	--
9	62	90	80	46	100	--
10	52	72	75	46	100	--
11	61	78	75	36	86	--
12	72	86	75	48	100	--
13	65	92	80	36	100	--
14	65	94	80	44	100	--
15	70	100	83	40	100	--
16	67	100	83	46	100	--
17	68	90	83	46	100	--
18	68	92	85	40	100	--
19	71	92	86	34	100	--
20						
21						
22	70	86	81	74	100	1.17
23	70	86	81	74	100	--
24	70	92	82	46	100	--
25	78	92	83	40	100	--
26	60	85	77	64	100	1.08
27						
28	54	78	76	32	100	--
29	64	83	77	36	100	0.02
30	67	88	73	54	100	0.92

ORR AGRICULTURAL RESEARCH AND DEMONSTRATION CENTER - PERRY
APRIL 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	27	50	34	46	38	86	--
2	26	56	37	46	48	100	T
3	22	42	35	43	36	86	--
4	21	45	34	44	35	84	--
5	29	51	34	46	30	74	--
6	38	63	36	51	36	80	--
7	35	57	42	50	52	90	--
8	34	71	40	59	26	91	--
9	31	70	43	62	28	92	--
10	34	75	44	64	25	78	--
11	37	56	44	51	70	100	0.13
12	33	63	42	52	41	99	--
13	43	65	40	58	42	100	1.07
14	50	60	49	53	78	100	0.79
15	42	64	50	60	50	100	0.08
16	45	60	48	59	57	97	--
17	42	67	50	60	46	100	--
18	42	75	49	67	37	100	--
19	51	74	52	67	43	100	--
20	54	79	53	69	40	98	--
21	59	87	56	73	36	87	--
22	46	74	56	69	60	100	0.24
23	43	73	52	58	46	100	0.02
24	41	57	50	55	60	100	T
25	35	67	54	65	42	100	--
26	43	72	48	66	30	80	--
27	49	80	54	71	36	92	T
28	38	73	54	70	24	74	--
29	45	71	53	70	27	64	--
30	47	88	57	64	32	68	--

ORR AGRICULTURAL RESEARCH AND DEMONSTRATION CENTER - PERRY
MAY 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	48	68	56	73	32	92	--
2	47	84	56	75	42	78	--
3	56	84	61	78	40	100	--
4	49	67	57	65	54	94	0.33
5	38	68	52	65	25	84	--
6	39	69	51	69	30	100	--
7	47	75	54	73	25	86	--
8	43	77	57	75	27	100	--
9	42	78	57	77	26	100	--
10	54	83	58	78	32	82	--
11	60	84	62	78	38	84	--
12	54	86	64	78	38	70	--
13	41	74	62	80	34	97	--
14	55	83	61	81	42	86	--
15	54	88	65	82	30	86	--
16	38	76	63	82	50	100	--
17	45	83	62	82	56	96	--
18	61	87	66	78	56	97	0.72
19	61	85	66	81	28	98	0.17
20	66	87	69	84	27	99	--
21	61	89	70	84	56	98	0.24
22	56	89	67	82	48	98	0.67
23	43	66	61	74	61	99	--
24	46	68	60	76	53	98	--
25	49	70	61	71	57	94	--
26	59	81	64	75	57	96	0.19
27	67	85	64	80	55	94	--
28	62	86	69	80	46	97	--
29	64	83	69	79	54	96	--
30	65	85	70	75	52	98	0.06
31	64	82	70	78	55	97	--

ORR AGRICULTURAL RESEARCH AND DEMONSTRATION CENTER - PERRY
JUNE 1987

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	60	87	69	84	40	99	0.09
2	68	86	70	84	42	82	--
3	55	84	66	79	60	97	1.35
4	50	76	63	76	26	96	--
5	44	74	67	76	34	98	--
6	45	81	62	80	39	98	--
7	51	84	65	82	36	90	--
8	64	86	68	83	38	86	--
9	65	89	69	85	60	96	--
10	49	75	68	80	41	66	--
11	56	78	67	77	55	98	--
12	68	82	70	77	60	98	T
13	68	92	71	88	36	92	--
14	71	93	75	91	37	86	T
15	67	97	76	93	34	100	--
16	61	97	77	94	30	91	--
17	64	93	78	94	42	97	--
18	64	92	79	92	45	97	--
19	65	92	77	91	31	98	--
20	67	87	76	86	56	98	0.45
21	66	89	75	85	52	98	0.14
22	64	86	74	84	53	100	--
23	66	91	73	90	38	96	T
24	66	80	74	79	70	96	--
25	62	89	73	92	43	97	T
26	57	80	70	82	48	96	0.15
27	46	80	68	84	29	98	--
28	49	78	67	84	25	98	--
29	63	81	67	81	46	100	0.10
30	69	86	73	80	40	84	0.23

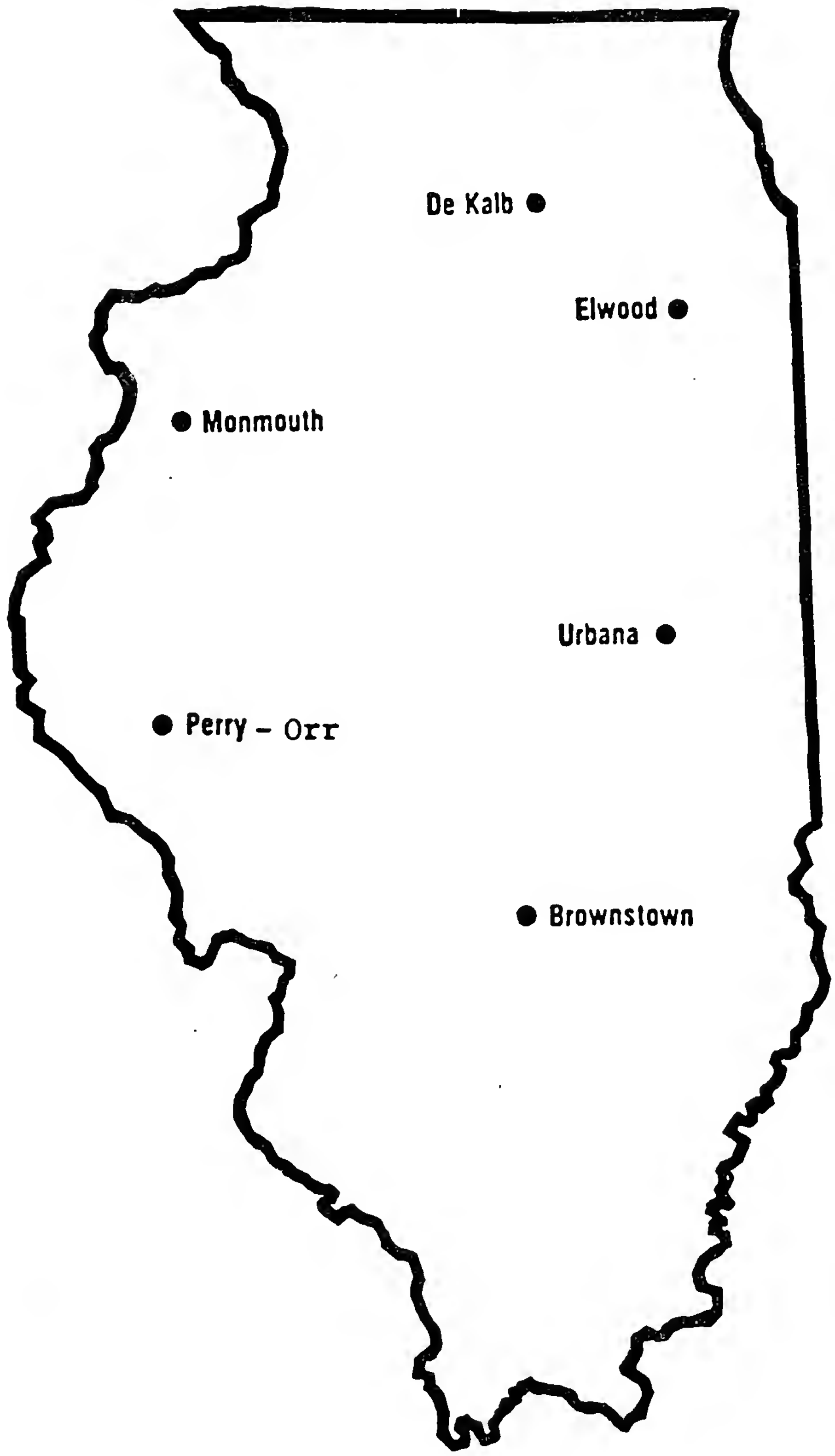
TERMINOLOGY FOR HERBICIDES IN THIS REPORT

Common Name or Code Name	Trade Names	Company
AC 263,499 (imazethapyr)	Pursuit	American Cyanamid
AC 263,222	Cadre	American Cyanamid
Acetochlor	Harness	Monsanto
Acifluorfen	Blazer, Tackle	BASF, Rhone-Poulenc
Alachlor	Lasso	Monsanto
Atrazine	AAtrex	CIBA-Geigy
BAS-51400	--	BASF
BAS-51702 (cycloxydim)	--	BASF
Bentazon + atrazine	Laddock	BASF
Bromoxynil	Brominal, Buctril	Rhone-Poulenc
Butylate + dichlormid	Sutan+	Stauffer-ICI
CGA-180937	--	CIBA-Geigy
Chloramben	Amiben	Rhone-Poulenc
Chlorimuron (DPX-F6025)	Classic	DuPont
Cinmethylin	Cinch	DuPont
Clethodim (RE45601)	Select	Chevron
Clomazone	Command	FMC
Clomazone + trifluralin	Commence	Elanco, FMC
Clopyralid	Lontrel	Dow
Cyanazine	Bladex	DuPont
Cyanazine + atrazine 2:1	Extrazine	DuPont
Cyanazine + atrazine 3:1	Conquest	DuPont
2,4-D butoxyethyl ester	Weedone LV4	Rhone-Poulenc
2,4-DB	Butyrac 200	Rhone-Poulenc
Dicamba	Banvel	Sandoz
Dicamba + atrazine	Marksman	Sandoz
DPX-L8348	Preview	DuPont
DPX-M6316	Harmony	DuPont
DPX-R8260	Lorox Plus	DuPont
DPX-Y6202	Assure	DuPont
DPX-Y6202-31 (resolved isomer)	Assure	DuPont
EPTC	Eptam	Stauffer-ICI
EPTC + dichlormid	Eradicane	Stauffer-ICI
Ethalfluralin	Sonalan	Eli Lilly
Fenoxaprop	Whip	Hoechst
Fluazifop-P	Fusilade 2000	ICI
Fluroxypyr	Starane	Dow
Fomesafen	Reflex	ICI
Glyphosate	Roundup	Monsanto
Glyphosate + alachlor (1.4:2.6)	Bronco	Monsanto
Haloxyfop	Verdict	Dow
HOE-39866	Ignite	Hoechst
Imazaquin	Scepter	Cyanamid
Lactofen	Cobra	PPG
Linuron	Lorox, Linex	DuPont, Griffin
Metolachlor	Dual	CIBA-Geigy

Common Name or Code Name	Trade Names	Company
Metribuzin	Sencor, Lexone	Mobay, DuPont
Metribuzin + metolachlor	Turbo	Mobay
Metribuzin + trifluralin	Salute	Mobay
Oryzalin	Surflan	Elanco
Paraquat	Gramoxone Super	ICI
Paraquat + atrazine .4 + 2	Colonel	ICI
Pendimethalin	Prowl	American Cyanamid
PPG-1259	--	PPG
PPG-4000	--	PPG
Quizalofop (DPX-Y6202)	Assure	DuPont
SC-0774 + R29148	--	Stauffer-ICI
SC-0051	--	Stauffer-ICI
Sethoxydim	Poast	BASF
Simazine	Princep, Caliber 90	CIBA-Geigy
Tridiphane	Tandem	Dow

WEED NAMES AND CODES

Abbreviation	Common Name	Botanical Name
Bucu	Burcucumber	Sicyos angulatus
Bygr	Barnyardgrass	Echinochloa crus-galli
Cath	Canada thistle	Cirsium arvense
Cocb	Common cocklebur	Xanthium strumarium
Coch	Common chickweed	Stellaria media
Colq	Common lambsquarters	Chenopodium album
Corw	Common ragweed	Ambrosia artemisiifolia
Cosf	Common sunflower	Helianthus annuus
Dali	Dandelion	Taraxacum officinale
Ebns	Easter black nightshade	Solanum ptycanthum
Fapa	Fall panicum	Panicum dichotomiflorum
Gift	Giant foxtail	Setaria faberi
Girw	Giant ragweed	Ambrosia trifida
Grft	Green foxtail	Setaria viridis
Howe	Horseweed	Conyza canadensis
Ilmg	Ivyleaf morningglory	Ipomoea hederacea
Jiwe	Jimsonweed	Datura stramonium
Lacg	Large crabgrass	Digitaria sanguinalis
Pesw	Pennsylvania smartweed	Polygonum pensylvanicum
Prsi	Prickly sida	Sida spinosa
Rrpw	Redroot pigweed	Amaranthus retroflexus
Shca	Shattercane	Sorghum bicolor
Shpu	Shepherdspurse	Capsella bursa-pastoris
Smgc	Smooth groundcherry	Physalis subglabrata
Smpw	Smooth pigweed	Amaranthus hybridus
Tamg	Tall morningglory	Ipomoea purpurea
Vele	Velvetleaf	Abutilon theophrasti
Vema	Venice mallow	Hibiscus trionum
Yeft	Yellow foxtail	Setaria glauca



LOCATIONS OF UNIVERSITY OF ILLINOIS
WEED SCIENCE RESEARCH STUDIES IN ILLINOIS

UNIVERSITY OF ILLINOIS

WEED CONTROL RESEARCH REPORT

1988

Department of Agronomy / Weed Science

University of Illinois at Urbana-Champaign

INTRODUCTION

This report is a summary of herbicide evaluation studies conducted by the University of Illinois Department of Agronomy Weed Science program in 1988. Research from six locations in Illinois are reported. The purpose of this report is to inform our colleagues at other universities, our cooperators in industry, and other interested persons of the results of our 1988 field research. The information within does not constitute a recommendation or endorsement of any product or rate. Current recommendations for weed control in field crops are available from the University of Illinois Cooperative Extension Service.

Weed control and crop injury ratings are based on a 0 to 99 scale with 99 equal to complete kill. Weed species are generally reported as four-letter NCWCC abbreviations. Herbicides are referred to by their trade name or experimental number. A list of weed species and herbicides used in these studies can be found in the appendix. Herbicide rates are given in lbs ai/A except when rate is followed by a "G" or "Z", meaning grams or ounces ai/A, respectively.

In preparing individual studies we tried to be as complete as possible; however, certain omissions do occur. In addition, despite careful proofing, certain errors in text entry and compilation may exist. If you believe that you have found an error and would like further explanation, please contact Rex Liebl or Loyd Wax. If you have concerns or suggestions, please feel free to contact us.

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ACKNOWLEDGEMENTS

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AMERICAN CYANAMID COMPANY
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SANDOZ CROP PROTECTION CORPORATION
TERRA INTERNATIONAL, INC.
UNIROYAL CHEMICAL
VALENT/CHEVRON CHEMICAL COMPANY

BACKGROUND

Trial Title :1988 EPP WEED CONTROL IN CORN STUDY I
Trial State :IL
Trial Location :C500 CENTER (URBANA)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :NO-TILL
Tillage/Maintenance :2 cultivations
Seedbed Description :BEAN STUBBLE
Ground cover & % :30% stover

Soil Texture :silt loam
Soil O.M. % : 4.5
Soil pH : 6.5
Soil Name :FLANAGAN
Fert. Level :lo nitr
Metero. Station:118741

previous crop	previous pesticide	year
soybeans	unknown	1987

CROP

Trial Crop :CORN
Crop Variety :PIONEER 3377
Planting Date : 5/18/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/acre):28000
Row Spacing (in) : 30.0
Soil Temp (F) @ Plant : 75
Soil Moisture @ Planting :ADEQUATE

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
COLQ	POST	2-12	LF	LOW	2.0	6.0
GIFT	POST	2-6	LF	HIGH	2.0	8.0
JIWE	POST	4-6	LF	MEDIUM	4.0	8.0
PESW	POST	4-12	LF	HIGH	4.0	12.0
SMPW	POST	6-8	LF	MEDIUM	2.0	8.0
VELE	POST	4-6	LF	LOW	4.0	8.0

Application Code	:EPP		
Date of Application	:04/08/88	Nozzle Spacing (In)	: 30
Time of Application	:07:00A	Boom Length (Ft)	: 10
Pressure (PSI)	: 30	Boom Height (In)	:
Nozzle Type	: 8003	Incorporation Equip	:
Air Temp (F)	: 60	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:80	Incorp. Depth (In)	:
Wind Speed (MPH)	: 6.5	Percent Cloud Cover	:10
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:25.0	Soil Temp (F)	: 50
Soil Moisture @ App.	:DRY		

Application Code	:PRE		
Date of Application	:05/18/88	Nozzle Spacing (In)	: 30
Time of Application	:08:00A	Boom Length (Ft)	: 10
Pressure (PSI)	: 30	Boom Height (In)	:
Nozzle Type	: 8003	Incorporation Equip	:
Air Temp (F)	: 80	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:25.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:DRY		

Application Code	:POST		
Date of Application	:06/03/88	Nozzle Spacing (In)	: 20
Time of Application	:05:00P	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip.	:
Air Temp (F)	: 80	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	:10.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	: N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:DRY		

COMMENTS

The early preplant (EPP) treatments applied as one application were better than those applied split EPP plus PRE. The grass control was much better from soil applied treatments than fro the postemergence applications.

					GIFT 5/16	GIFT 6/06	PESW 5/16	PESW 6/06	JIWE 5/16	COLQ 6/06	VELE 6/06
1A	BLADEX	90DF	3.0	EPP	97	92	99	82	98	99	93
1B	ATRAZINE	90DF	1.0	EPP							
2A	BLADEX	90DF	2.67	EPP	92	82	99	92	89	99	67
2B	ATRAZINE	90DF	1.33	EPP							
3A	BLADEX	90DF	2.0	EPP	91	83	99	97	94	98	60
3B	ATRAZINE	90DF	2.0	EPP							
4A	BLADEX	90DF	1.8	EPP	82	76	96	94	89	99	57
4B	ATRAZINE	90DF	0.6	EPP							
4C	BLADEX	90DF	1.2	PRE							
4D	ATRAZINE	90DF	0.4	PRE							
5A	BLADEX	90DF	1.6	EPP	80	74	99	94	94	99	65
5B	ATRAZINE	90DF	0.8	EPP							
5C	BLADEX	90DF	1.1	PRE							
5D	ATRAZINE	90DF	0.5	PRE							
6A	BLADEX	90DF	1.2	EPP	78	70	98	99	92	99	82
6B	ATRAZINE	90DF	1.2	EPP							
6C	BLADEX	90DF	0.8	PRE							
6D	ATRAZINE	90DF	0.8	PRE							
7	CHECK				0	0	0	0	0	0	0
8	LARIAT	4EC	4.75	EPP	92	77	99	70	92	99	57
9	BULLET	4MT	4.75	EPP	93	89	99	90	89	99	85
10	BICEP	5.9L	4.5	EPP	96	86	99	80	97	99	80
11A	LARIAT	4EC	4.85	EPP	93	84	99	99	97	99	85
11B	LARIAT	4EC	1.90	PRE							
12A	BULLET	4MT	2.85	EPP	86	83	99	99	74	99	82
12B	BULLET	4MT	1.90	PRE							
13A	BICEP	5.9L	2.7	EPP	91	86	99	92	96	99	85
13B	BICEP	5.9L	1.8	PRE							
14	LARIAT	4EC	3.6	EPP	92	77	99	60	92	99	57
15	BULLET	4MT	3.6	EPP	96	87	99	94	94	96	52
16	BICEP	5.9L	3.4	EPP	96	92	99	90	90	99	90

					GIFT 5/16	GIFT 6/06	PESW 5/16	PESW 6/06	JIWE 5/16	COLQ 6/06	VELE 6/06
17A	LARIAT	4EC	2.16	EPP	85	82	87	99	64	99	77
17B	LARIAT	4EC	1.44	PRE							
18A	BULLET	4MT	2.16	EPP	61	27	84	94	84	84	32
18B	BULLET	4MT	1.44	PRE							
19A	BICEP	5.9L	2.04	EPP	94	86	99	99	99	99	82
19B	BICEP	5.9L	1.36	PRE							
20	CHECK				0	0	0	0	0	0	0
21A	2.4-D AMINE	3.8EC	1.0	EPP	60	35	87	70	50	99	84
21B	TANDEM	4.0EC	0.5	POST							
21C	ATRAZINE	90DF	1.5	POST							
21D	COC	4L	1.0Q	POST							
22A	2.4-D AMINE	3.8EC	1.0	EPP	57	37	65	80	40	92	79
22B	TANDEM	4.0EC	0.5	POST							
22C	ATRAZINE	90DF	0.8	POST							
22D	X-77	%V/V	0.25	POST							
23A	DUAL	8EC	2.0	EPP	95	80	96	40	90	87	70
23B	2.4-D AMINE	3.8EC	1.0	EPP							
23C	TANDEM	4.0EC	0.5	POST							
23D	ATRAZINE	90DF	1.5	POST							
23E	COC	4L	1.0Q	POST							
24A	DUAL	8EC	2.0	EPP	87	70	94	60	92	92	72
24B	2.4-D AMINE	3.8EC	1.0	EPP							
24C	TANDEM	4.0EC	0.5	POST							
24D	ATRAZINE	90DF	1.5	POST							
24E	X-77	%V/V	0.25	POST							
25A	BICEP	5.9L	2.04	EPP	89	75	99	90	94	99	67
25B	TANDEM	4.0EC	0.5	POST							
25C	ATRAZINE	90DF	1.5	POST							
25D	COC	4L	1.0Q	POST							
26A	BLADEX	90DF	3.0	EPP	92	86	98	95	80	99	91
26B	BANVEL	4EC	0.3	POST							
27A	CGA-180937	7.8EC	2.5	EPP	88	74	85	94	80	97	91
27B	BANVEL	4EC	0.3	POST							
28A	LASSO	4EC	3.0	EPP	84	81	67	92	47	93	89
28B	BANVEL	4EC	0.3	POST							

					GIFT 5/16	GIFT 6/06	PESW 5/16	PESW 6/06	JIWE 5/16	COLQ 6/06	VELE 6/06
29A	LASSO MT	4MT	3.0	EPP	92	82	95	94	90	95	87
29B	BANVEL	4EC	0.3	POST							
30A	HARNESS	4EC	2.0	EPP	93	91	94	97	65	97	84
30B	BANVEL	4EC	0.3	POST							
31A	DUAL	8EC	2.5	EPP	87	60	89	92	90	92	80
31B	BANVEL	4EC	0.3	POST							
32	CHECK				0	0	0	0	0	0	0
CV					13	13	14	5	16	5	12
LSD					15	13	16	6	17	6	11

BACKGROUND

Trial Title	:1988 WEED CONTROL IN NO-TILL CORN
Trial State	:IL
Trial Location	:C-500 (URBANA, IL)
Trial Zipcode	:61801
Prime Investigator	:C/L/W/M

SITE

Experimental Design	:RCB	Soil Texture	:SILT LOAM
Number of Replicates	: 4	Soil O.M. %	: 4.5
Plot Wd X Lth (Ft)	:10.0 40.0	Soil pH	: 6.5
Tillage Type	:NO-TILL	Soil Name	:FLANAGAN
Seedbed Description	:BEAN STUBBLE	Metero. Station:	
Ground cover & %	:100		

Previous crop	previous pesticide	year
SOYBEANS	VARIOUS TRT'S	1987

CROP

Trial Crop	:CORN
Crop Variety	:PIONEER 3377
Planting Date	:05/16/88
Planting Method	:MECHANICAL
Planting Depth (in)	: 1.5
Seeding Rate(plants/acre)	: 2800
Row Spacing (in)	:30.0
Soil Temp (F) @ Plant	: 65
Soil Moisture @ Planting	:DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
COLQ	POST	2-12	LF	LOW	2.0	6.0
GIFT	POST	2-6	LF	HIGH	2.0	8.0
JIWE	POST	4-6	LF	MED	4.0	8.0
PESW	POST	4-12	LF	HIGH	4.0	12.0
COLQ	PRE			MED	2.0	8.0
GIFT	PRE			HIGH	1.0	2.0
JIWE	PRE			MED	2.0	4.0

Application Code	:PRE		
Date of Application	:05/18/88	Nozzle Spacing (in)	:20
Time of Application	:7:00A	Boom Length (Ft)	:10
Pressure (PSI)	:40	Boom Height (in)	:20
Nozzle Type	:8003	Incorporation Equip	:
Air Temp (F)	:85	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:67	Incorp. Depth (in)	:
Wind Speed (MPH)	:10 NE	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HAND-HELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:25	Soil Temp (F)	:80
Soil Moisture @ App.	:DRY		

* @24 HR APPLICATIONS WERE IDENTICAL TO PRE

Application Code	:POST		
Date of Application	:06/03/88	Nozzle Spacing (in)	:20
Time of Application	:9:00A	Boom Length (Ft)	:10
Pressure (PSI)	:40	Boom Height (in)	:20
Nozzle Type	:8002	Incorporation Equip.	:
Air Temp (F)	:90	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (in)	:
Wind Speed (MPH)	:8 SW	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HAND-HELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:20	Soil Temp (F)	:85
Soil Moisture @ App.	:DRY		

COMMENTS

Treatments including Roundup or Bronco provided much better knockdown than did Gramoxone. The early rating was 2 weeks after planting time (PRE) treatments. The PRE treatments were much better than expected considering the minimal rainfall.

					C.I. 5/31	C.I. 6/06	GIFT 5/31	GIFT 6/06	COLQ 5/31	COLQ 6/06
1A	ROUNDUP	3L	1.00	PRE	0	0	99	99	99	99
1B	ATRAZINE	90DF	2.50	PRE						
2A	ROUNDUP	3L	1.00	PRE	0	0	99	99	99	99
2B	EXTRAZINE	90DF	4.00	PRE						
3A	ROUNDUP	3L	1.00	PRE	0	0	99	99	99	99
3B	CONQUEST	90DF	4.00	PRE						
4A	ROUNDUP	3L	1.00	PRE	0	0	99	99	99	99
4B	LARIAT	4FL	3.75	PRE						
5A	ROUNDUP	3L	1.00	PRE	0	0	99	98	99	99
5B	BULLET	4FL	3.75	PRE						
6A	ROUNDUP	3L	1.00	PRE	0	0	99	99	99	99
6B	BICEP	5.9L	3.60	PRE						
7A	ROUNDUP	3L	1.00	PRE	0	0	99	99	99	99
7B	PROZINE	70DF	3.00	PRE						
8A	ROUNDUP	3L	1.00	PRE	0	0	99	98	99	99
8B	MARKSMAN	3.2FL	1.40	PRE						
9A	DUAL	8EC	2.50	PRE	0	0	55	67	99	99
9B	ATRAZINE	90DF	1.20	PRE						
9C	BANVEL	4EC	0.36	PRE						
9D	COC	4L	1.0Q	PRE						
10A	POAST	1.5EC	0.20	PRE	0	0	52	52	94	97
10B	LASSO	4EC	2.50	PRE						
10C	BANVEL	4EC	0.50	PRE						
10D	COC	4L	1.0Q	PRE						
11	CHECK				0	0	0	0	0	0
12A	ROUNDUP	3L	1.00	PRE	0	0	99	99	92	96
12B	BAS-514	50WP	0.50	PRE						
13A	ROUNDUP	3L	1.00	PRE	0	0	99	93	85	80
13B	BAS-514	50WP	1.00	PRE						
14A	ROUNDUP	3L	1.00	PRE	0	7	99	99	84	90
14B	BAS-514	50WP	1.50	PRE						
15A	BAS-514	50WP	0.50	PRE	0	10	99	99	99	99
15B	ATRAZINE	90DF	1.50	PRE						
15C	COC	4L	1.0Q	PRE						

					C.I. 5/31	C.I. 6/06	GIFT 5/31	GIFT 6/06	COLQ 5/31	COLQ 6/06
16A	BAS-514	50WP	1.00	PRE	0	0	50	65	77	99
16B	ATRAZINE	90DF	1.50	PRE						
16C	COC	4L	1.0Q	PRE						
17A	BAS-514	50WP	1.50	PRE	0	0	65	80	90	99
17B	ATRAZINE	90DF	1.50	PRE						
17C	COC	4L	1.0Q	PRE						
18	CHECK				0	0	0	0	0	0
19A	IGNITE	1.67AS	0.75	PRE	0	0	99	99	87	85
19B	TANDEM	4E	0.50	POST						
19C	ATRAZINE	90DF	1.50	POST						
19D	COC	4L	1.0Q	POST						
20A	IGNITE	1.67AS	1.00	PRE	0	0	99	99	94	89
20B	TANDEM	4E	0.50	POST						
20C	ATRAZINE	90DF	1.50	POST						
20D	COC	4L	1.0Q	POST						
21A	PARAQUAT	1.5L	0.30	PRE	0	0	57	55	80	82
21B	X-77	%/V	0.25	PRE						
21C	TANDEM	4E	0.50	POST						
21D	ATRAZINE	90DF	1.50	POST						
21E	COC	4L	1.0Q	POST						
22A	PARAQUAT	1.5L	0.50	PRE	0	0	57	72	89	94
22B	X-77	%/V	0.25	PRE						
22C	TANDEM	4E	0.50	POST						
22D	ATRAZINE	90DF	1.50	POST						
22E	COC	4L	1.0Q	POST						
23A	ROUNDUP	3L	0.75	PRE	0	0	99	98	99	97
23B	TANDEM	4E	0.50	POST						
23C	ATRAZINE	90DF	1.50	POST						
23D	COC	4L	1.0Q	POST						
24A	ROUNDUP	3L	1.00	PRE	3	0	99	95	99	97
24B	TANDEM	4E	0.50	POST						
24C	ATRAZINE	90DF	1.50	POST						
24D	COC	4L	1.0Q	POST						
25A	BRONCO	4L	4.00	PRE	0	0	99	99	97	97
25B	BANVEL	4L	0.25	POST						
26A	PRELUDE	2.5L	2.50	PRE	0	0	70	80	91	90
26B	BANVEL	4L	0.25	POST						

					C.I. 5/31	C.I. 6/06	GIFT 5/31	GIFT 6/06	COLQ 5/31	COLQ 6/06
27A	MON-14482	84.7DG	2.10	PRE	0	0	99	95	99	99
27B	X-77	%/V	0.50	PRE						
28A	MON-14482	84.7DG	2.60	PRE	0	0	99	72	99	97
28B	X-77	%/V	0.50	PRE						
29	ROUNDUP	3L	1.00	PRE	0	0	99	95	94	97
30A	ROUNDUP	3L	1.00	PRE	0	0	99	99	95	99
30B	LASSO EC	4L	2.50	@24H						
31A	ROUNDUP	3L	1.00	PRE	0	0	99	97	92	98
31B	LASSO MT	4L	2.50	@24H						
32	CHECK				0	0	0	0	0	0
33A	PARAQUAT	1.5L	0.50	PRE	0	0	80	86	96	99
33B	X-77	%/V	0.25	PRE						
33C	BICEP	5.9L	3.60	PRE						
34A	PARAQUAT	1.5L	0.50	PRE	0	0	72	79	97	99
34B	2.4-D	3.8EC	0.50	PRE						
34C	X-77	%/V	0.25	PRE						
34D	ATRAZINE	90DG	1.50	PRE						
35A	PARAQUAT	1.5L	0.50	PRE	0	0	75	85	99	92
35B	AATREX	90DG	1.00	PRE						
35C	BLADEX	90DG	1.00	PRE						
35D	X-77	%/V	0.25	PRE						
36A	ATRAZINE	90DG	2.00	PRE	0	0	42	42	88	94
36B	COC	4L	1.0Q	PRE						
37A	BLADEX	90DG	2.00	PRE	0	0	75	65	99	99
37B	COC	4L	1.00	PRE						
CV					1	1	17	12	6	6
LSD					1	1	7	13	7	8

					PESW 5/31	PESW 6/06
1A	ROUNDUP	3L	1.00	PRE	98	97
1B	ATRAZINE	90DF	2.50	PRE		
2A	ROUNDUP	3L	1.00	PRE	94	96
2B	EXTRAZINE	90DF	4.00	PRE		
3A	ROUNDUP	3L	1.00	PRE	98	98
3B	CONQUEST	90DF	4.00	PRE		
4A	ROUNDUP	3L	1.00	PRE	96	94
4B	LARIAT	4FL	3.75	PRE		
5A	ROUNDUP	3L	1.00	PRE	99	98
5B	BULLET	4FL	3.75	PRE		
6A	ROUNDUP	3L	1.00	PRE	99	96
6B	BICEP	5.9L	3.60	PRE		
7A	ROUNDUP	3L	1.00	PRE	97	95
7B	PROZINE	70DF	3.00	PRE		
8A	ROUNDUP	3L	1.00	PRE	97	99
8B	MARKSMAN	3.2FL	1.40	PRE		
9A	DUAL	8EC	2.50	PRE	94	94
9B	ATRAZINE	90DF	1.20	PRE		
9C	BANVEL	4EC	0.36	PRE		
9D	COC	4L	1.0Q	PRE		
10A	POAST	1.5EC	0.20	PRE	99	97
10B	LASSO	4EC	2.50	PRE		
10C	BANVEL	4EC	0.50	PRE		
10D	COC	4L	1.0Q	PRE		
11	CHECK				0	0
12A	ROUNDUP	3L	1.00	PRE	85	95
12B	BAS-514	50WP	0.50	PRE		
13A	ROUNDUP	3L	1.00	PRE	87	86
13B	BAS-514	50WP	1.00	PRE		
14A	ROUNDUP	3L	1.00	PRE	75	80
14B	BAS-514	50WP	1.50	PRE		
15A	BAS-514	50WP	0.50	PRE	94	94
15B	ATRAZINE	90DF	1.50	PRE		
15C	COC	4L	1.0Q	PRE		

					PESW 5/31	PESW 6/06
16A	BAS-514	50WP	1.00	PRE	40	65
16B	ATRAZINE	90DF	1.50	PRE		
16C	COC	4L	1.0Q	PRE		
17A	BAS-514	50WP	1.50	PRE	67	75
17B	ATRAZINE	90DF	1.50	PRE		
17C	COC	4L	1.0Q	PRE		
18	CHECK				0	0
19A	IGNITE	1.67AS	0.75	PRE	99	97
19B	TANDEM	4E	0.50	POST		
19C	ATRAZINE	90DF	1.50	POST		
19D	COC	4L	1.0Q	POST		
20A	IGNITE	1.67AS	1.00	PRE	98	98
20B	TANDEM	4E	0.50	POST		
20C	ATRAZINE	90DF	1.50	POST		
20D	COC	4L	1.0Q	POST		
21A	PARAQUAT	1.5L	0.30	PRE	70	75
21B	X-77	%/V	0.25	PRE		
21C	TANDEM	4E	0.50	POST		
21D	ATRAZINE	90DF	1.50	POST		
21E	COC	4L	1.0Q	POST		
22A	PARAQUAT	1.5L	0.50	PRE	75	77
22B	X-77	%/V	0.25	PRE		
22C	TANDEM	4E	0.50	POST		
22D	ATRAZINE	90DF	1.50	POST		
22E	COC	4L	1.0Q	POST		
23A	ROUNDUP	3L	0.75	PRE	92	94
23B	TANDEM	4E	0.50	POST		
23C	ATRAZINE	90DF	1.50	POST		
23D	COC	4L	1.0Q	POST		
24A	ROUNDUP	3L	1.00	PRE	85	86
24B	TANDEM	4E	0.50	POST		
24C	ATRAZINE	90DF	1.50	POST		
24D	COC	4L	1.0Q	POST		
25A	BRONCO	4L	4.00	PRE	87	89
25B	BANVEL	4L	0.25	POST		
26A	PRELUDE	2.5L	2.50	PRE	52	87
26B	BANVEL	4L	0.25	POST		

					PESW 5/31	PESW 6/06
27A	MON-14482	84.7DG	2.10	PRE	97	92
27B	X-77	%/V	0.50	PRE		
28A	MON-14482	84.7DG	2.60	PRE	97	96
28B	X-77	%/V	0.50	PRE		
29	ROUNDUP	3L	1.00	PRE	92	95
30A	ROUNDUP	3L	1.00	PRE	90	97
30B	LASSO EC	4L	2.50	@24H		
31A	ROUNDUP	3L	1.00	PRE	92	95
31B	LASSO MT	4L	2.50	@24H		
32	CHECK				0	0
33A	PARAQUAT	1.5L	0.50	PRE	89	94
33B	X-77	%/V	0.25	PRE		
33C	BICEP	5.9L	3.60	PRE		
34A	PARAQUAT	1.5L	0.50	PRE	92	94
34B	2.4-D	3.8EC	0.50	PRE		
34C	X-77	%/V	0.25	PRE		
34D	ATRAZINE	90DG	1.50	PRE		
35A	PARAQUAT	1.5L	0.50	PRE	94	90
35B	AATREX	90DG	1.00	PRE		
35C	BLADEX	90DG	1.00	PRE		
35D	X-77	%/V	0.25	PRE		
36A	ATRAZINE	90DG	2.00	PRE	85	84
36B	COC	4L	1.0Q	PRE		
37A	BLADEX	90DG	2.00	PRE	97	99
37B	COC	4L	1.00	PRE		
CV					10	10
LSD					12	12

BACKGROUND
Trial Title :PPI WEED CONTROL IN CORN
Trial State :IL
Trial Location :C-400 SOUTH (URBANA IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design	:RCB	Soil Texture	:SILT LOAM
Number of Replicates	: 4	Soil O.M. %	: 4.0
Plot Wd X Lth (Ft)	:10.0 40.0	Soil pH	: 6.0
Tillage Type	:CONVENTIONAL	Soil Name	:FLANAGAN
Seedbed Description	:CONV. TILL	Metero. Station:	
Ground cover & %	: 0		

previous crop	previous pesticide	year
SOYEANS		1987

CROP
Trial Crop :CORN
Crop Variety :PIONEER 3377
Planting Date :04/21/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate(plants/acre):24000
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 60
Soil Moisture @ Planting :ADQ

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE	PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	PPI		HIGH		
VELE	PPI		HIGH		
JIWE	PPI		MED		
SMPW	PPI		MED		

Application Code :PPI
Date of Application :4/21/88
Time of Application :7:00A
Pressure (PSI) : 30
Nozzle Type :8003
Air Temp (F) : 60
Relative Humidity :90
Wind Speed (MPH) : 5.0
Diluent Carrier :WATER
Appli Equip Type :HANDHELD
Spray Volume (GPA) :25.0
Soil Moisture @ App.:ADEQUATE

Nozzle Spacing (In) : 20
Boom Length (Ft) : 10
Boom Height (In) : 20
Incorporation Equip :COMBO
Elapsed Time to Incorp.: 1 hrs.
Incorp. Depth (In) : 4.0
Percent Cloud Cover :50
Dew Presence (Y/N) :N
Ground Speed (MPH) : 3.0
Soil Temp (F) : 60

Application Code :PRE
Date of Application :4/21/88
Time of Application :3:00P
Pressure (PSI) : 30
Nozzle Type :8003
Air Temp (F) : 60
Relative Humidity :90
Wind Speed (MPH) : 8.0
Diluent Carrier :WATER
Appli Equip Type :HANDHELD
Spray Volume (GPA) :25.0
Soil Moisture @ App.:ADEQUATE

Nozzle Spacing (In) : 20
Boom Length (Ft) : 10
Boom Height (In) : 20
Incorporation Equip :
Elapsed Time to Incorp.: hrs.
Incorp. Depth (In) :
Percent Cloud Cover :100
Dew Presence (Y/N) :N
Ground Speed (MPH) : 3.0
Soil Temp (F) : 60

Application Code :SPK
Date of Application :5/11/888
Date of Application :09:00A
Pressure (PSI) : 40
Nozzle Type :11002
Air Temp (F) : 70
Relative Humidity :90
Wind Speed (MPH) : 5.0
Diluent Carrier :WATER
Appli Equip Type :HANDHELD
Spray Volume (GPA) :20.0
Soil Moisture @ App.:ADEQUATE

Nozzle Spacing (In) : 20
Boom Length (Ft) : 10
Boom Height (In) : 20
Incorporation Equip. :
Elapsed Time to Incorp.: hrs.
Incorp. Depth (In) :
Percent Cloud Cover : 0
Dew Presence (Y/N) :N
Ground Speed (MPH) : 3.0
Soil Temp (F) : 70

COMMENTS

A heavy stand of giant foxtail and velvetleaf was present with moderate jimsonweed and smooth pigweed pressure. Despite dry weather following application, most treatments provided good to excellent weed control.

					GIFT 6/09	VELE 6/09	JIWE 6/09	SMPW 6/09
1	SUTAN	6.7EC	4.00	PPI	96	79	75	87
2	ERADICANE	6.7EC	4.00	PPI	99	88	89	97
3	SUTAZINE	6FL	4.67	PPI	98	79	88	99
4	SUTAZINE	6FL	5.33	PPI	97	85	97	99
5	SUTAZINE	6FL	6.67	PPI	97	86	97	99
6	SUTAZINE	6MT	4.38	PPI	93	74	91	99
7	SUTAZINE	6MT	5.00	PPI	95	79	98	97
8	SUTAZINE	6MT	6.25	PPI	97	82	97	99
9	LASSO	4EC	2.75	PPI	95	72	60	98
10	DUAL	8EC	2.29	PPI	98	61	82	99
11	LARIAT	4FL	3.75	PPI	98	76	93	99
12	LARIAT	4FL	2.80	PPI	93	66	90	99
13	CHECK				0	0	0	0
14	BULLET	4FL	3.75	PPI	94	70	95	99
15	BICEP	5.9FL	3.60	PPI	98	75	92	99
16	BICEP	5.9FL	2.70	PPI	93	66	95	97
17	CONQUEST	90DF	4.00	PPI	94	91	97	98
18	EXTRAZINE	90DF	4.00	PPI	95	86	95	97
19A	LASSO	4EC	2.00	PPI	95	79	91	99
19B	ATRAZINE	90DF	1.00	PPI				
19C	BLADEX	90DF	1.00	PPI				
20A	LASSO	4EC	2.50	PPI	92	76	93	99
20B	ATRAZINE	90DF	1.25	PPI				
20C	BLADEX	90DF	1.25	PPI				
21A	HARNESS	7.5EC	1.50	PPI	98	77	92	99
21B	ATRAZINE	90DF	1.10	PPI				

					GIFT 6/09	VELE 6/09	JIWE 6/09	SMPW 6/09
22A	HARNESS	7.5EC	1.75	PPI	99	84	95	99
22B	ATRAZINE	90DF	1.30	PPI				
23A	HARNESS	7.5EC	2.00	PPI	99	85	99	99
23B	ATRAZINE	90DF	1.50	PPI				
24A	DUAL	8EC	2.29	PPI	98	79	99	99
24B	ATRAZINE	90DF	2.00	PPI				
25A	DUAL	8EC	2.29	PPI	98	89	94	99
25B	AC-513-655	4.8FL	1.20	PPI				
26A	DUAL	8EC	2.29	PRE	92	72	97	99
26B	ATRAZINE	90DF	2.00	PRE				
27A	DUAL	8EC	2.29	PRE	93	57	92	97
27B	AC-513-655	4.8FL	1.20	PRE				
28A	PROWL	4EC	1.50	PRE	80	60	86	99
28B	AC-513-655	4.8FL	1.20	PRE				
29A	PROWL	4EC	1.50	SPK	69	92	90	99
29B	AC-513-655	4.8FL	1.20	SPK				
30	CHECK				0	0	0	0
CV					5	14	7	3
LSD					7	14	9	5

BACKGROUND
Trial Title :PREEMERGENCE WEED CONTROL IN CORN I
Trial State :IL
Trial Location :C-500 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design	:RCB	Soil Texture	:SILTY LOAM
Number of Replicates	: 4	Soil O.M. %	: 4.0
Plot Wd X Lth (Ft)	: 7.5 40.0	Soil pH	: 6.4
Tillage Type	:CONVENTIONAL	Soil Name	:FLANAGAN
Seedbed Description	:CLODDY	Metero. Station:	
Ground cover & %	: 0		

previous crop	previous pesticide	year
SOYBEANS		1987

CROP
Trial Crop :CORN
Crop Variety :PIONEER 3377
Planting Date :04/28/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate(plants/acre): 28000
Row Spacing (in) :30.0
Soil Temp (F) @ Plant :70
Soil Moisture @ Planting :DRY

Application Code	:PRE		
Date of Application	:05/03/88	Nozzle Spacing (In)	: 20
Time of Application	:07:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 30	Boom Height (In)	: 20
Nozzle Type	:8003	Incorporation Equip	:
Air Temp (F)	: 75	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:60	Incorp. Depth (In)	:
Wind Speed (MPH)	: 8.0	Percent Cloud Cover	:
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:25.0	Soil Temp (F)	:70
Soil Moisture @ App.	:LOW		

					GIFT 6/13	SMPW 6/13	VELE 6/13	JIWE 6/13
1	ATRAZINE	90DF	2.50	PRE	20	32	25	15
2	EXTRAZINE	90DF	4.00	PRE	15	85	7	5
3	EXTRAZINE	90DF	3.50	PRE	45	61	12	17
4	CONQUEST	90DF	4.00	PRE	10	54	10	20
5	CONQUEST	90DF	3.50	PRE	24	15	0	0
6	LARIAT	4FL	3.75	PRE	72	93	2	25
7	LARIAT	4FL	2.80	PRE	42	70	9	15
8	BULLET	4FL	3.75	PRE	71	87	10	9
9	BULLET	4FL	2.80	PRE	45	42	15	5
10	BICEP	5.9FL	3.60	PRE	77	81	14	15
11	BICEP	5.9FL	2.70	PRE	31	82	9	17
12	CHECK				0	0	0	0
13	PROZINE	70DF	3.00	PRE	17	32	11	7
14	PROZINE	70DF	2.25	PRE	39	49	35	7
15	MARKSMAN	3.2FL	1.4	PRE	0	32	70	25
16	MARKSMAN	3.2FL	1.00	PRE	42	86	55	51
17A	DUAL	8EC	2.50	PRE	37	85	65	56
17B	ATRAZINE	90DF	1.20	PRE				
17C	BANVEL	4EC	0.36	PRE				
18A	DUAL	8EC	2.50	PRE	30	79	17	30
18B	ATRAZINE	90DF	1.20	PRE				
19A	DUAL	8EC	2.50	PRE	69	84	12	17
19B	ATRAZINE	90DF	2.00	PRE				

					GIFT 6/13	SMPW 6/13	VELE 6/13	JIWE 6/13
20A	DUAL	8EC	2.50	PRE	74	42	32	22
20B	AC-513-655	4.8FL	1.20	PRE				
21A	PROWL	4EC	1.50	PRE	17	67	15	0
21B	AC-513-655	4.8FL	1.20	PRE				
22	CHECK				0	0	0	0
CV					46	17	68	85
LSD					23	14	19	20

BACKGROUND

Trial Title :PREEMERGENCE WEED CONTROL IN CORN II
Trial State :IL
Trial Location :C-500 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 4
Plot Wd X Lth (Ft) : 7.5 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :CLODDY
Ground cover & % : 0

Soil Texture :SILT LOAM
Soil O.M. % : 4.0
Soil pH : 6.4
Soil Name :FLANAGAN
Metero. Station:

previous crop	previous pesticide	year
SOYBEANS		1987

CROP

Trial Crop :CORN
Crop Variety :PIONEER 3377
Planting Date :04/28/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate(plants/acre): 28000
Row Spacing (in) :30.0
Soil Temp (F) @ Plant :70
Soil Moisture @ Planting :DRY

Application Code :PRE
Date of Application :05/03/88
Time of Application :08:00A
Pressure (PSI) : 30
Nozzle Type :8003
Air Temp (F) : 75
Relative Humidity :60
Wind Speed (MPH) : 8.0
Diluent Carrier :WATER
Appli Equip Type :HANDHELD
Spray Volume (GPA) :25.0
Soil Moisture @ App.:LOW

Nozzle Spacing (In) : 20
Boom Length (Ft) : 7.5
Boom Height (In) : 20
Incorporation Equip :
Elapsed Time to Incorp.: hrs.
Incorp. Depth (In) :
Percent Cloud Cover : 0
Dew Presence (Y/N) :N
Ground Speed (MPH) : 3.0
Soil Temp (F) : 70

COMMENTS

Treatments that included Banvel provided the best control.

					GIFT 6/10	SMPW 6/10	VELE 6/10	JIWE 6/10
1	EL-177	80DF	0.25	PRE	7	5	10	2
2	EL-177	80DF	0.30	PRE	7	2	10	67
3A	EL-177	80DF	0.25	PRE	0	25	12	17
3B	ATRAZINE	90DF	1.00	PRE				
4A	EL-177	80DF	0.30	PRE	15	27	22	37
4B	ATRAZINE	90DF	1.25	PRE				
5A	EL-177	80DF	0.30	PRE	58	75	37	77
5B	ATRAZINE	90DF	1.00	PRE				
5C	LASSO	4EC	1.00	PRE				
6A	LASSO	4EC	2.50	PRE	47	90	35	82
6B	BANVEL	4EC	0.50	PRE				
7A	TANDEM	4EC	1.25	PRE	90	95	72	90
7B	BANVEL	4EC	0.50	PRE				
8	BAS-514	50WP	0.50	PRE	22	5	17	17
9	BAS-514	50WP	1.00	PRE	40	0	32	32
10	CHECK				0	0	0	0
11	BAS-514	50WP	1.50	PRE	35	22	30	42
12A	BAS-514	50WP	0.50	PRE	10	12	27	10
12B	ATRAZINE	90DF	1.50	PRE				
13A	BAS-514	50WP	1.00	PRE	17	55	31	55
13B	ATRAZINE	90DF	1.50	PRE				
14A	BAS-514	50WP	1.50	PRE	72	84	64	85
14B	ATRAZINE	90DF	1.50	PRE				
15A	BAS-514	50WP	1.00	PRE	79	75	79	82
15B	BANVEL	4EC	0.50	PRE				
16	CHECK				0	0	0	0
CV					52	44	57	32
LSD					24	23	24	20

BACKGROUND

Trial Title	:PREEMERGENCE WEED CONTROL IN CORN III
Trial State	:IL
Trial Location	:M-12 N (URBANA, IL)
Trial Zipcode	:61801
Prime Investigator	:CANTWELL/LIEBL/WAX

SITE

Experimental Design	:RCB
Number of Replicates	: 3
Plot Wd X Lth (Ft)	: 7.5 40.0
Tillage Type	:CONVENTIONAL
Seedbed Description	:CLODDY
Ground cover & %	: 0

Soil Texture	:SILT LOAM
Soil O.M. %	: 3.5
Soil pH	: 6.4
Soil Name	:FLANAGAN
Metero. Station	:

previous crop	previous pesticide	year
SOYBEANS		1987

CROP

Trial Crop	:CORN
Crop Variety	:PIONEER 3377
Planting Date	:04/28/88
Planting Method	:MECHANICAL
Planting Depth (in)	: 1.5
Seeding Rate (Plants/A)	: 28000
Row Spacing (in)	:30.0
Soil Temp (F) @ Plant	:70
Soil Moisture @ Planting	:DRY

Application Code	:PRE
Date of Application	:05/03/88
Time of Application	:09:00A
Pressure (PSI)	: 30
Nozzle Type	:8003
Air Temp (F)	: 75
Relative Humidity	:60
Wind Speed (MPH)	: 8.0
Diluent Carrier	:WATER
Appli Equip Type	:HANDHELD
Spray Volume (GPA)	:20.0
Soil Moisture @ App.	:LOW

Nozzle Spacing (In)	: 20
Boom Length (Ft)	: 7.5
Boom Height (In)	: 20
Incorporation Equip	:
Elapsed Time to Incorp.	: hrs.
Incorp. Depth (In)	:
Percent Cloud Cover	: 0
Dew Presence (Y/N)	:N
Ground Speed (MPH)	: 3.0
Soil Temp (F)	:70

					C.I. 5/31	VELE 5/31	JIWE 5/31	COLQ 5/31
1A	DUAL	8EC	2.00	PRE	22	37	53	85
1B	ATRAZINE	90DG	1.00	PRE				
2A	DUAL	8EC	4.00	PRE	27	52	93	95
2B	ATRAZINE	90DG	1.00	PRE				
3A	LASSO	4EC	2.50	PRE	27	23	55	47
3B	ATRAZINE	90DG	1.00	PRE				
4A	LASSO	4EC	5.00	PRE	7	17	30	53
4B	ATRAZINE	90DG	1.00	PRE				
5A	CG180937	7.8EC	2.00	PRE	8	43	95	94
5B	ATRAZINE	90DG	1.00	PRE				
6A	CG180937	7.8EC	4.00	PRE	12	18	91	90
6B	ATRAZINE	90DG	1.00	PRE				
7A	SAN-582	8EC	1.50	PRE	17	37	82	91
7B	ATRAZINE	90DG	1.00	PRE				
8A	SAN-582	8EC	3.00	PRE	18	45	87	66
8B	ATRAZINE	90DG	1.00	PRE				
9A	HARNESS	7.5EC	2.00	PRE	13	18	95	99
9B	ATRAZINE	90DG	1.00	PRE				
10A	HARNESS	7.5EC	4.00	PRE	12	58	95	99
10B	ATRAZINE	90DG	1.00	PRE				
11A	ICIA-5767	7EC	2.00	PRE	7	80	99	99
11B	ATRAZINE	90DG	1.00	PRE				
12A	ICIA-5767	7EC	4.00	PRE	15	40	99	99
12B	ATRAZINE	90DG	1.00	PRE				
13	BANVEL	4L	0.50	PRE	30	60	73	95
14	CHECK				0	0	0	0
15	BICEP	5.9FL	3.60	PRE	33	25	86	96
16	LARIAT	4FL	3.75	PRE	22	27	98	98
17	ATRAZINE	90DF	2.25	PRE	12	63	93	95
18	BAS-514	50WP	1.00	PRE	13	27	20	17

					C.I. 5/31	VELE 5/31	JIWE 5/31	COLQ 5/31
19	BAS-514	50WP	1.50	PRE	13	40	30	27
20A	BAS-514	50WP	1.00	PRE	12	70	83	96
20B	ATRAZINE	90DF	1.50	PRE				
21A	BAS-514	50WP	1.50	PRE	10	73	93	99
21B	ATRAZINE	90DF	1.50	PRE				
22A	BAS-514	50WP	1.00	PRE	40	58	85	82
22B	BANVEL	4L	0.50	PRE				
23	MARKSMAN	3.2FL	1.40	PRE	47	68	83	91
24A	MARKSMAN	3.2FL	1.40	PRE	22	73	96	95
24B	LASSO	4EC	2.50	PRE				
25	CHECK				0	0	0	0
26A	SAN-582	8EC	1.50	PRE	42	60	50	63
26B	BANVEL	4L	0.50	PRE				
27A	DUAL	8EC	2.00	PRE	12	22	50	42
27B	BAS-514	50WP	1.50	PRE				
28	BULLET	4FL	3.75	PRE	22	37	95	95
CV					37	45	20	19
LSD					20	30	23	23

BACKGROUND

Trial Title :POSTEMERGENCE WEED CONTROL IN CORN I
Trial State :IL
Trial Location :N-100 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 4
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :CLODDY
Ground cover & % :0

Soil Texture :SILTY CLAY LOAM
Soil O.M. % : 5.0
Soil pH : 6.4
Soil Name :DRUMMER
Metero. Station:

previous crop	previous pesticide	year
SOYBEANS		1987

CROP

Trial Crop :CORN
Crop Variety :PIONEER 3377
Planting Date :4/28/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate(plants/acre): 28000
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 0
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	POST	4-5	LF	MEDIUM	2.0	6.0
JIWE	POST	2.0	LF	MEDIUM	2.0	4.0
SMPW	POST	4.0	LF	MEDIUM	1.0	2.0
VELE	POST	2.0	LF	MEDIUM	1.0	2.0

Application Code	:4-5 LF		
Date of Application	:05/26/88	Nozzle Spacing (In)	: 20
Time of Application	:10:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 80	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	: 8.0	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:DRY		

Application Code	:PRE		
Date of Application	:05/03/88	Nozzle Spacing (In)	: 20
Time of Application	:10:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	:
Nozzle Type	:8003	Incorporation Equip.	:
Air Temp (F)	: 75	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:60	Incorp. Depth (In)	:
Wind Speed (MPH)	: 8.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	:70
Soil Moisture @ App.	:LOW		

COMMENTS

Control of GIFT with SB-63596 appeared to be slightly antagonized when atrazine was included in the tank mix. Bromoxynil on the other hand enhanced SB-63596 activity.

					GIFT 6/03	GIFT 6/10
1	SB-63596	0.89EC	40.48G	PRE	76	70
2	SB-63596	0.89EC	20.24G	4-5L	17	25
3	SB-63596	0.89EC	30.36G	4-5L	52	50
4	SB-63596	0.89EC	40.48G	4-5L	60	60
5A	SB-63596	0.89EC	20.24G	4-5L	57	60
5B	X-77	%/V	0.05	4-5L		
6A	SB-63596	0.89EC	30.36G	4-5L	79	82
6B	X-77	%/V	0.05	4-5L		
7A	SB-63596	0.89EC	40.48G	4-5L	85	83
7B	X-77	%/V	0.05	4-5L		
8A	SB-63596	0.89EC	20.24G	4-5L	17	25
8B	ATRAZINE	90DF	1.20	4-5L		
9A	SB-63596	0.89EC	30.36G	4-5L	24	30
9B	ATRAZINE	90DF	1.20	4-5L		
10A	SB-63596	0.89EC	40.48G	4-5L	70	65
10B	ATRAZINE	90DF	1.20	4-5L		
11A	SB-63596	0.89EC	20.24G	4-5L	45	40
11B	ATRAZINE	90DF	1.20	4-5L		
11C	X-77	%/V	0.05	4-5L		
12A	SB-63596	0.89EC	30.36G	4-5L	63	65
12B	ATRAZINE	90DF	1.20	4-5L		
12C	X-77	%/V	0.05	4-5L		
13A	SB-63596	0.89EC	40.48G	4-5L	72	75
13B	ATRAZINE	90DF	1.20	4-5L		
13C	X-77	%/V	0.05	4-5L		
14A	SB-63596	0.89EC	30.36G	4-5L	34	40
14B	BLADEX	90DF	1.00	4-5L		
15A	SB-63596	0.89EC	30.36G	4-5L	60	60
15B	BLADEX	90DF	1.00	4-5L		
15C	X-77	%/V	0.05	4-5L		
16	ATRAZINE	90DF	1.20	PRE	31	20

					GIFT 6/03	GIFT 6/10
17A	ATRAZINE	90DF	1.00	PRE	76	75
17B	TANDEM	4EC	0.50	4-5L		
17C	ATRAZINE	90DF	1.50	4-5L		
17D	COC	4L	1QT	4-5L		
18A	ATRAZINE	90DF	1.00	PRE	32	25
18B	ATRAZINE	90DF	1.00	4-5L		
18C	X-77	%/V	0.05	4-5L		
19A	TANDEM	4EC	0.50	4-5L	74	75
19B	ATRAZINE	90DF	1.50	4-5L		
19C	COC	4L	1QT	4-5L		
20	BLADEX	90DF	1.00	4-5L	29	25
21A	SB-63596	0.89EC	40.48G	4-5L	60	65
21B	2.4-D	3.8EC	0.38	4-5L		
22A	SB-63596	0.89EC	40.48G	4-5L	89	92
22A	BROMOXYNIL	2EC	0.38	4-5L		
23	CHECK				0	0
CV					19	25
LSD					14	15

BACKGROUND

Trial Title :POSTEMERGENCE WEED CONTROL IN CORN II
Trial State :IL
Trial Location :N-100 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :CLODDY
Ground cover & % :0

Soil Texture :SILTY CLAY LOA
Soil O.M. % : 5.0
Soil pH : 6.4
Soil Name :DRUMMER
Metero. Station:

previous crop	previous pesticide	year
SOYBEANS		1987

CROP

Trial Crop :CORN
Crop Variety :PIONEER 3377
Planting Date :4/28/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate(plants/acre): 28000
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 0
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	POST	4-5	LF	MEDIUM	2.0	6.0
JIWE	POST	2.0	LF	MEDIUM	2.0	4.0
SMPW	POST	4.0	LF	MEDIUM	1.0	2.0
VELE	POST	2.0	LF	MEDIUM	1.0	2.0

Application Code :POST
Date of Application :05/26/88
Time of Application :10:00A
Pressure (PSI) : 40
Nozzle Type :8002
Air Temp (F) : 80
Relative Humidity :50
Wind Speed (MPH) : 8.0
Diluent Carrier :WATER
Appli Equip Type :HANDHELD
Spray Volume (GPA) :20.0
Soil Moisture @ App.:DRY

Nozzle Spacing (In) : 20
Boom Length (Ft) : 7.5
Boom Height (In) : 20
Incorporation Equip :
Elapsed Time to Incorp.: hrs.
Incorp. Depth (In) :
Percent Cloud Cover : 0
Dew Presence (Y/N) :N
Ground Speed (MPH) : 3.0
Soil Temp (F) : 70

COMMENTS

There appeared to be little effect of rate or additive on the efficacy of DPX-V9360.

					GIFT 6/05	VELE 6/05	JIWE 6/05
1A	DPX-V9360	72DF	0.50Z	4-5L	76	30	40
1B	X-77	%/V	0.25	4-5L			
2A	DPX-V9360	72DF	0.75Z	4-5L	85	53	60
2B	X-77	%/V	0.25	4-5L			
3A	DPX-V9360	72DF	1.00Z	4-5L	83	63	57
3B	X-77	%/V	0.25	4-5L			
4A	DPX-V9360	72DF	0.50Z	4-5L	87	45	52
4B	28%N	4L	4.00Q	4-5L			
4C	X-77	%/V	0.25	4-5L			
5A	DPX-V9360	72DF	0.75Z	4-5L	87	43	57
5B	28%N	4L	4.00Q	4-5L			
5C	X-77	%/V	0.25	4-5L			
6A	DPX-V9360	72DF	1.00Z	4-5L	89	53	72
6B	28%N	4L	4.00Q	4-5L			
6C	X-77	%/V	0.25	4-5L			
7	CHECK				0	0	0
8A	DPX-V9360	72DF	0.50Z	4-5L	89	57	58
8B	COC	4L	1.00Q	4-5L			
9A	DPX-V9360	72DF	0.75Z	4-5L	88	70	62
9B	COC	4L	1.00Q	4-5L			
10A	DPX-V9360	72DF	1.00Z	4-5L	73	73	73
10B	COC	4L	1.00Q	4-5L			
11A	DPX-V9360	72DF	0.50Z	4-5L	83	50	43
11B	28%N	4L	4.00Q	4-5L			
11C	COC	4L	1.0Q	4-5L			
12A	DPX-V9360	72DF	0.75Z	4-5L	85	69	61
12B	28%N	4L	4.00Q	4-5L			
12C	COC	4L	1.00Q	4-5L			
13A	DPX-V9360	72DF	1.00Z	4-5L	84	67	80
13B	28%N	4L	4.00Q	4-5L			
13C	COC	4L	1.00Q	4-5L			
CV					8	24	24
LSD					10	21	23

BACKGROUND

Trial Title :POSTEMERGENCE WEED CONTROL IN CORN III
Trial State :IL
Trial Location :N-100 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :CLODDY
Ground cover & % :0

Soil Texture :SILTY CLAY LOAM
Soil O.M. % : 5.0
Soil pH : 6.4
Soil Name :DRUMMER
Metero. Station:

previous crop	previous pesticide	year
SOYBEANS		1987

CROP

Trial Crop :CORN
Crop Variety :PIONEER 3377
Planting Date :04/28/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate(Plants/acre):28000
Row Spacing (in) :30.0
Soil Temp (F) @ Plant :75
Soil Moisture @ Planting :DRY

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	2-3L	4	LF	MED	2.0	4.0
GIFT	4-5L	4-5	LF	MED	3.0	6.0
JIWE	2-3L	2	LF	MED	2.0	4.0
JIWE	4-5L	3.0	LF	MED	3.0	5.0
VELE	2-3L	4	LF	MED	2.0	4.0
VELE	4-5L	5.0	LF	MED	3.0	5.0

Application Code	:2-3L		
Date of Application	:05/23/88	Nozzle Spacing (In)	: 20
Time of Application	:2:00P	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 70	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:99	Incorp. Depth (In)	:
Wind Speed (MPH)	: 3.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:Y
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 70
Soil Moisture @ App.	:WET		

Application Code	:4-5L		
Date of Application	:05/26/88	Nozzle Spacing (In)	: 20
Time of Application	:10:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip.	:
Air Temp (F)	: 80	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	: 8.0	Percent Cloud Cover	:
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 70
Soil Moisture @ App.	:DRY		

					GIFT 6/04	GIFT 6/22	VELE 6/04	JIWE 6/04	C.I. 6/07	C.I. 6/22
1A	KIH-2665	1.5FL	0.075	2-3L	92	88	99	94	2	0
1B	X-77	%/V	0.25	2-3L						
2A	KIH-2665	1.5FL	0.10	2-3L	97	94	99	90	3	0
2B	X-77	%/V	0.25	2-3L						
3A	KIH-2665	1.5FL	0.125	2-3L	97	97	99	99	7	0
3B	X-77	%/V	0.25	2-3L						
4A	KIH-2665	1.5FL	0.075	2-3L	98	97	99	97	12	0
4B	LASSO	4EC	1.50	2-3L						
4C	X-77	%/V	0.25	2-3L						
5A	KIH-2665	1.5FL	0.10	2-3L	98	98	91	94	17	0
5B	LASSO	4EC	1.50	2-3L						
5C	X-77	%/V	0.25	2-3L						
6A	KIH-2665	1.5FL	0.075	2-3L	94	92	98	96	8	0
6B	ATRAZINE	90DG	0.10	2-3L						
6C	X-77	%/V	0.25	2-3L						
7A	KIH-2665	1.5FL	0.10	2-3L	95	95	98	96	12	0
7B	ATRAZINE	90DG	1.50	2-3L						
7C	X-77	%/V	0.25	2-3L						
8A	KIH-2665	1.5FL	0.075	4-5L	86	90	93	93	5	0
8B	X-77	%/V	0.25	4-5L						
9A	KIH-2665	1.5FL	0.10	4-5L	91	90	98	95	10	0
9B	X-77	%/V	0.25	4-5L						
10	CHECK				0	0	0	0	0	0
11A	KIH-2665	1.5FL	0.125	4-5L	93	88	96	75	20	3
11B	X-77	%/V	0.25	4-5L						
12A	KIH-2665	1.5FL	0.075	4-5L	83	81	87	79	12	7
12B	LASSO	4EC	1.50	4-5L						
12C	X-77	%/V	0.25	4-5L						
13A	KIH-2665	1.5FL	0.10	4-5L	80	72	98	90	10	0
13B	LASSO	4EC	1.50	4-5L						
13C	X-77	%/V	0.25	4-5L						
14A	KIH-2665	1.5FL	0.075	4-5L	73	65	99	92	10	0
14B	ATRAZINE	90DG	1.50	4-5L						
14C	X-77	%/V	0.25	4-5L						

					GIFT 6/04	GIFT 6/22	VELE 6/04	JIWE 6/04	C.I. 6/07	C.I. 6/2
15A	KIH-2665	1.5FL	0.10	4-5L	75	70	95	95	7	0
15B	ATRAZINE	90DG	1.50	4-5L						
15C	X-77	%/V	0.25	4-5L						
16A	KIH-2665	1.5FL	0.075	6-7L	85	70	93	85	10	0
16B	X-77	%/V	0.25	6-7L						
17A	KIH-2665	1.5FL	0.10	6-7L	85	87	99	86	15	0
17B	X-77	%/V	0.25	6-7L						
18A	KIH-2665	1.5FL	0.125	6-7L	91	86	98	83	15	3
18B	X-77	%/V	0.25	6-7L						
19A	KIH-2665	1.5FL	0.075	6-7L	67	60	95	95	10	0
19B	ATRAZINE	90DG	1.50	6-7L						
19C	X-77	%/V	0.25	6-7L						
20A	KIH-2665	1.5FL	0.10	6-7L	75	63	87	90	10	0
20B	ATRAZINE	90DG	1.50	6-7L						
20C	X-77	%/V	0.25	6-7L						
CV					6	8	5	11	15	4
LSD					8	11	8	15	10	3

BACKGROUND

Trial Title :POSTEMERGENCE WEED CONTROL IN CORN IV
Trial State :IL
Trial Location :N-100 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :CLODDY
Ground cover & % : 0

Soil Texture :SILTY CLAY LOAM
Soil O.M. % : 5.0
Soil pH : 6.4
Soil Name :DRUMMER
Metero. Station:

previous crop	previous pesticide	year
SOYBEANS		1987

CROP

Trial Crop :CORN
Crop Variety :PIONEER 3377
Planting Date : 4/27/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (plants/acre): 28000
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 70
Soil Moisture @ Planting :DRY

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	2-3L	4	LF	MEDIUM	4.0	6.0
GIFT	4-5L	4-5	LF	MEDIUM	2.0	6.0
JIWE	2-3L	2	LF	MEDIUM	2.0	4.0
JIWE	4-5L	2	LF	MEDIUM	2.0	4.0
SMPW	2-3L	4	LF	MEDIUM	1.0	2.0
SMPW	4-5L	4	LF	MEDIUM	2.0	4.0
VELE	2-3L	2	LF	MEDIUM	1.0	2.0
VELE	4-5L	4	LF	MEDIUM	2.0	4.0

Application Code	:2-3L		
Date of Application	:05/23/88	Nozzle Spacing (In)	: 20
Time of Application	:02:00P	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 70	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:99	Incorp. Depth (In)	:
Wind Speed (MPH)	: 3.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:Y
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 70
Soil Moisture @ App.	:WET		

Application Code	:4-5L		
Date of Application	:05/26/88	Nozzle Spacing (In)	: 20
Date of Application	:10:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip.	:
Air Temp (F)	: 80	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	: 8.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 70
Soil Moisture @ App.	:DRY		

COMMENTS

Accent (DPXV9360) and Tandem + atrazine provided better giant foxtail control with less corn injury than did Beacon, KIH2665, or SB63596 especially on the larger size foxtail. SB63596 provided the poorest velvetleaf and jimsonweed control.

					C.I. 5/31	C.I. 6/10	GIFT 5/31	GIFT 6/10	VELE 5/31	VELE 6/10
1A	BEACON	75WG	12G	2-3L	3	0	87	63	96	90
1B	X-77	%/V	0.25	2-3L						
2A	BEACON	75WG	16G	2-3L	0	0	92	82	90	95
2B	X-77	%/V	0.25	2-3L						
3A	DPXV9360	72DF	0.5Z	2-3L	0	0	92	92	90	96
3B	COC	4L	1.0Q	2-3L						
4A	DPXV9360	72DF	0.75Z	2-3L	5	0	88	95	75	95
4B	COC	4L	1.0Q	2-3L						
5A	KIH-2665	1.5F	0.10	2-3L	5	0	92	92	97	97
5B	X-77	%/V	0.25	2-3L						
6A	KIH-2665	1.5F	0.125	2-3L	13	0	96	92	96	97
6B	X-77	%/V	0.25	2-3L						
7A	SB63596	0.89EC	30G	2-3L	2	0	27	37	7	23
7B	X-77	%/V	0.05	2-3L						
8A	SB63596	0.89EC	40G	2-3L	2	0	77	60	60	33
8B	X-77	%/V	0.05	2-3L						
9A	TANDEM	4EC	0.50	2-3L	5	0	96	90	98	99
9B	ATRAZINE	90DF	1.50	2-3L						
9C	COC	4L	1.0Q	2-3L						
10A	TANDEM	4EC	0.50	2-3L	30	12	95	87	99	99
10B	BLADEX	90DF	0.80	2-3L						
10C	ATRAZINE	90DF	0.80	2-3L						
10D	COC	4L	1.0Q	2-3L						
11A	TANDEM	4EC	0.75	2-3L	13	5	95	92	99	99
11B	ATRAZINE	90DF	2.00	2-3L						
11C	COC	4L	1.0Q	2-3L						
12	CHECK				0	0	0	0	0	0
13A	BEACON	75WG	12G	4-5L	3	0	43	67	23	95
13B	X-77	%/V	0.25	4-5L						
14A	BEACON	75WG	16G	4-5L	0	0	47	67	67	95
14B	X-77	%/V	0.25	4-5L						

					C.I. 5/31	C.I. 6/10	GIFT 5/31	GIFT 6/10	VELE 5/31	VELE 6/10
15A	DPXV9360	72DF	0.5Z	4-5L	0	0	53	87	23	92
15B	COC	4L	1.0Q	4-5L						
16A	DPXV9360	72DF	0.75Z	4-5L	0	0	57	96	20	93
16B	COC	4L	1.0Q	4-5L						
17A	KIH-2665	1.5F	0.10	4-5L	17	7	73	90	90	95
17B	X-77	%/V	0.25	4-5L						
18A	KIH-2665	1.5F	0.125	4-5L	37	12	73	95	80	96
18B	X-77	%/V	0.25	4-5L						
19A	SB63596	0.89EC	30G	4-5L	5	0	80	63	43	60
19B	X-77	%/V	0.05	4-5L						
20A	SB63596	0.89EC	40G	4-5L	0	0	63	87	43	47
20B	X-77	%/V	0.05	4-5L						
21A	TANDEM	4EL	0.50	4-5L	0	0	67	60	99	95
21B	ATRAZINE	90DF	1.50	4-5L						
21C	COC	4L	1.0Q	4-5L						
22A	TANDEM	4EL	0.50	4-5L	17	10	83	70	99	98
22B	BLADEX	90DF	0.80	4-5L						
22C	ATRAZINE	90DF	0.80	4-5L						
22D	COC	4L	1.0Q	4-5L						
23A	TANDEM	4EL	0.75	4-5L	0	2	87	77	98	99
23B	ATRAZINE	90DF	2.00	4-5L						
23C	COC	4L	1.0Q	4-5L						
24	CHECK				0	0	0	0	0	0
CV					20	6	7	12	16	7
LSD					11	2	8	14	17	8

					JIWE 5/31	JIWE 6/10
1A	BEACON	75WG	12G	2-3L	96	95
1B	X-77	%/V	0.25	2-3L		
2A	BEACON	75WG	16G	2-3L	96	95
2B	X-77	%/V	0.25	2-3L		
3A	DPXV9360	72DF	0.5Z	2-3L	99	96
3B	COC	4L	1.0Q	2-3L		
4A	DPXV9360	72DF	0.75Z	2-3L	93	99
4B	COC	4L	1.0Q	2-3L		
5A	KIH-2665	1.5F	0.10	2-3L	99	97
5B	X-77	%/V	0.25	2-3L		
6A	KIH-2665	1.5F	0.125	2-3L	99	97
6B	X-77	%/V	0.25	2-3L		
7A	SB63596	0.89EC	30G	2-3L	0	30
7B	X-77	%/V	0.05	2-3L		
8A	SB63596	0.89EC	40G	2-3L	60	47
8B	X-77	%/V	0.05	2-3L		
9A	TANDEM	4EC	0.50	2-3L	98	99
9B	ATRAZINE	90DF	1.50	2-3L		
9C	COC	4L	1.0Q	2-3L		
10A	TANDEM	4EC	0.50	2-3L	99	97
10B	BLADEX	90DF	0.80	2-3L		
10C	ATRAZINE	90DF	0.80	2-3L		
10D	COC	4L	1.0Q	2-3L		
11A	TANDEM	4EC	0.75	2-3L	99	99
11B	ATRAZINE	90DF	2.00	2-3L		
11C	COC	4L	1.0Q	2-3L		
12	CHECK		0	0		
13A	BEACON	75WG	12G	4-5L	17	92
13B	X-77	%/V	0.25	4-5L		
14A	BEACON	75WG	16G	4-5L	67	93
14B	X-77	%/V	0.25	4-5L		
15A	DPXV9360	72DF	0.5Z	4-5L	23	92
15B	COC	4L	1.0Q	4-5L		

					JIWE 5/31	JIWE 6/10
16A	DPXV9360	72DF	0.75Z	4-5L	40	93
16B	COC	4L	1.0Q	4-5L		
17A	KIH-2665	1.5F	0.10	4-5L	87	95
17B	X-77	%/V	0.25	4-5L		
18A	KIH-2665	1.5F	0.125	4-5L	96	96
18B	X-77	%/V	0.25	4-5L		
19A	SB63596	0.89EC	30G	4-5L	30	57
19B	X-77	%/V	0.05	4-5L		
20A	SB63596	0.89EC	40G	4-5L	13	67
20B	X-77	%/V	0.05	4-5L		
21A	TANDEM	4EL	0.50	4-5L	99	95
21B	ATRAZINE	90DF	1.50	4-5L		
21C	COC	4L	1.0Q	4-5L		
22A	TANDEM	4EL	0.50	4-5L	99	99
22B	BLADEX	90DF	0.80	4-5L		
22C	ATRAZINE	90DF	0.80	4-5L		
22D	COC	4L	1.0Q	4-5L		
23A	TANDEM	4EL	0.75	4-5L	99	99
23B	ATRAZINE	90DF	2.00	4-5L		
23C	COC	4L	1.0Q	4-5L		
24	CHECK				0	0
CV					10	11
LSD					11	14

BACKGROUND

Trial Title :URBANA CORN POSTEMERGENCE V
Trial State :IL
Trial Location :C400 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates :4
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % :0

Soil Texture :SILT LOAM
Soil O.M. % :4 .0
Soil pH :6 .0
Soil Name :FLANAGAN
Metero. Station:

previous crop	previous pesticide	year
SOYBEANS		1987

CROP

Trial Crop :CORN
Crop Variety :PIONEER 3377
Planting Date :04/21/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/acre): 28000
Row Spacing (in) :30.0
Soil Temp (F) @ Plant :70
Soil Moisture @ Planting :ADEQUATE

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
JIWE	POST	4	LF	MED	2.0	6.0
VELE	POST	6	LF	MED	2.0	4.0

Application Code	:POST		
Date of Application	:05/31/88	Nozzle Spacing (In)	: 20
Time of Application	: 1:00P	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 90	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:40	Incorp. Depth (In)	:
Wind Speed (MPH)	: 3.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:ADEQUATE		

COMMENTS

A number of postemergence treatments were compared on a moderate stand of broadleaf weeds in corn, consisting mainly of jimsonweed and velvetleaf. Growing conditions in terms of moisture, were barely adequate, at the time of application. A number of treatments provided fairly good control with essentially no injury to corn. The adjuvant BAS-090 greatly increased the effect of BAS-514 on corn.

					C.I. 6/13	VELE 6/13	JIWE 6/13
1A	DPXM6316	75DF	0.063Z	POST	2	70	45
1B	X-77	%/V	0.25	POST			
2A	DPXM6316	75DF	0.094Z	POST	0	67	40
2B	X-77	%/V	0.25	POST			
3A	DPXM6316	75DF	0.125Z	POST	2	79	57
3B	X-77	%/V	0.25	POST			
4A	DPXV9360	75DF	0.50Z	POST	0	76	57
4B	X-77	%/V	0.25	POST			
5A	DPXM6316	75DF	0.063Z	POST	0	81	76
5B	DPXV9360	72DF	0.50Z	POST			
5C	X-77	%/V	0.25	POST			
6A	DPXM6316	75DF	0.094Z	POST	0	82	76
6B	DPXV9360	72DF	0.50Z	POST			
6C	X-77	%/V	0.25	POST			
7A	DPXM6316	75DF	0.125Z	POST	5	84	79
7B	DPXV9360	72DF	0.50Z	POST			
7C	X-77	%/V	0.25	POST			
8	2.4-D	3.8EC	0.25	POST	0	76	55
9	2.4-D	3.8EC	0.50	POST	0	89	66
10	BANVEL	4SC	0.25	POST	0	77	72
11	BANVEL	4SC	0.50	POST	2	90	81
12	CHECK				0	0	0
13A	LADDOCK	3.33FL	0.83	POST	0	65	86
13B	DASH	4L	1.0Q	POST			
14A	LADDOCK	3.33FL	0.83	POST	0	80	90
14B	COC	4L	1.0Q	POST			
15A	LADDOCK	3.33FL	0.83	POST	0	77	89
15B	28%N	4L	4.0Q	POST			
16A	LADDOCK	3.33FL	1.04	POST	5	71	91
16B	DASH	4L	1.0Q	POST			
17A	LADDOCK	3.33FL	1.04	POST	2	77	84
17B	COC	4L	1.0Q	POST			

					C.I. 6/13	VELE 6/13	JIWE 6/13
18A	LADDOCK	3.33FL	1.04	POST	0	74	89
18B	28%N	4L	4.0Q	POST			
19A	ATRAZINE	90DF	0.50	POST	0	37	62
19B	COC	4L	1.0Q	POST			
20A	ATRAZINE	90DF	0.75	POST	0	42	75
20B	COC	4L	1.0Q	POST			
21A	BASAGRAN	4L	0.50	POST	0	70	82
21B	COC	4L	1.0Q	POST			
22A	BAS-514	50WP	0.25	POST	0	27	27
22B	COC	4L	1.0Q	POST			
23A	BAS-514	50WP	0.50	POST	0	37	32
23B	COC	4L	1.0Q	POST			
24A	BAS-514	50WP	0.25	POST	55	30	47
24B	BAS-090	4L	1.0Q	POST			
25A	BAS-514	50WP	0.50	POST	67	37	45
25B	BAS-090	4L	1.0Q	POST			
26	BAS-090	4L	1.0Q	POST	0	0	0
27	CHECK				0	0	0
CV					19	17	17
LSD					5	15	14

BACKGROUND

Trial Title	:URBANA CORN POSTEMERGENCE VI
Trial State	:IL
Trial Location	:AS100 (URBANA, IL)
Trial Zipcode	:61801
Prime Investigator	:CANTWELL/LIEBL/WAX

SITE

Experimental Design	:RCB	Soil Texture	:SILTY CLAY LOAM
Number of Replicates	: 3	Soil O.M. %	: 5.0
Plot Wd X Lth (Ft)	:10x40	Soil pH	: 6.0
Tillage Type	:CONVENTIONAL	Soil Name	:DRUMMER
Seedbed Description	:FINE	Metero. Station:	
Ground cover & %	: 0		

previous crop	previous pesticide	year
SOYBEANS		1987

CROP

Trial Crop	:CORN
Crop Variety	:PIONEER 3377
Planting Date	: 4/27/88
Planting Method	:MECHANICAL
Planting Depth (in)	: 1.5
Seeding Rate(plants/acre)	: 28000
Row Spacing (in)	:30.0
Soil Temp (F) @ Plant	: 70
Soil Moisture @ Planting	:ADEQUATE

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
JIWE	POST	4	LF	MEDIUM	4.0	8.0
PESW	POST	8	LF	MEDIUM	6.0	12.0
VELE	POST	8	LF	HIGH	6.0	12.0

Application Code	:POST		
Date of Application	:05/31/88	Nozzle Spacing (In)	: 20
Time of Application	:1:00P	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 90	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:40	Incorp. Depth (In)	:
Wind Speed (MPH)	: 3.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:ADEQUATE		

COMMENTS

Buctril, atrazine, 2,4-D and Banvel provided better broadleaf weed control than did Tough, EF-68 or triclopyr. EF 689 plus triclopyr provided better control than either one alone.

					C.I. 6/10	SMPW 6/10	JIWE 6/10	VELE 6/10
1	BUCTRIL	2EC	0.25	POST	0	63	96	83
2	BUCTRIL	2EC	0.38	POST	0	75	99	87
3A	BUCTRIL	2EC	0.25	POST	0	88	99	92
3B	ATRAZINE	90DF	0.50	POST				
4A	BUCTRIL	2EC	0.25	POST	2	92	99	92
4B	2.4-D LVE	3.8EC	0.25	POST				
5A	BUCTRIL	2EC	0.375	POST	5	89	99	99
5B	ATRAZINE	90DF	0.50	POST				
6	MARKSMAN	3.2L	1.40	POST	0	94	99	93
7	2.4-D	3.8EC	0.38	POST	0	96	17	96
8	BANVEL	4L	0.25	POST	0	96	99	90
9A	ATRAZINE	90DF	1.50	POST	0	90	95	90
9B	COC	4L	1.0Q	POST				
10	TOUGH	3.75EC	0.45	POST	0	50	17	33
11A	TOUGH	3.75EC	0.45	POST	0	77	47	33
11B	ATRAZINE	90DF	0.60	POST				
12A	TOUGH	3.75EC	0.60	POST	0	90	77	63
12B	ATRAZINE	90DF	0.60	POST				
13	CHECK				0	0	0	0
14	EF-689	1.67EC	0.5Z	POST	0	10	40	50
15	EF-689	1.67EC	1.0Z	POST	0	20	77	82
16	EF-689	1.67EC	1.5Z	POST	0	27	70	90
17	TRICLOPYR	4EC	0.5Z	POST	0	63	23	10
18	TRICLOPYR	4EC	1.0Z	POST	0	53	33	27
19	TRICLOPYR	4EC	1.5Z	POST	0	57	23	30
20A	EF-689	1.67EC	0.5Z	POST	0	40	67	47
20B	TRICLOPYR	4EC	0.5Z	POST				

					C.I. 6/10	SMPW 6/10	JIWE 6/10	VELE 6/10
21A	EF-689	1.67EC	0.75Z	POST	0	80	90	87
21B	TRICLOPYR	4EC	0.75Z	POST				
22	CHECK				0	0	0	0
23A	TANDEM	4L	0.50	POST	0	99	99	86
23B	ATRAZINE	90DF	1.50	POST				
23C	COC	4L	1.0Q	POST				
CV					2	11	14	10
LSD					1	11	14	11

BACKGROUND

Trial Title	:POST BDLF WEED CONTROL IN CORN VII
Trial State	:ILL
Trial Location	:AS100
Trial Zipcode	:61801
Prime Investigator	:ORFANEDES/LIEBL/WAX

SITE

Experimental Design	:RCB	Soil Texture	:SILTY CLAY LOAM
Number of Replicates	: 0	Soil O.M. %	:5.0
Plot Wd X Lth (Ft)	:10.0 40.0	Soil pH	:6.0
Tillage Type	:CONVENTIONAL	Soil Name	:DRUMMER
Seedbed Description	:FINE	Metero. Station:	
Ground cover & %	:30		

previous crop	previous pesticide	year
SOYBEANS		1987

CROP

Trial Crop	:CORN
Crop Variety	:PIONEER 3377
Planting Date	: 4/27/88
Planting Method	:MECHANICAL
Planting Depth (in)	:1.5
Seeding Rate (seeds/acre)	:28000
Row Spacing (in)	:30
Soil Temp (F) @ Plant	:70
Soil Moisture @ Planting	:ADEQUATE

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
JIWE	POST	2-3	LF	MEDIUM	1	3
SMPW	POST	1-5	LF	MEDIUM	3	5
VELE	POST	4	LF	MEDIUM	1	3

Application Code	:PRE		
Date of Application	:4/30/88	Nozzle Spacing (In)	:20
Time of Application	:9-10A	Boom Length (Ft)	:10.0
Pressure (PSI)	:34	Boom Height (In)	:20
Nozzle Type	:8002	Incorporation Equip	:NONE
Air Temp (F)	:70	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	: 8 NE	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:TRACTOR	Ground Speed (MPH)	:3 MPH
Spray Volume (GPA)	: 18.0	Soil Temp (F)	:56
Soil Moisture @ App.	:DRY		

Application Code	:POST		
Date of Application	:5/26/88	Nozzle Spacing (In)	:20
Time of Application	:7:30A	Boom Length (Ft)	:7.5
Pressure (PSI)	:40	Boom Height (In)	:20
Nozzle Type	:8002	Incorporation Equip	:NONE
Air Temp (F)	:65	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:60	Incorp. Depth (In)	:
Wind Speed (MPH)	: 8 SW	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	:3 MPH
Spray Volume (GPA)	: 0.0	Soil Temp (F)	:65
Soil Moisture @ App.	:DRY		

COMMENTS

Due to low soil moisture levels, all preemergence treatments failed to provide satisfactory weed control. Smooth pigweed appears to be relatively resistant to both XRM-3972 and EF-689. When tank mixed with XRM-3972, at least one lb. of atrazine was required for acceptable postemergence control of smooth pigweed. Higher rates of atrazine were required to improve velvetleaf control while lower rates provided satisfactory control of jimsonweed.

					SMPW 6/02	SMPW 6/09	VELE 6/02	VELE 6/09	JIWE 6/02	JIWE 6/09
1	XRM-3972	3SC	0.5Z	POST	7	7	8	8	13	28
2A	XRM-3972	3SC	0.5Z	POST	7	7	12	12	20	35
2B	COC	4L	1.0Q	POST						
3A	XRM-3972	3SC	0.75Z	POST	13	13	17	17	35	52
3B	COC	4L	1.0Q	POST						
4	XRM-3972	3SC	1.50Z	POST	10	10	15	17	58	60
5A	XRM-3972	3SC	1.50Z	POST	10	17	18	20	62	65
5B	COC	4L	1.0Q	POST						
6A	XRM-3972	3SC	0.50Z	POST	33	33	17	27	82	82
6B	ATRAZINE	4L	2.65Z	POST						
6C	COC	4L	1.0Q	POST						
7A	XRM-3972	3SC	0.75Z	POST	55	60	18	32	83	87
7B	ATRAZINE	4L	4.0Z	POST						
7C	COC	4L	1.0Q	POST						
8A	XRM-3972	3SC	1.50Z	POST	75	75	53	60	93	94
8B	ATRAZINE	4L	8.0Z	POST						
8C	COC	4L	1.0Q	POST						
9A	XRM-3972	3SC	1.50Z	POST	83	88	57	58	93	99
9B	ATRAZINE	4L	16Z	POST						
9C	COC	4L	1.0Q	POST						
10A	XRM-3972	3SC	1.50Z	POST	100	100	70	77	95	98
10B	ATRAZINE	4L	24Z	POST						
10C	COC	4L	1.0Q	POST						
11	ATRAZINE	4L	8Z	PRE	5	5	5	12	10	13
12	ATRAZINE	4L	16Z	PRE	3	3	5	22	5	5
13	ATRAZINE	4L	24Z	PRE	5	20	7	33	13	25
14A	ATRAZINE	4L	8Z	PRE	80	100	48	55	93	98
14B	XRM-3972	3SC	1.5Z	POST						
14C	ATRAZINE	4L	8Z	POST						
14D	COC	4L	1.0Q	POST						
15A	ATRAZINE	4L	16Z	PRE	40	85	57	68	73	100
15B	XRM-3972	3SC	1.5Z	POST						
15C	ATRAZINE	4L	8Z	POST						
15D	COC	4L	1.0Q	POST						

					SMPW 6/02	SMPW 6/09	VELE 6/02	VELE 6/09	JIWE 6/02	JIWE 6/09
16A	ATRAZINE	4L	24Z	PRE	50	75	65	68	98	98
16B	XRM-3972	3SC	1.5Z	POST						
16C	ATRAZINE	4L	8Z	POST						
16D	COC	4L	1.0Q	POST						
17	MARKSMAN	3.2L	1.4Z	POST	37	37	23	35	30	32
18	EF-689	1.67EC	0.5Z	POST	15	15	28	30	65	65
19	EF-689	1.67EC	1.5Z	POST	22	22	73	85	80	97
20	2,4-D A	3.8L	8.0Z	POST	55	75	67	83	60	79
CV					27	28	25	27	14	8
LSD					16	19	14	18	13	9

BACKGROUND

Trial Title	:EPP WEED CONTROL IN SOYBEANS I
Trial State	:IL
Trial Location	:C500 CENTER (URBANA IL)
Trial Zipcode	:61801
Prime Investigator	:CANTWELL/LIEBL/WAX

SITE

Experimental Design	:RCB	Soil Texture	:SILT LOAM
Number of Replicates	: 4	Soil O.M. %	: 4.0
Plot Wd X Lth (Ft)	:10.0 40.0	Soil pH	: 6.0
Tillage Type	:NO-TILL	Soil Name	:FLANAGAN
Seedbed Description	:NO-TILL	Metero. Station:	
Ground cover & %	:100%		

previous crop	previous pesticide	year
CORN	SOY HERBICIDE	1987

CROP

Trial Crop	:SOYBEANS
Crop Variety	:Williams
Planting Date	:05/19/88
Planting Method	:Mechanical
Planting Depth (in)	:1.5
Seeding Rate (seeds/foot)	:10
Row Spacing (in)	:30
Soil Temp (F) @ Plant	: 70
Soil Moisture @ Planting	:dry

Application Code	:EPP		
Date of Application	:04/14/88	Nozzle Spacing (In)	:20
Time of Application	: 3:00P	Boom Length (Ft)	:10
Pressure (PSI)	: 30	Boom Height (In)	:20
Nozzle Type	:8003	Incorporation Equip	:
Air Temp (F)	: 65	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:70	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	:3.0
Spray Volume (GPA)	:25.0	Soil Temp (F)	:60
Soil Moisture @ App.	:ADEQUATE		

Application Code	:PRE		
Date of Application	:5/20/88	Nozzle Spacing (in)	:20
Time of Application	:8:00A	Boom Length (Ft)	:10
Pressure (PSI)	:40	Boom Height (in)	:20
Nozzle Type	:8003	Incorporation Equip.	:
Air Temp (F)	:85	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:75	Incorp. Depth (in)	:
Wind Speed (MPH)	:8 NE	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HAND-HELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:25	Soil Temp (F)	:80
Soil Moisture @ App.	:DRY		

COMMENTS

Rainfall was limited throughout the season, especially following planting. Few additional weeds emerged after planting. The most prevalent species were giant foxtail, velvetleaf, and horseweed. No treatment caused significant injury to soybeans. A number of treatments provided good to excellent control of giant foxtail and velvetleaf, however few controlled horseweed adequately.

					GIFT 5/22	GIFT 6/21	VELE 5/22	VELE 6/21	CODA 5/22	CODA 6/21
1A 1B	DUAL BAS514	8EC 50WP	2.5 990.5	EPP EPP	76	75	52	32	27	30
2A 2B	DUAL METRIBUZIN	8EC 75DF	2.5 0.5	EPP EPP	94	90	87	54	50	42
3A 3B	DUAL SCEPTER	8EC 1.5SC	2.5 0.125	EPP EPP	92	90	92	75	40	27
4A 4B	DUAL PREVIEW	8EC 75DF	2.5 0.40	EPP EPP	96	90	96	72	85	62
5A 5B	PROWL BAS514	4EC 50WP	1.25 0.5	EPP EPP	81	92	67	51	37	45
6A 6B	PROWL METRIBUZIN	4EC 75DF	1.25 0.5	EPP EPP	87	84	84	72	65	62
7A 7B	PROWL SCEPTER	4EC 1.5SC	1.25 0.125	EPP EPP	92	91	91	74	50	45
8A 8B	PROWL PREVIEW	4EC 75DF	1.25 0.40	EPP EPP	84	84	86	57	79	60
9A 9B	COMMAND BAS514	4EC 50WP	1.0 0.5	EPP EPP	97	90	96	79	65	45
10A 10B	COMMAND METRIBUZIN	4EC 75DF	1.0 0.5	EPP EPP	96	93	97	86	97	89
11A 11B	COMMAND SCEPTER	4EC 1.5SC	1.0 0.125	EPP EPP	96	93	96	87	71	59
12A 12B	COMMAND PREVIEW	4EC 75DF	1.0 0.40	EPP EPP	99	94	98	90	95	79
13	CHECK				0	0	0	0	0	0
14A 14B 14C 14D	DUAL BAS514 DUAL BAS514	8EC 50WP 8EC 50WP	1.5 0.3 1.0 0.2	EPP EPP PRE PRE	82	80	66	45	42	37

					GIFT 5/22	GIFT 6/21	VELE 5/22	VELE 6/21	CODA 5/22	CODA 6/21
15A	DUAL	8EC	1.5	EPP	83	86	79	75	66	65
15B	METRIBUZIN	75DF	0.3	EPP						
15C	DUAL	8EC	1.0	PRE						
15D	METRIBUZIN	75DF	0.2	PRE						
16A	DUAL	8EC	1.5	EPP	91	92	87	82	47	52
16B	SCEPTER	1.5SC	0.075	EPP						
16C	DUAL	8EC	1.0	PRE						
16D	SCEPTER	1.5SC	0.05	PRE						
17A	DUAL	8EC	1.5	EPP	97	95	96	91	89	74
17B	PREVIEW	75DF	0.24	EPP						
17C	DUAL	8EC	1.0	PRE						
17D	PREVIEW	75DF	0.16	PRE						
18A	PROWL	4EC	0.75	EPP	87	86	83	61	51	45
18B	BAS514	50WP	0.3	EPP						
18C	PROWL	4EC	0.5	PRE						
18D	BAS514	50WP	0.2	PRE						
19A	PROWL	4EC	0.75	EPP	76	84	75	69	57	52
19B	METRIBUZIN	75DF	0.3	EPP						
19C	PROWL	4EC	0.5	PRE						
19D	METRIBUZIN	75DF	0.2	PRE						
20A	PROWL	4EC	0.75	EPP	95	86	90	63	45	40
20B	SCEPTER	1.5SC	0.075	EPP						
20C	PROWL	4EC	0.5	PRE						
20D	SCEPTER	1.5SC	0.05	PRE						
21A	PROWL	4EC	0.75	EPP	91	89	93	86	82	84
21B	PREVIEW	75DF	0.24	EPP						
21C	PROWL	4EC	0.5	PRE						
21D	PREVIEW	75DF	0.16	PRE						
22A	COMMAND	4EC	0.6	EPP	86	89	84	84	67	75
22B	BAS514	50WP	0.3	EPP						
22C	COMMAND	4EC	0.4	PRE						
22D	BAS514	50WP	0.2	PRE						
23A	COMMAND	4EC	0.6	EPP	99	94	98	89	97	80
23B	METRIBUZIN	75DF	0.3	EPP						
23C	COMMAND	4EC	0.4	PRE						
23D	METRIBUZIN	75DF	0.2	PRE						

					GIFT 5/22	GIFT 6/21	VELE 5/22	VELE 6/21	CODA 5/22	CODA 6/21
24A	COMMAND	4EC	0.6	EPP	94	92	94	87	66	57
24B	SCEPTER	1.5SC	0.075	EPP						
24C	COMMAND	4EC	0.4	PRE						
24D	SCEPTER	1.5SC	0.05	PRE						
25A	COMMAND	4EC	0.6	EPP	96	98	96	96	76	90
25B	PREVIEW	75DF	0.24	EPP						
25C	COMMAND	4EC	0.4	PRE						
25D	PREVIEW	75DF	0.16	PRE						
26	CHECK				0	0	0	0	0	0
27A	PURSUIT	2SC	0.63	EPP	69	89	91	70	47	42
27B	DUAL	8EC	2.5	EPP						
28A	PURSUIT	2SC	0.63	EPP	91	81	86	70	55	47
28B	PROWL	4EC	1.25	EPP						
29A	PURSUIT	2SC	0.06	EPP	97	90	96	79	70	50
29B	DUAL	8EC	1.5	EPP						
29C	PURSUIT	2SC	0.03	PRE						
29D	DUAL	8EC	1.0	PRE						
30A	PURSUIT	2SC	0.06	EPP	90	90	87	86	52	44
30B	PROWL	4EC	0.75	EPP						
30C	PURSUIT	2SC	0.03	PRE						
30D	PROWL	4EC	0.5	PRE						
CV					15	9	15	18	33	29
LSD					18	10	17	18	27	22

					HOWE 5/22	HOWE 6/21
1A	DUAL	8EC	2.5	EPP	60	50
1B	BAS514	50WP	0.5	EPP		
2A	DUAL	8EC	2.5	EPP	70	52
2B	METRIBUZIN	75DF	0.5	EPP		
3A	DUAL	8EC	2.5	EPP	40	25
3B	SCEPTER	1.5SC	0.125	EPP		
4A	DUAL	8EC	2.5	EPP	86	72
4B	PREVIEW	75DF	0.40	EPP		
5A	PROWL	4EC	1.25	EPP	65	57
5B	BAS514	50WP	0.5	EPP		
6A	PROWL	4EC	1.25	EPP	76	65
6B	METRIBUZIN	75DF	0.5	EPP		
7A	PROWL	4EC	1.25	EPP	55	42
7B	SCEPTER	1.5SC	0.125	EPP		
8A	PROWL	4EC	1.25	EPP	82	64
8B	PREVIEW	75DF	0.40	EPP		
9A	COMMAND	4EC	1.0	EPP	77	62
9B	BAS514	50WP	0.5	EPP		
10A	COMMAND	4EC	1.0	EPP	97	89
10B	METRIBUZIN	75DF	0.5	EPP		
11A	COMMAND	4EC	1.0	EPP	87	70
11B	SCEPTER	1.5SC	0.125	EPP		
12A	COMMAND	4EC	1.0	EPP	95	79
12B	PREVIEW	75DF	0.40	EPP		
13	CHECK				0	0
14A	DUAL	8EC	1.5	EPP	67	37
14B	BAS514	50WP	0.3	EPP		
14C	DUAL	8EC	1.0	PRE		
14D	BAS514	50WP	0.2	PRE		

					HOWE 5/22	HOWE 6/21
15A	DUAL	8EC	1.5	EPP	66	55
15B	METRIBUZIN	75DF	0.3	EPP		
15C	DUAL		1.0	PRE		
15D	METRIBUZIN	75DF	0.2	PRE		
16A	DUAL	8EC	1.5	EPP	49	50
16B	SCEPTER	1.5SC	0.075	EPP		
16C	DUAL	8EC	1.0	PRE		
16D	SCEPTER	1.5SC	0.05	PRE		
17A	DUAL	8EC	1.5	EPP	90	72
17B	PREVIEW	75DF	0.24	EPP		
17C	DUAL	8EC	1.0	PRE		
17D	PREVIEW	75DF	0.16	PRE		
18A	PROWL	4EC	0.75	EPP	57	60
18B	BAS514	50WP	0.3	EPP		
18C	PROWL	4EC	0.5	PRE		
18D	BAS514	50WP	0.2	PRE		
19A	PROWL	4EC	0.75	EPP	52	59
19B	METRIBUZIN	75DF	0.3	EPP		
19C	PROWL	4EC	0.5	PRE		
19D	METRIBUZIN	75DF	0.2	PRE		
20A	PROWL	4EC	0.75	EPP	57	35
20B	SCEPTER	1.5SC	0.075	EPP		
20C	PROWL	4EC	0.5	PRE		
20D	SCEPTER	1.5SC	0.05	PRE		
21A	PROWL	4EC	0.75	EPP	85	84
21B	PREVIEW	75DF	0.24	EPP		
21C	PROWL	4EC	0.5	PRE		
21D	PREVIEW	75DF	0.16	PRE		
22A	COMMAND	4EC	0.6	EPP	60	62
22B	BAS514	50WP	0.3	EPP		
22C	COMMAND	4EC	0.4	PRE		
22D	BAS514	50WP	0.2	PRE		
23A	COMMAND	4EC	0.6	EPP	94	86
23B	METRIBUZIN	75DF	0.3	EPP		
23C	COMMAND	4EC	0.4	PRE		
23D	METRIBUZIN	75DF	0.2	PRE		

					HOWE 5/22	HOWE 6/21
24A	COMMAND	4EC	0.6	EPP	87	66
24B	SCEPTER	1.5SC	0.075	EPP		
24C	COMMAND	4EC	0.4	PRE		
24D	SCEPTER	1.5SC	0.05	PRE		
25A	COMMAND	4EC	0.6	EPP	82	81
25B	PREVIEW	75DF	0.24	EPP		
25C	COMMAND	4EC	0.4	PRE		
25D	PREVIEW	75DF	0.16	PRE		
26	CHECK				0	0
27A	PURSUIT	2SC	0.63	EPP	45	45
27B	DUAL	8EC	2.5	EPP		
28A	PURSUIT	2SC	0.63	EPP	65	47
28B	PROWL	4EC	1.25	EPP		
29A	PURSUIT	2SC	0.06	EPP	76	57
29B	DUAL	8EC	1.5	EPP		
29C	PURSUIT	2SC	0.03	PRE		
29D	DUAL	8EC	1.0	PRE		
30A	PURSUIT	2SC	0.06	EPP	51	52
30B	PROWL	4EC	0.75	EPP		
30C	PURSUIT	2SC	0.03	PRE		
30D	PROWL	4EC	0.5	PRE		
CV					27	28
LSD					25	22

BACKGROUND

Trial Title :URBANA SOYBEAN NO-TILL
Trial State :IL
Trial Location :C500 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 4
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :ZERO
Seedbed Description :FIRM
Ground cover & % :100%

Soil Texture :SILT LOAM
Soil O.M. % : 4.0
Soil pH : 6.0
Soil Name :FLANAGAN
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop :SOYBEAN
Crop Variety :WILLIAMS 82
Planting Date :05/19/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot):10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 70
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
DANDE	PRE			HIGH		
GIFT	PRE			HIGH		
JIWE	PRE			MED		
PESW	PRE			MED		
SMPW	PRE			MED		
GIFT	POST	4	LF	HIGH	2.0	6.0
VELE	POST	4	LF	MED	1.0	2.0
JIWE	POST	4	LF	MED	2.0	4.0
COLQ	POST			MED	4.0	12

Application Code	:PRE		
Date of Application	:05/20/88	Nozzle Spacing (In)	: 20
Time of Application	:07:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8003	Incorporation Equip	:
Air Temp (F)	: 80	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:80	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:25.0	Soil Temp (F)	:75
Soil Moisture @ App.	:DRY		

Application Code	:POST		
Date of Application	:06/14/88	Nozzle Spacing (In)	:20
Date of Application	:7:00A	Boom Length (Ft)	:7.5
Pressure (PSI)	:50	Boom Height (In)	:20
Nozzle Type	:8002	Incorporation Equip.	:
Air Temp (F)	:95	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	:6	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:25	Soil Temp (F)	:85
Soil Moisture @ App.	:DRY		

COMMENTS

The first ratings on 5/28/88 were intended to assess the effect of the burndown treatments, and the later ratings on 6/21/88 were to assess the overall combined results of the burndown plus the preemergence residual or the postemergence treatments. BDLF represents a combination of annual broadleaf weeds: velvetleaf, lambsquarters, and smartweed. The combination of burndown treatments at planting time, followed by postemergence treatments 3 weeks later, provided the best overall weed control. None of the treatments caused more than slight visual injury to soybeans.

					GIFT 5/28	GIFT 6/21	CODA 5/28	CODA 6/21	HOWE 5/28	HOWE 6/21	BDLF 6/21
1A	ROUND-UP	3L	0.75	PRE	95	91	60	77	60	81	81
1B	GALAXY	3.67EC	0.92	POST							
1C	POAST	1.5EC	0.15	POST							
1D	DASH	4L	1.0Q	POST							
2A	ROUND-UP	3L	1.00	PRE	96	95	79	80	77	83	81
2B	GALAXY	3.67EC	0.92	POST							
2C	POAST	1.5EC	0.15	POST							
2D	DASH	4L	1.0Q	POST							
3A	IGNITE	1.67L	0.75	PRE	96	89	89	84	91	82	85
3B	GALAXY	3.67EC	0.92	POST							
3C	POAST	1.5EC	0.15	POST							
3D	DASH	4L	1.0Q	POST							
4A	IGNITE	1.67L	1.00	PRE	97	91	93	92	94	91	90
4B	GALAXY	3.67EC	0.92	POST							
4C	POAST	1.5EC	0.15	POST							
4D	DASH	4L	1.0Q	POST							
5A	PARAQUAT	1.5L	0.38	PRE	95	77	67	69	67	62	74
5B	X-77	%/V	0.25	PRE							
5C	GALAXY	3.67EC	0.92	POST							
5D	POAST	1.5EC	0.15	POST							
5E	DASH	4L	1.0Q	POST							
6A	PARAQUAT	1.5L	0.50	PRE	94	81	67	80	69	70	69
6B	X-77	%/V	0.25	PRE							
6C	GALAXY	3.67EC	0.92	POST							
6D	POAST	1.5EC	0.15	POST							
6E	DASH	4L	1.0Q	POST							
7A	POAST	1.5EC	0.10	PRE	78	82	75	92	75	92	89
7B	2.4-D	3.8EC	0.50	PRE							
7C	COC	4L	1QT	PRE							
7D	GALAXY	3.67EC	0.92	POST							
7E	POAST	1.5EC	0.15	POST							
7F	DASH	4L	1.0Q	POST							
8A	PRELUDE	2.5E	1.9	PRE	92	65	72	60	76	62	62
8B	X-77	%/V	0.25	PRE							
8C	CLASSIC	25DF	3.69G	POST							
8D	X-77	%/V	0.25	POST							
8E	28%N	4L	4.0Q	POST							

					GIFT 5/28	GIFT 6/21	CODA 5/28	CODA 6/21	HOWE 5/28	HOWE 6/21	BDLF 6/21
9A	PRELUDE	2.5E	2.5	PRE	94	79	72	55	70	62	59
9B	X-77	%/V	0.25	PRE							
9C	CLASSIC	25DF	3.69G	POST							
9D	X-77	%/V	0.25	POST							
9E	28%N	4L	4.0Q	POST							
10A	BRONCO	4L	3.00	PRE	96	97	87	93	87	94	92
10B	CLASSIC	25DF	3.69G	POST							
10C	X-77	%/V	0.25	POST							
10D	28%N	4L	4.0Q	POST							
11A	BRONCO	4L	4.00	PRE	98	96	91	91	92	94	94
11B	CLASSIC	25DF	3.69G	POST							
11C	X-77	%/V	0.25	POST							
11D	28%N	4L	4.0Q	POST							
12	CHECK				0	0	0	0	0	0	0
13A	ROUND-UP	3L	0.50	PRE	93	86	57	60	55	61	76
13B	DUAL	8EC	2.50	PRE							
13C	SENCOR	75DF	0.40	PRE							
14A	ROUND-UP	3L	0.38	PRE	93	89	60	65	62	62	74
14B	PURSUIT	2SC	0.063	PRE							
15A	ROUND-UP	3L	0.50	PRE	94	90	52	57	47	57	62
15B	PURSUIT	2SC	0.063	PRE							
16A	ROUND-UP	3L	0.38	PRE	94	88	45	55	40	50	79
16B	PREVIEW	75DF	0.38	PRE							
16C	LASSO	4EC	2.75	PRE							
17A	ROUND-UP	3L	0.50	PRE	96	90	65	65	66	62	77
17B	PREVIEW	75DF	0.38	PRE							
17C	LASSSO	4EC	2.75	PRE							
18A	ROUND-UP	3L	0.38	PRE	90	81	52	62	57	62	67
18B	SCEPTER	1.5SC	0.125	PRE							
18C	LASSSO	4EC	2.75	PRE							
19A	ROUND-UP	3L	0.50	PRE	95	88	66	72	70	67	71
19B	SCEPTER	1.5SC	0.125	PRE							
19C	LASSO	4EC	2.75	PRE							

					GIFT 5/28	GIFT 6/21	CODA 5/28	CODA 6/21	HOWE 5/28	HOWE 6/21	BDLF 6/21
20A	IGNITE	1.67SC	0.50	PRE	97	79	85	71	87	74	70
20B	PURSUIT	2SC	0.063	PRE							
21A	IGNITE	1.67SC	0.75	PRE	96	89	91	87	90	85	75
21B	PURSUIT	2SC	0.063	PRE							
22A	IGNITE	1.67SC	0.50	PRE	94	80	81	80	81	79	75
22B	PREVIEW	75DF	0.38	PRE							
22C	DUAL	8EC	2.25	PRE							
23A	IGNITE	1.67SC	0.75	PRE	97	90	82	86	84	87	86
23B	PREVIEW	75DF	0.38	PRE							
23C	DUAL	8EC	2.25	PRE							
24A	IGNITE	1.67SC	0.50	PRE	94	72	82	77	82	80	57
24B	SCEPTER	1.5SC	0.125	PRE							
24C	DUAL	8EC	2.25	PRE							
25A	IGNITE	1.67SC	0.75	PRE	97	76	89	87	88	89	74
25B	SCEPTER	1.5SC	0.125	PRE							
25C	DUAL	8EC	2.25	PRE							
26A	PARAQUAT	1.5L	0.19	PRE	88	32	72	65	75	70	55
26B	X-77	%/V	0.25	PRE							
26C	PURSUIT	2SC	0.063	PRE							
27A	PARAQUAT	1.5L	0.25	PRE	95	76	62	40	52	35	61
27B	X-77	%/V	0.25	PRE							
27C	PURSUIT	2SC	0.063	PRE							
28A	PARAQUAT	1.5L	0.19	PRE	92	79	57	62	60	62	77
28B	X-77	%/V	0.25	PRE							
28C	PREVIEW	75DF	0.38	PRE							
28D	DUAL	8EC	2.25	PRE							
29A	PARAQUAT	1.5L	0.25	PRE	91	70	62	50	55	45	60
29B	X-77	%/V	0.25	PRE							
29C	PREVIEW	75DF	0.38	PRE							
29D	DUAL	8EC	2.25	PRE							
30A	PARAQUAT	1.5L	0.19	PRE	92	74	57	42	52	45	40
30B	X-77	%/V	0.25	PRE							
30C	SCEPTER	1.5SC	0.125	PRE							
30D	DUAL	8EC	2.25	PRE							

					GIFT 5/28	GIFT 6/21	CODA 5/28	CODA 6/21	HOWE 5/28	HOWE 6/21	BDLF 6/21
31A	PARAQUAT	1.5L	0.25	PRE	87	74	70	50	79	40	57
31B	X-77	%/V	0.25	PRE							
31C	SCEPTER	1.5SC	0.125	PRE							
31D	DUAL	8EC	2.25	PRE							
32	CHECK				0	0	0	0	0	0	0
CV					5	12	20	22	20	21	17
LSD					7	13	19	20	19	20	16

BACKGROUND

Trial Title	:PPI WEED CONTROL IN SOYBEANS I
Trial State	:IL
Trial Location	:AS-200(URBANA IL)
Trial Zipcode	:61801
Prime Investigator	:C/L/W/M

SITE

Experimental Design	:RCB	Soil Texture	:SILTY CLAY LOAM
Number of Replicates	: 3	Soil O.M. %	:5.0
Plot Wd X Lth (Ft)	:10.0 40.0	Soil pH	:6.0
Tillage Type	:CONVENTIONAL	Soil Name	:DRUMMER
Seedbed Description	:FINE	Metero. Station:	
Ground cover & %	:0		

Previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop	:SOYBEANS
Crop Variety	:HACK
Planting Date	:05/11/88
Planting Method	:MECHANICAL
Planting Depth (in)	: 1.5
Seeding Rate (seeds/foot)	:10
Row Spacing (in)	:30.0
Soil Temp (F) @ Plant	: 65
Soil Moisture @ Planting	:ADEQUATE

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE	PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	PPI		MED		
VELE	PPI		MED		
JIWE	PPI		HIGH		
SMPW	PPI		MED		
ILMG	PPI		HIGH		

Application Code	:PPI
Date of Application	:05/11/88
Time of Application	:07:00A
Pressure (PSI)	: 30
Nozzle Type	:11002
Air Temp (F)	: 75
Relative Humidity	:90
Wind Speed (MPH)	:10
Diluent Carrier	:WATER
Appli Equip Type	:HANDHELD
Spray Volume (GPA)	:20.0
Soil Moisture @ App.	:ADEQUATE

Nozzle Spacing (In)	: 20
Boom Length (Ft)	: 10
Boom Height (In)	: 20
Incorporation Equip	:COMBO TOOL
Elapsed Time to Incorp.	: 1 hrs.
Incorp. Depth (In)	: 4.0
Percent Cloud Cover	: 0
Dew Presence (Y/N)	:Y
Ground Speed (MPH)	: 3.0
Soil Temp (F)	: 72

COMMENTS

Despite excellent control of giant foxtail, velvetleaf, and smooth pigweed by many treatments, jimsonweed and morningglory escapes were prevalent.

					SMPW 6/17	GIFT 6/17	JIWE 6/17	VELE 6/17	ILMG 6/17
1	COMMAND	4EC	0.50	PPI	78	93	85	99	67
2	COMMAND	4EC	0.75	PPI	80	93	87	99	53
3	SONALAN	3EC	0.75	PPI	99	93	55	70	75
4	TREFLAN	4EC	0.75	PPI	90	95	62	78	70
5	PROWL	4EC	0.75	PPI	95	82	50	65	57
6	COMMENCE	5.25SC	1.31	PPI	99	96	85	96	72
7A 7B	SONALAN COMMAND	3EC 4EC	0.75 0.50	PPI PPI	99	97	77	86	72
8	PREVIEW	75DF	0.38	PPI	99	60	77	99	65
9	SCEPTER	1.5SC	0.063	PPI	96	82	68	85	77
10	SCEPTER	1.5SC	0.125	PPI	99	88	65	78	65
11	PURSUIT	2SC	0.063	PPI	96	95	87	98	82
12A 12B	SONALAN PREVIEW	3EC 75DF	0.75 0.38	PPI PPI	99	99	62	98	80
13A 13B	SONALAN SCEPTER	3EC 1.5SC	0.75 0.063	PPI PPI	99	95	65	91	73
14A 14B	SONALAN PURSUIT	3EC 2SC	0.75 0.063	PPI PPI	99	99	83	99	90
15A 15B	COMMENCE SCEPTER	5.25SC 1.5SC	1.31 0.063	PPI PPI	99	93	73	96	72
16A 16B	COMMENCE PREVIEW	5.25SC 75DF	1.31 0.38	PPI PPI	99	96	78	98	78
17A 17B	TREFLAN PREVIEW	4EC 75DF	0.75 0.38	PPI PPI	99	93	78	99	80
18	SQUADRON	2.33EC	0.874	PPI	99	90	70	93	77
19	TRISCEPT	3.03EC	0.88	PPI	99	96	68	75	72
20	CHECK				0	0	0	0	0

					SMPW 6/17	GIFT 6/17	JIWE 6/17	VELE 6/17	ILMG 6/17
21	LASSO	4EC	2.50	PPI	96	92	58	78	50
22	CANNON	3EC	2.25	PPI	99	87	50	85	63
23	CANNON	3EC	3.00	PPI	98	93	78	87	77
24A	CANNON	3EC	3.00	PPI	98	95	88	95	68
24B	COMMAND	4EC	0.50	PPI					
25A	CANNON	3EC	3.00	PPI	99	95	85	95	73
25B	COMMAND	4EC	0.50	PPI					
26A	CANNON	3EC	2.25	PPI	99	90	80	96	78
26B	PREVIEW	75DF	0.38	PPI					
27	DUAL	8EC	2.50	PPI	99	90	73	77	50
28A	DUAL	8EC	2.50	PPI	99	95	65	99	58
28B	COMMAND	4EC	0.50	PPI					
29A	DUAL	8EC	2.50	PPI	98	93	67	86	72
29B	PREVIEW	75DF	0.38	PPI					
30A	LASSO	4MT	3.00	PPI	99	95	78	93	57
30B	COMMAND	4EC	0.50	PPI					
31	CHECK				0	0	0	0	0
32	PURSUIT	2SC	0.094	PPI	99	91	80	96	85
33A	PURSUIT	2SC	0.063	PPI	99	95	70	88	77
33B	LASSO	4MT	2.00	PPI					
34A	DUAL	8EC	2.50	PPI	99	87	64	90	50
34B	SENCOR	75DF	0.50	PPI					
CV					3	6	20	11	16
LSD					5	9	22	15	17

BACKGROUND

Trial Title	:PPI WEED CONTROL IN SOYBEANS II
Trial State	:IL
Trial Location	:AS-200(URBANA IL)
Trial Zipcode	:61801
Prime Investigator	:C/L/W/M

SITE

Experimental Design	:RCB
Number of Replicates	: 3
Plot Wd X Lth (Ft)	:10.0 X 40.0
Tillage Type	:CONVENTIONAL
Seedbed Description	:FINE
Ground cover & %	:0

Soil Texture	:SILTY CLAY LOAM
Soil O.M. %	:5.0
Soil pH	:6.0
Soil Name	:DRUMMER
Metero. Station:	

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop	:SOYBEANS
Crop Variety	:HACK
Planting Date	:05/11/88
Planting Method	:MECHANICAL
Planting Depth (in)	: 1.5
Seeding Rate (seeds/foot)	:10
Row Spacing (in)	:30.0
Soil Temp (F) @ Plant	: 65
Soil Moisture @ Planting	:ADQ

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
JIWE	POST	2	LF	MED	2.0	4.0
SOYS	POST	3	TRIF		2.0	4.0
ILMG	POST	3	LF	HIGH	1.0	3.0
SMPW	POST	4	LF	MED	4.0	8.0
VELE	POST	4	LF	MED	2.0	4.0

Application Code	:PPI		
Date of Application	:05/11/88	Nozzle Spacing (In)	: 20
Time of Application	:08:00A	Boom Length (Ft)	: 10
Pressure (PSI)	: 30	Boom Height (In)	: 20
Nozzle Type	:11002	Incorporation Equip.	:COMBO
Air Temp (F)	: 75	Elapsed Time to Incorp.	: 1 hrs.
Relative Humidity	:90	Incorp. Depth (In)	: 4.0
Wind Speed (MPH)	: 0.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	:70
Soil Moisture @ App.	:ADEQUATE		

Application Code	:PRE		
Date of Application	:05/12/88	Nozzle Spacing (In)	: 20
Time of Application	:08:00A	Boom Length (Ft)	: 10
Pressure (PSI)	: 30	Boom Height (In)	: 20
Nozzle Type	:11002	Incorporation Equip.	:
Air Temp (F)	: 75	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 70
Soil Moisture @ App.	:ADEQUATE		

Application Code	:POST		
Date of Application	:06/06/88	Nozzle Spacing (In)	: 20
Time of Application	:1:00P	Boom Length (Ft)	: 10
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 90	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:25	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:DRY		

COMMENTS

Several combinations provided excellent control of the weeds present with the exception of ivyleaf morningglory.

					SMPW 6/20	GIFT 6/20	JIWE 6/20	VELE 6/20	ILMG 6/20
1	SCEPTER	1.5AS	0.094	PPI	99	73	78	86	57
2	SCEPTER	1.5AS	0.094	PRE	99	73	77	66	50
3	COMMAND	4EC	0.50	PPI	58	92	88	99	42
4	COMMAND	4EC	0.50	PRE	66	87	73	91	50
5	PREVIEW	75DF	0.38	PPI	99	80	87	99	62
6	PREVIEW	75DF	0.38	PRE	83	50	63	75	63
7	PURSUIT	2SC	0.063	PPI	99	90	83	99	67
8	PURSUIT	2SC	0.063	PRE	90	85	72	75	58
9A	DUAL	8EC	2.00	PPI	99	98	99	96	50
9B	SENCOR	75DF	0.38	PPI					
10A	DUAL	8EC	2.00	PRE	93	80	85	83	42
10B	SENCOR	75DF	0.38	PRE					
11A	PREVIEW	75DF	0.38	PRE	91	87	93	93	50
11B	LASSO	4EC	2.50	PRE					
12A	PREVIEW	75DF	0.38	PRE	99	95	93	96	50
12B	COMMAND	4EC	0.50	PRE					
13A	PREVIEW	75DF	0.38	PRE	99	93	90	98	50
13B	COMMAND	4EC	1.00	PRE					
14A	PREVIEW	75DF	0.38	PPI	98	99	98	98	70
14B	COMMAND	4EC	0.50	PPI					
15A	PREVIEW	75DF	0.38	PPI	99	98	99	99	50
15B	COMMAND	4EC	0.75	PPI					
16A	PREVIEW	75DF	0.38	PPI	99	93	88	92	67
16B	TREFLAN	4EC	0.75	PPI					
17A	PURSUIT	2SC	0.063	PPI	99	96	86	86	85
17B	PROWL	4EC	0.75	PPI					
18A	SCEPTER	1.5EC	0.125	PPI	99	96	78	87	77
18B	PROWL	4EC	0.75	PPI					
19	CHECK				0	0	0	0	0

					SMPW 6/20	GIFT 6/20	JIWE 6/20	VELE 6/20	ILMG 6/20
20	SENCOR	75DF	0.50	PPI	91	58	76	98	42
21A	SALUTE	4FL	1.13	PPI	94	88	78	91	62
22A	SALUTE	4FL	1.13	PPI	99	98	93	99	70
22B	COMMAND	4EC	0.50	PPI					
23A	SENCOR	75DF	0.40	PPI	91	95	93	96	58
23B	COMMAND	4EC	0.50	PPI					
24A	SENCOR	75DF	0.50	PRE	99	95	88	93	50
24B	LASSO	4EC	2.50	PRE					
25A	SALUTE	4FL	1.50	PRE	99	87	99	99	70
25B	BLAZER	2EC	0.50	POST					
25C	2.4-DB	3.8L	0.06	POST					
25D	X-77	%/V	0.25	POST					
26A	SALUTE	4FL	1.50	PRE	99	91	99	96	58
26B	SCEPTER	1.5EC	0.125	POST					
26C	COC	4L	1.0Q	POST					
27	CHECK				0	0	0	0	0
28	COMMENCE	5.25EC	1.31	PPI	93	98	82	99	78
CV					11	10	14	9	21
LSD					16	14	18	13	19

BACKGROUND
Trial Title :USOYINJ
Trial Location :URBANA
Trial Zipcode :61801
Prime Investigator :STEVENS/LIEBL/WAX

SITE
Experimental Design :LATIN SQ
Number of Replicates :8
Plot Wd X Lth (Ft) :10 X 40
Tillage Type :CONVENTIONAL
Ground cover & % :0
Seedbed Description :FINE

Soil Texture :SILT LOAM
Soil O.M. % :4.0
Soil pH :6.0
Soil Name :FLANAGAN
Fert. Level :
Metero. Station:

Previous Crop	Previous Pesticide	Year
CORN	VARIOUS	1987

CROP
Trial Crop :SOYBEAN
Crop Variety :WILLAMS 82
Planting Date :5/17/88
Planting Method :MECHANICAL
Planting Depth (in) :1.5"
Seeding Rate (seed/foot) :10
Row Spacing (in) :30"
Soil Temp (F) @ Plant :70
Soil Moisture @ Planting :adq

Application Code :PPI
Date of Application :5/17/88
Time of Application :06:30
Pressure (PSI) :42
Nozzle Type :8003
Air Temp (F) :45 F
Relative Humidity :50%
Wind Speed (MPH) :10 S
Diluent Carrier :WATER
Appli Equip Type :HAND HELD
Spray Volume (GPA) :25
Soil Moisture @ App.:DRY

Nozzle Spacing (in) :20"
Boom Length (Ft) :10 FT
Boom Height (in) :19"
Incorporation Equip :COMBO
Elapsed Time to Incorp.:1 hr.
Incorp. Depth (in) :4
Percent Cloud Cover :40%
Dew Presence (Y/N) :NO
Ground Speed (MPH) :3
Soil Temp (F) :75

COMMENTS

%EMG = soybeans emerged 10 days after treatment (% of control), SR = stand reduction, GR = growth reduction.

					%EMG 6/17	SR 6/17	GR 6/17
1	CHECK				100	0	0
2A	LASSO MT	4ME	2.00	PPI	92	0	1
2B	PREVIEW	75DF	0.38	PPI			
3A	LASSO MT	4ME	2.00	PPI	95	0	1
3B	SCEPTER	1.5AS	0.125	PPI			
4A	MON-9838	3EC	2.25	PPI	92	0	0
4B	PREVIEW	75DF	0.38	PPI			
5A	MON-9838	3EC	2.25	PPI	95	0	0
5B	SCEPTER	1.5AS	0.125	PPI			
6	SQUADRON	2.33EC	0.87	PPI	92	1	3
7A	TREFLAN	4EC	0.75	PPI	91	0	0
7B	SCEPTER	1.5AS	0.125	PPI			
8	SCEPTER	1.5AS	0.125	PPI	94	0	1
CV					6	4	8
LSD					6	1	2

BACKGROUND

Trial Title	:URBANA PRE WEED CONTROL IN SOYBEANS I
Trial State	:IL
Trial Location	:M-17 E (URBANA, IL)
Trial Zipcode	:61801
Prime Investigator	:C/L/W/M

SITE

Experimental Design	:RCB	Soil Texture	:SILTY CLAY LOAM
Number of Replicates	: 3	Soil O.M. %	: 6.0
Plot Wd X Lth (Ft)	: 7.5 40.0	Soil pH	: 6.4
Tillage Type	:CONVENTIONAL	Soil Name	:DRUMMER
Seedbed Description	:FINE	Metero. Station:	
Ground cover & %	: 0		

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop	:SOYBEANS
Crop Variety	:HACK
Planting Date	:05/11/88
Planting Method	:MECHANICAL
Planting Depth (in)	: 1.5
Seeding Rate (seeds/foot)	: 10
Row Spacing (in)	:30.0
Soil Temp (F) @ Plant	: 70
Soil Moisture @ Planting	:DRY

Application Code	:PRE		
Date of Application	:05/12/88	Nozzle Spacing (In)	: 20
Time of Application	:07:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 30	Boom Height (In)	: 20
Nozzle Type	:11002	Incorporation Equip	:
Air Temp (F)	: 70	Elapsed Time to Incorp.	: 0 hrs.
Relative Humidity	:80	Incorp. Depth (In)	: 0.0
Wind Speed (MPH)	:15.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 70
Soil Moisture @ App.	:DRY		

					GIFT 6/11	VELE 6/11
1	BAS-514	50WP	0.25	PRE	7	0
2	BAS-514	50WP	0.50	PRE	13	0
3	SB-53482	50WP	10G	PRE	10	10
4	SB-53482	50WP	20G	PRE	27	13
5	SB-53482	50WP	30G	PRE	23	10
6A	SB-53482	50WP	10G	PRE	47	0
6B	DUAL	8EC	2.25	PRE		
7A	SB-53482	50WP	20G	PRE	53	7
7B	DUAL	8EC	2.25	PRE		
8A	SB-53482	50WP	30G	PRE	73	10
8B	DUAL	8EC	2.25	PRE		
9	SB-53482	50WP	20G	PRE	33	17
10	SENCOR	75DF	0.40	PRE	0	17
11A	SENCOR	75DF	0.40	PRE	62	0
11B	LASSO	4EC	2.75	PRE		
12	SCEPTER	1.5SC	0.094	PRE	10	10
13	SCEPTER	1.5SC	0.125	PRE	10	0
14	PURSUIT	2SC	0.063	PRE	10	10
15	PREVIEW	75DF	0.38	PRE	7	7
16	LASSO	4EC	3.0	PRE	67	0
17	COMMAND	4EC	1.0	PRE	78	0
18	CHLORIMURON	25DF	0.036	PRE	13	27
19	AMIBEN	75DF	3.00	PRE	13	30
20	CHECK				0	0
21	SENCOR	75DF	0.5	PRE	20	0
22A	DUAL	8E	2.25	PRE	57	0
22B	SENCOR	75DF	0.5	PRE		

					GIFT 6/11	VELE 6/11
23A	PURSUIT	2SC	0.063	PRE	23	7
23B	LASSO	4EC	2.0	PRE		
24A	SCEPTER	1.5SC	0.063	PRE	27	17
24B	LASSO	4EC	2.0	PRE		
25A	SCEPTER	1.5SC	0.094	PRE	23	0
25B	LASSO	4EC	2.0	PRE		
26A	PREVIEW	75DF	0.38	PRE	50	20
26B	LASSO	4EC	2.75	PRE		
27A	PREVIEW	75DF	0.38	PRE	38	0
27B	DUAL	8E	2.25	PRE		
28	PROWL	4EC	1.25	PRE	40	10
CV					50	25
LSD					25	19

BACKGROUND

Trial Title :URBANA PRE WEED CONTROL IN SOYBEANS II
Trial State :IL
Trial Location :M-17 E (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :C/L/W/M

SITE

Experimental Design	:RCB	Soil Texture	:SILTY CLAY LOAM
Number of Replicates	: 3	Soil O.M. %	: 6.0
Plot Wd X Lth (Ft)	: 7.5 35.0	Soil pH	: 6.4
Tillage Type	:CONVENTIONAL	Soil Name	:DRUMMER
Seedbed Description	:FINE	Metero. Station:	
Ground cover & %	: 0		

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/11/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 70
Soil Moisture @ Planting :ADEQUATE

Application Code	:PRE		
Date of Application	:05/12/88	Nozzle Spacing (In)	: 20
Time of Application	:08:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 30	Boom Height (In)	: 20
Nozzle Type	:11002	Incorporation Equip	:
Air Temp (F)	: 70	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:80	Incorp. Depth (In)	:
Wind Speed (MPH)	:15.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 70
Soil Moisture @ App.	:DRY		

					GIFT 6/13	ILMG 6/13
1	BAS 514	50WP	0.5	PRE	37	7
2	SCEPTER	1.5AS	0.094	PRE	10	15
3	SCEPTER	1.5AS	0.125	PRE	65	35
4	PURSUIT	2.0AS	0.063	PRE	60	17
5	PREVIEW	75DF	0.30	PRE	32	13
6	PREVIEW	75DF	0.40	PRE	42	10
7	SENCOR	75DF	0.50	PRE	43	38
8	COMMAND	4EC	0.75	PRE	81	30
9	COMMAND	4EC	1.0	PRE	84	22
10	CHECK				0	0
11A 11B	BAS 514 DUAL	50WP 8E	0.5 2.25	PRE PRE	61	13
12A 12B	SCEPTER DUAL	1.5AS 8E	0.094 2.25	PRE PRE	27	3
13A 13B	SCEPTER DUAL	1.5AS 8E	0.125 2.25	PRE PRE	52	28
14A 14B	PUSUIT DUAL	2.0AS 8E	0.063 2.25	PRE PRE	82	30
15A 15B	PREVIEW DUAL	75DF 8E	0.30 2.25	PRE PRE	81	13
16A 16B	SENCOR DUAL	75DF 8E	0.50 2.25	PRE PRE	85	32
17A 17B	COMMAND PURSUIT	4E 2AS	0.75 0.063	PRE PRE	84	33
18A 18B	COMMAND SCEPTER	4E 1.5AS	0.75 0.094	PRE PRE	82	28
19A 19B	COMMAND SCEPTER	4E 1.5AS	0.75 0.125	PRE PRE	86	33

					GIFT 6/13	ILMG 6/13
20A	COMMAND	4E	0.75	PRE	88	32
20B	PREVIEW	75DF	0.30	PRE		
21A	COMMAND	4E	0.75	PRE	85	35
21B	PREVIEW	75DF	0.4	PRE		
22A	COMMAND	4E	0.75	PRE	90	42
22B	SENCOR	75DF	0.5	PRE		
23	CHECK				0	0
24	PROWL	4EC	1.0	PRE	50	22
25A	PROWL	4EC	1.0	PRE	42	33
25B	SCEPTER	1.5AS	0.125	PRE		
26A	PROWL	4EC	1.0	PRE	44	27
26B	PREVIEW	75DF	0.4	PRE		
27	CHLORIMURON	25DF	0.036	PRE	33	33
28	AMIBEN	75DF	3.0	PRE	50	25
CV					32	59
LSD					30	22

BACKGROUND

Trial Title :1988 SOYBEAN PREEMERGENCE III (URBANA)
Trial Location :AS-200 URBANA IL.
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design	:RCB	Soil Texture	: SILT LOAM
Number of Replicates	: 4	Soil O.M. %	: 4.0
Plot Wd X Lth (Ft)	:10.0 X 40.0	Soil pH	: 6.0
Tillage Type	:CONVENTIONAL	Soil Name	:FLANAGAN
Ground cover & %	: 0	Fert. Level	:
Seedbed Description	:GOOD	Metero. Station:	

Previous Crop	Previous Pesticide	Year
CORN		1987

CROP

Trial Crop :SOYBEAN
Crop Variety :HACK
Planting Date :05/26/88
Planting Method :MECHANICAL
Planting Depth (in) :1.5
Seeding Rate (seed/foot) :10
Row Spacing (in) : 30
Soil Temp (F) @ Plant : 75
Soil Moisture @ Planting : DRY

Application Code	:PRE		
Date of Application	:05/26/88	Nozzle Spacing (in)	: 20
Time of Application	:5 PM	Boom Length (Ft)	: 10
Pressure (PSI)	: 40	Boom Height (in)	: 20
Nozzle Type	:11002	Incorporation Equip	:
Air Temp (F)	: 70	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:20	Incorp. Depth (in)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	: N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:25	Soil Temp (F)	: 80
Soil Moisture @ App.	: DRY		

					SMPW 09/10	GIFT 09/10
1	COMMAND	4EC	1.0	PRE	36	82
2	COMMAND	4EC	2.0	PRE	50	96
3	METRIBUZIN	75DF	0.5	PRE	85	22
4	METRIBUZIN	75DF	0.75	PRE	96	42
5	METRIBUZIN	75DF	1.0	PRE	88	24
6A	COMMAND	4EC	1.0	PRE	82	89
6B	METRIBUZIN	75DF	0.5	PRE		
7A	COMMAND	4EC	1.0	PRE	82	81
7B	METRIBUZIN	75DF	0.75	PRE		
8A	COMMAND	4EC	1.0	PRE	87	85
8B	METRIBUZIN	75DF	1.0	PRE		
9A	COMMAND	4EC	2.0	PRE	81	98
9B	METRIBUZIN	75DF	0.5	PRE		
10A	COMMAND	4EC	2.0	PRE	91	95
10B	METRIBUZIN	75DF	0.75	PRE		
11A	COMMAND	4EC	2.0	PRE	95	99
11B	METRIBUZIN	75DF	1.0	PRE		
12	CHECK				0	0
CV					12	10
LSD					13	10

BACKGROUND

Trial Title :URBANA SOYBEANS POSTEMERGENCE I
Trial State :IL
Trial Location :C700 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE

Soil Texture :SILT LOAM
Soil O.M. % : 4.0
Soil pH : 6.0
Soil Name :FLANAGAN
Metero. Station:

CROP

Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/06/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot):10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 65
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
COLQ	POST	6	LF	MED	2.0	5.0
GIFT	POST	5	LF	HIGH	2.0	4.0
JIWE	POST	4	LF	HIGH	2.0	4.0
POAM	POST	5	LF	HIGH	2.0	4.0
VELE	POST	5	LF	MED	2.0	5.0

Application Code	:POST		
Date of Application	:06/02/88	Nozzle Spacing (In)	: 20
Time of Application	:07:00	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	:90	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:70	Incorp. Depth (In)	:
Wind Speed (MPH)	:10.0	Percent Cloud Cover	:50
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:DRY		

COMMENTS

A dense stand of annual weeds were under drought conditions at the time of application. Crop injury was greatest from treatments including Cobra. The best overall weed control was provided by mixtures that included Reflex with either Poast or Fusilade.

				C.I. 6/13	C.I. 6/21	GIFT 6/13	GIFT 6/21	POAM 6/13	POAM 6/21
1A	POAST	1.5EC	0.15	0	0	68	75	0	0
1B	DASH	4L	1.0Q						
1C	28%N	4L	4.0Q						
2A	POAST	1.5EC	0.15	10	17	75	83	82	88
2B	CLASSIC	25DF	3.69G						
2C	DASH	4L	1.0Q						
2D	28%N	4L	4.0Q						
3A	POAST	1.5EC	0.20	8	3	70	73	83	82
3B	CLASSIC	25DF	3.69G						
3C	DASH	4L	1.0Q						
3D	28%N	4L	4.0Q						
4A	POAST	1.5EC	0.15	13	10	75	79	82	84
4B	CLASSIC	25DF	5.50G						
4C	DASH	4L	1.0Q						
4D	28%N	4L	4.0Q						
5A	POAST	1.5EC	0.20	15	5	77	80	82	82
5B	CLASSIC	25DF	5.50G						
5C	DASH	4L	1.0Q						
5D	28%N	4L	4.0Q						
6A	POAST	1.5EC	0.15	30	20	97	97	97	96
6B	REFLEX	2EC	0.25						
6C	DASH	4L	1.0Q						
6D	28%N	4L	4.0Q						
7A	POAST	1.5EC	0.20	27	20	99	99	99	97
7B	REFLEX	2EC	0.25						
7C	DASH	4L	1.0Q						
7D	28%N	4L	4.0Q						
8A	POAST	1.5EC	0.15	10	7	75	79	50	52
8B	BASAGRAN	4S	0.75						
8C	DASH	4L	1.0Q						
8D	28%N	4L	4.0Q						
9A	POAST	1.5EC	0.20	13	10	82	85	53	57
9B	BASAGRAN	4S	0.75						
9B	DASH	4L	1.0Q						
9D	28%N	4L	4.0Q						

				C.I. 6/13	C.I. 6/21	GIFT 6/13	GIFT 6/21	POAM 6/13	POAM 6/21
10A	POAST.	1.5EC	0.15	40	33	98	97	99	98
10B	COBRA	2EC	0.20						
10C	DASH	4L	1.0Q						
10D	28%N	4L	4.0Q						
11A	POAST	1.5EC	0.20	33	30	96	96	96	96
11B	COBRA	2EC	0.20						
11C	DASH	4L	1.0Q						
11D	28%N	4L	4.0Q						
12A	POAST	1.5EC	0.15	7	17	82	75	93	93
12B	PURSUIT	2SC	0.063						
12C	DASH	4L	1.0Q						
12D	28%N	4L	4.0Q						
13A	FUSILADE	1EC	0.15	0	0	52	53	0	0
13B	DASH	4L	1.0Q						
13C	28%N	4L	4.0Q						
14A	FUSILADE	1EC	0.15	10	7	75	72	91	88
14B	CLASSIC	25DF	3.69G						
14C	DASH	4L	1.0Q						
14D	28%N	4L	4.0Q						
15A	FUSILADE	1EC	0.20	7	3	72	70	88	85
15B	CLASSIC	25DF	3.69G						
15C	DASH	4L	1.0Q						
15D	28%N	4L	4.0Q						
16A	FUSILADE	1EC	0.15	10	5	55	55	87	87
16B	CLASSIC	25DF	5.5G						
16C	DASH	4L	1.0Q						
16D	28%N	4L	4.0Q						
17A	FUSILADE	1EC	0.20	13	7	68	70	88	87
17B	CLASSIC	25DF	5.5G						
17C	DASH	4L	1.0Q						
17D	28%N	4L	4.0Q						
18A	FUSILADE	1EC	0.15	27	18	91	91	96	95
18B	REFLEX	2EC	0.25						
18C	DASH	4L	1.0Q						
18D	28%N	4L	4.0Q						

				C.I. 6/13	C.I. 6/21	GIFT 6/13	GIFT 6/21	POAM 6/13	POAM 6/21
19A	FUSILADE	1EC	0.20	28	20	98	97	98	96
19B	REFLEX	2EC	0.25						
19C	DASH	4L	1.0Q						
19D	28%N	4L	4.0Q						
20A	FUSILADE	1EC	0.15	15	10	63	67	30	32
20B	BASAGRAN	4S	0.75						
20C	DASH	4L	1.0Q						
20D	28%N	4L	4.0Q						
21A	FUSILADE	1EC	0.20	7	3	67	68	33	30
21B	BASAGRAN	4S	0.75						
21C	DASH	4L	1.0Q						
21D	28%N	4L	4.0Q						
22A	FUSILADE	1EC	0.15	37	30	92	93	96	94
22B	COBRA	2EC	0.20						
22C	DASH	4L	1.0Q						
22D	28%N	4L	4.0Q						
23A	FUSILADE	1EC	0.20	37	30	91	93	94	89
23B	COBRA	2EC	0.20						
23C	DASH	4L	1.0Q						
23D	28%N	4L	4.0Q						
24A	FUSILADE	1EC	0.15	10	10	75	78	85	87
24B	PURSUIT	2SC	0.063						
24C	DASH	4L	1.0Q						
24D	28%N	4L	4.0Q						
25A	FUSILADE	1EC	0.20	0	0	71	75	0	0
25C	DASH	4L	1.0Q						
25D	28%N	4L	4.0Q						
26A	COBRA	2EC	0.20	27	20	33	33	92	90
26B	DASH	4L	1.0Q						
26C	28%N	4L	4.0Q						
27A	PURSUIT	2SC	0.063	10	7	63	60	90	90
27B	DASH	4L	1.0Q						
27C	28%N	4L	4.0Q						
28A	DASH	4L	1.0Q	0	0	0	0	0	0
28B	28%N	4L	4.0Q						
29	CHECK			0	0	0	0	0	0
CV				31	22	14	17	8	10
LSD				8	14	17	20	9	11

				VELE 6/13	VELE 6/21	JIWE 6/13	JIWE 6/21
1A	POAST	1.5EC	0.15	0	0	0	0
1B	DASH	4L	1.0Q				
1C	28%N	4L	4.0Q				
2A	POAST	1.5EC	0.15	92	92	80	88
2B	CLASSIC	25DF	3.69G				
2C	DASH	4L	1.0Q				
2D	28%N	4L	4.0Q				
3A	POAST	1.5EC	0.20	85	85	75	77
3B	CLASSIC	25DF	3.69G				
3C	DASH	4L	1.0Q				
3D	28%N	4L	4.0Q				
4A	POAST	1.5EC	0.15	90	90	87	87
4B	CLASSIC	25DF	5.50G				
4C	DASH	4L	1.0Q				
4D	28%N	4L	4.0Q				
5A	POAST	1.5EC	0.20	90	90	82	80
5B	CLASSIC	25DF	5.50G				
5C	DASH	4L	1.0Q				
5D	28%N	4L	4.0Q				
6A	POAST	1.5EC	0.15	95	95	96	96
6B	REFLEX	2EC	0.25				
6C	DASH	4L	1.0Q				
6D	28%N	4L	4.0Q				
7A	POAST	1.5EC	0.20	97	96	98	94
7B	REFLEX	2EC	0.25				
7C	DASH	4L	1.0Q				
7D	28%N	4L	4.0Q				
8A	POAST	1.5EC	0.15	90	90	90	90
8B	BASAGRAN	4S	0.75				
8C	DASH	4L	1.0Q				
8D	28%N	4L	4.0Q				
9A	POAST	1.5EC	0.20	90	90	93	94
9B	BASAGRAN	4S	0.75				
9B	DASH	4L	1.0Q				
9D	28%N	4L	4.0Q				
10A	POAST	1.5EC	0.15	88	93	98	90
10B	COBRA	2EC	0.20				
10C	DASH	4L	1.0Q				
10D	28%N	4L	4.0Q				

				VELE 6/13	VELE 6/21	JIWE 6/13	JIWE 6/21
11A	POAST	1.5EC	0.20	85	88	93	88
11B	COBRA	2EC	0.20				
11C	DASH	4L	1.0Q				
11D	28%N	4L	4.0Q				
12A	POAST	1.5EC	0.15	87	89	92	92
12B	PURSUIT	2SC	0.063				
12C	DASH	4L	1.0Q				
12D	28%N	4L	4.0Q				
13A	FUSILADE	1EC	0.15	0	0	0	0
13B	DASH	4L	1.0Q				
13C	28%N	4L	4.0Q				
14A	FUSILADE	1EC	0.15	89	87	78	75
14B	CLASSIC	25DF	3.69G				
14C	DASH	4L	1.0Q				
14D	28%N	4L	4.0Q				
15A	FUSILADE	1EC	0.20	88	87	82	78
15B	CLASSIC	25DF	3.69G				
15C	DASH	4L	1.0Q				
15D	28%N	4L	4.0Q				
16A	FUSILADE	1EC	0.15	90	90	60	65
16B	CLASSIC	25DF	5.5G				
16C	DASH	4L	1.0Q				
16D	28%N	4L	4.0Q				
17A	FUSILADE	1EC	0.20	90	90	82	85
17B	CLASSIC	25DF	5.5G				
17C	DASH	4L	1.0Q				
17D	28%N	4L	4.0Q				
18A	FUSILADE	1EC	0.15	96	95	98	96
18B	REFLEX	2EC	0.25				
18C	DASH	4L	1.0Q				
18D	28%N	4L	4.0Q				
19A	FUSILADE	1EC	0.20	97	96	97	96
19B	REFLEX	2EC	0.25				
19C	DASH	4L	1.0Q				
19D	28%N	4L	4.0Q				
20A	FUSILADE	1EC	0.15	87	83	87	83
20B	BASAGRAN	4S	0.75				
20C	DASH	4L	1.0Q				
20D	28%N	4L	4.0Q				

				VELE 6/13	VELE 6/21	JIWE 6/13	JIWE 6/21
21A	FUSILADE	1EC	0.20	80	77	87	63
21B	BASAGRAN	4S	0.75				
21C	DASH	4L	1.0Q				
21D	28%N	4L	4.0Q				
22A	FUSILADE	1EC	0.15	87	85	95	93
22B	COBRA	2EC	0.20				
22C	DASH	4L	1.0Q				
22D	28%N	4L	4.0Q				
23A	FUSILADE	1EC	0.20	82	80	93	92
23B	COBRA	2EC	0.20				
23C	DASH	4L	1.0Q				
23D	28%N	4L	4.0Q				
24A	FUSILADE	1EC	0.15	87	88	73	80
24B	PURSUIT	2SC	0.063				
24C	DASH	4L	1.0Q				
24D	28%N	4L	4.0Q				
25A	FUSILADE	1EC	0.20	0	0	0	0
25C	DASH	4L	1.0Q				
25D	28%N	4L	4.0Q				
26A	COBRA	2EC	0.20	87	83	87	88
26B	DASH	4L	1.0Q				
26C	28%N	4L	4.0Q				
27A	PURSUIT	2SC	0.063	87	87	83	85
27B	DASH	4L	1.0Q				
27C	28%N	4L	4.0Q				
28A	DASH	4L	1.0Q	0	0	0	0
28B	28%N	4L	4.0Q				
29	CHECK			0	0	0	0
CV				6	7	7	13
LSD				7	8	8	15

BACKGROUND

Trial Title :URBANA SOYBEAN POSTEMERGENCE II
Trial State :IL
Trial Location :N200 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % :0

Soil Texture :SILTY CLAY LOAM
Soil O.M. % : 5.5
Soil pH : 6.4
Soil Name :DRUMMER
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/06/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot):10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 75
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	EPOS	4	LF	MED	2.0	4.0
GIFT	LPOS	6	LF	MED	4.0	6.0
JIWE	EPOS	2	LF	HIGH	2.0	4.0
JIWE	LPOS	4	LF	HIGH	2.0	4.0
SMPW	EPOS	2	LF	MED	2.0	4.0
SMPW	LPOS	4	LF	MED	2.0	4.0
SOYBEA	LPOS	3	TRIF		0.0	0.0
ILMG	EPOS	2	LF	MED	2.0	4.0
ILMG	LPOS	3	LF	HIGH	1.0	3.0
VELE	EPOS	2	LF	MED	1.0	2.0
VELE	LPOS	4	LF	HIGH	2.0	4.0

Application Code	:EPOS		
Date of Application	:5/31/88	Nozzle Spacing (In)	: 20
Time of Application	:6:00P	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 70	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	: 3.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 74
Soil Moisture @ App.	:DRY		

Application Code	:LPOS		
Date of Application	:06/03/88	Nozzle Spacing (In)	: 18
Time of Application	:07:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip.	:
Air Temp (F)	: 70	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	:10.0	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:20.0	Soil Temp (F)	:70
Soil Moisture @ App.	:DRY		

					C.I. 6/13/	C.I. 6/28	VELE 6/13	VELE 6/28	JIWE 6/13	JIWE 6/28
1A	COBRA	2EC	0.2	EPOS	25	8	47	43	88	47
1B	COC	4L	0.5Q	EPOS						
2A	COBRA	2EC	0.2	EPOS	33	10	43	33	63	67
2B	28%N	4L	4.0Q	EPOS						
3A	COBRA	2EC	0.2	EPOS	30	8	37	23	90	68
3B	X-77	%/V	0.25	EPOS						
4A	COBRA	2EC	0.15	EPOS	32	10	43	30	91	85
4B	TACKLE	2EC	0.25	EPOS						
4C	X-77	%/V	0.25	EPOS						
5A	COBRA	2EC	0.15	EPOS	42	12	60	27	92	83
5B	2.4-DB	2EC	0.031	EPOS						
5C	X-77	%/V	0.25	EPOS						
6A	COBRA	2EC	0.15	EPOS	47	20	93	70	85	77
6B	CLASSIC	25DF	2.72G	EPOS						
6C	X-77	%/V	0.25	EPOS						
7A	COBRA	2EC	0.15	EPOS	42	13	87	70	87	70
7B	CLASSIC	25DF	3.69G	EPOS						
7C	X-77	%/V	0.25	EPOS						
8A	COBRA	2EC	0.15	EPOS	45	18	91	90	96	95
8B	PURSUIT	2SC	0.063	EPOS						
8C	X-77	%/V	0.25	EPOS						
9A	TACKLE	2EC	0.5	EPOS	20	17	28	17	93	88
9B	X-77	%/V	0.25	EPOS						
10A	PURSUIT	2SC	0.063	EPOS	10	0	95	98	95	99
10B	X-77	%/V	0.25	EPOS						
11A	CLASSIC	25DF	3.69G	EPOS	18	0	93	88	92	97
11B	X-77	%/V	0.25	EPOS						
12A	CLASSIC	25DF	5.50G	EPOS	55	47	92	96	90	98
12B	X-77	%/V	0.25	EPOS						
13A	2.4-DB	2EC	0.031	EPOS	10	13	17	20	5	43
13B	X-77	%/V	0.25	EPOS						
14	CHECK				0	0	0	0	0	0
15A	COBRA	2EC	0.2	LPOS	53	17	50	63	47	53
15B	COC	4L	0.5Q	LPOS						

					C.I. 6/13	C.I. 6/28	VELE 6/13	VELE 6/28	JIWE 6/13	JIWE 6/28
16A	COBRA	2EC	0.2	LPOS	52	18	47	50	92	83
16B	28%N	4L	4.0Q	LPOS						
17A	COBRA	2EC	0.2	LPOS	48	15	50	57	93	67
17B	X-77	%/V	0.25	LPOS						
18A	COBRA	2EC	0.15	LPOS	40	13	52	53	95	78
18B	TACKLE	2EC	0.25	LPOS						
18C	X-77	%/V	0.25	LPOS						
19A	COBRA	2EC	0.15	LPOS	63	5	87	47	90	70
19B	2.4-DB	2EC	0.031	LPOS						
19C	X-77	%/V	0.25	LPOS						
20A	COBRA	2EC	0.15	LPOS	35	5	80	92	88	82
20B	CLASSIC	25DF	2.72G	LPOS						
20C	X-77	%/V	0.25	LPOS						
21A	COBRA	2EC	0.15	LPOS	43	0	92	93	96	87
21B	CLASSIC	25DF	3.69G	LPOS						
21C	X-77	%/V	0.25	LPOS						
22A	COBRA	2EC	0.15	LPOS	48	12	95	98	88	96
22B	PURSUIT	2SC	0.063	LPOS						
22C	X-77	%/V	0.25	LPOS						
23A	TACKLE	2EC	0.5	LPOS	33	7	20	20	85	52
23B	X-77	%/V	0.25	LPOS						
24A	PURSUIT	2SC	0.063	LPOS	25	10	73	75	83	79
24B	X-77	%/V	0.25	LPOS						
25A	CLASSIC	25DF	3.69G	LPOS	38	8	85	88	87	67
25B	X-77	%/V	0.25	LPOS						
26A	CLASSIC	25DF	5.50G	LPOS	63	8	93	93	92	70
26B	X-77	%/V	0.25	LPOS						
27A	2.4-DB	2EC	0.031	LPOS	12	18	27	37	20	43
27B	X-77	%/V	0.25	LPOS						
28	CHECK				0	0	0	0	0	0
CV					30	100	17	30	10	22
LSD					17	18	16	27	12	25

					ILMG 6/13	ILMG 6/28
1A	COBRA	2EC	0.2	EPOS	27	20
1B	COC	4L	0.5Q	EPOS		
2A	COBRA	2EC	0.2	EPOS	37	35
2B	28%N	4L	4.0Q	EPOS		
3A	COBRA	2EC	0.2	EPOS	52	20
3B	X-77	%/V	0.25	EPOS		
4A	COBRA	2EC	0.15	EPOS	43	30
4B	TACKLE	2EC	0.25	EPOS		
4C	X-77	%/V	0.25	EPOS		
5A	COBRA	2EC	0.15	EPOS	43	23
5B	2.4-DB	2EC	0.031	EPOS		
5C	X-77	%/V	0.25	EPOS		
6A	COBRA	2EC	0.15	EPOS	87	60
6B	CLASSIC	25DF	2.72G	EPOS		
6C	X-77	%/V	0.25	EPOS		
7A	COBRA	2EC	0.15	EPOS	80	60
7B	CLASSIC	25DF	3.69G	EPOS		
7C	X-77	%/V	0.25	EPOS		
8A	COBRA	2EC	0.15	EPOS	78	85
8B	PURSUIT	2SC	0.063	EPOS		
8C	X-77	%/V	0.25	EPOS		
9A	TACKLE	2EC	0.5	EPOS	33	13
9B	X-77	%/V	0.25	EPOS		
10A	PURSUIT	2SC	0.063	EPOS	78	92
10B	X-77	%/V	0.25	EPOS		
11A	CLASSIC	25DF	3.69G	EPOS	72	58
11B	X-77	%/V	0.25	EPOS		
12A	CLASSIC	25DF	5.50G	EPOS	80	68
12B	X-77	%/V	0.25	EPOS		
13A	2.4-DB	2EC	0.031	EPOS	20	17
13B	X-77	%/V	0.25	EPOS		
14	CHECK				0	0

					ILMG 6/13	ILMG 6/28
15A	COBRA	2EC	0.2	LPOS	43	38
15B	COC	4L	0.5Q	LPOS		
16A	COBRA	2EC	0.2	LPOS	35	28
16B	28%N	4L	4.0Q	LPOS		
17A	COBRA	2EC	0.2	LPOS	40	33
17B	X-77	%/V	0.25	LPOS		
18A	COBRA	2EC	0.15	LPOS	48	15
18B	TACKLE	2EC	0.25	LPOS		
18C	X-77	%/V	0.25	LPOS		
19A	COBRA	2EC	0.15	LPOS	83	33
19B	2.4-DB	2EC	0.031	LPOS		
19C	X-77	%/V	0.25	LPOS		
20A	COBRA	2EC	0.15	LPOS	80	63
20B	CLASSIC	25DF	2.72G	LPOS		
20C	X-77	%/V	0.25	LPOS		
21A	COBRA	2EC	0.15	LPOS	87	40
21B	CLASSIC	25DF	3.69G	LPOS		
21C	X-77	%/V	0.25	LPOS		
22A	COBRA	2EC	0.15	LPOS	82	50
22B	PURSUIT	2SC	0.063	LPOS		
22C	X-77	%/V	0.25	LPOS		
23A	TACKLE	2EC	0.5	LPOS	37	33
23B	X-77	%/V	0.25	LPOS		
24A	PURSUIT	2SC	0.063	LPOS	77	57
24B	X-77	%/V	0.25	LPOS		
25A	CLASSIC	25DF	3.69G	LPOS	75	45
25B	X-77	%/V	0.25	LPOS		
26A	CLASSIC	25DF	5.50G	LPOS	85	47
26B	X-77	%/V	0.25	LPOS		
27A	2.4-DB	2EC	0.031	LPOS	33	50
27B	X-77	%/V	0.25	LPOS		
28	CHECK				0	0
CV					19	50
LSD					17	33

BACKGROUND

Trial Title :URBANA SOYBEAN POSTEMERGENCE III
Trial State :IL
Trial Location :AS300 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 32.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % : 0

Soil Texture :SILTY CLAY LOAM
Soil O.M. % : 6.0
Soil pH : 6.2
Soil Name :DRUMMER
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/03/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) : 30
Soil Temp (F) @ Plant : 70
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
COLQ	POST	8	LF	MEDIUM	4.0	6.0
GIFT	POST	6	LF	HIGH	4.0	6.0
JIWE	POST	4	LF	HIGH	4.0	8.0
SMPW	POST	4	LF	MEDIUM	4.0	8.0
VELE	POST	4	LF	MEDIUM	2.0	4.0

Application Code :POST
Date of Application :05/31/88
Time of Application :08:00A
Pressure (PSI) : 40
Nozzle Type :8002
Air Temp (F) : 80
Relative Humidity :50
Wind Speed (MPH) : 3.0
Diluent Carrier :WATER
Appli Equip Type :HANDHELD
Spray Volume (GPA) :20.0
Soil Moisture @ App.:DRY

Nozzle Spacing (In) : 20
Boom Length (Ft) : 7.5
Boom Height (In) : 20
Incorporation Equip :
Elapsed Time to Incorp.: hrs.
Incorp. Depth (In) :
Percent Cloud Cover : 0
Dew Presence (Y/N) :N
Ground Speed (MPH) : 3.0
Soil Temp (F) : 75

					COLQ 6/16	JIWE 6/16	VELE 6/16	SMPW 6/16
1A	COBRA	2EC	0.20	POST	62	90	73	90
1B	COC	4L	0.5QT	POST				
2A	COBRA	2EC	0.20	POST	47	77	73	98
2B	28%N	4L	4.0Q	POST				
3A	COBRA	2EC	0.20	POST	53	80	65	89
3B	X-77	%/V	0.25	POST				
4A	COBRA	2EC	0.15	POST	78	98	86	90
4B	BASAGRAN	4EC	0.50	POST				
4C	28%N	4L	4.0Q	POST				
5A	COBRA	2EC	0.15	POST	55	99	77	98
5B	CLASSIC	25DF	2.7G	POST				
5C	X-77	%/V	0.25	POST				
6	CHECK			POST	0	0	0	0
7A	COBRA	2EC	0.20	POST	47	99	55	98
7B	SCEPTER	1.5SC	0.05	POST				
7C	X-77	%/V	0.25	POST				
8A	COBRA	2EC	0.15	POST	55	98	70	98
8B	2.4-DB	2EC	0.031	POST				
8C	X-77	%/V	0.25	POST				
9A	COBRA	2EC	0.20	POST	30	81	40	98
9B	SELECT	2EC	0.125	POST				
9C	X-77	%/V	0.25	POST				
10A	COBRA	2EC	0.20	POST	33	91	67	84
10B	SELECT	2EC	0.125	POST				
10C	COC	4L	0.5Q	POST				
CV					31	11	26	6
LSD					25	15	26	9

BACKGROUND

Trial Title :URBANA SOYBEANS POSTEMERGENCE IV
Trial State :IL
Trial Location :M17E (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) : 7.5 35.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % : 0

Soil Texture :SILTY CLAY LOAM
Soil O.M. % : 6.0
Soil pH : 6.4
Soil Name :DRUMMER
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :5/11/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 70
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	POST	6	LF	HIGH	4	6
SOYS	POST	3	TRIF		4	6

Application Code	:POST		
Date of Application	:6/06/88	Nozzle Spacing (In)	: 18
Time of Application	:08:30A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 90	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:26	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:DRY		

COMMENTS

The entire area was treated with Butyrac (4oz. product/A) and Basagran (1pt./A) on May 24, 1988. Few, if any, differences were observed between COC and Dash.

					GIFT 6/13	GIFT 6/27
1A	FUSILADE	1EC	0.095	POST	57	40
1B	COC	4L	1QT	POST		
2A	FUSILADE	1EC	0.19	POST	83	82
2B	COC	4L	1QT	POST		
3A	ASSURE	0.8EC	0.05	POST	92	98
3B	COC	4L	1QT	POST		
4A	ASSURE	0.8EC	0.1	POST	95	98
4B	COC	4L	1QT	POST		
5A	OPTION	1EC	0.075	POST	92	90
5B	COC	4L	1QT	POST		
6A	OPTION	1EC	0.15	POST	93	97
6B	COC	4L	1QT	POST		
7A	SELECT	2EC	0.063	POST	93	93
7B	COC	4L	1QT	POST		
8A	SELECT	2EC	0.125	POST	87	100
8B	COC	4L	1QT	POST		
9A	POAST	1.5EC	0.1	POST	85	93
9B	COC	4L	1QT	POST		
10A	POAST	1.5EC	0.2	POST	90	100
10B	COC	4L	1QT	POST		
11A	FUSILADE	1EC	0.095	POST	82	57
11B	DASH	4L	1QT	POST		
12A	FUSILADE	1EC	0.19	POST	82	77
12B	DASH	4L	1QT	POST		
13A	ASSURE	0.8EC	0.05	POST	92	93
13B	DASH	4L	1QT	POST		
14A	ASSURE	0.8EC	0.05	POST	87	93
14B	DASH	4L	1QT	POST		
15A	OPTION	1EC	0.075	POST	87	95
15B	DASH	4L	1QT	POST		
16A	OPTION	1EC	0.15	POST	92	98
16B	DASH	4L	1QT	POST		

					GIFT 6/13	GIFT 6/27
17A	SELECT	2EC	0.063	POST	88	98
17B	DASH	4L	1QT	POST		
18A	SELECT	2EC	0.125	POST	92	98
18B	DASH	4L	1QT	POST		
19A	POAST	1.5EC	0.1	POST	90	97
19B	DASH	4L	1QT	POST		
20A	POAST	1.5EC	0.2	POST	90	98
20B	DASH	4L	1QT	POST		
CV					13	7
LSD					19	11

BACKGROUND
Trial Title :URBANA SOYBEANS POSTEMERGENCE V
Trial State :IL
Trial Location :C700 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE
Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % :0

Soil Texture :SILT LOAM
Soil O.M. % : 4.0
Soil pH : 6.0
Soil Name :FLANAGAN
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP
Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/06/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot):10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 65
Soil Moisture @ Planting :DRY

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
SOYS	POST	3	TRIF		6.0	8.0
GIFT	POST	5	LF	HIGH	2.0	4.0
JIWE	POST	4	LF	HIGH	2.0	4.0
POAM	POST	5	LF	HIGH	2.0	4.0
VELE	POST	5	LF	MED	2.0	5.0

Application Code	:POST		
Date of Application	:06/02/88	Nozzle Spacing (In)	: 20
Time of Application	:07:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 90	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	:10.0	Percent Cloud Cover	:50
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:DRY		

COMMENTS

Soybeans were growing under drought stress at the time of herbicide application. Several treatments resulted in slight soybean injury; however, after 3 weeks the symptoms were undetectable. Good but not excellent control of the broadleaf spectrum was achieved by many of the treatments tested. POAM ratings on 6/13 are not included since these values are very similar to 6/21 ratings.

					C.I. 6/13/	C.I. 6/21	POAM 6/21	VELE 6/13	VELE 6/21	JIWE 6/13	JIWE 6/21
1A	DPXM6316	25DF	1.36G	POST	0	0	82	57	75	60	67
1B	28N	4L	4QT	POST							
1C	X-77	%/V	0.25	POST							
2A	DPXM6316	25DF	1.82G	POST	0	0	80	53	68	53	67
2B	28N	4L	4QT	POST							
2C	X-77	%/V	0.25	POST							
3A	CLASSIC	25DF	2.72G	POST	0	0	75	73	82	77	85
3B	28N	4L	4QT	POST							
3C	X-77	%/V	0.25	POST							
4A	CLASSIC	25DF	3.69G	POST	7	0	73	83	92	82	90
4B	28N	4L	4QT	POST							
4C	X-77	%/V	0.25	POST							
5A	DPXM6316	25DF	1.36G	POST	7	0	87	80	92	78	87
5B	CLASSIC	25DF	2.72G	POST							
5C	28N	4L	4QT	POST							
5D	X-77	%/V	0.25	POST							
6A	DPXM6316	25DF	1.36G	POST	20	0	90	82	92	78	87
6B	CLASSIC	25DF	3.69G	POST							
6C	28N	4L	4QT	POST							
6D	X-77	%/V	0.25	POST							
7A	DPXM6316	25DF	1.82G	POST	3	0	88	80	87	77	88
7B	CLASSIC	25DF	2.72G	POST							
7C	28N	4L	4QT	POST							
7D	X-77	%/V	0.25	POST							
8A	DPXM6316	25DF	1.82G	POST	7	0	92	87	93	82	87
8B	CLASSIC	25DF	3.69G	POST							
8C	28N	4L	4QT	POST							
8D	X-77	%/V	0.25	POST							
9A	TACKLE	2EC	0.25	POST	0	0	83	50	43	63	50
9B	X-77	%/V	0.25	POST							
10A	TACKLE	2EC	0.25	POST	7	0	83	73	77	63	70
10B	28N	4L	4QT	POST							
11A	TACKLE	2EC	0.5	POST	12	3	82	53	47	57	50
11B	X-77	%/V	0.25	POST							
12A	TACKLE	2EC	0.5	POST	12	0	83	80	83	62	62
12B	28N	4L	4QT	POST							

					C.I. 6/13	C.I. 6/21	POAM 6/21	VELE 6/13	VELE 6/21	JIWE 6/13	JIWE 6/21
13A	GALAXY	3.67S	0.92	POST	0	0	73	67	77	77	83
13B	COC	4L	1.0QT	POST							
14A	PURSUIT	2SC	0.063	POST	10	10	87	78	83	73	83
14B	28N	4L	4QT	POST							
14C	X-77	%/V	0.25	POST							
15	CHECK				0	0	0	0	0	0	0
CV					37	8	8	11	9	15	14
LSD					13	2	10	12	11	16	17

BACKGROUND

Trial Title :URBANA SOYBEAN POSTEMERGENCE VI
Trial State :IL
Trial Location :C400 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) : 7.5 38.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % :CORNSTALKS 20%

Soil Texture :SILT LOAM
Soil O.M. % : 4.0
Soil pH : 6.0
Soil Name :FLANAGAN
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :5/06/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 65
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
CORN	POST	5	LF	HIGH	8.0	12.0
GIFT	POST	6	LF	MED	4.0	6.0
JIWE	POST	4	LF	HIGH	2.0	4.0
SMPW	POST	4	LF	MED	2.0	4.0
VELE	POST	4	LF	HIGH	2.0	4.0

Application Code	:24HL		
Date of Application	:06/03/88	Nozzle Spacing (In)	: 18
Time of Application	:09:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 18
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 70	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	:10.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 70
Soil Moisture @ App.	:DRY		

Application Code	:POST		
Date of Application	:06/02/88	Nozzle Spacing (In)	: 18
Time of Application	:07:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip.	:
Air Temp (F)	: 90	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:70	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	:25
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:DRY		

COMMENTS

Soybean injury was excessive in plots receiving 24 hour later "split" applications. The increased amount of surfactant in these treatments may be responsible for the greater injury.

					C.I. 6/10	C.I. 6/21	SMPW 6/10	SMPW 6/21	CORN 6/10	CORN 6/21
1A	BASAGRAN	4SC	0.75	POST	5	2	77	75	0	0
1B	COC	4L	1QT	POST						
2A	COBRA	2EC	0.2	POST	18	8	99	95	50	0
2B	X-77	%/V	0.25	POST						
3A	TACKLE	2EC	0.38	POST	17	3	99	95	0	0
3B	X-77	%/V	0.25	POST						
4A	CLASSIC	25DF	3.69G	POST	37	5	99	90	0	0
4B	X-77	%/V	0.25	POST						
5A	PURSUIT	2SC	0.063	POST	5	5	99	99	0	0
5B	X-77	%/V	0.25	POST						
6A	BASAGRAN	4SC	0.75	POST	12	7	85	83	93	95
6B	COC	4L	1QT	POST						
6C	SELECT	2EC	0.1	24HL						
6D	COC	4L	1QT	24HL						
7A	COBRA	2EC	0.2	POST	18	10	99	98	87	68
7B	X-77	%/V	0.25	POST						
7C	SELECT	2EC	0.1	24HL						
7D	COC	4L	1QT	24HL						
8A	TACKLE	2EC	0.38	POST	13	5	96	90	88	85
8B	X-77	%/V	0.25	POST						
8C	SELECT	2EC	0.1	24HL						
8D	COC	4L	1QT	24HL						
9A	CLASSIC	25DF	3.69G	POST	25	13	99	88	87	92
9B	X-77	%/V	0.25	POST						
9C	SELECT	2EC	0.1	24HL						
9D	COC	4L	1QT	24HL						
10A	PURSUIT	2SC	0.063	POST	7	8	99	96	90	92
10B	X-77	%/V	0.25	POST						
10C	SELECT	2EC	0.1	24HL						
10D	COC	4L	1QT	24HL						
11A	BASAGRAN	4SC	0.75	POST	28	8	86	80	90	88
11B	COC	4L	1QT	POST						
11C	OPTION	1EC	0.12	24HL						
11D	COC	4L	1QT	24HL						

					C.I. 6/10	C.I. 6/21	SMPW 6/10	SMPW 6/21	CORN 6/10	CORN 6/21
12A	COBRA	2EC	0.2	POST	22	10	99	99	95	93
12B	X-77	%/V	0.25	POST						
12C	OPTION	1EC	0.12	24HL						
12D	COC	4L	1QT	24HL						
13A	TACKLE	2EC	0.38	POST	38	10	99	98	90	87
13B	X-77	%/V	0.25	POST						
13C	OPTION	1EC	0.12	24HL						
13D	COC	4L	1QT	24HL						
14A	CLASSIC	25DF	3.69G	POST	25	10	99	96	90	93
14B	X-77	%/V	0.25	POST						
14C	OPTION	1EC	0.12	24HL						
14D	COC	4L	1QT	24HL						
15A	PURSUIT	2SC	0.063	POST	8	7	99	98	83	73
15B	X-77	%/V	0.25	POST						
15C	OPTION	1EC	0.12	24HL						
15D	COC	4L	1QT	24HL						
16A	SELECT	2EC	0.1	24HL	3	0	0	0	93	93
16B	COC	4L	1QT	24HL						
17A	OPTION	1EC	0.12	24HL	2	2	0	0	95	73
17B	COC	4L	1QT	24HL						
18	CHECK				0	0	0	0	0	0
CV					30	8	5	7	4	16
LSD					21	5	7	9	5	15

					GIFT 6/10	GIFT 6/21	JIWE 6/10	JIWE 6/21	VELE 6/10	VELE 6/21
1A	BASAGRAN	4SC	0.75	POST	0	0	99	99	93	87
1B	COC	4L	1QT	POST						
2A	COBRA	2EC	0.2	POST	0	0	86	68	82	72
2B	X-77	%/V	0.25	POST						
3A	TACKLE	2EC	0.38	POST	0	0	90	75	77	58
3B	X-77	%/V	0.25	POST						
4A	CLASSIC	25DF	3.69G	POST	0	32	95	78	93	93
4B	X-77	%/V	0.25	POST						
5A	PURSUIT	2SC	0.063	POST	57	25	88	60	90	87
5B	X-77	%/V	0.25	POST						
6A	BASAGRAN	4SC	0.75	POST	90	96	99	95	91	93
6B	COC	4L	1QT	POST						
6C	SELECT	2EC	0.1	24HL						
6D	COC	4L	1QT	24HL						
7A	COBRA	2EC	0.2	POST	92	95	91	68	83	72
7B	X-77	%/V	0.25	POST						
7C	SELECT	2EC	0.1	24HL						
7D	COC	4L	1QT	24HL						
8A	TACKLE	2EC	0.38	POST	90	99	80	67	75	67
8B	X-77	%/V	0.25	POST						
8C	SELECT	2EC	0.1	24HL						
8D	COC	4L	1QT	24HL						
9A	CLASSIC	25DF	3.69G	POST	90	92	96	73	93	87
9B	X-77	%/V	0.25	POST						
9C	SELECT	2EC	0.1	24HL						
9D	COC	4L	1QT	24HL						
10A	PURSUIT	2SC	0.063	POST	87	90	90	85	90	85
10B	X-77	%/V	0.25	POST						
10C	SELECT	2EC	0.1	24HL						
10D	COC	4L	1QT	24HL						
11A	BASAGRAN	4SC	0.75	POST	90	95	99	96	93	78
11B	COC	4L	1QT	POST						
11C	OPTION	1EC	0.12	24HL						
11D	COC	4L	1QT	24HL						

					GIFT 6/10	GIFT 6/21	JIWE 6/10	JIWE 6/21	VELE 6/10	VELE 6/21
12A	COBRA	2EC	0.2	POST	92	87	90	83	85	78
12B	X-77	%/V	0.25	POST						
12C	OPTION	1EC	0.12	24HL						
12D	COC	4L	1QT	24HL						
13A	TACKLE	2EC	0.38	POST	90	87	85	80	80	75
13B	X-77	%/V	0.25	POST						
13C	OPTION	1EC	0.12	24HL						
13D	COC	4L	1QT	24HL						
14A	CLASSIC	25DF	3.69G	POST	90	80	99	93	96	92
14B	X-77	%/V	0.25	POST						
14C	OPTION	1EC	0.12	24HL						
14D	COC	4L	1QT	24HL						
15A	PURSUIT	2SC	0.063	POST	80	78	87	78	90	87
15B	X-77	%/V	0.25	POST						
15C	OPTION	1EC	0.12	24HL						
15D	COC	4L	1QT	24HL						
16A	SELECT	2EC	0.1	24HL	93	96	0	0	0	0
16B	COC	4L	1QT	24HL						
17A	OPTION	1EC	0.12	24HL	95	95	0	0	0	0
17B	COC	4L	1QT	24HL						
18	CHECK				0	0	0	0	0	0
CV					19	27	7	19	6	15
LSD					20	28	8	20	7	17

BACKGROUND
Trial Title :URBANA SOYBEANS POSTEMERGENCE VII
Trial State :IL
Trial Location :C700 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design	:RCB	Soil Texture	:SILT LOAM
Number of Replicates	: 3	Soil O.M. %	: 4.0
Plot Wd X Lth (Ft)	:10.0 40.0	Soil pH	: 6.0
Tillage Type	:CONVENTIONAL	Soil Name	:FLANAGAN
Sedbed Description	:FINE	Metero. Station:	
Ground cover & %	:0		

previous crop	previous pesticide	year
CORN		1987

CROP
Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/06/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 65
Soil Moisture @ Planting :DRY

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	POST	5	LF	HIGH	2.0	4.0
JIWE	POST	4	LF	HIGH	2.0	4.0
POAM	POST	5	LF	HIGH	2.0	4.0
VELE	POST	5	LF	MED	2.0	5.0

Application Code	:POST		
Date of Application	:06/02/88	Nozzle Spacing (In)	: 20
Time of Application	:07:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 90	Elapsed Time to Incorp.	: hrs.
Relative Humidity	: 70	Incorp. Depth (In)	:
Wind Speed (MPH)	:10.0	Percent Cloud Cover	:50
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:DRY		

COMMENTS

Dash helped improve GIFT and POAM control better than COC or 28% plus X-77. Lower values at t second rating on 6/24 indicate that the weeds were growing out of the initial injury symptoms.

					GIFT 6/09	GIFT 6/24	VELE 6/09	VELE 6/24	POAM 6/09	POAM 6/24
1A	TORNADO	1.75EC	0.35	POST	55	43	33	45	65	57
1B	COC	4L	0.5QT	POST						
2A	TORNADO	1.75EC	0.35	POST	82	45	65	38	80	72
2B	DASH	4L	1QT	POST						
3A	TORNADO	1.75EC	0.35	POST	75	27	48	32	62	52
3B	28N	4L	4QT	POST						
3C	X-77	%/V	0.25	POST						
4A	SELECT	2EC	0.1	POST	75	87	45	37	77	60
4B	COBRA	2EC	0.15	POST						
4C	COC	4L	0.5QT	POST						
5A	SELECT	2EC	0.1	POST	85	94	33	37	79	73
5B	COBRA	2EC	0.15	POST						
5C	DASH	4L	1QT	POST						
6A	SELECT	2EC	0.1	POST	80	93	42	55	83	75
6B	COBRA	2EC	0.15	POST						
6C	28N	4L	4QT	POST						
6D	X-77	%/V	0.25	POST						
7A	POAST	1.5EC	0.15	POST	65	79	22	16	57	72
7B	BLAZER	2EC	0.25	POST						
7C	COC	4L	0.5QT	POST						
8A	POAST	1.5EC	0.15	POST	82	82	69	71	85	88
8B	BLAZER	2EC	0.25	POST						
8C	DASH	4L	1QT	POST						
9A	POAST	1.5EC	0.15	POST	58	20	52	50	77	82
9B	BLAZER	2EC	0.25	POST						
9C	28N	4L	4QT	POST						
9D	X-77	%/V	0.25	POST						
10	CHECK				0	0	0	0	0	0
11A	TORNADO	1.75EC	0.35	POST	55	52	32	31	48	48
11B	BASAGRAN	4SC	0.75	POST						
11C	COC	4L	0.5QT	POST						
12A	TORNADO	1.75EC	0.35	POST	63	49	40	60	77	76
12B	BASAGRAN	4SC	0.75	POST						
12C	DASH	4L	1QT	POST						

					GIFT 6/09	GIFT 6/24	VELE 6/09	VELE 6/24	POAM 6/09	POAM 6/24
13A	TORNADO	1.75EC	0.35	POST	7	28	73	68	60	51
13B	BASAGRAN	4SC	0.75	POST						
13C	28N	4L	4QT	POST						
13D	X-77	%/V	0.25	POST						
14A	SELECT	2EC	0.1	POST	77	88	34	73	60	88
14B	COBRA	2EC	0.15	POST						
14C	BASAGRAN	4SC	0.75	POST						
14D	COC	4L	0.5QT	POST						
15A	SELECT	2EC	0.1	POST	82	90	70	82	85	90
15B	COBRA	2EC	0.15	POST						
15C	BASAGRAN	4SC	0.75	POST						
15D	DASH	4L	1QT	POST						
16A	SELECT	2EC	0.1	POST	43	20	75	80	83	84
16B	COBRA	2EC	0.15	POST						
16C	BASAGRAN	4SC	0.75	POST						
16D	28N	4L	4QT	POST						
16E	X-77	%/V	0.25	POST						
17A	POAST	1.5EC	0.15	POST	11	8	3	0	7	0
17B	BLAZER	2EC	0.25	POST						
17C	BASAGRAN	4SC	0.75	POST						
17D	COC	4L	0.5QT	POST						
18A	POAST	1.5EC	0.15	POST	73	85	60	58	72	84
18B	BLAZER	2EC	0.25	POST						
18C	BASAGRAN	4SC	0.75	POST						
18D	DASH	4L	1QT	POST						
19A	POAST	1.5EC	0.15	POST	11	17	38	68	78	74
19B	BLAZER	2EC	0.25	POST						
19C	BASAGRAN	4SC	0.75	POST						
19D	28N	4L	4QT	POST						
19E	X-77	%/V	0.25	POST						
20A	FUSILADE	1EC	0.15	POST	52	68	0	0	0	0
20B	COC	4L	0.5QT	POST						
21A	FUSILADE	1EC	0.15	POST	55	52	0	0	1	0
21B	DASH	4L	1QT	POST						
22A	SELECT	2EC	0.1	POST	53	91	1	0	1	0
22B	COC	4L	0.5QT	POST						

					GIFT 6/09	GIFT 6/24	VELE 6/09	VELE 6/24	POAM 6/09	POAM 6/24
23A	SELECT	2EC	0.1	POST	55	84	0	0	0	0
23B	DASH	4L	1QT	POST						
24A	POAST	1.5EC	0.15	POST	60	82	0	0	0	0
24B	COC	4L	0.5QT	POST						
25A	POAST	1.5EC	0.15	POST	47	88	0	0	0	0
25B	DASH	4L	1QT	POST						
CV					22	19	35	28	24	19
LSD					20	18	19	17	19	15

					C.I. 6/09	C.I. 6/24
1A	TORNADO	1.75EC	0.35	POST	10	1
1B	COC	4L	0.5QT	POST		
2A	TORNADO	1.75EC	0.35	POST	12	2
2B	DASH	4L	1QT	POST		
3A	TORNADO	1.75EC	0.35	POST	13	1
3B	28N	4L	4QT	POST		
3C	X-77	%/V	0.25	POST		
4A	SELECT	2EC	0.1	POST	20	2
4B	COBRA	2EC	0.15	POST		
4C	COC	4L	0.5QT	POST		
5A	SELECT	2EC	0.1	POST	20	3
5B	COBRA	2EC	0.15	POST		
5C	DASH	4L	1QT	POST		
6A	SELECT	2EC	0.1	POST	23	4
6B	COBRA	2EC	0.15	POST		
6C	28N	4L	4QT	POST		
6D	X-77	%/V	0.25	POST		
7A	POAST	1.5EC	0.15	POST	12	3
7B	BLAZER	2EC	0.25	POST		
7C	COC	4L	0.5QT	POST		
8A	POAST	1.5EC	0.15	POST	23	3
8B	BLAZER	2EC	0.25	POST		
8C	DASH	4L	1QT	POST		
9A	POAST	1.5EC	0.15	POST	17	4
9B	BLAZER	2EC	0.25	POST		
9C	28N	4L	4QT	POST		
9D	X-77	%/V	0.25	POST		
10	CHECK				0	0
11A	TORNADO	1.75EC	0.35	POST	10	1
11B	BASAGRAN	4SC	0.75	POST		
11C	COC	4L	0.5QT	POST		
12A	TORNADO	1.75EC	0.35	POST	15	3
12B	BASAGRAN	4SC	0.75	POST		
12C	DASH	4L	1QT	POST		

					C.I. 6/09	C.I. 6/24
13A	TORNADO	1.75EC	0.35	POST	15	2
13B	BASAGRAN	4SC	0.75	POST		
13C	28N	4L	4QT	POST		
13D	X-77	%/V	0.25	POST		
14A	SELECT	2EC	0.1	POST	13	5
14B	COBRA	2EC	0.15	POST		
14C	BASAGRAN	4SC	0.75	POST		
14D	COC	4L	0.5QT	POST		
15A	SELECT	2EC	0.1	POST	22	5
15B	COBRA	2EC	0.15	POST		
15C	BASAGRAN	4SC	0.75	POST		
15D	DASH	4L	1QT	POST		
16A	SELECT	2EC	0.1	POST	15	4
16B	COBRA	2EC	0.15	POST		
16C	BASAGRAN	4SC	0.75	POST		
16D	28N	4L	4QT	POST		
16E	X-77	%/V	0.25	POST		
17A	POAST	1.5EC	0.15	POST	3	0
17B	BLAZER	2EC	0.25	POST		
17C	BASAGRAN	4SC	0.75	POST		
17D	COC	4L	0.5QT	POST		
18A	POAST	1.5EC	0.15	POST	20	2
18B	BLAZER	2EC	0.25	POST		
18C	BASAGRAN	4SC	0.75	POST		
18D	DASH	4L	1QT	POST		
19A	POAST	1.5EC	0.15	POST	13	3
19B	BLAZER	2EC	0.25	POST		
19C	BASAGRAN	4SC	0.75	POST		
19D	28N	4L	4QT	POST		
19E	X-77	%/V	0.25	POST		
20A	FUSILADE	1EC	0.15	POST	0	0
20B	COC	4L	0.5QT	POST		
21A	FUSILADE	1EC	0.15	POST	1	0
21B	DASH	4L	1QT	POST		
22A	SELECT	2EC	0.1	POST	0	0
22B	COC	4L	0.5QT	POST		
23A	SELECT	2EC	0.1	POST	0	0
23B	DASH	4L	1QT	POST		

					C.I. 6/09	C.I. 6/24
24A	POAST	1.5EC	0.15	POST	0	0
24B	COC	4L	0.5QT	POST		
25A	POAST	1.5EC	0.15	POST	0	0
25B	DASH	4L	1QT	POST		
CV					14	6
LSD					6	2

BACKGROUND

Trial Title :URBANA SOYBEANS POSTEMERGENCE VIII
Trial State :IL
Trial Location :C400 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) : 7.5 38.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % :CORNSTALKS 20%

Soil Texture :SILT LOAM
Soil O.M. % : 4.0
Soil pH :
Soil Name :FLANAGAN
Metero. Station:

CROP

Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/06/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 65
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
CORN	POST	5	LF	HIGH	8.0	12.0
GIFT	POST	6	LF	MED	4.0	6.0
JIWE	POST	4	LF	HIGH	2.0	4.0
SMPW	POST	4	LF	MED	2.0	4.0
VELE	POST	4	LF	HIGH	2.0	4.0

Application Code :POST
Date of Application :06/02/88
Time of Application :07:00A
Pressure (PSI) : 40
Nozzle Type :8002
Air Temp (F) : 90
Relative Humidity :50
Wind Speed (MPH) : 5.0
Diluent Carrier :WATER
Appli Equip Type :HANDHELD
Spray Volume (GPA) :20.0
Soil Moisture @ App.:DRY

Nozzle Spacing (In) : 20
Boom Length (Ft) : 7.5
Boom Height (In) : 20
Incorporation Equip :
Elapsed Time to Incorp.: hrs.
Incorp. Depth (In) :
Percent Cloud Cover :25
Dew Presence (Y/N) :N
Ground Speed (MPH) : 3.0
Soil Temp (F) : 75

					GIFT 6/13	GIFT 6/28	VELE 6/13	VELE 6/28	JIWE 6/13	JIWE 6/28
1A 1B	GALAXY 28%N	3.67S 4L	0.92 4.0Q	POST POST	0	0	90	98	96	98
2A 2B	GALAXY COC	3.67S 4L	0.92 1.0Q	POST POST	0	0	50	53	93	98
3A 3B	GALAXY DASH	3.67S 4L	0.92 1.0Q	POST POST	0	0	67	92	98	99
4A 4B 4C	GALAXY DASH 28%N	3.67S 4L 4L	0.92 1.0Q 4.0Q	POST POST POST	0	0	87	91	96	99
5A 5B	PURSUIT COC	2SC 4L	0.063 1.0Q	POST POST	50	85	88	87	83	95
6A 6B	PURSUIT 28%N	2SC 4L	0.063 4.0Q	POST POST	37	0	92	90	85	95
7A 7B	PURSUIT DASH	2SC 4L	0.063 1.0Q	POST POST	92	98	95	95	93	99
8A 8B	REFLEX X-77	2EC %/V	0.38 0.25	POST POST	0	0	23	20	38	23
9A 9B	REFLEX 28%N	2EC 4L	0.38 4.0Q	POST POST	0	0	53	47	43	40
10A 10B	REFLEX DASH	2EC 4L	0.38 1.0Q	POST POST	30	0	63	67	72	96
11A 11B	TACKLE X-77	2EC %/V	0.38 0.25	POST POST	0	0	37	0	55	17
12A 12B	TACKLE 28%N	2EC 4L	0.38 4.0Q	POST POST	22	0	82	78	85	90
13A 13B	TACKLE DASH	2EC 4L	0.38 1.0Q	POST POST	0	0	47	43	95	98
14A 14B 14C	CLASSIC X-77 28%N	25DF %/V 4L	3.69G 0.25 4.0Q	POST POST POST	10	0	96	98	93	95
15A 15B 15C	DPX-M6316 X-77 28%N	25DF %/V 4L	1.82G 0.25 4.0Q	POST POST POST	0	0	50	83	48	47

					GIFT 6/13	GIFT 6/28	VELE 6/13	VELE 6/28	JIWE 6/13	JIWE 6/28
16A	CLASSIC	25DF	3.69G	POST	0	0	96	99	90	96
16B	DPX-M6316	25DF	1.82G	POST						
16C	X-77	%/V	0.25	POST						
16D	28%N	4L	4.0Q	POST						
17A	SCEPTER	1.5SC	0.125	POST	85	85	53	57	50	73
17B	X-77	%/V	0.25	POST						
17C	28%N	4L	4.0Q	POST						
18A	SCEPTER	1.5SC	0.094	POST	78	62	40	40	54	67
18B	X-77	%/V	0.25	POST						
18C	28%N	4L	4.0Q	POST						
19A	SCEPTER	1.5SC	0.063	POST	37	7	47	27	30	37
19C	X-77	%/V	0.25	POST						
19C	28%N	4L	4.0Q	POST						
20A	BASAGRAN	4S	0.75	POST	0	0	88	99	96	99
20B	COC	4L	1.0Q	POST						
20C	28%N	4L	4.0Q	POST						
21A	2.4-DB	2EC	0.05	POST	0	0	50	7	37	10
22A	BASAGRAN	4S	0.50	POST	0	0	87	95	96	98
22B	CLASSIC	25DF	2.72G	POST						
22C	X-77	%/V	0.25	POST						
22D	28%N	4L	4.0Q	POST						
23A	BASAGRAN	4FL	0.50	POST	0	0	88	91	95	99
23B	PURSUIT	2SC	0.03	POST						
23C	X-77	%/V	0.25	POST						
23D	28%N	4L	4.0Q	POST						
24A	BASAGRAN	4FL	0.50	POST	0	0	90	96	98	99
24B	2.4-DB	2EC	0.05	POST						
24C	X-77	%/V	0.25	POST						
24D	28%N	4L	4.0Q	POST						
25A	BENAZOLIN	4SC	0.38	POST	0	0	48	48	72	75
25B	X-77	%/V	0.25	POST						
26A	BENAZOLIN	4SC	0.38	POST	0	0	85	72	93	86
26B	REFLEX	2EC	0.25	POST						
26C	X-77	%/V	0.25	POST						
27	CHECK				0	0	0	0	0	0
CV					32	40	16	20	11	15
LSD					25	8	17	22	14	19

					C.I. 6/28	CORN 6/28
1A	GALAXY	3.67S	0.92	POST	3	12
1B	28%N	4L	4.0Q	POST		
2A	GALAXY	3.67S	0.92	POST	7	11
2B	COC	4L	1.0Q	POST		
3A	GALAXY	3.67S	0.92	POST	5	14
3B	DASH	4L	1.0Q	POST		
4A	GALAXY	3.67S	0.92	POST	7	10
4B	DASH	4L	1.0Q	POST		
4C	28%N	4L	4.0Q	POST		
5A	PURSUIT	2SC	0.063	POST	5	10
5B	COC	4L	1.0Q	POST		
6A	PURSUIT	2SC	0.063	POST	2	5
6B	28%N	4L	4.0Q	POST		
7A	PURSUIT	2SC	0.063	POST	10	50
7B	DASH	4L	1.0Q	POST		
8A	REFLEX	2EC	0.38	POST	3	7
8B	X-77	%/V	0.25	POST		
9A	REFLEX	2EC	0.38	POST	3	5
9B	28%N	4L	4.0Q	POST		
10A	REFLEX	2EC	0.38	POST	5	19
10B	DASH	4L	1.0Q	POST		
11A	TACKLE	2EC	0.38	POST	0	14
11B	X-77	%/V	0.25	POST		
12A	TACKLE	2EC	0.38	POST	3	15
12B	28%N	4L	4.0Q	POST		
13A	TACKLE	2EC	0.38	POST	8	22
13B	DASH	4L	1.0Q	POST		
14A	CLASSIC	25DF	3.69G	POST	18	32
14B	X-77	%/V	0.25	POST		
14C	28%N	4L	4.0Q	POST		
15A	DPX-M6316	25DF	1.82G	POST	4	12
15B	X-77	%/V	0.25	POST		
15C	28%N	4L	4.0Q	POST		

					C.I. 6/28	CORN 6/28
16A	CLASSIC	25DF	3.69G	POST	9	29
16B	DPX-M6316	25DF	1.82G	POST		
16C	X-77	%/V	0.25	POST		
16D	28%N	4L	4.0Q	POST		
17A	SCEPTER	1.5SC	0.125	POST	12	54
17B	X-77	%/V	0.25	POST		
17C	28%N	4L	4.0Q	POST		
18A	SCEPTER	1.5SC	0.094	POST	18	55
18B	X-77	%/V	0.25	POST		
18C	28%N	4L	4.0Q	POST		
19A	SCEPTER	1.5SC	0.063	POST	15	39
19C	X-77	%/V	0.25	POST		
19C	28%N	4L	4.0Q	POST		
20A	BASAGRAN	4S	0.75	POST	2	4
20B	COC	4L	1.0Q	POST		
20C	28%N	4L	4.0Q	POST		
21A	2.4-DB	2EC	0.05	POST	7	7
22A	BASAGRAN	4S	0.50	POST	3	12
22B	CLASSIC	25DF	2.72G	POST		
22C	X-77	%/V	0.25	POST		
22D	28%N	4L	4.0Q	POST		
23A	BASAGRAN	4FL	0.50	POST	8	9
23B	PURSUIT	2SC	0.03	POST		
23C	X-77	%/V	0.25	POST		
23D	28%N	4L	4.0Q	POST		
24A	BASAGRAN	4FL	0.50	POST	15	15
24B	2.4-DB	2EC	0.05	POST		
24C	X-77	%/V	0.25	POST		
24D	28%N	4L	4.0Q	POST		
25A	BENAZOLIN	4SC	0.38	POST	22	7
25B	X-77	%/V	0.25	POST		
26A	BENAZOLIN	4SC	0.38	POST	5	16
26B	REFLEX	2EC	0.25	POST		
26C	X-77	%/V	0.25	POST		
27	CHECK				0	0

BACKGROUND

Trial Title :URBANA SOYBEAN POSTEMERGENCE IX
Trial State :IL
Trial Location :C500 URBANA, IL
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % :0

Soil Texture :SILT LOAM
Soil O.M. % : 4.0
Soil pH : 6.0
Soil Name :FLANAGAN
Metero. Station:

previous crop	previous pesticide	year
SOYBEANS		1988

CROP

Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/11/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 60
Soil Moisture @ Planting :DRY

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
COLQ	EPOS	4	LF	LIGHT	2.0	4.0
COLQ	LPOS	6	LF	MED	2.0	4.0
GIFT	EPOS	4	LF	MED	2.0	4.0
GIFT	LPOS	6	LF	HIGH	4.0	6.0
JIWE	EPOS	2	LF	HIGH	2.0	4.0
JIWE	LPOS	4	LF	HIGH	2.0	4.0
SMPW	EPOS	2	LF	MED	1.0	3.0
SMPW	LPOS	4	LF	MED	2.0	4.0
SOYS	EPOS	2	TRIF		2.0	6.0
SOYS	LPOS	4	TRIF		4.0	6.0
VELE	EPOS	4	LF	MED	1.0	3.0
VELE	LPOS	3	LF	MED	2.0	4.0

Application Code	:EPOS		
Date of Application	:05/31/88	Nozzle Spacing (In)	: 20
Time of Application	:07:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 80	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	: 3.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 85
Soil Moisture @ App.	:DRY		

Application Code	:LPOS		
Date of Application	:06/03/88	Nozzle Spacing (In)	: 18
Time of Application	:08:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 18
Nozzle Type	:8002	Incorporation Equip.	:
Air Temp (F)	: 70	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	:10.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 90
Soil Moisture @ App.	:DRY		

COMMENTS

Classic, DPX-M6316 and Pursuit provided better velvetleaf control than did Cobra, Blazer or Reflex. DPX-M6316 provided better lambsquarters control than any of the other treatments but provided poor jimsonweed control alone.

					C.I. 6/27	VELE 6/27	JIWE 6/27	COLQ 6/27
1A	COBRA	2EC	0.20	EPOS	10	63	99	37
1B	COC	4L	0.5Q	EPOS				
2A	COBRA	2EC	0.20	EPOS	10	75	96	40
2B	28%N	4L	4.0Q	EPOS				
3A	COBRA	2EC	0.20	EPOS	7	63	88	30
3B	X-77	%/V	0.25	EPOS				
4A	COBRA	2EC	0.15	EPOS	10	33	80	0
4B	TACKLE	2EC	0.25	EPOS				
4C	X-77	%/V	0.25	EPOS				
5A	COBRA	2EC	0.15	EPOS	7	33	77	30
5B	2.4-DB	2EC	0.03	EPOS				
5C	X-77	%/V	0.25	EPOS				
6A	COBRA	2EC	0.15	EPOS	3	73	95	53
6B	CLASSIC	25DF	2.72G	EPOS				
6C	X-77	%/V	0.25	EPOS				
7A	COBRA	2EC	0.15	EPOS	7	90	95	60
7B	CLASSIC	25DF	3.69G	EPOS				
7C	X-77	%/V	0.25	EPOS				
8A	BLAZER	4FL	0.50	EPOS	3	0	83	70
8B	X-77	%/V	0.25	EPOS				
9A	CLASSIC	25DF	3.69G	EPOS	0	88	99	23
9B	X-77	%/V	0.25	EPOS				
9C	28%N	4L	4.0Q	EPOS				
10A	CLASSIC	25DF	2.72G	EPOS	0	92	99	10
10B	X-77	%/V	0.25	EPOS				
10C	28%N	4L	4.0Q	EPOS				
11A	DPX-M6316	25DF	1.82G	EPOS	10	90	0	96
11B	X-77	%/V	0.25	EPOS				
11C	28%N	4L	4.0Q	EPOS				
12A	CLASSIC	25DF	3.69G	EPOS	3	99	98	96
12B	DPX-M6316	25DF	1.82G	EPOS				
12C	X-77	%/V	0.25	EPOS				
12D	28%N	4L	4.0Q	EPOS				

					C.I. 6/27	VELE 6/27	JIWE 6/27	COLQ 6/27
13A	CLASSIC	25DF	2.72G	EPOS	7	99	99	99
13B	DPX-M6316	25DF	1.82G	EPOS				
13C	X-77	%/V	0.25	EPOS				
13D	28%N	4L	4.0Q	EPOS				
14A	PURSUIT	2SC	0.063	EPOS	0	96	99	93
14B	X-77	%/V	0.25	EPOS				
14C	28%N	4L	4.0Q	EPOS				
15A	REFLEX	2EC	0.38	EPOS	0	30	99	43
15B	X-77	%/V	0.25	EPOS				
16	CHECK				0	0	0	0
17A	COBRA	2EC	0.20	LPOS	10	93	96	50
17B	COC	4L	0.5Q	LPOS				
18A	COBRA	2EC	0.20	LPOS	3	82	73	40
18B	28%N	4L	4.0Q	LPOS				
19A	COBRA	2EC	0.20	LPOS	2	55	60	17
19B	X-77	%/V	0.25	LPOS				
20A	COBRA	2EC	0.15	LPOS	3	70	67	40
20B	TACKLE	2EC	0.25	LPOS				
20C	X-77	%/V	0.25	LPOS				
21A	COBRA	2EC	0.15	LPOS	13	47	87	10
21B	2.4-DB	2EC	0.03	LPOS				
21C	X-77	%/V	0.25	LPOS				
22A	COBRA	2EC	0.15	LPOS	10	67	90	27
22B	CLASSIC	25DF	2.72G	LPOS				
22C	X-77	%/V	0.25	LPOS				
23A	COBRA	2EC	0.15	LPOS	20	80	96	87
23B	CLASSIC	25DF	3.69G	LPOS				
23C	X-77	%/V	0.25	LPOS				
24A	BLAZER	4FL	0.50	LPOS	0	57	62	23
24B	X-77	%/V	0.25	LPOS				
25A	CLASSIC	25DF	3.69G	LPOS	0	93	83	17
25B	X-77	%/V	0.25	LPOS				
25C	28%N	4L	4.0Q	LPOS				

					C.I. 6/27	VELE 6/27	JIWE 6/27	COLQ 6/27
26A	CLASSIC	25DF	2.72G	LPOS	7	99	90	17
26B	X-77	%/V	0.25	LPOS				
26C	28%N	4L	4.0Q	LPOS				
27A	DPX-M6316	25DF	1.82G	LPOS	0	96	0	10
27B	X-77	%/V	0.25	LPOS				
27C	28%N	4L	4.0Q	LPOS				
28A	CLASSIC	25DF	3.69G	LPOS	7	99	93	95
28B	DPX-M6316	25DF	1.82G	LPOS				
28C	X-77	%/V	0.25	LPOS				
28D	28%N	4L	4.0Q	LPOS				
29A	CLASSIC	25DF	2.72G	LPOS	3	99	83	83
29B	DPX-M6316	25DF	1.82G	LPOS				
29C	X-77	%/V	0.25	LPOS				
29D	28%N	4L	4.0Q	LPOS				
30A	PURSUIT	2SC	0.063	LPOS	0	50	60	13
30B	X-77	%/V	0.25	LPOS				
30C	28%N	4L	4.0Q	LPOS				
31A	REFLEX	2EC	0.38	LPOS	10	7	43	0
31B	X-77	%/V	0.25	LPOS				
32	CHECK				0	0	0	0
CV					32	19	11	33
LSD					11	21	14	22

BACKGROUND
Trial Title :URBANA SOYBEAN POSTEMERGENCE X
Trial State :IL
Trial Location :C500 URBANA, IL
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE
Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % : 0

Soil Texture :SILT LOAM
Soil O.M. % : 4.0
Soil pH : 6.0
Soil Name :FLANAGAN
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP
Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/11/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 60
Soil Moisture @ Planting :DRY

PEST TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (in) min	max
COLQ	1TRF	4	LF	LIGHT	2.0	4.0
COLQ	2TRF	6	LF	MED	2.0	4.0
COLQ	3TRF	8	LF	MED	3.0	5.0
GIFT	1TRF	4	LF	MEDIU	2.0	4.0
GIFT	2TRF	5	LF	HIGH	4.0	6.0
GIFT	3TRF	6	LF	MED	4.0	6.0
JIWE	1TRF	2	LF	HIGH	2.0	4.0
JIWE	2TRF	4	LF	HIGH	3.0	4.0
JIWE	3TRF	4	LF	MED	3.0	6.0
SMPW	1TRF	2	LF	MED	1.0	3.0
SMPW	2TRF	4	LF	MED	2.0	4.0
SMPW	3TRF	4	LF	HIGH	3.0	4.0

Application Code	:1TRF		
Date of Application	:05/31/88	Nozzle Spacing (in)	: 18
Time of Application	:07:00	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (in)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 80	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (in)	:
Wind Speed (MPH)	: 3.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	: N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3
Spray Volume (GPA)	:20	Soil Temp (F)	: 75
Soil Moisture @ App.	:DRY		

Application Code	:2TRF		
Date of Application	:6/03/88	Nozzle Spacing (in)	:18
Time of Application	:8:00a	Boom Length (Ft)	:7.5
Pressure (PSI)	:40	Boom Height (in)	:20
Nozzle Type	:8002	Incorporation Equip.	:
Air Temp (F)	:85	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:60	Incorp. Depth (in)	:
Wind Speed (MPH)	:8 SW	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HAND-HELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:20	Soil Temp (F)	:78
Soil Moisture @ App.	:DRY		

Application Code	:3TRF		
Date of Application	:06/06/88	Nozzle Spacing (In)	: 20
Time of Application	:7:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 80	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:70	Incorp. Depth (In)	:
Wind Speed (MPH)	: 3.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	:80
Soil Moisture @ App.	:DRY		

COMMENTS

Of the two new compounds, SB-23031 and KIH-9201, KIH-9201 performed very well. This material was scored good to excellent on the BDLF species rated. KIH-9201 also has good activity on morningglory spp. (not reported due to variable population). Crop injury was limited to a moderate contact-type burn.

					C.I. 6/22	GIFT 6/22	COLQ 6/22	VELE 6/22	JIWE 6/22
1A	SB-23031	.89EC	13G	2TRF	0	0	23	33	15
2A	SB-23031	.89EC	26G	2TRF	3	5	30	40	35
3A	SB-23031	.89EC	39G	2TRF	3	12	30	61	33
4A	SB-23031	.89EC	45.3G	2TRF	3	8	42	88	57
5A 5B	KIH-9201 X-77	1EC %/V	0.005 0.10	1TRF 1TRF	0	0	71	86	91
6A 6B	KIH-9201 X-77	1EC %/V	0.01 0.10	1TRF 1TRF	3	5	91	95	95
7A 7B	KIH-9201 X-77	1EC %/V	0.02 0.10	1TRF 1TRF	10	3	97	97	97
8A 8B	KIH-9201 X-77	1EC %/V	0.005 0.1	2TRF 2TRF	7	0	78	93	94
9A 9B	KIH-9201 X-77	1EC %/V	0.01 0.10	2TRF 2TRF	13	2	82	94	94
10A 10B	KIH-9201 X-77	1EC %/V	0.02 0.10	2TRF 2TRF	23	0	89	96	97
11A 11B	KIH-9201 X-77	1EC %/V	0.005 0.1	3TRF 3TRF	0	0	20	23	17
12A 12B	KIH-9201 X-77	1EC %/V	0.01 0.10	3TRF 3TRF	0	0	40	57	35
13A 13B	KIH-9201 X-77	1EC %/V	0.02 0.10	3TRF 3TRF	0	8	62	58	42
14	CHECK				0	0	0	0	0
15A 15B	COBRA X-77	2EC %/V	0.20 0.25	2TRF 2TRF	7	0	47	55	63
16A 16B	COBRA COC	2EC 4L	0.20 0.5Q	2TRF 2TRF	23	3	52	59	80
17A 17B	COBRA COC	2EC 4L	0.15 0.5Q	2TRF 2TRF	17	3	56	50	83

					C.I. 6/22	GIFT 6/22	COLQ 6/22	VELE 6/22	JIWE 6/22
18A	GALAXY	3.67S	0.92	2TRF	7	0	70	62	91
18B	COC	4L	0.5Q	2TRF					
19A	BLAZER	4FL	0.38	2TRF	3	10	62	53	70
19B	X-77	%/V	0.25	2TRF					
20A	SB-23031	.89EC	39G	2TRF	25	95	95	93	66
20B	SELECT	2EC	0.10	2TRF					
20C	COC	4L	1.0Q	2TRF					
21A	COBRA	2EC	0.20	2TRF	30	94	67	84	84
21B	SELECT	2EC	0.10	2TRF					
21C	COC	4L	1.0Q	2TRF					
22A	TORNADO	1.75EC	0.43	2TRF	20	89	60	77	72
22B	COC	4L	0.5Q	2TRF					
23A	BAS514	50W	0.25	2TRF	23	7	28	57	52
23B	X-77	%/V	0.25	2TRF					
24A	PURSUIT	2SC	0.063	2TRF	13	79	53	93	95
24B	X-77	%/V	0.25	2TRF					
24C	28N	4L	4Q	2TRF					
25A	CLASSIC	25DF	3.69G	2TRF	0	18	33	90	92
25B	X-77	%/V	0.25	2TRF					
25C	28N	4L	4Q	2TRF					
26A	CLASSIC	25DF	5.5G	2TRF	0	5	38	83	91
26B	X-77	%/V	0.25	2TRF					
26C	28N	4L	4Q	2TRF					
27A	DPXM6316	25DF	1.82G	2TRF	0	0	86	84	36
27B	X-77	%/V	0.25	2TRF					
27C	28N	4L	4Q	2TRF					
28	CHECK				0	0	0	0	0
CV					14	42	20	18	14
LSD					9	11	18	20	15

BACKGROUND
Trial Title :URBANA SOYBEANS POSTEMERGENCE XI
Trial State :IL
Trial Location :N200 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE
Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % :0

Soil Texture :SILTY CLAY LOAM
Soil O.M. % : 5.0
Soil pH : 6.4
Soil Name :DRUMMER
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP
Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/06/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 75
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	POST	4	LF	MED	4.0	6.0
JIWE	POST	4	LF	HIGH	2.0	4.0
SMPW	POST	4	LF	MED	2.0	4.0
TAMG	POST	2	LF	HIGH	2.0	4.0
VELE	POST	2	LF	MED	2.0	4.0

Application Code :POST
Date of Application :06/01/88
Time of Application :07:00A
Pressure (PSI) : 40
Nozzle Type :8002
Air Temp (F) : 90
Relative Humidity :50
Wind Speed (MPH) : 3.0
Diluent Carrier :WATER
Appli Equip Type :HANDHELD
Spray Volume (GPA) :20.0
Soil Moisture @ App.:DRY

Nozzle Spacing (In) : 20
Boom Length (Ft) : 7.5
Boom Height (In) : 20
Incorporation Equip :
Elapsed Time to Incorp.: hrs.
Incorp. Depth (In) :
Percent Cloud Cover : 0
Dew Presence (Y/N) :N
Ground Speed (MPH) : 3.0
Soil Temp (F) : 75

					C.I. 6/16	GIFT 6/16	VELE 6/16	JIWE 6/16	ILMG 6/16	SMPW 6/16
1A	PURSUIT	2SC	0.063	POST	0	98	99	98	94	99
1B	BAS0902	4L	1QT	POST						
2A	PURSUIT	2SC	0.063	POST	0	57	98	96	89	99
2B	28N	4L	4QT	POST						
3A	PURSUIT	2SC	0.063	POST	0	90	98	97	88	99
3B	COC	4L	1QT	POST						
4A	PURSUIT	2SC	0.063	POST	0	83	97	96	82	99
4B	X-77	%/V	0.25	POST						
5A	PURSUIT	2SC	0.063	POST	0	98	99	99	94	98
5B	DASH	4L	1QT	POST						
6A	CLASSIC	25DF	3.69G	POST	0	3	63	63	59	66
6B	BAS0902	4L	1QT	POST						
7A	CLASSIC	25DF	3.69G	POST	0	12	78	76	56	72
7B	28N	4L	4QT	POST						
8A	CLASSIC	25DF	3.69G	POST	7	10	98	99	92	97
8B	COC	4L	1QT	POST						
9A	CLASSIC	25DF	3.69G	POST	5	7	97	97	86	98
9B	X-77	%/V	0.25	POST						
10A	CLASSIC	25DF	3.69G	POST	7	13	98	98	85	93
10B	DASH	4L	1QT	POST						
11A	24DB	2EC	0.05	POST	3	0	50	58	57	47
11B	BAS0902	4L	1QT	POST						
12A	24DB	2EC	0.05	POST	3	23	32	22	18	50
12B	28N	4L	4QT	POST						
13A	24DB	2EC	0.05	POST	2	7	48	60	28	37
13B	COC	4L	1QT	POST						
14A	24DB	2EC	0.05	POST	0	28	43	48	28	40
14B	X-77	%/V	0.25	POST						
15A	24DB	2EC	0.05	POST	2	10	23	60	58	37
15B	DASH	4L	1QT	POST						
16A	BLAZER	2EC	0.25	POST	9	74	79	99	52	99
16B	BAS0902	4L	1QT	POST						

					C.I. 6/16	GIFT 6/16	VELE 6/16	JIWE 6/16	ILMG 6/16	SMPW 6/16
17A	BLAZER	2EC	0.25	POST	5	10	51	76	23	99
17B	28N	4L	4QT	POST						
18A	BLAZER	2EC	0.25	POST	10	23	18	99	23	99
18B	COC	4L	1QT	POST						
19A	BLAZER	2EC	0.25	POST	10	17	15	67	17	96
19B	X-77	%/V	0.25	POST						
20A	BLAZER	2EC	0.25	POST	7	35	32	99	60	99
20B	DASH	4L	1QT	POST						
21A	BASAGRAN	4SC	0.75	POST	7	7	97	99	63	53
21B	BAS0902	4L	1QT	POST						
22A	BASAGRAN	4SC	0.75	POST	0	0	99	99	90	83
22B	28N	4L	4QT	POST						
23A	BASAGRAN	4SC	0.75	POST	3	0	99	99	92	89
23B	COC	4L	1QT	POST						
24A	BASAGRAN	4SC	0.75	POST	0	0	91	99	90	73
24B	X-77	%/V	0.25	POST						
25A	BASAGRAN	4SC	0.75	POST	6	0	99	99	83	88
25B	DASH	4L	1QT	POST						
26	CHECK				0	0	0	0	0	0
CV					69	44	22	25	31	26
LSD					4	19	25	33	32	33

BACKGROUND

Trial Title :URBANA SOYBEAN POSTEMERGENCE XII
Trial State :IL
Trial Location :AS300(URBANA IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 32.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % :0

Soil Texture :SILTY CLAY LOAM
Soil O.M. % :5.0
Soil pH :6.0
Soil Name :DRUMMER
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :5/03/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot):10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 70
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	POST	6	LF	HIGH	4.0	6.0
SMPW	POST	4	LF	MED	2.0	4.0
JIWE	POST	4	LF	MED	4.0	6.0
VELE	POST	4	LF	MED	2.0	4.0

Application Code	:POST
Date of Application	:05/31/88
Time of Application	:08:00A
Pressure (PSI)	: 40
Nozzle Type	:8002
Air Temp (F)	: 80
Relative Humidity	:50
Wind Speed (MPH)	: 3.0
Diluent Carrier	:WATER
Appli Equip Type	:HANDHELD
Spray Volume (GPA)	:20.0
Soil Moisture @ App.	:DRY

Nozzle Spacing (In)	: 20
Boom Length (Ft)	:7.5
Boom Height (In)	:20
Incorporation Equip	:
Elapsed Time to Incorp.	: hrs.
Incorp. Depth (In)	:
Percent Cloud Cover	: 0
Dew Presence (Y/N)	:N
Ground Speed (MPH)	: 3.0
Soil Temp (F)	: 75

COMMENTS

Under the conditions of this study, Dash spray additive performed better than the other adjuvants.

					GIFT 6/20	SMPW 6/20	JIWE 6/20	VELE 6/20
1A	PURSUIT	2SC	0.063	POST	87	98	94	93
1B	SUN 7E	4L	1QT	POST				
2A	PURSUIT	2SC	0.063	POST	90	95	98	93
2B	SUN 11E	4L	1QT	POST				
3A	PURSUIT	2SC	0.063	POST	92	96	99	98
3B	X-77	%/V	0.25	POST				
4A	PURSUIT	2SC	0.063	POST	93	98	99	99
4B	SUN 7E	4L	1QT	POST				
4C	X-77	%/V	0.25	POST				
5A	PURSUIT	2SC	0.063	POST	95	96	96	96
5B	SUN 11E	4L	1QT	POST				
5C	X-77	%/V	0.25	POST				
6A	PURSUIT	2SC	0.063	POST	93	96	96	98
6B	28N	4L	4QT	POST				
6C	X-77	%/V	0.25	POST				
7A	PURSUIT	2SC	0.063	POST	97	99	98	96
7B	DASH	4L	1QT	POST				
8A	PURSUIT	2SC	0.063	POST	90	98	98	98
8B	COC	4L	1QT	POST				
9A	CLASSIC	25DF	3.69G	POST	0	98	96	88
9B	SUN 7E	4L	1QT	POST				
10A	CLASSIC	25DF	3.69G	POST	0	93	96	90
10B	SUN 11E	4L	1QT	POST				
11A	CLASSIC	25DF	3.69G	POST	0	98	93	87
11B	X-77	%/V	0.25	POST				
12A	CLASSIC	25DF	3.69G	POST	0	99	96	88
12B	SUN 7E	4L	1QT	POST				
12C	X-77	%/V	0.25	POST				
13A	CLASSIC	25DF	3.69G	POST	0	96	93	91
13B	SUN 11E	4L	1QT	POST				
13C	X-77	%/V	0.25	POST				
14A	CLASSIC	25DF	3.69G	POST	0	95	98	90
14B	28N	4L	4QT	POST				
14C	X-77	%/V	0.25	POST				

					GIFT 6/20	SMPW 6/20	JIWE 6/20	VELE 6/20
15A	CLASSIC	25DF	3.69G	POST	0	96	99	90
15B	DASH	4L	1QT	POST				
16A	CLASSIC	25DF	3.69G	POST	0	83	98	87
16B	COC	4L	1QT	POST				
17	CHECK				0	0	0	0
18A	BASAGRAN	4SC	0.75	POST	0	63	99	68
18B	SUN 7E	4L	1QT	POST				
19A	BASAGRAN	4SC	0.75	POST	0	60	99	68
19B	SUN 11E	4L	1QT	POST				
20A	BASAGRAN	4SC	0.75	POST	0	50	98	67
20B	X-77	%/V	0.25	POST				
21A	BASAGRAN	4SC	0.75	POST	0	58	98	83
21B	SUN 7E	4L	1QT	POST				
21C	X-77	%/V	0.25	POST				
22A	BASAGRAN	4SC	0.75	POST	0	67	98	80
22B	SUN 11E	4L	1QT	POST				
22C	X-77	%/V	0.25	POST				
23A	BASAGRAN	4SC	0.75	POST	0	67	99	95
23B	28N	4L	4QT	POST				
23C	X-77	%/V	0.25	POST				
24A	BASAGRAN	4SC	0.75	POST	0	76	99	95
24B	DASH	4L	1QT	POST				
25A	BASAGRAN	4SC	0.75	POST	0	68	99	82
25B	COC	4L	1QT	POST				
26	CHECK				0	0	0	0
CV					7	13	3	7
LSD					3	17	5	9

BACKGROUND

Trial Title :URBANA SOYBEAN POSTEMERGENCE XIII
Trial State :IL
Trial Location :N200 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates :15
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % : 0

Soil Texture :SILTY CLAY LOAM
Soil O.M. % : 5.5
Soil pH : 6.4
Soil Name :DRUMMER
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/06/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 75
Soil Moisture @ Planting :DRY

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	POST	6	LF	MED	2.0	8.0
JIWE	POST	6	LF	HIGH	2.0	8.0
SMPW	POST	8	LF	HIGH	4.0	6.0
SOYBEA	POST	4	TRIF		6.0	8.0
ILMG	POST	4	LF	HIGH	2.0	4.0
VELE	POST	6	LF	HIGH	4.0	6.0

Application Code	:POST
Date of Application	:06/06/88
Time of Application	:13:00
Pressure (PSI)	: 40
Nozzle Type	:8002
Air Temp (F)	: 90
Relative Humidity	:26
Wind Speed (MPH)	: 5.0
Diluent Carrier	:WATER
Appli Equip Type	:HANDHELD
Spray Volume (GPA)	:20.0
Soil Moisture @ App.	:DRY

Nozzle Spacing (In)	: 18
Boom Length (Ft)	: 7.5
Boom Height (In)	: 20
Incorporation Equip	:
Elapsed Time to Incorp.	: hrs.
Incorp. Depth (In)	:
Percent Cloud Cover	: 0
Dew Presence (Y/N)	:N
Ground Speed (MPH)	: 3.0
Soil Temp (F)	: 75

COMMENTS

To better compare the activities of Pursuit, Classic, Classic + DPXM6316, and Galaxy, these four treatments were replicated 15 times in a test area with intense BDLF pressure.

					VELE 6/19	ILMG 6/19	SMPW 6/19	JIWE 6/19
1A	PURSUIT	2SC	0.063	POST	87	70	83	85
1B	X-77	%/V	0.25	POST				
1C	28N	4L	4QT	POST				
2A	CLASSIC	25DF	5.5G	POST	92	54	74	89
2B	X-77	%/V	0.25	POST				
2C	28N	4L	4QT	POST				
3A	CLASSIC	25DF	5.5G	POST	96	52	90	94
3B	DPXM6316	25DF	1.82G	POST				
3C	X-77	%/V	0.25	POST				
3D	28N	4L	4QT	POST				
4A	GALAXY	3.67EC	0.92	POST	95	21	92	97
4B	X-77	%/V	0.25	POST				
4C	28N	4L	4QT	POST				
CV					6	24	12	5
LSD					10	20	17	8

BACKGROUND

Trial Title :URBANA SOYBEAN POSTEMERGENCE XIV
Trial State :IL
Trial Location :C500 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) :10.0 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % :0

Soil Texture :SILT LOAM
Soil O.M. % : 4.0
Soil pH : 6.0
Soil Name :FLANAGAN
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/11/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot):10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant :70
Soil Moisture @ Planting :DRY

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	POST	6	LF	HIGH	6.0	8.0
COLQ	POST	MANY		MED	4.0	6.0
SMPW	POST	4	LF	MED	4.0	6.0
VELE	POST	4	LF	MED	4.0	6.0
JIWE	POST	4	LF	HIGH	4.0	6.0

Application Code	:POST		
Date of Application	:06/13/88	Nozzle Spacing (In)	: 18
Time of Application	:07:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 60	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:75	Incorp. Depth (In)	:
Wind Speed (MPH)	:10.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 70
Soil Moisture @ App.	:MOIST		

COMMENTS

The treatments were applied to a broad spectrum of moderately large weeds growing under drought conditions. Control of giant foxtail ranged from fair to good, with considerable differences in control depending on adjuvant when Poast and Galaxy were applied as tank mixtures. Several treatments provided good to excellent control of the broadleaf species present in the study.

					C.I. 6/21	GIFT 6/21	COLQ 6/21	SMPW 6/21	VELE 6/21	JIWE 6/21
1A	HOE46360	0.63EC	0.05	POST	0	75	0	0	0	0
1B	COC	4L	1QT	POST						
2A	HOE46360	0.63EC	0.1	POST	7	87	0	0	0	0
2B	COC	4L	1QT	POST						
3A	OPTION	1EC	0.075	POST	0	88	0	0	0	0
3B	COC	4L	1QT	POST						
4A	OPTION	1EC	0.15	POST	0	87	0	0	0	0
4B	COC	4L	1QT	POST						
5A	POAST	1.5EC	0.1	POST	0	72	0	0	0	0
5B	COC	4L	1QT	POST						
6A	POAST	1.5EC	0.2	POST	0	85	0	0	0	0
6B	COC	4L	1QT	POST						
7A	GALAXY	3.67EC	0.92	POST	17	80	78	85	83	95
7B	POAST	1.5EC	0.15	POST						
7C	COC	4L	1QT	POST						
8A	GALAXY	3.67EC	0.92	POST	33	92	90	95	85	93
8B	POAST	1.5EC	0.15	POST						
8C	DASH	4L	1QT	POST						
9A	GALAXY	3.67EC	0.92	POST	23	67	85	88	92	95
9B	POAST	1.5EC	0.15	POST						
9C	28N	4L	4QT	POST						
9D	X77	%/V	0.25	POST						
10A	GALAXY	3.67EC	0.92	POST	20	72	53	90	68	93
10B	POAST	1.5EC	0.15	POST						
10C	SUN 7E	4L	1QT	POST						
10D	X77	%/V	0.25	POST						
11A	GALAXY	3.67EC	0.92	POST	13	82	67	87	72	93
11B	POAST	1.5EC	0.15	POST						
11C	SUN 11E	4L	1QT	POST						
11D	X77	%/V	0.25	POST						
12A	GALAXY	3.67EC	0.92	POST	10	53	82	93	93	93
12B	POAST	1.5EC	0.15	POST						
12C	INHANCE	4L	1QT	POST						
CV					24	11	28	11	14	5
LSD					13	14	18	8	10	4

BACKGROUND

Trial Title	:URBANA SOYBEAN POST XV
Trial State	:IL
Trial Location	:C400 (URBANA, IL)
Trial Zipcode	:61801
Prime Investigator	:CANTWELL/LIEBL/WAX

SITE

Experimental Design	:RCB	Soil Texture	:SILT LOAM
Number of Replicates	: 3	Soil O.M. %	: 4.0
Plot Wd X Lth (ft)	: 7.5 38.0	Soil pH	: 6.0
Tillage Type	:CONVENTIONAL	Soil Name	:FLANAGAN
Seedbed Description	:FINE	Metero. Station:	
Ground cover & %	:CORNSTALKS 20%		

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop	:SOYBEANS
Crop Variety	:HACK
Planting Date	:05/06/88
Planting Method	:MECHANICAL
Planting Depth (in)	: 1.5
Seeding Rate (seeds/foot)	: 10
Row Spacing (in)	:30.0
Soil Temp (F) @ Plant	: 65
Soil Moisture @ Planting	:DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
CORN	3-5	6	LF	HIGH	8.0	18.0
GIFT	3-5	6	LF	HIGH	4.0	8.0
SOYS	3-5	4	TRIF		4.0	6.0

Application Code	:POST		
Date of Application	:06/06/88	Nozzle Spacing (In)	: 18
Time of Application	:09:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 90	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:26	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:DRY		

COMMENTS

Several treatments afforded excellent control of graminae species. Treatments that included Dash generally performed better than those that included COC. BAS-0562-16H performance was enhanced by the addition of Dash or COC.

					GIFT 6/13	GIFT 6/27	GIFT 7/19	CORN 6/13	CORN 6/27	CORN 7/19
1	CHECK				0	0	0	0	0	0
2A	POAST	1.5EC	0.10	3-5"	63	80	90	43	65	63
2B	COC	4L	1.0Q	3-5"						
3A	POAST	1.5EC	0.10	3-5"	67	85	90	50	73	90
3B	DASH	4L	1.0Q	3-5"						
4A	POAST	1.5EC	0.10	3-5"	70	85	93	60	82	92
4B	DASH	4L	2.0Q	3-5"						
5A	POAST	1.5EC	0.125	3-5"	63	83	92	57	78	83
5B	COC	4L	1.0Q	3-5"						
6A	POAST	1.5EC	0.125	3-5"	63	83	90	45	78	77
6B	DASH	4L	1.0Q	3-5"						
7A	POAST	1.5EC	0.125	3-5"	47	48	28	30	40	30
8A	POAST	1.5EC	0.15	3-5"	65	90	97	58	85	94
8B	COC	4L	1.0Q	3-5"						
9A	POAST	1.5EC	0.15	3-5"	63	88	94	53	85	89
9B	DASH	4L	1.0Q	3-5"						
10A	POAST	1.5EC	0.15	3-5"	65	93	98	62	83	95
10B	DASH	4L	2.0Q	3-5"						
11	BAS-0562-16H	1EC	0.10	3-5"	58	73	80	50	60	62
12A	BAS-0562-16H	1EC	0.10	3-5"	65	83	91	45	77	78
12B	COC	4L	1.0Q	3-5"						
13A	BAS-0562-16H	1EC	0.10	3-5"	53	87	90	50	83	89
13B	DASH	4FL	1.0Q	3-5"						
14A	BAS-0562-16H	1EC	0.125	3-5"	67	83	95	65	68	73
15A	BAS-0562-16H	1EC	0.125	3-5"	75	85	96	62	80	89
15B	COC	4L	1.0Q	3-5"						
16A	BAS-0562-16H	1EC	0.125	3-5"	77	85	95	70	83	93
16B	DASH	4FL	1.0Q	3-5"						
17	BAS-0562-16H	1EC	0.15	3-5"	78	83	94	58	82	87

					GIFT 6/13	GIFT 6/27	GIFT 7/19	CORN 6/13	CORN 6/27	CORN 7/19
18A	BAS-0562-16H	1EC	0.15	3-5"	73	83	96	72	75	90
18B	COC	4L	1.0Q	3-5"						
19A	BAS-0562-16H	1EC	0.15	3-5"	70	83	97	50	85	96
19B	DASH	4L	0.5Q	3-5"						
20A	BAS-0562-16H	1EC	0.15	3-5"	73	88	98	67	87	97
20B	DASH	4FL	1.0Q	3-5"						
21A	FUSILADE	1.0EC	0.15	3-5"	63	78	87	67	87	94
21B	COC	4L	1QT	3-5"						
22A	OPTION	1EC	0.1	3-5"	75	85	90	47	83	94
22B	COC	4L	1QT	3-5"						
23A	HOE46360	0.63	0.075	3-5"	77	90	93	55	87	97
23B	COC	4L	1QT	3-5"						
24	CHECK				0	0	0	0	0	0
CV					17	10	6	22	14	11
LSD					17	13	8	19	17	14

BACKGROUND
Trial Title :URBANA SOYBEAN POST XVI
Trial State :IL
Trial Location :C400 (URBANA, IL)
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE
Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) : 7.5 38.0
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % :CORNSTALKS 20%

Soil Texture :SILT LOAM
Soil O.M. % : 4.0
Soil pH : 6.0
Soil Name :FLANAGAN
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP
Trial Crop :SOYBEANS
Crop Variety :HACK
Planting Date :05/06/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 65
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
CORN	POST	6	LF	HIGH	8.0	18.0
GIFT	POST	6	LF	HIGH	4.0	8.0
SOYS	POST	4	TRIF		4.0	6.0

Application Code	:POST		
Date of Application	:06/06/88	Nozzle Spacing (In)	: 18
Time of Application	:09:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 90	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:26	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	:
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
Soil Moisture @ App.	:DRY		

COMMENTS

Several treatments gave substantial control of both giant foxtail and volunteer corn.Most treatments showed slightly greater control of giant foxtail as compared to volunteer corn with no visible injury to soybeans.

The addition of Basagran (and 28%N) antagonized Poast + COC efficacy, but had little effect on Poas plus Dash. The efficacy of BAS-562-16H alone was generally equivalent to a similar rate of Poast plus COC or Dash.

					GIFT 6/13/	GIFT 6/27/	GIFT 7/19	CORN 6/13	CORN 6/27	COR 7/19
1	CHECK				0	0	0	0	0	0
2A	POAST	1.5EC	0.10	POST	62	85	78	50	75	70
2B	COC	4L	1.0Q	POST						
3A	POAST	1.5EC	0.15	POST	73	80	90	55	77	77
3B	COC	4L	1.0Q	POST						
4A	POAST	1.5EC	0.10	POST	83	80	60	67	50	47
4B	BASAGRAN	4SC	0.75	POST						
4C	COC	4L	1.0Q	POST						
4D	28%N	4L	4.0Q	POST						
5A	POAST	1.5EC	0.15	POST	85	90	82	73	65	67
5B	BASAGRAN	4SC	0.75	POST						
5C	COC	4L	1.0Q	POST						
5D	28%N	4L	4.0Q	POST						
6A	POAST	1.5EC	0.10	POST	27	30	30	17	23	37
7A	POAST	1.5EC	0.15	POST	63	53	28	47	55	35
8A	POAST	1.5EC	0.10	POST	90	87	75	63	83	70
8B	BASAGRAN	4SC	0.75	POST						
8C	DASH	4L	2.0Q	POST						
8D	28%N	4L	4.0Q	POST						
9A	POAST	1.5EC	0.15	POST	94	95	92	87	87	93
9B	BASAGRAN	4SC	0.75	POST						
9C	DASH	4L	2.0Q	POST						
9D	28%N	4L	4.0Q	POST						
10	BAS-562-16H	1EC	0.10	POST	63	80	88	45	75	67
11	BAS-562-16H	1EC	0.15	POST	77	90	88	62	83	88
12A	BAS-562-16H	1EC	0.10	POST	83	78	68	60	52	60
12B	BASAGRAN	4SC	0.75	POST						
12C	28%N	4L	4.0Q	POST						
13A	BAS-562-16H	1EC	0.15	POST	87	94	95	67	85	83
13B	BASAGRAN	4SC	0.75	POST						
13C	28%N	4L	4.0Q	POST						

					GIFT 6/13	GIFT 6/27	GIFT 7/19	CORN 6/13	CORN 6/27	CORN 7/19
14A	BAS-562-16H	1EC	0.10	POST	73	87	90	58	82	82
14B	DASH	4L	1.0Q	POST						
15A	BAS-562-16H	1EC	0.15	POST	77	85	94	63	88	94
15B	DASH	4L	1.0Q	POST						
16A	BAS-562-16H	1EC	0.10	POST	93	90	88	72	83	88
16B	BASAGRAN	4SC	0.75	POST						
16C	DASH	4FL	1.0Q	POST						
16D	28%N	4L	4.0Q	POST						
17A	BAS-562-16H	1EC	0.10	POST	90	87	85	75	80	83
17B	BASAGRAN	4SC	0.75	POST						
17C	DASH	4L	1.0Q	POST						
17D	28%N	4L	4.0Q	POST						
18	CHECK				0	0	0	0	0	0
CV					13	13	12	19	20	18
LSD					15	16	14	17	21	19

BACKGROUND
Trial Title :POSTEMERGENCE WEED CONTROL IN WHEAT II
Trial Location :URBANA, IL
Trial Zipcode :61801
Prime Investigator :CANTWELL/LIEBL/WAX

SITE
Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) : 7.5 X 40.0
Tillage Type :CONVENTIONAL
Ground cover & % :
Seedbed Description :

Soil Texture :SILTY CLAY LOAM
Soil O.M. % : 5.0
Soil pH : 6.4
Soil Name :DRUMMER
Fert. Level :
Metero. Station:

CROP
Trial Crop :WHEAT
Crop Variety :TYLER
Planting Date :10/01/87
Planting Method :DRILL
Planting Depth (in) :1.0
Seeding Rate (seed/foot) : 0
Row Spacing (in) : 0.0
Soil Temp (F) @ Plant : 0
Soil Moisture @ Planting :DRY

PEST

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE	PEST DENSITY	PEST HEIGHT (in) min	PEST HEIGHT (in) max
HEBI	POST		0.0	6	12.0
TAMU	POST		0.0	6	12.0

Application Code	:POST	Nozzle Spacing (in)	: 20
Date of Application	:05/04/88	Boom Length (Ft)	: 0
Time of Application	:07:00	Boom Height (in)	: 20
Pressure (PSI)	: 40	Incorporation Equip	:
Nozzle Type	:8002	Elapsed Time to Incorp.	: 0 hrs.
Air Temp (F)	: 75	Incorp. Depth (in)	: 0.0
Relative Humidity	:60	Percent Cloud Cover	: 0
Wind Speed (MPH)	: 5.0	Dew Presence (Y/N)	:N
Diluent Carrier	:WATER	Ground Speed (MPH)	: 3.0
Appli Equip Type	:HANDHELD	Soil Temp (F)	: 0
Spray Volume (GPA)	:20.0		
Soil Moisture @ App.	:DRY		

COMMENTS

An experimental herbicide, SB-23121, was compared to 2,4-D and Harmony.

					TAMU 05/17	HEBI 05/17	CI 05/17
1	SB-23121	0.9EC	0.5Z	POST	12	50	21
2A	HARMONY	75DF	0.25Z	POST	80	60	0
2B	X-77	%/V	0.25	POST			
3	2.4-D	3.8EC	6.0Z	POST	75	30	0
CV					3	1	30
LSD					4	1	4

BACKGROUND

Trial Title :PREMERGENCE WEED CONTROL IN CORN (BROWNSTOWN)
Trial State :IL
Trial Location :BROWNSTOWN, IL
Trial Zipcode :62481
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design	:RCB	Soil Texture	:SILT LOAM
Number of Replicates	: 3	Soil O.M. %	: 1.5
Plot Wd X Lth (Ft)	: 7.5 40.0	Soil pH	: 7.0
Tillage Type	:CONVENTIONAL	Soil Name	:CISNE
Seedbed Description	:CLODDY		
Ground cover & %	:0		

previous crop	previous pesticide	year
SOYBEANS		1987

CROP

Trial Crop :CORN
Crop Variety :PIONEER 9442
Planting Date :04/21/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate(plants/acre): 24000
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 60
Soil Moisture @ Planting :ADEQUATE

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE	PEST DENSITY	PEST HEIGHT (In) min	max
GIFT			HIGH		
COLQ			HIGH		

Application Code	:PRE		
Date of Application	:04/22/88	Nozzle Spacing (In)	: 18
Time of Application	:10:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 30	Boom Height (In)	: 20
Nozzle Type	:8003	Incorporation Equip	:
Air Temp (F)	: 70	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:80	Incorp. Depth (In)	:
Wind Speed (MPH)	: NE	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:25.0	Soil Temp (F)	: 70
Soil Moisture @ App.	:ADEQUATE		

COMMENTS

Acetanilides (Dual, Lasso, Harness or SAN-582) provided better giant Foxtail control than did Prowl, atrazine or Extrazine. EL-177 and BAS-514 did not provide adequate grass control.

					GIFT 6/08	COLQ 6/08
1A	DUAL	8EC	2.00	PRE	77	83
1B	ATRAZINE	90DG	1.00	PRE		
2A	LASSO	4EC	2.25	PRE	92	87
2B	ATRAZINE	90DG	1.00	PRE		
3A	CG180937	7.8EC	2.00	PRE	88	87
3B	ATRAZINE	90DG	1.00	PRE		
4A	SAN-582	8EC	1.25	PRE	88	77
4B	ATRAZINE	90DG	1.00	PRE		
5A	ACETOCHLOR	7.5EC	1.75	PRE	95	88
5B	ATRAZINE	90DG	1.00	PRE		
6A	HARNESS	8EC	1.75	PRE	88	68
6B	ATRAZINE	90DG	1.00	PRE		
7	ATRAZINE	90DG	1.75	PRE	10	85
8	EXTRAZINE	90DF	3.50	PRE	30	78
9	LARIAT	4FL	2.80	PRE	87	90
10	BULLET	4FL	2.80	PRE	57	77
11	BICEP	5.9FL	2.70	PRE	43	67
12	PROZINE	70DF	2.25	PRE	53	92
13	MARKSMAN	3.2FL	1.40	PRE	47	99
14	MARKSMAN	3.2FL	1.00	PRE	37	90
15A	DUAL	8EC	2.00	PRE	95	99
15B	ATRAZINE	90DG	1.20	PRE		
15C	BANVEL	4SC	0.36	PRE		
16A	DUAL	8EC	2.00	PRE	82	80
16B	ATRAZINE	90DG	1.20	PRE		
17	CHECK				0	0
18A	DUAL	8EC	2.00	PRE	92	88
18B	AC-513-655	4.8FL	1.20	PRE		
19A	PROWL	4EC	1.25	PRE	55	85
19B	AC-513-655	4.8FL	1.20	PRE		

					GIFT 6/08	COLQ 6/08
20	EL-177	80DF	0.25	PRE	0	70
21	EL-177	80DF	0.30	PRE	0	83
22A	EL-177	80DF	0.25	PRE	23	80
22B	ATRAZINE	90DG	1.00	PRE		
23A	EL-177	80DF	0.25	PRE	17	92
23B	ATRAZINE	90DG	1.25	PRE		
24A	EL-177	80DF	0.25	PRE	70	92
24B	ATRAZINE	90DG	1.00	PRE		
24C	LASSO	4EC	1.00	PRE		
25A	LASSO	4EC	2.25	PRE	88	90
25B	BANVEL	4SC	0.50	PRE		
26	BAS-514	50WP	0.50	PRE	13	37
27	BAS-514	50WP	1.00	PRE	27	57
28A	BAS-514	50WP	0.50	PRE	90	90
28B	ATRAZINE	90DG	1.50	PRE		
29A	BAS-514	50WP	0.50	PRE	83	90
29B	ATRAZINE	90DG	1.50	PRE		
30	CHECK				0	0
CV					22	14
LSD					20	17

BACKGROUND

Trial Title :POSTEMERGENCE WEED CONTROL IN CORN 1 (BRNSTN)
Trial State :IL
Trial Location :BROWNSTOWN, IL
Trial Zipcode :62481
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) : 7.5 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :CLODDY
Ground cover & % :0

Soil Texture :SILT LOAM
Soil O.M. % : 1.5
Soil pH : 7.0
Soil Name :CISNE
Metero.Station:

previous crop	previous pesticide	year
SOYBEANS		1987

CROP

Trial Crop :CORN
Crop Variety :PIONEER 3377
Planting Date :04/21/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate(plants/acre): 24000
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 60
Soil Moisture @ Planting :ADEQUATE

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (in) min	max
COLQ	POST	MANY	LF	HIGH	4.0	8.0
GIFT	POST	6-8	LF	MED	4 0	
JIWE	POST	4	LF	MED	2.0	6.0
TAWH	POST	6	LF	MED	2.0	4.0

Application Code	:POST		
Date of Application	:05/25/88	Nozzle Spacing (In)	: 20
Time of Application	:08:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 60	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	:3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 70
Soil Moisture @ App.	:DRY		

COMMENTS

Accent (DPXV9360) and KIH 2665 provided better giant foxtail control than did Beacon, SB63596 or Tandem + atrazine. BAS 514 caused significant injury to corn.

					C.I. 6/08	GIFT 6/08	COLQ 6/08
1A	BEACON	75WG	12G	POST	13	60	47
1B	X-77	%/V	0.25	POST			
2A	BEACON	75WG	16G	POST	7	67	70
2B	X-77	%/V	0.25	POST			
3A	DPXV9360	75DF	.5Z	POST	13	83	17
3B	X-77	%/V	0.25	POST			
4A	DPXV9360	75DF	0.75Z	POST	10	90	37
4B	X-77	%/V	0.25	POST			
5A	SB63596	0.89EC	30G	POST	0	50	30
5B	X-77	%/V	0.05	POST			
6A	SB63596	0.89EC	40G	POST	0	50	37
6B	X-77	%/V	0.05	POST			
7A	KIH-2665	1.5FL	0.10	POST	0	87	90
7B	X-77	%/V	0.25	POST			
8A	KIH-2665	1.5FL	0.125	POST	0	87	96
8B	X-77	%/V	0.25	POST			
9A	TANDEM	4EC	0.5	POST	0	53	99
9B	ATRAZINE	90DF	1.5	POST			
9C	COC	4L	1Q	POST			
10A	TANDEM	4EC	0.5	POST	18	78	99
10B	ATRAZINE	90DF	0.8	POST			
10C	BLADEX	90DF	0.8	POST			
10D	COC	4L	1QT	POST			
11A	TANDEM	4EC	0.75	POST	8	65	99
11B	ATRAZINE	90DF	2.0	POST			
11C	COC	4L	1QT	POST			
12A	BAS514	50WP	0.5	POST	47	90	33
12B	COC	4L	1QT	POST			
13A	BAS514	50WP	0.5	POST	47	99	43
13B	DASH	4L	1QT	POST			
14A	BAS514	50WP	0.5	POST	83	99	90
14B	BAS0902	4L	1QT	POST			

		C.I. 6/08	GIFT 6/08	COLQ 6/08
15	CHECK	0	0	0
CV		28	14	17
LSD		8	17	16

BACKGROUND

Trial Title :POSTEMERGENCE WEED CONTROL IN CORN 2 (BROWNSTOWN)
Trial State :IL
Trial Location :BROWNSTOWN, IL
Trial Zipcode :62481
Prime Investigator :CANTWELL/LIEBL/WAX

SITE

Experimental Design :RCB
Number of Replicates : 3
Plot Wd X Lth (Ft) : 7.5 40.0
Tillage Type :CONVENTIONAL
Seedbed Description :CLODDY
Ground cover & % :0

Soil Texture : SILT LOAM
Soil O.M. % : 1.5
Soil pH : 7.0
Soil Name :CISNE
Metero.Station:

previous crop	previous pesticide	year
SOYBEANS		1987

CROP

Trial Crop :CORN
Crop Variety :PIONEER 9442
Planting Date :04/21/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate(plants/acre): 24000
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 60
Soil Moisture @ Planting :ADEQUATE

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PESTHEIGHT (In) min	max
COLQ	POST	MANY	LF	HIGH	4.0	8.0
GIFT	POST	6-8	LF	MED	4 0	
JIWE	POST	4	LF	MED	2.0	6.0
TAWH	POST	6	LF	MED	2.0	4.0

Application Code	:POST		
Date of Application	:05/25/88	Nozzle Spacing (In)	: 20
Time of Application	:08:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 60	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	: N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	:3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 70
Soil Moisture @ App.	:DRY		

Application Code	:PRE		
Date of Application	:05/18/8	Nozzle Spacing (In)	: 20
Time of Application	:06:00A	Boom Length (Ft)	: 10
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8003	Incorporation Equip.	:
Air Temp (F)	: 60	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:70	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:25.0	Soil Temp (F)	: 65
Soil Moisture @ App.	:DRY		

COMMENTS

The grass control was very poor due to weed emergence prior to application of Dual. However, the lambsquarters control was good with all treatments except the Tough and EF-689.

					C.I. 6/08	GIFT 6/08	COLQ 6/08
1A	DUAL	8E	1.5	PRE	8	3	92
1B	2.4-D	3.8E	0.38	POST			
2A	DUAL	8E	1.5	PRE	0	0	77
2B	BANVEL	4SC	0.25	POST			
3A	DUAL	8E	1.5	PRE	0	0	96
3B	LADDOCK	3.33	.83	POST			
3C	COC	4L	1QT	POST			
4A	DUAL	8E	1.5	PRE	0	0	99
4B	LADDOCK	3.33	.83	POST			
4C	DASH	4L	1QT	POST			
5A	DUAL	8E	1.5	PRE	0	0	98
5B	LADDOCK	3.33	.83	POST			
5C	28N	4L	4QT	POST			
6A	DUAL	8E	1.5	PRE	0	0	80
6B	BASAGRAN	4L	0.5	POST			
6C	COC	4L	1QT	POST			
7A	DUAL	8E	1.5	PRE	1	0	90
7B	DPXM6316	75DF	0.094Z	POST			
7C	X-77	%/V	0.25	POST			
8A	DUAL	8E	1.5	PRE	10	0	99
8B	BUCTRIL	2EC	0.25	POST			
9A	DUAL	8E	1.5	PRE	10	0	99
9B	BUCTRIL	2EC	0.25	POST			
9C	ATRAZINE	90DF	0.5	POST			
10A	DUAL	8E	1.5	PRE	3	0	99
10B	MARKSMAN	3.2L	1.4	POST			
11A	DUAL	8E	1.5	PRE	0	0	67
11B	TOUGH	3.75EC	0.45	POST			
12A	DUAL	8E	1.5	PRE	0	0	60
12B	EF-689	1.67EC	0.5Z	POST			
13A	DUAL	8E	1.5	PRE	0	0	20
13B	EF-689	1.67EC	1.0Z	POST			

		C.I. 6/08	GIFT 6/08	COLQ 6/08
14	CHECK	0	0	0
CV		7	3	7
LSD		8	1	6

BACKGROUND

Trial Title :PREEMERGENCE WEED CONTROL IN SOYBEANS
Trial State :IL
Trial Location :BROWNSTOWN
Trial Zipcode :62418
Prime Investigator :C/L/W/M

SITE

Experimental Design	:RCB	Soil Texture	:SILT LOAM
Number of Replicates	: 3	Soil O.M. %	: 2.0
Plot Wd X Lth (Ft)	:10.0 40.0	Soil pH	: 7.0
Tillage Type	:CONVENTIONAL	Soil Name	:CISNE
Seedbed Description	:CLODDY	Metero. Station:	
Ground cover & %	:0		

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop :SOYBEANS
Crop Variety :WILIAMS
Planting Date :5/11/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot):10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 75
Soil Moisture @ Planting :ADQ

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE	PEST DENSITY	PEST HEIGHT(In) min	max
GIFT	PRE		HIGH		
VELE	PRE		MED		
CORW	PRE		MED		

Application Code	:PRE
Date of Application	:05/12/88
Time of Application	:10:00A
Pressure (PSI)	: 30
Nozzle Type	:8002
Air Temp (F)	: 75
Relative Humidity	: 70
Wind Speed (MPH)	:10.0
Diluent Carrier	:WATER
Appli Equip Type	:HANDHELD
Spray Volume (GPA)	:20.0
Soil Temp (F)	: 65
Soil Moisture @ App.	:DRY

Nozzle Spacing (In)	: 20
Boom Length (Ft)	: 7.5
Boom Height (In)	: 20
Incorporation Equip	:
Elapsed Time to Incorp.	:
Incorp. Depth (In)	:
Percent Cloud Cover	: 0
Dew Presence (Y/N)	:N
Ground Speed (MPH)	: 3.0

COMMENTS

Dry weather following herbicide application resulted in only fair weed control by most combinations. Treatments including Command controlled the most weeds.

					GIFT 7/12	VELE 7/12	CORW 7/12
1	BAS514	50WP	0.25	PRE	50	0	90
2	BAS514	50WP	0.5	PRE	75	50	90
3	SB-53482	50WP	10G	PRE	0	0	0
4	SB-53482	50WP	20G	PRE	0	0	0
5	SB-53482	50WP	30G	PRE	0	90	0
6	SCEPTER	1.5AS	0.094	PRE	90	0	50
7	SCEPTER	1.5AS	0.125	PRE	90	0	50
8	PURSUIT	2.0AS	0.063	PRE	90	50	50
9	PREVIEW	75DF	0.30	PRE	70	70	50
10	PREVIEW	75DF	0.40	PRE	50	50	50
11	SENCOR	75DF	0.38	PRE	50	50	50
12	COMMAND	4EC	0.75	PRE	90	70	90
13	COMMAND	4EC	1.0	PRE	99	66	77
14	CHECK				0	0	0
15A	SCEPTER	1.5AS	0.094	PRE	73	0	90
15B	DUAL	8E	1.75	PRE			
16A	SCEPTER	1.5AS	0.125	PRE	90	0	0
16B	DUAL	8E	1.75	PRE			
17A	PURSUIT	2.0AS	0.063	PRE	90	0	80
17B	DUAL	8E	1.75	PRE			
18A	PREVIEW	75DF	0.30	PRE	87	17	77
18B	DUAL	8E	1.75	PRE			
19A	SENCOR	75DF	0.38	PRE	86	66	77
19B	DUAL	8E	1.75	PRE			
20A	COMMAND	4E	0.75	PRE	96	89	83
20B	PURSUIT	2AS	0.063	PRE			
21A	COMMAND	4E	0.75	PRE	90	70	70
21B	SCEPTER	1.5AS	0.094	PRE			

					GIFT 7/12	VELE 7/12	CORW 7/12
22A	COMMAND	4E	0.75	PRE	99	80	90
22B	PREVIEW	75DF	0.30	PRE			
23A	COMMAND	4E	0.75	PRE	99	90	99
23B	SENCOR	75DF	0.38	PRE			
24	CHECK				0	0	0
25	PROWL	4EC	1.0	PRE	50	70	80
26A	PROWL	4EC	1.0	PRE	70	70	80
26B	SCEPTER	1.5AS	0.125	PRE			
27A	PROWL	4EC	1.0	PRE	60	60	50
27B	PREVIEW	75DF	0.3	PRE			
28	CHLORIMURON	25DF	0.036	PRE	0	95	0
29	AMIBEN	75DF	3.0	PRE	50	80	50
30	LASSO	4MT	2.5	PRE	50	0	0
31A	LASSO	4MT	2.0	PRE	50	50	70
31B	SENCOR	75DF	0.38	PRE			
32A	LASSO	4MT	2.0	PRE	70	70	90
32B	LOROX	50DF	0.5	PRE			
CV					6	29	9
LSD					6	21	8

BACKGROUND

Trial Title :BROWNSTOWN SOYBEAN POSTEMERGENCE I
Trial State :IL
Trial Location :BROWNSTOWN
Trial Zipcode :62418
Prime Investigator :C/L/W

SITE

Experimental Design	:RCB	Soil Texture	:SILT LOAM
Number of Replicates	: 3	Soil O.M. %	: 2.0
Plot Wd X Lth (Ft)	:10.0 40.0	Soil pH	: 7.0
Tillage Type	:CONVENTIONAL	Soil Name	:CISNE
Seedbed Description	:CLODDY	Metero. Station:	
Ground cover & %	:20		

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop :SOYBEANS
Crop Variety :WILLIAMS
Planting Date :05/11/88
Planting Method :MECHANICAL
Planting Depth (in) : 1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) :30.0
Soil Temp (F) @ Plant : 65
Soil Moisture @ Planting :DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT(In) min	max
COCB	POST	4	LF	LOW	2.0	4.0
COLQ	POST	10-20	LF	LOW	4.0	12.0
JIWE	POST	4	LF	LOW	2.0	4.0
SMPW	POST	3	LF	LOW	2.0	4.0
SOYS	POST	3	TRIF		4.0	6.0

Application Code	:POST		
Date of Application	:06/08/88	Nozzle Spacing (In)	: 18
Time of Application	:07:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 85	Elapsed Time to Incorp.	:
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	: 5.0	Percent Cloud Cover	:50
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 75
SoilMoisture @ App.	:DRY		

					COLQ 7/5	VELE 7/5	COCB 7/5	JIWE 7/5
1A	TORNADO	1.75EC	0.43	POST	43	85	37	93
1B	COC	4L	1QT	POST				
2A	TORNADO	1.75EC	0.43	POST	25	85	66	93
2B	DASH	4L	1QT	POST				
3A	POAST	1.5EC	0.15	POST	30	95	93	93
3B	BASAGRAN	4S	0.75	POST				
3C	COC	4L	1QT	POST				
4A	POAST	1.5EC	0.15	POST	43	87	88	93
4B	BASAGRAN	4S	0.75	POST				
4C	DASH	4L	1QT	POST				
5A	SELECT	2EC	0.1	POST	10	98	96	99
5B	COBRA	2EC	0.2	POST				
5C	COC	4L	0.5QT	POST				
6A	SELECT	2EC	0.1	POST	0	99	99	99
6B	COBRA	2EC	0.2	POST				
6C	DASH	4L	1.0QT	POST				
7A	COBRA	2EC	0.2	POST	0	93	99	98
7B	COC	4L	0.5	POST				
8A	COBRA	2EC	0.2	POST	0	99	99	99
8B	28N	4L	4QT	POST				
9A	PURSUIT	2SC	0.063	POST	0	99	99	93
9B	COC	4L	1QT	POST				
10A	PURSUIT	2SC	0.063	POST	17	99	95	97
10B	28N	4L	4QT	POST				
10C	X77	%/V	0.25	POST				
11A	SCEPTER	1.5SC	0.094	POST	0	33	96	65
11B	28N	4L	4QT	POST				
11C	X77	%/V	0.25	POST				
12A	SCEPTER	1.5SC	0.063	POST	7	20	93	50
12B	28N	4L	4QT	POST				
12C	X77	%/V	0.25	POST				
13A	CLASSIC	25DF	3.69G	POST	0	99	95	85
13B	28N	4L	4QT	POST				
13C	X77	%/V	0.25	POST				

					COLQ 7/5	VELE 7/5	COCB 7/5	JIWE 7/5
14A	CLASSIC	25DF	5.5G	POST	0	99	96	99
14B	28N	4L	4QT	POST				
14C	X77	%/V	0.25	POST				
15A	DPXM6316	25DF	1.82G	POST	47	98	63	10
15B	28N	4L	4QT	POST				
15C	X77	%/V	0.25	POST				
16A	CLASSIC	25DF	3.69G	POST	70	99	93	96
16B	DPXM6316	25DF	1.82G	POST				
16C	28N	4L	4QT	POST				
16D	X77	%/V	0.25	POST				
17	24-DB	2EC	0.031	POST	0	7	10	3
18A	GALAXY	3.67EC	0.92	POST	20	80	85	95
18B	COC	4L	1QT	POST				
19A	STORM	4EC	0.75	POST	0	67	37	88
19B	COC	4L	0.5QT	POST				
20A	GALAXY	3.67EC	0.69	POST	40	72	82	99
20B	COC	4L	1QT	POST				
21A	STORM	4EC	0.56	POST	17	23	37	96
21B	COC	4L	0.5QT	POST				
22A	BASAGRAN	4S	0.75	POST	17	87	93	93
22B	COC	4L	1QT	POST				
23A	BASAGRAN	4S	0.75	POST	0	67	82	83
23B	24-DB	2EC	0.031	POST				
23C	COC	4L	0.25QT	POST				
24	SB23031	0.89	26G	POST	0	75	43	13
25	SB23031	0.89	26G	POST	0	77	43	17
CV					92	16	14	13
LSD					23	20	18	17

BACKROUND

Trial Title	:BROWNSTOWN SOYBEANS POSTEMERGENCE II
Trial State	:IL
Trial Location	:BROWNSTOWN
Trial Zipcode	:62418
Prime Investigator	:CANTWELL/LIEBL/WAX

SITE

Experimental Design	:RCB	Soil Texture	:SILT LOAM
Number of Replicates	:3	Soil O.M. %	:2.0
Plot Wd X Lth (Ft)	:10.0 40.0	Soil pH	:6.8
Tillage Type	:CONVENTIONAL	Soil Name	:CISNE
Seedbed Description	:CLODDY	Metero. Station:	
Ground cover & %	:20		

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop	:SOYBEANS
Crop Variety	:WILIAMS
Planting Date	:5/11/88
Planting Method	:MECHANICAL
Planting Depth (in)	:1.5
Seeding Rate (seeds/foot)	:10
Row Spacing (in)	:30
Soil Temp (F) @ Plant	:75
Soil Moisture @ Planting	:DRY

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
SOYS	POST	3	TRIF		4	6
COCB	POST	4	LF	MED	2	4
COLQ	POST	10-20	LF	MED	4	12
JIWE	POST	4	LF	MED	2	4
SMPW	POST	3	LF	MED	2	4

Application Code	:POST		
Date of Application	:06/08/88	Nozzle Spacing (In)	:18
Date of Application	:0700	Boom Length (Ft)	:7.5
Pressure (PSI)	:40	Boom Height (In)	:20
Nozzle Type	:8002	Incorporation Equip	:
Temp (F)	:85	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	:5	Percent Cloud Cover	:50
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:20	Soil Temp (F)	:75
Soil Moisture @ App.	:DRY		

COMMENTS

Weeds and crop were drought stressed at application. Many cocklebur were severely burned by treatments, yet recovered.

					GIFT 6/23	COCB 6/23	JIWE 6/23	ILMG 6/23
1A	COBRA	2EC	0.20	POST	0	58	98	90
1B	COC	4L	0.5QT	POST				
2A	COBRA	2EC	0.20	POST	0	50	98	90
2B	28%N	4L	4.0Q	POST				
3A	COBRA	2EC	0.20	POST	0	60	91	90
3B	X-77	%/V	0.25	POST				
4A	COBRA	2EC	0.15	POST	0	82	99	90
4B	BASAGRAN	4EC	0.50	POST				
4C	28%N	4L	4.0Q	POST				
5A	COBRA	2EC	0.15	POST	0	83	95	93
5B	CLASSIC	25DF	2.7G	POST				
5C	X-77	%/V	0.25	POST				
6	CHECK			POST	0	0	0	0
7A	COBRA	2EC	0.20	POST	95	73	99	92
7B	SCEPTER	1.5SC	0.05	POST				
7C	X-77	%/V	0.25	POST				
8A	COBRA	2EC	0.15	POST	0	68	99	90
8B	2.4-DB	2EC	0.031	POST				
8C	X-77	%/V	0.25	POST				
9A	COBRA	2EC	0.20	POST	93	50	99	90
9B	SELECT	2EC	0.125	POST				
9C	X-77	%/V	0.25	POST				
10A	COBRA	2EC	0.20	POST	96	50	99	90
10B	SELECT	2EC	0.125	POST				
10C	COC	4L	0.5Q	POST				
CV					6	16	4	2
LSD					3	15	6	3

BACKGROUND

Trial Title	:1988 POSTEMERGENCE WEED CONTROL IN WHEAT
Trial Location	:BROWNSTOWN, IL
Trial Zipcode	:62418
Prime Investigator	:CANTWELL/LIEBL/WAX

SITE

Experimental Design	:RCB	Soil Texture	:SILTY CLAY LOAM
Number of Replicates	: 4	Soil O.M. %	: 0.0
Plot Wd X Lth (Ft)	:10.0 X 28.0	Soil pH	: 0.0
Tillage Type	:CONVENTIONAL	Soil Name	:CISNE
Ground cover & %	:SOIL 100%	Fert. Level	:
Seedbed Description	:CONV. TILL	Metero. Station	:

Previous Crop	Previous Pesticide	Year
SOYBEANS	VARIOUS TRTS.	1987

CROP

Trial Crop	:WHEAT
Crop Variety	:CALDWELL
Planting Date	:10/05/87
Planting Method	:DRILL
Planting Depth (in)	: 1.0
Seeding Rate (seed/foot)	: 90
Row Spacing (in)	: 7.0
Soil Temp (F) @ Plant	: 65
Soil Moisture @ Planting	:VERY MOIST

Application Code	:EPOS		
Date of Application	:04/05/88	Nozzle Spacing (in)	: 20
Time of Application	:08:00	Boom Length (Ft)	: 10
Pressure (PSI)	: 40	Boom Height (in)	: 20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	: 75	Elapsed Time to Incorp.	: 0 hrs.
Relative Humidity	:70	Incorp. Depth (in)	: 0.0
Wind Speed (MPH)	: 8.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 0
Soil Moisture @ App.	:ADQ		

Application Code	:LPOS		
Date of Application	:04/22/88	Nozzle Spacing (in)	: 20
Time of Application	:13:00	Boom Length (Ft)	: 10
Pressure (PSI)	: 40	Boom Height (in)	: 20
Nozzle Type	:8002	Incorporation Equip.	:
Air Temp (F)	: 80	Elapsed Time to Incorp.	: 0 hrs.
Relative Humidity	:80	Incorp. Depth (in)	: 0.0
Wind Speed (MPH)	: 8.0	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HANDHELD	Ground Speed (MPH)	: 3.0
Spray Volume (GPA)	:20.0	Soil Temp (F)	: 0
Soil Moisture @ App.	:ADQ		

COMMENTS

Test area was seeded with smartweed, mustard, and millet and "lightly" disked in early March to promote weed emergence. However, no weed emergence occurred. SB-23121 crop injury was a burning of leaf tips. The effect was worse at the later applications; however, no effect on yield was observed.

					YIELD BU/A	C.I. 4/8	C.I. 4/12	C.I. 4/19	C.I. 4/25	C.I. 4/29	C.I. 5/6
1	SB-23121	0.9EC	.125Z	EPOS	38	0	0	0	0	0	0
2	SB-23121	0.9EC	.125Z	LPOS	37	0	0	0	5	10	0
3	SB-23121	0.9EC	.25Z	EPOS	37	5	3	0	0	0	0
4	SB-23121	0.9EC	.25Z	LPOS	37	0	0	0	5	25	5
5	SB-23121	0.9EC	.375Z	EPOS	37	5	7	0	0	0	0
6	SB-23121	0.9EC	.375Z	LPOS	37	0	0	0	5	25	5
7	SB-23121	0.9EC	.5Z	EPOS	36	5	6	0	0	0	0
8	SB-23121	0.9EC	.5Z	LPOS	36	0	0	0	5	35	5
9A	SB-23121	0.9EC	.125Z	EPOS	36	5	5	0	0	0	0
9B	2.4-D	3.8EC	3.0Z	EPOS							
10A	SB-23121	0.9EC	.125Z	LPOS	37	0	0	0	5	10	0
10B	2.4-D	3.8EC	3.0Z	LPOS							
11A	SB-23121	0.9EC	.25Z	EPOS	37	5	6	0	0	0	0
11B	2.4-D	3.8EC	3.0Z	EPOS							
12A	SB-23121	0.9EC	.25Z	LPOS	36	0	0	0	5	20	5
12B	2.4-D	3.8EC	3.0Z	LPOS							
13A	SB-23121	0.9EC	.375Z	EPOS	37	5	6	0	0	0	0
13B	2.4-D	3.8EC	3.0Z	EPOS							
14A	SB-23121	0.9EC	.375Z	LPOS	36	0	0	0	5	25	5
14B	2.4-D	3.8EC	3.0Z	LPOS							
15A	SB-23121	0.9EC	.125Z	EPOS	37	10	18	5	0	0	0
15B	MCPA	4.0EC	3.0Z	EPOS							
16A	SB-23121	0.9EC	.125Z	LPSO	36	0	0	0	12	20	5
16B	MCPA	4.0EC	3.0Z	LPOS							
17A	SB-23121	0.9EC	.25Z	EPOS	37	10	22	5	0	0	0
17B	MCPA	4.0EC	3.0Z	EPOS							
18A	SB-23121	0.9EC	.25Z	LPOS	36	0	0	0	15	30	5
18B	MCPA	4.0EC	3.0Z	LPOS							

					YIELD BU/A	C.I. 4/8	C.I. 4/12	C.I. 4/19	C.I. 4/25	C.I. 4/29	C.I. 5/6
19A	SB-23121	0.9EC	.375Z	EPOS	37	10	22	5	0	0	0
19B	MCPA	4.0EC	3.0Z	EPOS							
20A	SB-23121	0.9EC	.375Z	LPOS	37	0	0	0	12	30	5
20B	MCPA	4.0EC	3.0Z	LPOS							
21	HARMONY	25%DG	.25Z	EPOS	37	0	0	0	0	0	0
22	HARMONY	25%DG	.25Z	LPOS	37	0	0	0	0	0	0
23	2.4-D	3.8EC	3.0Z	EPOS	37	0	0	0	0	0	0
24	2.4-D	3.8EC	3.0Z	LPOS	36	0	0	0	0	0	0
25	2.4-D	3.8EC	6.0Z	EPOS	37	0	0	0	0	0	0
26	2.4-D	3.8EC	6.0Z	LPOS	36	0	0	0	0	0	0
27	MCPA	4.0EC	3.0Z	EPOS	37	0	0	0	0	0	0
28	MCPA	4.0EC	3.0Z	LPOS	36	0	0	0	0	0	0
29	MCPA	4.0EC	6.0Z	EPOS	37	0	0	0	0	0	0
30	MCPA	4.0EC	6.0Z	LPOS	36	0	0	0	0	0	0
31	BROMOXY	3.8EC	6.0Z	EPOS	36	5	5	0	0	0	0
32	BROMOXY	3.8EC	6.0Z	LPOS	36	0	0	0	5	10	5
33	2.4-D	3.8EC	6.0Z	EPOS	37	0	0	0	0	0	0
34	2.4-D	3.8EC	6.0Z	LPOS	36	0	0	0	0	0	0
35	HRMONY	+75DF	.25Z	EPOS	37	0	0	0	0	0	0
36	HRMONY	+75DF	.25Z	LPOS	36	0	0	0	0	0	0
37	EXPRESS	75DF	.25Z	EPOS	37	0	0	0	0	0	0
38	EXPRESS	75DF	.25Z	LPOS	36	0	0	0	0	0	0
39	CHECK				37	0	0	0	0	0	0
40	CHECK				37	0	0	0	0	0	0
CV					2	5	10	3	3	8	3
LSD					1	1	4	1	1	4	1

BACKGROUND
Trial Title :POSTEMERGENCE JOGR CONTROL IN CORN
Trial State :ILL
Trial Location :DIXON SPRINGS
Trial Zipcode :
Prime Investigator :C/L/W

SITE
Experimental Design :RCB
Number of Replicates :3
Plot Wd X Lth (Ft) :10 25
Tillage Type :CONVENTIONAL
Seedbed Description :TRASHY
Ground cover & % : 20%

Soil Texture :SILT LOAM
Soil O.M. % : 1.5
Soil pH : 6.6
Soil Name :SHARON SILT LOAM
Metero. Station:

previous crop	previous pesticide	year
SOYBEANS		1987

CROP
Trial Crop :CORN
Crop Variety :PIONEER 3471
Planting Date :5/13/88
Planting Method :MECHANICAL
Planting Depth (in) :1.5
Seeding Rate (seeds/ACRE):26,000
Row Spacing (in) :30
Soil Temp (F) @ Plant :75
Soil Moisture @ Planting :ADEQUATE

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
JOGR	POST	3-9	LEAF	MED	3	12
SMGC	POST	3-6	LEAF	LIGHT	2	6
BRMG	POST	20	LEAF	MED	2	36
CORN	POST	6	LEAF		16	

Application Code	:EPOST		
Date of Application	:06/09/88	Nozzle Spacing (In)	:20
Time of Application	:1:00P	Boom Length (Ft)	:7.5
Pressure (PSI)	:40	Boom Height (In)	:18
Nozzle Type	:8002 FF	Incorporation Equip	:
Air Temp (F)	:65	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:40	Incorp. Depth (In)	:
Wind Speed (MPH)	:6-8	Percent Cloud Cover	:40
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:BKPK	Ground Speed (MPH)	:3
Spray Volume (GPA)	:20GPA	Soil Temp (F)	:80
Soil Moisture @ App.	:MOIST		

Application Code	:LPOST		
Date of Application	:6/20/88	Nozzle Spacing (In)	:20
Time of Application	:11:00a	Boom Length (Ft)	:10
Pressure (PSI)	:40	Boom Height (In)	: 20
Nozzle Type	:8003	Incorporation Equip.	:
Air Temp (F)	:85	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:75	Incorp. Depth (In)	:
Wind Speed (MPH)	:5	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HAND-HELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:20	Soil Temp (F)	:80
Soil Moisture @ App.	:ADQ		

					JOGR 7/06
1A	TANDEM	4EC	0.75	EPOST	0
1B	BLADEX	4L	2.50	EPOST	
2A	TANDEM	4EC	0.75	EPOST	13
2B	ATRAZINE	90DG	1.00	EPOST	
2C	BLADEX	4L	1.00	EPOST	
2D	X-77	%/V	0.25	EPOST	
3A	TANDEM	4EC	0.50	EPOST	0
3B	BLADEX	4L	2.00	EPOST	
3C	LASSO	4E	2.00	EPOST	
4A	TANDEM	4EC	0.50	EPOST	0
4B	BLADEX	4L	2.00	EPOST	
4C	LASSO	4E	3.00	EPOST	
5A	TANDEM	4EC	0.50	EPOST	0
5B	BLADEX	4L	2.00	EPOST	
5C	DUAL	8EC	1.67	EPOST	
6A	TANDEM	4EC	0.50	EPOST	0
6B	BLADEX	4L	2.00	EPOST	
6C	DUAL	8EC	2.50	EPOST	
7A	TANDEM	4EC	0.75	EPOST	0
7B	BLADEX	4L	2.00	EPOST	
7C	DUAL	8EC	1.00	EPOST	
8A	TANDEM	4EC	0.75	EPOST	0
8B	BLADEX	4L	2.00	EPOST	
8C	DUAL	8EC	2.00	EPOST	
9	CHECK				0
10A	BEACON	75WG	12G	EPOST	10
10B	X-77	%/V	0.25	EPOST	
11A	BEACON	75WG	16G	EPOST	8
11B	X-77	%/V	0.25	EPOST	
12A	DPXV9360	75DF	0.5Z	EPOST	97
12B	COC	4L	1.0Q	EPOST	
13A	DPXV9360	75DF	0.75Z	EPOST	99
13B	COC	4L	1.0Q	EPOST	
14A	KIH-2665	1.5F	0.05	EPOST	83
14B	X-77	%/V	0.25	EPOST	

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JOGR
7/06

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15A	KIH-2665	1.5F	0.10	EPOST	84
15B	X-77	%/V	0.25	EPOST	
16A	SB63596	0.89EC	30G	EPOST	15
16B	X-77	%/V	0.05	EPOST	
17A	SB63596	0.89EC	40G	EPOST	0
17B	X-77	%/V	0.05	EPOST	
18A	BEACON	75WG	12G	LPOST	17
18B	X-77	%/V	0.25	LPOST	
19A	BEACON	75WG	16G	LPOST	20
19B	X-77	%/V	0.25	LPOST	
20A	DPXV9360	75DF	0.50Z	LPOST	91
20B	COC	4L	1.0Q	LPOST	
21A	DPXV9360	75DF	0.75Z	LPOST	91
21B	COC	4L	1.0Q	LPOST	
22A	KIH-2665	1.5F	0.05	LPOST	57
22B	X-77	%/V	0.25	LPOST	
23A	KIH-2665	1.5F	0.10	LPOST	79
23B	X-77	%/V	0.25	LPOST	
24A	SB63596	0.89EC	30G	LPOST	13
24B	X-77	%/V	0.05	LPOST	
25A	SB63596	0.89EC	40G	LPOST	47
25B	X-77	%/V	0.05	LPOST	
26A	BEACON	75WG	6.0G	EPOST	30
26B	X-77	%/V	0.25	EPOST	
26C	BEACON	75WG	6.0G	LPOST	
26D	X-77	%/V	0.25	LPOST	
27	CHECK				0
CV					31
LSD					15

BACKGROUND
Trial Title :POSTEMEGENCE BDLF WEED CONTROL @ DIXON SPRINGS
Trial State :ILL
Trial Location :MORSE BOTTOM
Trial Zipcode :
Prime Investigator :WAX/LIEBL/EBELHARE

SITE
Experimental Design :RCB
Number of Replicates :3
Plot Wd X Lth (Ft) :10 X 25
Tillage Type :CONVENTIONAL
Seedbed Description :CLODDY
Ground cover & % : 10

Soil Texture : SILT LOAM
Soil O.M. % : 1.5
Soil pH : 6.6
Soil Name :SHARON SILT LOAM
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP
Trial Crop :SOYBEAN
Crop Variety :PIONEER 9442
Planting Date :5/18/88
Planting Method :MECHANICAL
Planting Depth (in) :1.5
Seeding Rate (seeds/foot): 10
Row Spacing (in) : 30
Soil Temp (F) @ Plant : 75
Soil Moisture @ Planting : ADQ

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE	PEST DENSITY	PEST HEIGHT (In) min	max
ILMG	POST	2-3 LF	MOD	2	
YENS	POST	3 LF	MOD	5	
SOYS		1 TRIF		4	

Application Code	:PRE		
Date of Application	:5/17/88	Nozzle Spacing (In)	:20
Time of Application	:2:00	Boom Length (Ft)	:10
Pressure (PSI)	:25	Boom Height (In)	:20
Nozzle Type	:8003	Incorporation Equip	:
Air Temp (F)	:75	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:60	Incorp. Depth (In)	:
Wind Speed (MPH)	:8 S	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HAND-HELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:20	Soil Temp (F)	: 70
Soil Moisture @ App.	:ADEQUATE		

Application Code	:POST		
Date of Application	:6/9/88	Nozzle Spacing (In)	:20
Time of Application	:1:00	Boom Length (Ft)	:10
Pressure (PSI)	:35	Boom Height (In)	:20
Nozzle Type	:8002	Incorporation Equip.	:
Air Temp (F)	:80	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	:3 SW	Percent Cloud Cover	: 0
Diluent Carrier	:WATER	Dew Presence (Y/N)	: N
Appli Equip Type	:HAND-HELD	Ground Speed (MPH)	: 3
Spray Volume (GPA)	:20	Soil Temp (F)	: 75
Soil Moisture @ App.	:ADEQUATE		

COMMENTS

Ratings 06/09 apply only to pretreatments or the "pre" portion of a combination treatment. Zero values for post treatments (applied 06/09) should be disregarded for 06/09 ratings.

					ILMG 6/09	ILMG 7/06	YENS 6/09
1A	REFLEX	2EC	0.313	POST	0	87	0
1B	COC	4L	1.0Q	POST			
1C	FUSILADE	1EC	0.20	7DL			
2A	REFLEX	2EC	0.313	POST	0	94	0
2B	2.4-DB	2EC	0.031	POST			
2C	COC	4L	0.5Q	POST			
2D	FUSILADE	1EC	0.20	7DL			
3A	REFLEX	2EC	0.253	POST	0	95	0
3B	CLASSIC	25DF	0.008	POST			
3C	COC	4L	1.0Q	POST			
3D	FUSILADE	1EC	0.20	7DL			
4A	REFLEX	2EC	0.253	POST	0	96	0
4B	BASAGRAN	4EC	0.50	POST			
4C	COC	4L	1.0Q	POST			
4D	FUSILADE	1EC	0.20	7DL			
5A	TORNADO	1.75E	0.44	POST	0	93	0
5B	COC	4L	1.0Q	POST			
6A	TORNADO	1.75E	0.44	POST	0	93	0
6B	BASAGRAN	4EC	0.50	POST			
6C	COC	4L	1.0Q	POST			
7A	BLAZER	2EC	0.38	POST	0	94	0
7B	POAST	1.5L	0.20	POST			
7C	COC	4L	1.0Q	POST			
8	CHECK				0	0	0
9	COMMAND	4EC	0.75	PRE	20	5	37
10	SCEPTER	1.5SC	0.094	PRE	78	42	57
11	PREVIEW	75DF	0.40	PRE	77	43	67
12	PURSUIT	2SC	0.063	PRE	80	73	77
13A	COMMAND	4EC	0.75	PRE	72	27	67
13B	SCEPTER	1.5SC	0.094	PRE			
14A	COMMAND	4EC	0.75	PRE	78	68	77
14B	PREVIEW	75DF	0.40	PRE			
15A	COMMAND	4EC	0.75	PRE	80	57	82
15B	PURSUIT	2SC	0.063	PRE			

					ILMG 6/09	ILMG 7/06	YENS 6/09
16A	COMMAND	4EC	0.60	PRE	40	86	30
16B	PURSUIT	2SC	0.063	POST			
16C	X-77	%/V	0.25	POST			
17A	COMMAND	4EC	0.60	PRE	20	27	30
17B	COBRA	2EC	0.20	POST			
17C	X-77	%/V	0.25	POST			
18A	COMMAND	4EC	0.60	PRE	0	94	0
18B	BLAZER	2EC	0.38	POST			
18C	X-77	%/V	0.25	POST			
19A	COMMAND	4EC	0.60	PRE	27	13	37
19B	SCEPTER	1.5SC	0.094	POST			
19C	X-77	%/V	0.25	POST			
20A	COMMAND	4EC	0.60	PRE	13	78	23
20B	CLASSIC	25DF	0.008	POST			
20C	X-77	%/V	0.25	POST			
21A	COMMAND	4EC	0.60	PRE	20	83	37
21B	CLASSIC	25DF	0.008	POST			
21C	PINNACLE	25DF	0.003	POST			
21D	X-77	%/V	0.25	POST			
22A	COMMAND	4EC	0.60	PRE	13	7	17
23A	COMMAND	4EC	0.60	PRE	0	89	0
23B	BASAGRAN	4EC	0.75	POST			
23C	2.4-DB	2EC	0.03	POST			
23D	COC	4L	1.0QT	POST			
24A	COMMAND	4EC	0.60	PRE	0	83	0
24B	BLAZER	2EC	0.25	POST			
24C	BASAGRAN	4EC	0.50	POST			
24D	X-77	%/V	0.25	POST			
25A	COMMAND	4EC	0.60	PRE	17	92	27
25B	BLAZER	2EC	0.25	POST			
25C	BASAGRAN	4EC	0.50	POST			
25D	COC	4L	1.0Q	POST			
26A	COMMAND	4EC	0.60	PRE	3	90	3
26B	BLAZER	2EC	0.25	POST			
26C	BASAGRAN	4EC	0.50	POST			
26D	DASH	4FL	2.0Q	POST			

					ILMG 6/09	ILMG 7/06	YENS 6/09
27A	COMMAND	4EC	0.60	PRE	13	95	23
27B	BLAZER	2EC	0.25	POST			
27C	BASAGRAN	4EC	0.50	POST			
27D	28%N	4L	4.0Q	POST			
28	CHECK				0	0	0
CV					38	17	45
LSD					18	18	22

BACKGROUND
Trial Title :MISCCANE
Trial State :IL
Trial Location :NOKOMIS
Trial Zipcode :62075
Prime Investigator :DIANE ANDERSON

SITE

Experimental Design	:RCB	Soil Texture	:SILT LOAM
Number of Replicates	:3	Soil O.M. %	:2-3
Plot Wd X Lth (Ft)	:30 30	Soil pH	:6.5
Tillage Type	:CONVENTIONAL	Soil Name	:HERRICK
Seedbed Description	:CLEAN FIRM FINE	Metero. Station:	
Ground cover & %	:0		

previous crop	previous pesticide	year
soybeans		1987

CROP
Trial Crop :CORN
Crop Variety :PIONEER 3292
Planting Date :5/04/88
Planting Method :MECHANICAL
Planting Depth (in) :1.5
Seeding Rate (seeds/ACRE):24,000
Row Spacing (in) :30
Soil Temp (F) @ Plant :70
Soil Moisture @ Planting :ADEQUATE

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE	PEST DENSITY	PEST HEIGHT (In) min	max
GIFT	POST	2-3 LEAF		1.5	3.0

Application Code	:POE		
Date of Application	:5/25/88	Nozzle Spacing (In)	:18
Time of Application	:6:00A	Boom Length (Ft)	:7.5
Pressure (PSI)	:20	Boom Height (In)	:18
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	:80	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:30	Incorp. Depth (In)	:
Wind Speed (MPH)	:3-5	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HAND-HELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:20	Soil Temp (F)	:75
Soil Moisture @ App.	:ADEQUATE		

					GIFT 6/12	GIFT 7/05	GIFT 7/12
01	BEACON	75WP	12G	POE	3	40	17
01	X-77	%/V	.25	POE			
02	BEACON	75WP	16G	POE	3	17	10
02	X-77	%/V	0.25	POE			
03	DPXV9360	75DF	0.5Z	POE	78	85	83
03	COC	4L	1Q	POE			
04	DPXV9360	75DF	0.75Z	POE	82	90	82
04	COC	4L	1Q	POE			
05	KIH-2665	1.5F	0.10	POE	67	66	23
05	X-77	%/V	0.25	POE			
06	KIH-2665	1.5F	0.125	POE	40	45	15
06	X-77	%/V	0.25	POE			
07	SB63596	0.89EC	30G	POE	52	30	12
07	X-77	%/V	.05	POE			
08	SB63596	0.89EC	40G	POE	48	27	20
08	X-77	%/V	.05	POE			
9	CHECK				0	0	0

BACKGROUND

Trial Title :POST CORN SHATTERCANE - PEORIA
Trial State :ILL
Trial Location :Metamora, IL
Trial Zipcode :
Prime Investigator :R. Liebl J. Sebert

SITE

Experimental Design	:rcb	Soil Texture	:silt loam
Number of Replicates	: 3	Soil O.M. %	: 3.3
Plot Wd X Lth (Ft)	:10.0 40.0	Soil pH	: 6.2
Tillage Type	:conventional	Soil Name	:
Seedbed Description	:trashy	Metero. Station:	
Ground cover & %	:20		

previous crop	previous pesticide	year
corn	thios	1987

CROP

Trial Crop :CORN
Crop Variety :pioneer 3379
Planting Date :04/25/88
Planting Method :jd 7000
Planting Depth (in) : 1.5
Seeding Rate(plants/acre): 27000
Row Spacing (in) : 30.0
Soil Temp (F) @ Plant : 70
Soil Moisture @ Planting :adequate
Crop emergence date :05/10/88

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
CORN	LPOS	4.5	lf		6.0	8.0
CORN	POST	3	lf		4.0	5.0
SHATTER	LPOS	4	lf		3.0	4.0
SHATTER	POST	3	lf		1.0	2.0

Application Code	:POST		
Date of Application	:05/18/88	Nozzle Spacing (In)	: 20
Time of Application	:11:00A	Boom Length (Ft)	: 7.5
Pressure (PSI)	: 40	Boom Height (In)	: 20
Nozzle Type	:8002	Incorporation Equip.	:
Air Temp (F)	: 70	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:40	Incorp. Depth (In)	:
Wind Speed (MPH)	: 8.0	Percent Cloud Cover	:0
Diluent Carrier	:water	Dew Presence (Y/N)	:n
Appli Equip Type	:backpack	Ground Speed (MPH)	:3
Spray Volume (GPA)	:20.0	Soil Temp (F)	:75
Soil Moisture @ App.	:dry		

COMMENTS

Disregard zero values recorded on 5/25 for 5-7L treatments (applications for 5-7L were on 5/25).

					C.I. 5/25	C.I. 6/07	SHAT 5/25	SHAT 6/07
1A	TANDEM	4EC	0.75	3-5L	10	2	78	47
1B	BLADEX	90DG	2.50	3-5L				
1C	X-77	%/V	0.25	3-5L				
2A	TANDEM	4EC	0.75	3-5L	2	0	79	47
2B	ATRAZINE	90DG	1.0	3-5L				
2C	BLADEX	90DG	1.0	3-5L				
2C	X-77	%/V	0.25	3-5L				
3A	TANDEM	4EC	0.50	3-5L	7	0	75	50
3B	BLADEX	90GD	2.00	3-5L				
3C	LASSO	4E	2.00	3-5L				
3D	X-77	%/V	0.25	3-5L				
4A	TANDEM	4EC	0.50	3-5L	17	7	76	57
4B	BLADEX	90DG	2.00	3-5L				
4C	LASSO	4E	3.00	3-5L				
4D	X-77	%/V	0.25	3-5L				
5A	TANDEM	4EC	0.50	3-5L	17	10	73	62
5B	BLADEX	90DG	2.00	3-5L				
5C	DUAL	8EC	1.67	3-5L				
5D	X-77	%/V	0.25	3-5L				
6A	TANDEM	4EC	0.50	3-5L	9	3	68	65
6B	BLADEX	90DG	2.00	3-5L				
6C	DUAL	8EC	2.50	3-5L				
6D	X-77	%/V	0.25	3-5L				
7A	TANDEM	4EC	0.75	3-5L	2	0	74	50
7B	BLADEX	90DG	2.00	3-5L				
7C	DUAL	8EC	1.00	3-5L				
7D	X-77	%/V	0.25	3-5L				
8A	TANDEM	4EC	0.75	3-5L	13	0	78	57
8B	BLADEX	90DG	2.00	3-5L				
8C	DUAL	8EC	2.00	3-5L				
8D	X-77	%/V	0.25	3-5L				
9	CHECK				0	0	0	0
10A	BEACON	75WG	12G	3-5L	0	0	86	53
10B	X-77	%/V	0.25	3-5L				
11A	BEACON	75WG	16G	3-5L	0	3	78	77
11B	X-77	%/V	0.25	3-5L				

					C.I. 5/25	C.I. 6/07	SHAT 5/25	SHAT 6/07
12A	DPXV9360	75DF	0.5Z	3-5L	3	0	77	71
12B	COC	4L	1.0Q	3-5L				
13A	DPXV9360	75DF	0.75Z	3-5L	0	7	86	90
13B	COC	4L	1.0Q	3-5L				
14A	KIH-2665	1.5F	0.05	3-5L	3	0	80	72
14B	X-77	%/V	0.25	3-5L				
15A	KIH-2665	1.5F	0.10	3-5L	7	0	89	90
15B	X-77	%/V	0.25	3-5L				
16A	SB63596	0.89EC	30G	3-5L	5	0	63	65
16B	X-77	%/V	0.05	3-5L				
17A	SB63596	0.89EC	40G	3-5L	13	0	82	83
17B	X-77	%/V	0.05	3-5L				
18A	TANDEM	4EC	0.75	5-7L	86	12	19	27
18B	ATRAZINE	90DG	1.0	5-7L				
18C	BLADEX	90DG	1.0	5-7L				
18D	X-77	%/V	.25	5-7L				
19A	BEACON	75WG	12G	5-7L	0	0	0	89
19B	X-77	%/V	0.25	5-7L				
20A	BEACON	75WG	16G	5-7L	0	0	0	86
20B	X-77	%/V	0.25	5-7L				
21A	DPXV9360	75DF	0.5Z	5-7L	0	0	0	97
21B	COC	4L	1.0Q	5-7L				
22A	DPXV9360	75DF	0.75Z	5-7L	0	0	0	89
22B	COC	4L	1.0Q	5-7L				
23A	KIH-2665	1.5F	0.05	5-7L	0	7	0	91
23B	X-77	%/V	0.25	5-7L				
24A	KIH-2665	1.5F	0.1	5-7L	0	0	0	94
24B	X-77	%/V	0.25	5-7L				
25A	SB63596	0.89EC	30G	5-7L	0	0	0	81
25B	X-77	%/V	0.05	5-7L				
26A	SB63596	0.89EC	40G	5-7L	0	10	0	73
26B	X-77	%/V	0.05	5-7L				
27	CHECK				0	0	0	0

BACKGROUND

Trial Title	:ORR SOYBEAN
Trial State	:ILL
Trial Location	:ORR FARM
Trial Zipcode	:
Prime Investigator	:Stevens/Wax/Liebl

SITE

Experimental Design	:RCB	Soil Texture	:SILT LOAM
Number of Replicates	:3	Soil O.M. %	:2.0
Plot Wd X Lth (Ft)	:7.5 32	Soil pH	:6.4
Tillage Type	:CONVENTIONAL	Soil Name	:
Seedbed Description	:FINE	Metero. Station:	
Ground cover & %	: 0		

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop	:SOYBEANS
Crop Variety	:WILLIAMS
Planting Date	:5/13/88
Planting Method	:MECHANICAL
Planting Depth (in)	:1.5
Seeding Rate (seeds/foot)	:10
Row Spacing (in)	:30
Soil Temp (F) @ Plant	:75
Soil Moisture @ Planting	:DRY

Pest TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
SOYS	POST	4	TRI		6	9
COCB	POST	7-8	LF	HIGH	7	10
ILMG	POST	5	LF	HIGH	3	5
GIFT	POST	4	LF	HIGH	6	10
COLQ	POST	6-9	LF	MED	4	9

Application Code	:POST		
Date of Application	:6/14/88	Nozzle Spacing (In)	:20
Time of Application	: 5:00PM	Boom Length (Ft)	:7.5
Pressure (PSI)	:45	Boom Height (In)	:20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	:90	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:50	Incorp. Depth (In)	:
Wind Speed (MPH)	:SW 10	Percent Cloud Cover	:0
Diluent Carrier	:H2O	Dew Presence (Y/N)	:N
Appli Equip Type	:HAND HELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:20	Soil Temp (F)	:85
Soil Moisture @ App.	:DRY		

COMMENTS

The weeds were large at the time of application and growing under stressed conditions. Many treatments provided only fair weed control. Crop injury was slight. Few treatments afforded excellent foxtail control. Common cocklebur control was good to excellent. Good control of morningglory and lambsquarters was achieved by few treatments, and most did not provide adequate control.

					C.I. 6/29	GIFT 6/29	COCB 6/29	ILMG 6/29	COLQ 6/29
1A	TORNADO	1.75EC	0.43	POST	7	93	80	53	78
1B	COC	4L	1QT	POST					
2A	TORNADO	1.75EC	0.43	POST	10	95	91	75	60
2B	DASH	4L	1QT	POST					
3A	POAST	1.5EC	0.15	POST	0	40	86	23	58
3B	BASAGRAN	4S	0.75	POST					
3C	COC	4L	1QT	POST					
4A	POAST	1.5EC	0.15	POST	0	7	82	47	60
4B	BASAGRAN	4S	0.75	POST					
4C	DASH	4L	1QT	POST					
5A	SELECT	2EC	0.1	POST	17	96	92	37	63
5B	COBRA	2EC	0.2	POST					
5C	COC	4L	0.5QT	POST					
6A	SELECT	2EC	0.1	POST	0	98	95	47	30
6B	COBRA	2EC	0.2	POST					
6C	DASH	4L	1.0QT	POST					
7A	COBRA	2EC	0.2	POST	0	23	90	43	40
7B	COC	4L	0.5	POST					
8A	COBRA	2EC	0.2	POST	0	7	88	37	47
8B	28N	4L	4QT	POST					
9A	PURSUIT	2SC	0.063	POST	7	80	87	60	53
9B	COC	4L	1QT	POST					
10A	PURSUIT	2SC	0.063	POST	0	88	95	53	63
10B	28N	4L	4QT	POST					
10C	X77	%/V	0.25	POST					
11A	SCEPTER	1.5SC	0.094	POST	0	75	90	30	50
11B	28N	4L	4QT	POST					
11C	X77	%/V	0.25	POST					
12A	SCEPTER	1.5SC	0.063	POST	0	67	90	43	37
12B	28N	4L	4QT	POST					
12C	X77	%/V	0.25	POST					
13A	CLASSIC	25DF	3.69G	POST	10	13	90	70	43
13B	28N	4L	4QT	POST					
13C	X77	%/V	0.25	POST					

					C.I. 6/29	GIFT 6/29	COCB 6/29	ILMG 6/29	COLQ 6/29
14A	CLASSIC	25DF	5.5G	POST	13	13	87	70	65
14B	28N	4L	4QT	POST					
14C	X77	%/V	0.25	POST					
15A	DPXM6316	25DF	1.82G	POST	27	10	92	72	75
15B	28N	4L	4QT	POST					
15C	X77	%/V	0.25	POST					
16A	CLASSIC	25DF	3.69G	POST	10	3	83	75	67
16B	DPXM6316	25DF	1.82G	POST					
16C	28N	4L	4QT	POST					
16D	X77	%/V	0.25	POST					
17	2.4-DB	2EC	0.031	POST	0	0	73	40	57
18A	GALAXY	3.67EC	0.92	POST	0	0	96	43	67
18B	COC	4L	1QT	POST					
19A	STORM	4EC	0.75	POST	0	7	89	33	53
19B	COC	4L	0.5QT	POST					
20A	GALAXY	3.67EC	0.69	POST	0	0	93	33	50
20B	COC	4L	1QT	POST					
21A	STORM	4EC	0.56	POST	0	0	83	30	50
21B	COC	4L	0.5QT	POST					
22A	BASAGRAN	4S	0.75	POST	0	0	82	23	47
22B	COC	4L	1QT	POST					
23A	BASAGRAN	4S	0.75	POST	0	0	94	85	72
23B	2.4-DB	2EC	0.031	POST					
23C	COC	4L	0.25QT	POST					
24	SB23031	0.89	26G	POST	0	13	37	17	17
25	SB23031	0.89	26G	POST	0	17	43	27	23
26	CHECK				0	0	0	0	0
CV					16	43	11	30	21
LSD					10	23	14	22	18

BACKGROUND

Trial Title :SAND FARM POST SOYBEANS
Trial State :ILL
Trial Location :SAND FARM
Trial Zipcode :
Prime Investigator :STEVENS/WAX/LIEBL

SITE

Experimental Design :RCB
Number of Replicates :4
Plot Wd X Lth (Ft) :7.5 25
Tillage Type :CONVENTIONAL
Seedbed Description :FINE
Ground cover & % :0

Soil Texture :SAND
Soil O.M. % :0.5%
Soil pH :6.0
Soil Name :PLAINFIELD SAND
Metero. Station:

previous crop	previous pesticide	year
CORN		1987

CROP

Trial Crop :SOYBEANS
Crop Variety :WILLIAMS
Planting Date :5/21/88
Planting Method :MECHANICAL
Planting Depth (in) :1.5
Seeding Rate (seeds/foot):10
Row Spacing (in) :30
Soil Temp (F) @ Plant :70
Soil Moisture @ Planting :ADQ

Pest

TRIAL PEST	APPLICATION CODE	PEST GROWTH STAGE		PEST DENSITY	PEST HEIGHT (In) min	max
SOYS	POST	1-2	TRI		4	6
LACG	POST	3	LF	HIGH	2	2
COLQ	POST	6-8	LF	MED	3	4
CORW	POST	7	LF	MED	4	4

Application Code	:POST		
Date of Application	:6/14/88	Nozzle Spacing (In)	:20
Time of Application	:AM	Boom Length (Ft)	:7.5
Pressure (PSI)	:45	Boom Height (In)	:20
Nozzle Type	:8002	Incorporation Equip	:
Air Temp (F)	:85	Elapsed Time to Incorp.	: hrs.
Relative Humidity	:60	Incorp. Depth (In)	:
Wind Speed (MPH)	:SW	Percent Cloud Cover	:0
Diluent Carrier	:WATER	Dew Presence (Y/N)	:N
Appli Equip Type	:HAND-HELD	Ground Speed (MPH)	:3
Spray Volume (GPA)	:20 GP	Soil Temp (F)	:85
Soil Moisture @ App.	:ADQ		

COMMENTS

This study was conducted on a very dense stand of large crabgrass growing under good moisture conditions. Moisture was adequate at the time of application, and the area recieved approximately 1 inch of water by sprinkler irrigation. No soybean injury was observed from the herbicide treatments. The herbicides were more effective with COC than DASH. Select appeared to be the most effective herbicide for control of large crabgrass.

					C.I. 6/29	LACG 6/29	LACG 7/12
1A	POAST	1.5EC	0.20	POST	0	72	46
1B	COC	4L	1.0Q	POST			
2A	POAST	1.5EC	0.15	POST	0	59	42
2B	COC	4L	1.0Q	POST			
3A	POAST	1.5EC	0.10	POST	0	55	49
3B	COC	4L	1.0Q	POST			
4A	POAST	1.5EC	0.075	POST	0	17	14
4B	COC	4L	1.0Q	POST			
5A	FUSILADE	1EC	0.20	POST	0	79	71
5B	COC	4L	1.0Q	POST			
6A	FUSILADE	1EC	0.15	POST	0	81	75
6B	COC	4L	1.0Q	POST			
7A	FUSILADE	1EC	0.10	POST	0	60	30
7B	COC	4L	1.0Q	POST			
8A	FUSILADE	1EC	0.075	POST	0	47	34
8B	COC	4L	1.0Q	POST			
9A	WHIP	1EC	0.15	POST	0	79	71
9B	COC	4L	1.0Q	POST			
10A	WHIP	1EC	0.10	POST	0	77	69
10B	COC	4L	1.0Q	POST			
11A	WHIP	1EC	0.075	POST	0	80	79
11B	COC	4L	1.0Q	POST			
12A	SELECT	2EC	0.15	POST	0	93	93
12B	COC	4L	1.0Q	POST			
13A	SELECT	2EC	0.10	POST	0	96	93
13B	COC	4L	1.0Q	POST			
14A	SELECT	2EC	0.075	POST	0	93	87
14B	COC	4L	1.0Q	POST			
15	CHECK				0	0	0
16A	POAST	1.5EC	0.20	POST	5	41	32
16B	DASH	4FL	2.0Q	POST			

					C.I. 6/29	LACG 6/29	LACG 7/12
17A	POAST	1.5EC	0.15	POST	0	42	31
17B	DASH	4FL	2.0Q	POST			
18A	POAST	1.5EC	0.10	POST	0	27	12
18B	DASH	4FL	2.0Q	POST			
19A	POAST	1.5EC	0.075	POST	0	25	10
19B	DASH	4FL	2.0Q	POST			
20A	FUSILADE	1EC	0.20	POST	0	71	26
20B	DASH	4FL	2.0Q	POST			
21A	FUSILADE	1EC	0.15	POST	0	57	22
21B	DASH	4FL	2.0Q	POST			
22A	FUSILADE	1EC	0.10	POST	0	45	24
22B	DASH	4FL	2.0Q	POST			
23A	FUSILADE	1EC	0.075	POST	2	35	21
23B	DASH	4FL	2.0Q	POST			
24A	WHIP	1EC	0.15	POST	0	70	51
24B	DASH	4FL	2.0Q	POST			
25A	WHIP	1EC	0.10	POST	0	40	40
25B	DASH	4FL	2.0Q	POST			
26A	WHIP	1EC	0.075	POST	0	32	17
26B	DASH	4FL	2.0Q	POST			
27A	SELECT	2EC	0.15	POST	0	90	80
27B	DASH	4FL	2.0Q	POST			
28A	SELECT	2EC	0.10	POST	0	89	75
28B	DASH	4FL	2.0Q	POST			
29A	SELECT	2EC	0.075	POST	0	65	55
29B	DASH	4FL	2.0Q	POST			
30	CHECK				0	0	0
CV					8	19	29
LSD					3	16	18

APPENDIX A

HERBICIDES EVALUATED IN 1988

TRADE NAME	COMMON NAME	EXP. #	COMPANY
AAtrex;others	atrazine	--	several
Amiben	chloramben	--	Rhone-Poulenc
Assure	quizalofop	DPX-Y6202-38	DuPont
Banvel	dicamba	--	Sandoz
Basagran	bentazon	--	BASF
Beacon	--	CGA-136876	CIBA-GIEGY
Benazolin	benazolin	--	Nor-Am
Bladex	cyanazine	--	DuPont
Blazer	acifluorfen	--	Rhom&Haas
Buctril	bromoxynil	--	Rhone-Poulenc
Butoxone/Butyrac	2,4-DB	--	several
Classic	chlorimuron ethyl	--	DuPont
Cobra	lactofen	--	Valen/Chevron
Command	clomazone	--	FMC
Dual	metolachlor	--	CIBA-GEIGY
Eradicane Encap.	EPTC	--	ICI
Eradicane Extra	EPTC+R25788	--	ICI
Fusilade 2000	fluazifop	--	ICI
Gramoxone	paraquat	--	ICI
Harness	acetochlor	--	Monsanto
Hoelon	diclofop	--	Hoechst-Roussel
Ignite	glufosinate	--	Hoechst-Roussel
Lasso	alachlor	--	Monsanto
Lexone	metribuzin	--	DuPont
Linex	linuron	--	Griffin
Lorox	linuron	--	DuPont
Lontrel	clopyralid	--	Dow
Marathon	cycloate+safener	--	ICI
Modown	bifenox	--	Rhone-Poulenc
Paraquat	paraquat	--	Valen/Chevron
Poast	seyhoxydin	--	BASF
Princep	simazine	--	CIBA-GIEGY
Prowl	pendimethalin	--	AmCyanamid
Pursuit	imazethapyr	--	AmCyanimid
Reflex	fomesafen	--	ICI
Round-Up	glyphosate	--	Monsanto
Scepter	imazaquin	--	AmCyanamid
Select	cloproxydin	--	Valent
Sencor	metribuzin	--	Mobay
Sonalan	ethalfluralin	--	Elanco

APPENDIX A (cont.)

HERBICIDES EVALUATED IN 1988

TRADE NAME	COMMON NAME	EXP. #	COMPANY
Starane	fluroxypyr	--	Dow
Surflan	oryzalin	--	Elanco
Sutan Encap	butylate	--	ICI
Sutan +	butylate+R25788	--	ICI
Tackle	acfluorfen	--	Rhone-Poulenc
Tandem	tridiphane	--	Dow
Tough	pyridate	--	Terra
Treflan	trifluralin	--	Elanco
Weedone/Weedar ect.	2,4-D	--	several
Verdict	haloxyfop methyl	--	Dow
Vernam	vernolate	--	ICI
Whip	fenoxaprop	--	Hoechst-Roussel
--	cycloxydim	BAS-517	BASF
--	--	BAS-514	BASF
--	--	BAS-0562-16H	BASF
--	--	CGA-180937	CIBA-GIEGY
--	--	DPX-M6316	DuPont
--	--	DPX-V6390	DuPont
--	--	EF-689	DOW
--	--	EL-177	Elanco
--	--	HOE 46360	Hoechst-Roussel
--	--	ICIA 5767	ICI
--	--	KIH 2665	Kumiai
--	--	KIH 9201	Kumiai
--	--	San 582	Sandoz
--	--	SB-53482	Valent
--	--	SB-63596	Valent
--	--	SB-23121	Valent
--	--	XRM-3972	DOW

ADDITIVES EVALUATED IN 1988

ADDITIVE	CLASSIFICATION	COMPANY
Triton AG-98	surfactant	Rohm & Haas
Dash (BCH-815)	crop oil	BASF
COC	crop oil concentrate	several
X-77	surfactant	Valent/Chevron
Tween 20	surfactant	AmCyanamid
10-34-0	fluid fertilizer	several
28% N	fluid fertilizer	several

APPENDIX B

INDEX OF WEED SPECIES REPORTED

ABBREVIATION	COMMON NAME	SCIENTIFIC NAME
ANBG	Annual Bluegrass	Poa annua
ANMG	Morningglory species	Ipomea species
COCB	Common Cocklebur	Xanthium strumarium
COCH	Common Chickweed	Stellaria media
CODA	Common Dandelion	Taraxacum officinale
COLQ	Common Lambsquarters	Chenopodium Album
CORW	Common Ragweed	Ambrosia artemisiifolia
COSF	Common Sunflower	Helianthus annuus
EBNS	E. Black Nightshade	Solanum ptycanthum
FAPA	Fall Panicum	Panicum dichotomiflorum
GIFT	Giant Foxtail	Setaria faberi
GIRW	Giant Ragweed	Ambrosia trifida
HOWE	Horseweed Conyza	canadensis
HEBI	Henbit	Lamium amplexicaule
ILMG	Ivyleaf Morningglory	Ipomea hederacea
JIWE	Jimsonweed	Datura stramonium
JOGR	Johnson Grass	Sorghum halapense
LACG	Large Crabgrass	Digitaria sanguinalis
PESW	Penn. Smartweed	Polygonum pennsylvanicum
PRLE	Prickly Lettuce	Lactuca serriola
PRSI	Prickly Sida	Sida spinosa
RRPW	Redroot Pigweed	Amaranthus retroflexus
SHCA	Shattercane	Sorghum bicolor
SMPW	Smooth Pigweed	Amaranthus hybridus
TAMG	Tall Morningglory	Ipomea purpurea
TAMU	Tansy Mustard	Descurainia pinnata
VELE	Velvetleaf	Abutilon theophrasti
YENS	Yellow Nutsedge	Cyperus esculentus

APPENDIX C

FORMULATED HERBICIDE COMBINATIONS (PRE-MIXES) FOR CORN

ATRAZINE	PLUS	RATIO	TIME OF APPLICATION
BICEP 6L	DUAL	4:5	EPP, PPI, PRE
BUCTRIL/ATR. 3S	BUCTRIL	2:1	EPP?,POST
BULLET 4L	LASSO	5:3	EPP, PPI, PRE
COLONEL 2.4L	GRAMOXONE	5:1	EPP, PRE
EXTRAZINE II 4L	BLADEX	1:3	EPP, PPI, PRE, POST
LADDOK 3.33L	BASAGRAN	1:1	POST
LARIAT 4L	LASSO	5:3	EPP, PPI, PRE
MARKSMAN 3.2L	BANVEL	2.2:1.1	EPP?, PRE, POST
PROZINE 70DF	PROWL	1:1	PRE
RAMROD/ATR 4L	RAMROD	3:1	PRE
RHINO 6L	GENATE+	5:2	PPI
SUTAZINE 6L	SUTAN+	4:1	PPI

FORMULATED HERBICIDE COMBINATIONS (PRE-MIXES) FOR BEANS

PREMIX NAME	"GRASS"	+ "BROAD"	AI RATIO	TIME OF APPLICATION
ALA-SCEPT ??	LASSO	+ SCEPTER	16:1	EPP, PPI, PRE
COMMENCE 5.25	TREFLAN	+ COMMAND	12:9	PPI
PURSUIT + ??	PROWL	+ PURSUIT	14:1	PPI. PRE
SALUTE 4L	TREFLAN	+ SENCOR	2:1	PPI
SQUADRON 2.33L	PROWL	+ SCEPTER	6:1	PPI, PRE
TRI-SCEPT	TRILIN	+ SCEPTER	6:1	PPI
TORNADO 1.75E	FUSILADE	+ REFLEX	3:4	POST
TURBO 8E	DUAL	+ SENCOR	9:2	PPI, PRE

BEAN PREMIX	"BROAD"	+ "BROAD"	AI RATIO	TIME
CANOPY 75DF	LEXONE	+ CLASSIC	6:1	PPI, PRE
PREVIEW 75DF	LEXONE	+ CLASSIC	10:1	PPI, PRE
GEMINI 60DF	LOROX	+ CLASSIC	12:1	PRE
LOROX+ 60DF	LOROX	+ CLASSIC	16:1	PRE
GALAXY 3.67S	BASAGRAN	+ BLAZER	9:2	POST
STORM 4S	BASAGRAN	+ BLAZER	2:1	POST

NO-TILL PREMIX	GRASS	+ KNOCKDOWN	AI RATIO	CROP CLEARANCE
BRONCO 4E	LASSO	+ ROUNDUP	2.6:1.4	CORN, BEANS, MILO
PRELUDE 2.50	DUAL	+ GRAMOX.	4:1	CORN, BEANS, MILO

APPENDIX D

BEAN HERBICIDE(S)	NIS	COC	DASH	UAN	MAP	2,4-DB
	ADDITIVES					
BASAGRAN		X	X	X	X	X
TACKLE	X	X		X	X	X
BLAZER	X					X + NIS
GALAXY	X			X		
STORM		X				
COBRA	X	X		X		X + NIS
REFLEX	X	X				X + NIS/COC
TORNADO	X	X				
POAST		X	X	+X		
FUSILADE	X	X				
OPTION	X	X				
ASSURE	X	X				
SCEPTER	X					
PURSUIT	X					
CLASSIC	X	X		+X		
RESCUE	X	X				
RESCUE + BLA/TAC	X	?				
<u>CORN HERBICIDES</u>						
BASAGRAN		X				
LADDOK		X				
ATRAZINE		X				
BLADEX	X*					
BANVEL	X					
MARKSMAN	X					

* = ONLY IF UNDER EXTREME DROUGHT CONDITIONS
NIS = NON-IONIC SURFACTANT
\+ = USED ONLY IN COMBINATION WITH OTHER SURFACTANTS

APPENDIX E

RAINFALL SUMMARY FOR THE MONTH OF APRIL

DATE	BROWNSTOWN	DIXON SPR.	SAND FARM	ORR	URBANA
precip	precip	precip	precip	precip	
1	.36	.63	---	---	.10
2	.13	.16	1.01	.27	.04
3	---	---	---	.11	.16
4	---	---	---	---	---
5	---	---	---	---	.22
6	.12	.71	---	.37	.34
7	.12	---	---	---	---
8	---	---	---	---	---
9 ---	---	---	---	---	
10	---	---	---	---	---
11	---	---	---	---	---
12	---	---	---	---	---
13	---	---	---	---	---
14	---	---	---	---	---
15 ---	.04	---	---	---	
16	---	---	---	---	---
17	---	---	---	---	.37
18	.22	.78	---	.04	---
19	---	---	---	---	---
20	---	---	---	---	---
21	---	---	---	---	.20
22	---	---	---	---	---
23	---	---	---	---	---
24	---	---	---	---	---
25	---	---	---	---	---
26	---	---	---	---	.07
27	.03	---	---	---	---
28 ---	---	---	---	---	
29	---	---	---	---	---
30	---	---	---	---	---
TOTAL	.98	2.32	1.01	.79	1.50

APPENDIX E (cont.)

RAINFALL SUMMARY FOR THE MONTH OF MAY

DATE		BROWNSTOWN	DIXON SPR.	SAND FARM	ORR	URBANA
		precip	precip	precip	precip	precip
1	---	---	---	---	---	
2	---	---	---	---	---	
3	---	.02	---	---	---	
4	.36	.98	---	---	---	
5	---	---	---	---	---	
6	---	---	---	---	---	
7	---	---	---	---	---	
8	---	.04	.78	---	.53	
9	.72	.77	---	1.21	---	
10	---	---	---	---	---	
11	---	---	---	---	---	
12	---	---	---	---	.01	
13	---	---	---	---	---	
14	---	---	---	---	---	
15	---	---	---	---	---	
16	---	---	---	---	.07	
17	---	---	---	---	---	
18	---	---	---	---	---	
19	---	---	---	---	---	
20	---	---	---	---	---	
21	---	---	---	---	---	
22	---	.17	.62	---	.68	
23	.22	.32	---	.19	.22	
24	.05	.50	---	2.05	.03	
25	---	---	---	---	---	
26	---	---	---	---	---	
27	---	---	---	---	---	
28	---	---	---	---	.01	
29	---	---	---	---	---	
30	---	---	---	---	---	
31	---	---	---	---	---	
TOTAL		1	2.8	1.4	3.45	1.55

APPENDIX E (cont.)

RAINFALL SUMMARY FOR THE MONTH OF JUNE

DATE	BROWNSTOWN	DIXON SPR.	SAND FARM	ORR	URBANA
	precip	precip	precip	precip	precip
1 ---	---	---	---	---	
2 ---	---	---	---	---	
3	---	---	.13	---	---
4	---	---	---	---	---
5	---	---	---	---	---
6	---	---	---	---	---
7	---	---	---	---	---
8	---	---	.83	---	.32
9	.96	.31	---	1.38	---
10 ---	---	---	---	---	
11 ---	---	---	---	---	
12 ---	---	---	---	---	
13 ---	---	---	---	---	
14 ---	---	---	---	---	
15 ---	---	---	---	---	
16 .12	---	---	---	---	
17 ---	---	---	---	---	
18 ---	---	---	---	---	
19 ---	---	---	---	---	
20 ---	---	---	---	---	
21 ---	---	---	---	---	
22 ---	---	---	---	---	
23 ---	---	---	---	---	
24 ---	---	---	---	---	
25 ---	---	---	---	---	
26 ---	---	---	---	---	
27 ---	---	---	---	---	
28 ---	---	---	---	---	
29 ---	.16	---	---	---	
30 .09	.36	.10	1.23	---	
TOTAL	1.17	.83	1.06	2.61	.32

APPENDIX E (cont.)

RAINFALL SUMMARY FOR THE MONTH OF JULY

DATE	BROWNSTOWN	DIXON SPR.	SAND FARM	ORR	URBANA
	precip	precip	precip	precip	precip
1	---	---	---	---	---
2	---	---	---	---	---
3	---	---	---	---	---
4	---	---	---	---	---
5	---	---	---	---	---
6	---	---	---	---	---
7	---	---	---	---	---
8	---	---	---	---	---
9	---	---	---	---	---
10 ---	---	---	---	.02	
11 1.15	.08	.14	.12	---	
12 .02	.42	---	---	.03	
13 ---	.38	---	---	---	
14 ---	---	---	---	.35	
15 .65	---	---	---	---	
16 ---	---	---	---	---	
17 ---	---	.27	---	---	
18 .15	.05	---	.17	.92	
19 ---	.13	---	.02	---	
20 .35	.40	---	.02	.20	
21 1.0	---	---	---	---	
22 ---	---	---	---	---	
23 ---	---	---	---	---	
24 ---	---	---	---	---	
25 ---	.02	.41	---	2.12	
26 .07	.04	---	---	---	
27 ---	---	---	---	---	
28 ---	---	---	---	---	
29 ---	---	---	---	---	
30 .38	.01	---	---	---	
31 .12	---	---	---	---	
TOTAL	2.39	1.53	.82	.33	3.64

AGX

1988 Illinois Weed Science Research Report Part II

Department of Agronomy
Agricultural Experiment Station
College of Agriculture
University of Illinois at Urbana-Champaign

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NORTHEASTERN ILLINOIS AGRONOMY RESEARCH CENTER - ELWOOD

MULTI-SITE

APPENDIX

Mike Grimes - Terra International
Bill Bertges - Hoechst Roussel

More than two dozen experiments were conducted at six different locations in the state with a wide variety of soil and climatic conditions. Land area used is estimated at about 50 acres. Emphasis is placed on research that will help farmers operate more efficiently and help to assure safety for their crops and themselves while conserving their land and energy resources.

Although a variety of weed control practices are considered, considerable effort is devoted to herbicides since an estimated $350,000,000 worth of herbicides are used in Illinois by about 90,000 farmers and over 10,000 commercial applicators on about 20 million acres.

As the research results are moved into the technology transfer system, hopefully the information will be helpful to farmers, dealers, applicators and others faced by the increasing complexity for making their decisions for designing weed control programs. Hopefully, the results will also be helpful to industry as they plan their developement strategy for Illinois.

We have attempted to place emphasis on research that will help farmers obtain broad-spectrum weed control at a reasonable cost. Where we visualize new needs and opportunities, we attempt to design systems to fit changing production practices. However, we also continue what might be considered more routine research to delineate optimum rates of herbicides for each major weed species. We evaluate crop tolerance and potential for affecting subsequent crops.

We sincerely appreciate the suggestions, help and support of those involved with our weed science research program.

Multi-species evaluation of preplant and preemergence soil-applied herbicides

Knake, Ellery L., Ann M. Carrick, Russell A. Higgins, Maurice W. Wolff,
Fritz K. Koppatschek, Lyle E. Paul and William S. Curran

The primary purpose of these trials was to evaluate crop tolerance and weed susceptibility for most of the crops and annual weed species common to Illinois. Both current and experimental herbicides are included with half of the treatments preplant incorporated and half surface-applied.

The evaluation was conducted in 1988 at the Northern Illinois Agronomy Research Center near DeKalb, Illinois on Drummer silty clay loam with 5 to 6% organic matter. The field is in a high state of fertility. The area was moldboard plowed the previous summer after a similar trial. On April 25, a tandem disk with harrow was used once. Preplant herbicides were applied 7:00 to 9:00 a.m. on April 26. These were incorporated with a tandem disk operated four inches deep followed by a harrow. Two passes were made in the same east and west direction in which herbicides were applied.

Crops and weeds were planted between 9:00 a.m. and 4:00 p.m. April 26. Corn, soybeans, and sorghum were planted with a conventional four row planter. Small grains were seeded with a drill. Cocklebur was planted with a hand planter. The remainder of the weeds and alfalfa and clover were seeded with a Brillion seeder. It began raining as seeding was being completed with 0.21 inch on April 26 and 0.27 inch on April 27. Soil was in excellent physical condition at time of preplant application and seeding. Moisture was optimum from 0.54 inch of rain on April 22. Preemergence herbicides were applied between 7:00 and 8:00 a.m. May 3. There was 0.35 inch of rain May 8 and an additional 2.04 inches during the remainder of May.

All herbicides were applied with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi pressure and 3 mph to give 25 gpa. The seeding was done in a N-S direction and herbicides applied in an E-W direction to plots 10 ft. x 150 ft. Ratings were made June 9 and 10.

Conditions at time of herbicide application:

Date	April 26	May 3
Air temperature - F	50	58
Bare soil temperature - 4 inch - F	45	50
Wind speed (mph)	4 E	3 E
Sky - % cloud cover	100	0
Relative humidity - %	52	40
Rainfall previous week	.69	.35
Rainfall following week	.35	.41

Results are presented in the tables. (Dept. of Agronomy, University of Illinois, Urbana).

Table 1. Multi-species evaluation with preplant incorporated herbicides (Knake, Carrick, Higgins, Wolff, Koppatschek, Paul and Curran).

		Soybeans				Corn-Pioneer				Grain Sorghum							
Preplant incorporated	Rate lb/A	Carter	Chamber-lain	Harper	Hobbit	3475	3732	3615	3377	Untreated	CGA133205	Oats Larry	Winter Wheat	Winter Rye	Spring Barley Robust	Alfalfa	Red Clover
*Alac & trif + clom	2.5 + 0.5 + 0.5	0	0	0	0	80	70	50	50	90	90	60	80	80	50	70	100
Alac & trif + metr & clim	2.5 + 0.5 + 0.35 + 0.035	0	0	0	50	90	90	70	70	60	60	50	100	100	80	90	100
Trif & clom	1.0 + 0.75	0	0	0	0	90	100	60	90	100	100	80	90	90	30	40	60
Trif & clom + imqn	1.0 + 0.75 + 0.063	0	0	0	0	100	100	100	100	90	100	90	100	100	60	70	70
Etha + clom + imqn	0.94 + 0.5 + 0.063	0	0	0	40	60	60	60	60	90	100	90	90	90	40	70	50
Etha + clom	0.94 + 0.75	0	0	0	0	100	100	100	100	80	80	90	60	60	90	70	50
Pend & imqn	0.75 + 0.125	0	0	0	0	100	100	100	100	90	100	80	70	70	90	80	90
Clom + imqn	0.75 + 0.094	0	0	0	0	100	100	100	100	50	50	70	80	80	90	90	90
Trif & imqn	0.75 + 0.125	0	0	0	0	100	100	100	100	100	100	100	70	70	100	80	90
Trif + imep	0.88 + 0.063	0	0	0	0	100	100	100	100	100	100	100	90	90	50	50	80
Etha + imep	0.94 + 0.063	0	0	0	0	90	90	90	90	90	100	100	90	90	90	20	50
Pend + imep	0.88 + 0.063	0	0	0	0	80	80	60	80	90	90	80	50	50	50	20	50
Trif & metr + imep	0.75 + 0.38 + 0.063	0	0	0	20	100	100	100	100	100	100	100	100	100	80	80	100
Trif + metr & clim	1.0 + 0.35 + 0.035	0	0	0	30	100	100	100	100	100	90	100	80	100	70	80	100
Etha + metr & clim	0.94 + 0.35 + 0.035	0	0	0	20	100	100	100	100	90	100	100	90	90	100	70	100
Trif & metr	0.75 + 0.38	0	0	0	30	80	80	80	80	100	100	100	80	80	60	60	100
Trif & metr + clom	0.75 + 0.38 + 0.5	0	0	0	30	80	80	80	80	70	80	90	100	100	100	80	100
Clom + metr & clim	0.75 + 0.35 + 0.035	0	0	0	50	100	100	100	100	50	100	80	100	100	100	100	100
Clom + imep	0.75 + 0.063	0	0	0	0	80	40	30	30	70	40	70	90	80	70	50	100
Trif & clom + metr & clim	1.0 + 0.75 +0.35 + 0.035	0	0	0	30	90	90	90	90	60	60	90	100	100	90	100	100
Imqn	0.125	0	0	0	10	100	100	100	100	80	40	90	70	70	80	30	100
Imep	0.063	0	0	0	0	80	30	20	50	50	80	50	40	40	30	10	20
Imep	0.078	0	0	0	0	80	60	90	60	90	90	90	60	60	30	10	40
Trif + chloramben	1.0 + 2.0	0	0	0	0	40	50	40	70	100	100	90	50	50	80	80	100

*alac = alachlor; trif = trifluarlin; clom = clomazone; metr = metribuzin; clim = chlorimuron; imqn = imazaquin; etha = ethalfluralin; pend = pendimethalin; imep = imazethapyr

Table 2. Multi-species evaluation with preplant incorporated herbicides (Knake, Carrick, Higgins, Wolff, Koppatschek, Paul and Curran).

Preplant incorporated:	Rate lb/A	Gift	Yeft	Grft	Lacg	Bygr	Shca	Jogr	Rrpw	Colq	Vele	Jiwe	Tamg	Girw	Cocb
Alachlor & trifluralin + clomazone	2.5 + 0.5 + 0.5	100	100	100	100	100	90	90	90	90	90	80	80	90	30
Alac & trif + metribuzin & chlorimuron	2.5 + 0.5 + 0.35 + 0.035	100	100	100	100	100	100	90	90	90	90	90	90	90	90
Trif & clom	1.0 + 0.75	100	100	100	100	100	90	100	90	90	90	90	90	80	40
Trif & clom + imazaquin	1.0 + 0.75 + 0.063	100	100	100	100	100	90	100	90	90	90	90	90	90	70
Ethalfluralin + clom + imqn	0.94 + 0.5 + 0.063	100	100	100	100	100	100	90	90	90	90	80	70	80	80
Etha + clom	0.94 + 0.75	100	100	100	100	100	90	90	70	70	70	70	100	90	50
Pendimethalin & imqn	0.75 + 0.125	100	100	90	100	100	90	90	90	90	70	90	90	100	100
Clom + imqn	0.75 + 0.094	100	100	100	100	100	80	80	90	90	90	80	80	90	90
Trif & imqn	0.75 + 0.125	100	100	100	100	100	80	80	90	90	90	80	90	90	100
Trif + imazethapyr	0.88 + 0.063	100	100	100	100	100	90	90	90	90	90	90	90	90	90
Etha + imep	0.94 + 0.063	100	100	100	100	100	100	100	90	90	90	90	90	90	80
Pend + imep	0.88 + 0.063	80	80	80	90	90	80	80	90	90	80	70	90	70	90
Trif & metr + imep	0.75 + 0.38 + 0.063	100	100	100	100	100	100	100	100	100	100	100	100	100	90
Trif + metr & clim	1.0 + 0.35 + 0.035	100	100	100	100	100	100	90	90	90	90	80	90	80	100
Etha + metr & clim	0.94 + 0.35 + 0.035	100	100	100	100	100	90	90	90	90	90	80	90	80	100
Trif & metr	0.75 + 0.38	100	100	100	100	100	90	90	70	90	80	70	50	90	80
Trif & metr + clom	0.75 + 0.38 + 0.5	90	80	90	90	90	90	90	90	90	90	90	90	90	70
Clom + metr & clim	0.75 + 0.35 + 0.035	100	100	100	100	100	70	90	100	100	100	100	20	80	80
Clom + imep	0.75 + 0.063	100	100	100	100	100	80	90	90	90	90	90	90	90	90
Trif & clom + metr & clim	1.0 + 0.75 + 0.35 + 0.035	100	100	100	100	100	100	100	90	90	90	90	80	80	90
Imqn	0.125	90	90	90	90	80	90	90	90	90	60	70	70	90	100
Imep	0.063	90	90	90	80	80	50	50	70	90	70	60	80	60	80
Imep	0.078	90	90	90	90	90	60	60	70	80	70	70	90	80	90
Trif + chloramben	1.0 + 2.0	100	100	100	100	100	100	100	80	90	60	60	70	70	10

Table 3. Multi-species evaluation with preemergence herbicides (Knake, Carrick, Higgins, Wolff, Koppatschek, Paul and Curran).

		Soybeans		Corn-Pioneer				Grain Sorghum							
Preemergence:	Rate lb/A	Harper	Hobbit	3475	3732	3615	3377	Untreated	CGA133205	Oats Larry	Winter Wheat	Winter Rye	Spring Barley Robust	Alfalfa	Red Clover
Imazaquin	0.125	0	0	25	10	5	5	0	0	50	10	10	50	10	20
Imazethapyr	0.063	0	0	15	0	10	5	5	10	30	10	10	25	0	0
Imep	0.078	0	0	20	0	15	10	50	65	50	30	10	20	0	0
EL-177	0.3	0	0	0	0	0	0	0	5	30	10	5	10	0	10
Metolachlor & metribuzin	2.46 + 0.54	0	15	0	0	0	0	0	0	50	20	25	20	70	100
Cinmethylin + metr & chlorimuron	1.5 + 0.35 + 0.035	0	15	5	5	0	10	0	0	50	15	20	15	20	100
Cinm + imep	1.5 + 0.063	0	15	10	0	0	0	50	75	50	15	15	5	0	0
Metr & clim + imep	0.35 + 0.035 + 0.063	0	0	20	0	10	0	40	65	60	20	5	10	40	100
Chloramben + clomazone	1.8 + 0.5	0	0	10	10	0	0	10	10	50	15	20	15	40	100
Alachlor + imqn	2.5 + 0.125	0	0	20	0	10	15	0	0	50	5	20	20	40	80
SB 53482	0.025	20	15	0	0	0	0	0	0	20	5	15	5	10	10
SB 53482	0.075	20	30	0	0	0	0	0	0	30	10	15	5	50	50
SB 53482	0.125	25	30	0	0	0	0	0	0	50	20	20	10	80	70
SB 23121	0.025	25	25	0	0	0	0	0	0	30	20	10	5	0	0
SB 23121	0.075	30	30	0	0	0	0	0	0	50	20	15	5	50	60
SB 23121	0.125	35	35	0	0	0	0	10	10	60	20	15	5	60	80
SB 63596	0.025	0	15	0	0	0	0	0	0	50	15	10	0	0	0
SB 63596	0.075	0	15	0	0	0	0	5	15	50	15	20	30	0	0
SB 63596	0.125	0	15	0	0	0	0	0	10	50	15	25	40	0	0
UBI-A1237	0.0156	0	20	0	0	5	5	0	0	50	15	20	15	10	20
UBI-A1237	0.0312	10	30	0	0	0	5	0	0	50	20	20	15	50	50
UBI-A1237	0.0625	20	50	0	0	0	0	0	0	60	30	20	30	70	80
Haloxyfop	0.25	0	0	0	0	0	0	0	0	40	25	15	0	0	0
Tridiphane	1.0	0	0	0	0	0	0	0	0	50	10	15	10	0	0

Table 4. Multi-species evaluation with preemergence herbicides (Knake, Carrick, Higgins, Wolff, Koppatschek, Paul and Curran).

Preemergence:	Rate lb/A	Gift	Yeft	Grft	Lacg	Bygr	Shca	Jogr	Rrpw	Colq	Vele	Jiwe	Tamg	Girw	Cocb
Imazaquin	0.125	70	70	70	70	50	20	20	80	80	80	70	80	90	90
Imazethapyr	0.063	70	70	70	70	70	30	30	90	90	90	80	90	90	20
Imep	0.078	80	80	80	80	80	40	40	90	90	90	90	90	90	25
EL-177	0.3	40	40	40	40	40	0	0	90	90	90	80	80	90	10
Metolachlor & metribuzin	2.46 + 0.54	100	100	100	100	100	30	30	90	90	90	90	0	60	50
Cinmethylin + metr & chlorimuron	1.5 + 0.35 + 0.035	100	100	100	100	100	50	70	90	90	90	70	60	70	50
Cinm + clim + imep	0.35 + 0.035 + 0.063	100	100	100	100	100	80	90	80	90	90	70	70	90	95
Metr & clim + imep	0.35 + 0.035 + 0.063	90	90	90	90	90	90	90	90	90	90	90	60	60	85
Chloramben + clomazone	1.8 + 0.5	90	90	90	90	90	80	80	90	90	90	70	0	80	30
Alachlor + imqn	2.5 + 0.125	90	90	90	90	90	70	70	90	80	80	80	30	90	60
SB 53482	0.025	0	0	0	0	0	50	50	70	70	60	80	70	0	20
SB 53482	0.075	30	30	30	30	30	50	50	90	90	80	90	70	50	50
SB 53482	0.125	30	30	30	30	30	60	70	90	80	80	90	80	90	50
SB 23121	0.025	0	0	0	0	0	50	50	90	80	70	70	80	80	20
SB 23121	0.075	40	40	40	40	40	50	50	90	90	80	80	90	60	50
SB 23121	0.125	40	40	40	40	40	50	50	90	90	80	80	90	50	50
SB 63596	0.025	20	20	20	20	20	60	60	20	30	50	40	70	60	40
SB 63596	0.075	30	30	30	40	30	80	80	20	30	60	50	80	60	40
SB 63596	0.125	60	60	60	60	40	80	80	20	30	60	50	80	50	40
UBI-A1237	0.0156	90	80	90	80	90	40	40	70	90	50	90	30	80	50
UBI-A1237	0.0312	90	90	90	90	90	50	50	90	90	80	90	30	60	50
UBI-A1237	0.0625	100	100	100	100	100	40	60	90	90	90	90	30	50	60
Haloxyfop	0.25	90	90	90	90	90	90	90	0	0	0	0	0	0	0
Tridiphane	1.0	70	70	70	70	70	60	80	0	0	0	0	0	0	0

Multi-species evaluation of postemergence herbicides

Knake, Ellery L., Fritz K. Koppatschek, Ann M. Carrick,
Lyle E. Paul, Russell A Higgins and Maurice W. Wolff

The primary purpose of this study was to evaluate various herbicides, combinations, rates and adjuvants for post emergence use on major crops and weed species common to Illinois. The study was conducted in 1988 at the Northern Illinois Agronomy Research Center near DeKalb on plot area SW800 with Drummer silty clay loam having 5 to 6% organic matter. The field was in a high state of fertility. The area was moldboard plowed the previous summer after a similar trial. On April 25 a tandem disk with harrow was used once and on April 26 a field cultivator with harrow was used once. Crops and weeds were planted April 26. Corn, soybeans, and sorghum were planted with a conventional four row planter. Small grains were seeded with a drill. Cocklebur was planted with a hand planter. The remainder of the weeds and alfalfa were seeded with a Brillion seeder. Soil was in excellent condition at time of seeding. Moisture was optimum from 0.54 inch of rain on April 22.

All herbicides were applied postemergence on June 3 between 9:00 and 11:00 a.m. using a tractor mounted compressed air sprayer with a loom height of 22 inches, flat fan nozzle tips, 30 psi and 3 mph to give 25 gpa. The seeding was done in a N-S direction and herbicides applied in an E-W direction to plots 10 by 150 ft.

Conditions on the day of herbicide application were:

Air temperature	65 F
Bare soil temperature at 4 inches	72 F
Relative humidity	45%
Wind speed and direction	10 E
Sky	Clear

There was 0.17 inch of rain on May 26, six days prior to spraying, and 2.39 inches for the month of May. The only significant rain during June was .46 inch on June 28. Ratings were made June 22 and 23.

Growth stage of plants at time of postemergence application:

	Height inches (free standing)	Number of true leaves
Corn	9	7
Soybeans	3	1
Sorghum	3	4
Wheat	5	6
Oats	5	6
Barley	5	6
Rye	5	6
Alfalfa	3	3
Giant foxtail	3	5
Yellow foxtail	3	4
Green foxtail	3	4
Large crabgrass	3	4
Barnyardgrass	4	6
Shattercane	3	4
Johnsongrass	3	4
Redroot pigweed	1	4
Lambsquarters	1	4

(continued)

	Height inches (free standing)	Number of true leaves
Velvetleaf	3	5
Jimsonweed	2	3
Fall morningglory	3	2
Common ragweed	3	2
Cocklebur	4	6

Results are reported in the tables. (Dept. of Agronomy, University of Illinois, Urbana).

Table 5. Multi-species evaluation with postemergence herbicides (Knake, Koppatschek, Carrick, Paul, Higgins and Wolff).

		Soybeans			Corn-Pioneer				Grain Sorghum						
Postemergence:	Rate lb/A	Chamber-lain	Harper	Hobbit	3475	3732	3615	3377	Untreated	CGA133205	Oats Larry	Winter Wheat	Winter Rye	Spring Barley Robust	Alfalfa
Imazaquin + X-77	0.063	0	0	0	70	70	70	70	30	30	50	10	10	70	10
Imqn + X-77	0.125	0	0	0	70	70	70	70	30	30	70	30	20	70	10
Imazethapyr + X-77	0.063	0	0	0	20	20	20	20	70	70	70	30	20	50	0
Imep + 28% UAN + X-77	0.063	0	0	0	30	30	30	30	80	80	80	40	20	70	0
Bentazon + COC	1.0	0	0	0	0	0	0	0	0	0	30	0	20	10	0
Bent + 28% UAN	1.0	0	0	0	20	0	0	0	0	0	30	10	10	0	0
Bent + imqn	0.5 + 0.063	0	0	0	60	70	60	40	0	0	40	20	10	70	0
Bent + imep	0.5 + 0.063	0	0	0	0	0	0	0	40	40	50	20	20	30	0
Bent & acifluorfen + 28% UAN	0.75 + 0.17	0	0	0	10	10	30	10	20	20	30	20	0	10	10
Fomesafen + COC	0.25	0	0	0	20	20	20	20	0	0	30	20	20	10	30
Fome + 28% UAN	0.25	0	0	0	10	20	20	10	20	20	20	10	0	10	20
Fome + bent +28% UAN	0.25 + 0.5	20	0	0	20	20	20	20	0	0	10	10	0	30	10
Fluazifop-P & fome + COC	0.188 + 0.25	20	0	0	100	100	100	100	90	90	60	40	50	80	30
Flfp-P & fome + 28% UAN	0.188 + 0.25	0	0	0	80	80	80	80	80	80	50	40	30	80	30
Flfp-P & fome + bent + 28% UAN	0.188 + 0.25 + 0.5	0	0	0	80	80	80	80	90	90	40	30	50	80	30
Lactofen + 28% UAN	0.2	30	20	20	20	10	20	20	50	50	10	10	0	0	0
Lact + bent + 28% UAN	0.15 + 0.5	50	20	0	0	0	20	10	20	50	0	0	0	0	0
Lact + 2,4-DB + X-77	0.15 + 0.03	30	20	20	10	10	10	10	10	30	0	0	0	0	0
Lact + DPX-M6316	0.15 + 0.004	20	20	20	10	10	10	10	0	0	0	0	0	0	0
Lact + clethodim	0.2 + 0.1	0	0	0	40	30	0	20	30	30	40	0	0	40	20
Chlorimuron + 28% UAN + X-77	0.012	0	0	0	0	0	0	0	70	70	50	10	0	20	40
Clim + bent	0.008 + 0.5	20	0	0	20	20	20	20	60	60	30	0	0	10	10
Clim + 2,4-DB + 28% UAN + X-77	0.012 + 0.03	60	40	30	10	10	30	30	70	70	40	0	0	10	20
DPX-M6316 + 28% UAN + X-77	0.004	20	20	20	10	10	30	30	30	30	0	0	0	0	0
DPX-M6316 + clim + 28% UAN + X-77	0.004 + 0.01	50	30	30	30	30	30	30	20	20	10	10	10	30	50

Unless otherwise indicated: X-77 @ 0.25%; COC @ 1 qt/A; 28% UAN @ 1 gal/A

Table 6. Multi-species evaluation with postemergence herbicides (Knake, Koppatschek, Carrick, Paul, Higgins and Wolff).

Postemergence:	Rate lb/A	Gift	Yeft	Grft	Lacg	Bygr	Shca	Jogr	Rrpw	Colq	Vele	Jiwe	Tamg	Girw	Cocb
Imazaquin + X-77	0.063	30	20	20	20	0	0	0	70	90	50	90	30	80	100
Imqn + X-77	0.125	10	10	10	10	0	20	0	70	90	40	90	50	80	100
Imazethapyr + X-77	0.063	10	10	10	10	30	20	0	80	90	70	80	40	80	100
Imep + 28% UAN + X-77	0.063	10	10	10	10	20	20	20	10	80	80	90	40	90	100
Bentazon + COC	1.0	0	0	0	0	0	0	0	30	50	80	70	50	90	100
Bent + 28% UAN	1.0	30	20	30	30	0	0	0	60	50	90	80	20	90	80
Bent + imqn	0.5 + 0.063	30	30	30	30	0	0	0	60	40	90	70	30	90	80
Bent + imep	0.5 + 0.063	20	30	20	40	20	20	10	50	30	90	80	40	90	100
Bent & acifluorfen + 28% UAN	0.75 + 0.17	0	0	0	0	20	10	10	60	50	90	70	20	90	100
Fomesafen	0.25	0	0	0	0	0	0	0	60	70	70	40	50	90	30
Fome + 28% UAN	0.25	0	0	0	0	0	0	0	70	60	60	40	50	90	30
Fome + bent + 28% UAN	0.25 + 0.5	0	0	0	0	0	0	0	60	70	90	90	60	90	90
Fluazifop-P & fome + COC	0.188 + 0.25	80	80	40	50	80	90	90	80	80	70	100	60	100	80
Flfp-P & fome + 28% UAN	0.188 + 0.25	30	30	30	30	70	90	90	60	60	60	100	40	90	80
Flfp-P & fome + bent + 28% UAN	0.188 + 0.25 + 0.5	30	30	30	30	80	70	90	80	70	90	100	50	90	90
Lactofen + 28% UAN	0.2	0	0	0	0	0	0	0	30	40	70	60	30	90	60
Lact + bent + 28% UAN	0.15 + 0.5	0	0	0	0	0	0	0	30	40	70	100	60	90	90
Lact + 2,4-DB + X-77	0.15 + 0.03	0	0	0	0	0	0	0	30	40	60	90	60	90	80
Lact + DPX-M6316	0.15 + 0.004	0	0	0	0	0	0	0	60	70	80	70	70	90	50
Lact + clethodim	0.2 + 0.1	30	30	60	30	80	50	50	30	40	50	80	60	90	60
Chlorimuron + 28% UAN + X-77	0.012	10	10	10	10	20	0	0	70	80	90	70	60	90	100
Clim + bent	0.008 + 0.5	0	0	20	10	20	0	0	80	90	90	70	60	90	100
Clim + 2,4-DB + 28% UAN + X-77	0.012 + 0.03	0	0	20	10	20	0	0	90	60	90	70	70	90	70
DPX-M6316 + 28% UAN + X-77	0.004	0	0	0	0	30	0	20	80	60	80	80	80	90	70
DPX-M6316 + clim + 28% UAN + X-77	0.004 + 0.01	30	20	20	20	40	0	20	70	60	90	90	90	90	100

Unless otherwise indicated: X-77 @ 0.25%; COC @ 1 qt/A; 28% UAN @ 1 gal/A

Table 7. Multi-species evaluation with postemergence herbicides (Knake, Koppatschek, Carrick, Paul, Higgins and Wolff).

		Soybeans				Corn-Pioneer				Grain Sorghum						
Postemergence:	Rate lb/A	Carter	Chamber-lain	Harper	Hobbit	3475	3732	3615	3377	Untreated	CGA133205	Oats Larry	Winter Wheat	Winter Rye	Spring Barley Robust	Alfalfa
SB 53482 + COC	0.075	10	0	0	0	10	0	0	0	10	10	20	10	10	20	0
SB 53482 + COC	0.125	80	80	70	80	30	30	30	30	70	70	50	10	10	20	60
SB 23121 + COC	0.075	60	60	50	40	20	20	20	20	0	0	30	10	10	40	70
SB 23121 + COC	0.125	90	100	80	90	30	30	30	30	0	0	30	10	20	40	70
SB 23031 + COC	0.075	10	0	0	0	0	10	10	10	10	10	20	0	0	10	10
SB 23031 + COC	0.125	30	40	20	20	10	10	10	10	30	30	20	0	0	20	10
SB 63596 + COC	0.075	0	0	0	20	0	0	0	0	40	40	60	20	30	80	0
SB 63596 + COC	0.125	30	40	40	40	0	0	0	0	80	90	80	30	30	80	0
Pyridate & atrazine	0.6 + 0.6	100	100	100	100	0	0	0	0	0	0	0	10	20	0	30
Pydt & atra	0.9 + 1.5	100	100	100	100	0	0	0	0	0	0	10	20	80	40	70
DPX-V9360 + COC	0.03	-	-	-	-	0	0	0	0	80	80	60	20	40	80	50
DPX-V9360 + COC	0.045	-	-	-	-	0	0	0	0	80	80	80	20	40	80	60
DPX-V9360 + COC	0.06	-	-	-	-	0	0	0	0	90	90	70	20	40	80	70
DPX-V9360 + atra + COC	0.06 + 2.0	100	100	100	100	0	0	0	0	80	90	50	100	100	70	100
DPX-V9360 + dicamba & atra	0.06 + 0.47 + 0.92	100	100	100	100	20	0	20	0	80	90	40	40	90	70	100
HOE 360 EW + COC	0.025	-	-	-	-	90	90	90	80	90	90	10	0	0	0	0
HOE 360 EW + COC	0.05	-	-	-	-	90	90	90	90	90	100	20	0	0	0	0
CGA-136872 + X-77	0.018	30	40	60	60	-	-	-	-	100	100	70	20	40	70	60
CGA-136872 + X-77	0.027	80	80	70	80	-	-	-	-	100	100	70	30	40	70	70
CGA-136872 + atra + COC	0.027 + 2.0	100	100	100	100	-	-	-	-	90	90	50	80	80	70	100
Atra + COC	1.5	100	100	100	100	-	-	-	-	50	60	10	70	80	40	100
Tridiphane + atra + COC	0.5 + 1.5	100	100	100	100	-	-	-	-	30	30	20	80	90	40	100
Clopyralid + atra + COC	0.9 + 0.5	100	100	100	100	-	-	-	-	0	0	10	20	50	20	100

Unless otherwise indicated: X-77 @ 0.25%; COC @ 1 qt/A; 28% UAN @ 1 gal/A

Table 8. Multi-species evaluation with postemergence herbicides (Knake, Koppatschek, Carrick, Paul, Higgins and Wolff).

Postemergence:	Rate lb/A	Gift	Yeft	Grft	Lacg	Bygr	Shca	Jogr	Rrpw	Colq	Vele	Jiwe	Tamg	Girw	Cocb
SB 53482 + COC	0.075	0	0	0	0	10	0	0	60	70	90	60	70	90	90
SB 53482 + COC	0.125	10	10	10	10	20	0	20	90	80	90	90	80	90	100
SB 23121 + COC	0.075	10	10	10	10	10	0	0	70	70	90	90	60	90	80
SB 23121 + COC	0.125	10	10	10	10	30	0	20	90	90	90	90	80	90	100
SB 23031 + COC	0.075	10	10	10	10	0	0	0	70	70	90	90	70	90	70
SB 23031 + COC	0.125	10	10	10	10	20	20	10	80	90	90	90	90	90	80
SB 63596 + COC	0.075	90	90	80	90	90	40	90	0	0	0	0	0	0	0
SB 63596 + COC	0.125	90	90	80	90	90	90	90	0	0	0	0	0	0	0
Pyridate & atrazine	0.6 + 0.6	20	10	20	10	10	10	20	50	50	50	90	50	90	80
Pydt & atra	0.9 + 1.5	20	10	20	10	20	10	20	60	60	70	90	80	90	100
DPX-V9360 + COC	0.03	70	60	70	60	80	90	90	90	40	50	80	80	80	0
DPX-V9360 + COC	0.045	80	80	80	70	90	90	90	90	50	60	90	80	90	0
DPX-V9360 + COC	0.06	80	80	80	80	80	90	90	90	60	70	90	80	90	0
DPX-V9360 + atra + COC	0.06 + 2.0	80	80	80	80	70	80	80	100	90	30	80	70	80	100
DPX-V9360 + dicamba + atra	0.06 + 0.47 + 0.92	70	70	70	70	60	80	70	90	90	90	90	80	70	100
HOE 360 EW + COC	0.025	50	60	50	50	70	70	60	-	-	-	-	-	-	0
HOE 360 EW + COC	0.05	40	50	40	40	70	60	60	-	-	-	-	-	-	0
CGA-126872 + X-77	0.018	30	30	30	30	70	60	60	50	-	50	-	30	60	-
CGA-136872 + X-77	0.027	30	30	30	30	70	60	60	50	-	50	-	40	60	-
CGA-136872 + atra + COC	0.027 + 2.0	20	20	20	20	50	50	50	50	60	50	-	30	50	60
Atra + COC	1.5	10	10	10	10	40	0	0	60	60	60	70	60	70	100
Tridiphane + atra + COC	0.5 + 1.5	10	10	10	10	40	20	20	60	60	60	70	60	70	100
Clopyralid + atra + COC	0.9 + 0.5	0	0	0	0	0	0	0	60	60	60	50	60	70	100

Postemergence herbicides for corn

Knake, Ellery L., William S. Curran, Fritz K. Koppatschek,
Ann M. Carrick, Lyle E. Paul, and David R. Pike

The primary purpose of this study was to evaluate herbicides for control of grass weeds in corn. However, evaluation was also made on control of velvetleaf.

Plots were established in 1988 at the Northern Illinois Agronomy Research Center near DeKalb on Drummer silty clay loam with 5 to 6% organic matter. Soil was high in phosphorous and potassium and 240 lb/A of nitrogen was applied as ammonium nitrate. The field was moldboard plowed the previous fall and a tandem disk with harrow used twice May 2. Pioneer 3540 corn was planted in 30 inch rows on May 2 for a population of 28,300 plants per acre. Chlorpyrifos soil insecticide was band applied at 9.8 lb/A. A randomized complete block design was used with treatments replicated four times and individual plots 10 ft x 60 ft.

Herbicides were applied May 25 between 6:30 and 7:30 a.m. with a tractor mounted compressed air sprayer with flat fan nozzle tips, 30 psi and 3 mph to give 25 gpa. Soil temperature was 50° F and air temperature 45° F with a range from 35° to 70° F for the day. Wind was 3 to 5 mph from the south. Sky was clear and relative humidity 40%. Giant foxtail was 1 to 2 inches with 2 to 3 leaves, velvetleaf 2 to 3 inches with 3 leaves and corn 4 to 6 inches with 5 leaves. There was 1.13 inches of rain two days earlier and 2.39 inches for the month of May. Following application on May 25 there was .17 inch of rain May 27 and .46 inch June 28. Ratings were made June 9.

Results are presented in the table. (Dept. of Agronomy, University of Illinois, Urbana).

Table 9. Postemergence herbicides for corn (Knake, Curran, Koppatschek, Carrick, Paul, and Pike)

Treatment	Rate lb/A	Percent Control 6/9 Gift	6/9 Vele	7/12 Gift	7/12 Vele
Tridiphane + atrazine + COC	0.5 + 1.5	69	84	49	55
Tridiphane + cyanazine + atrazine	0.5 + 1.2 + 0.4	59	86	48	60
Tridiphane + atrazine + bentazon + COC	0.5 + 1.5 + 0.5	69	87	49	64
DPX-V9360 + atrazine + COC	0.06 + 1.5	91	81	94	41
CGA-136872 + atrazine + X-77	0.036 + 1.5	56	83	28	59
Check - untreated		0	0		
LSD .05		15.7	4.7	25.2	15.9

X-77 surfactant @ 0.25% v/v
COC - crop oil concentrate was an 83% paraffin base petroleum oil with 16% surfactant and 1% inert used @ 1.0 qt/A

Postemergence control of quackgrass and giant foxtail in corn

Knake, Ellery L., Fritz K. Koppatschek, William S. Curran,
Ann M. Carrick, Lyle E. Paul and David R. Pike

The primary purpose of this study was to evaluate DPX-V9360 and CGA-136872 for control of quackgrass and giant foxtail and to determine the effect of adding atrazine.

The study was established at the Northern Illinois Agronomy Research Center on Flanagan-Drummer silty clay loam with 5 to 6% organic matter. The field was in a high state of fertility and 180 lb/A nitrogen as ammonium nitrate was applied. The field was moldboard plowed November 10, 1987. A tandem disk with harrow was used twice on May 2, 1988. Pioneer 3540 corn was planted May 2 in 30 inch rows for a population of 28,300 plants/A. Chlorpyrifos soil insecticide was band applied at 9.8 lb/A. A randomized complete block design was used with each treatment replicated four times. Individual plots were 10 ft x 70 ft.

Herbicides were applied May 25 between 7:30 and 8:30 a.m. with a tractor mounted compressed air sprayer with flat fan nozzle tips, 30 psi and 3 mph to give 25 gpa. Soil temperature was 50° F and air temperature 50° F, ranging from 35° to 70° F for the day. Wind was 5 to 8 mph from the south. Sky was clear and relative humidity 40%. Giant foxtail was 1 to 2 inches with 2 to 3 leaves, quackgrass 7 to 10 inches with 3 to 4 leaves, and corn 4 to 6 inches with 3 to 5 leaves. There was 1.13 inches of rain two days earlier and 2.39 inches for the month of May. There was .17 inch of rain May 27 and for the month of June only .46 inch on June 28. Ratings were made June 9. No corn injury was noted.

DPX-V9360 gave good control of both giant foxtail and quackgrass with all rates tested. Addition of atrazine to DPX-V9360 did not enhance efficacy. CGA-136872 was less effective than DPX-V9360 on both giant foxtail and quackgrass. Although there was some rate response for CGA-136872, even the highest rate did not give good control. Addition of atrazine to CGA-136872 generally did not enhance activity and may have had a slight antagonistic effect. (Dept. of Agronomy, University of Illinois, Urbana).

Table 10. Control of quackgrass and giant foxtail (Knake, Koppatschek, Curran, Carrick, Paul and Pike).

Treatment	Rate lb/A	Percent Control 6/9 Gift	Percent Control 6/9 Qugr	Percent Control 7/12 Gift	Percent Control 7/12 Qugr	Corn Yield Bu/A
DPX-V9360 + X-77	0.03	86	85	86	86	66.8
DPX-V9360 + X-77	0.045	95	79	90	86	67.1
DPX-V9360 + X-77	0.06	95	88	89	86	92.1
DPX-V9360 + atrazine + X-77	0.03 + 2.0	91	91	86	84	61.1
DPX-V9360 + atrazine + X-77	0.045 + 2.0	95	90	88	85	91.6
DPX-V9360 + atrazine + X-77	0.06 + 2.0	95	91	83	84	82.6
CGA-136872 + X-77	0.018	50	71	46	64	29.5
CGA-136872 + X-77	0.027	56	70	56	70	38.2
CGA-136872 + X-77	0.036	60	73	65	79	53.8
CGA-136872 + atrazine + X-77	0.018 + 2.0	43	68	49	69	27.7
CGA-136872 + atrazine + X-77	0.027 + 2.0	51	76	48	71	26.3
CGA-136872 + atrazine + X-77	0.036 + 2.0	58	80	54	68	37.5
Check - Untreated		0	0	0	0	6.6
LSD .05		8.7	10.3	12.3	9.0	17.2

X-77 surfactant @ 0.25% v/v

Herbicide treatments for corn

Knake, Ellery L., Fritz K. Koppatschek, Ann M. Carrick,
Lyle E. Paul and David R. Pike

The primary purpose of this study was to compare several times and methods of herbicide application and to compare results with various herbicides for corn. This study was established in 1988 at the Northern Illinois Agronomy Research Center near DeKalb on area 1400N. The soil is Drummer silty clay loam with 5 to 6% organic matter. The experimental design was a randomized complete block with treatments replicated three times and individual plots 10 ft x 120 ft. The field was in a high state of fertility with applications of P_2O_5 and K_2O the previous fall and 240 lb/A nitrogen as anhydrous ammonia applied April 29. The field had been moldboard plowed November 13 and a tandem disk with harrow was used twice on May 2. Pioneer 3540 corn was planted in 30 inch rows on May 2 for a population of 28,300 plants/A.

Herbicides were applied with a tractor mounted compressed air sprayer with flat fan nozzle tips, 30 psi, and 3 mph to give 25 gpa. Preemergence treatments were applied between 1:00 and 2:00 p.m. May 2. Soil temperature was 50° F, air temperature 70° F, and relative humidity 60%. Wind was from the east at 3 to 5 mph and sky had 5% cloud cover. There was 0.35 inch of rain during the week prior to the preemergence application, 0.41 inch the following week and 2.39 for the month of May. Postemergence treatments were applied 12:30 to 1:30 p.m. May 28. Soil temperature was 70° F and air temperature 76° F. Relative humidity was 45%, wind from the south at 10 mph and sky was clear. Corn was 4 to 6 inches with 5 leaves, giant foxtail 3 inches with 3 leaves, lambsquarters 1.5 inches with 5 leaves and velvetleaf 3 inches with 3 leaves. There was 1.3 inches of rain during the week prior to the May 28 postemergence application and no significant rain following the postemergence until June 28 with 0.46 inch. Ratings were made June 9.

Most preemergence treatments or DPX-V9360 post gave good control of giant foxtail. Most treatments gave relatively good control of velvetleaf and lambsquarters. No corn injury was noted. Two reps were located where the field was in corn the previous year. Thethird rep had no crop the previous three years but was used for redroot pigweed and velvetleaf studies. Thus it somewhat simulated set-aside or fallow since it was tilled in mid season during the previous three years. This gave a unique opportunity to compare corn yields for corn after corn versus corn after "set aside" for the relatively dry year of 1988. (Dept. of Agronomy, University of Illinois, Urbana).

Table 11. Herbicide treatments for corn (Knake, Koppatschek, Carrick, Paul and Pike).

Treatment		Rate lb/A	Percent Control Gift	Percent Control Vele	Percent Control Colq	Corn Yield bu/A 3 Reps Mean	Corn Yield bu/A Reps 1 & 2 corn after corn Mean	Corn Yield bu/A Rep 3 corn after "set-aside"
PRE:								
Cyanazine & atrazine		3.0 + 1.0	89	84	92	50.1	14.5	121.3
Pendimethalin & atra		1.5 + 1.5	77	81	92	60.0	13.6	152.8
Alachlor & atra (4F)		2.5 + 1.5	89	86	88	45.7	9.1	118.7
Alac & atra (4MT)		2.5 + 1.5	88	78	92	61.1	32.9	117.5
Metolachor & CGA154281 & atra		2.5 + 2.0	90	84	92	46.6	9.4	121.2
Alac + dicamba & atra		2.5 + 0.47 + 0.92	91	84	92	90.0	65.0	140.2
PRE	POST:							
Alac	Dica & atra	2.5 + 0.47 + 0.92	92	86	94	96.8	73.6	143.1
Alac	Bentazon & atra	2.5 + 0.5 + 0.5	93	89	94	57.4	12.3	147.8
Alac	Bromoxynil & atra	2.5 + 0.38 + 0.75	88	91	92	55.5	13.9	138.8
Alac	Pyridate & atra	2.5 +0.9 + 1.5	89	85	94	52.4	11.3	134.6
POST:								
Tridiphane + cyanazine & atra		0.5 + 0.53 + 1.07	62	89	94	51.0	4.5	144.1
Trid + cyan & atra		0.5 + 1.2 + 0.4	67	89	93	45.5	5.3	125.8
DPX-V9360 + atra + COC		0.063 + 1.5	87	87	92	56.1	7.6	153.0
CGA-136872 + atra + X-77		0.027 + 1.5	69	82	92	43.9	7.8	116.2
Check Untreated			0	0	0	47.9	35.9	71.8
LSD .05			14.7	12.0	3.7	45.2		

X-77 surfactant @ 0.25% v/v
COC - crop oil concentrate - 83% paraffin oil base, 16% surfactant, 1% inert @ 1.0 qt/A

Time and method of herbicide application for a reduced tillage cropping sequence

Knake, Ellery L., Ann M. Carrick, Lyle E. Paul,
Fritz K. Koppatschek and David R. Pike

The purpose of this study was to compare PPI, preemergence and postemergence applications for weed control in corn, soybeans and clover with various tillage systems.

This long term study is located on area 1400S at the Northern Illinois Agronomy Research Center near DeKalb on Drummer silty clay loam with 5 to 6% organic matter. The study includes two areas planted to corn, two to soybeans and one to clover. One corn area follows soybeans and tillage consists of disking twice with a tandem disk and harrow. The other corn area is corn no-tilled in red clover sod. For soybeans which follow corn, one area is chiseled and then disked while the other area is only disked. The clover follows soybeans with the soybean stubble disked twice. The field was in a high state of fertility with 180 lb/A nitrogen added as ammonium nitrate for corn. Chisel plowing was done November 6, 1987 and all other tillage May 2, 1988.

All planting was done May 2. Pioneer 3475 corn was planted in 30 inch rows for a population of 28,300 plants/A. Soybeans were Pioneer 9271 in 30 inch rows with 60 lb/A to give 8 plants/ft.

All spraying was done with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi and 3 mph to give 25 gpa. PPI treatments were applied 7:00 to 8:00 a.m. May 2 and incorporated immediately. Preemergence treatments were applied 9:00 to 10:00 a.m. May 2. For corn, postemergence treatments were applied May 28. For soybeans and clover, post treatments for broadleaf weeds were applied May 28 followed by post treatments for grass weeds on June 4. Each herbicide treatment was replicated three times with individual plots 10 ft by 120 ft. The dry season was not conducive to control of the clover for no-till corn and on June 16, 0.5 lb/A dicamba was applied to all of the no-till corn. Ratings were made June 22. The 2,4-D formulation was a low volatile 2-ethylhexyl ester. The fluazifop-P plus fomesafen, the trifluralin plus clomazone, the bentazon plus acifluorfen, the cyanazine plus atrazine, metolachlor plus atrazine and dicamba plus atrazine were prepackaged mixtures of Tornado, Commence, Galaxy, Conquest, Bicep and Marskman respectively.

Conditions at time of herbicide application:

Date	May 2	May 28	June 4
Air temperature	65°F	76°F	65°F
Bare soil temperature @ 4 inches	50°F	72°F	78°F
Relative humidity	40%	50%	50%
Wind speed (mph) and direction	3-5E	10S	5E
Sky - % cloud cover	5%	0	0
Rainfall previous week	0.35	1.30	0.17
Rainfall following week	0.41	0	0

Growth stage:	height inches	leaves	height inches	leaves
Corn	5	4		
Soybeans	2	2 unifoliates	3	1 trifoliolate
Clover	0.5	1 trifoliolate	1	2 trifoliolate
Giant foxtail	3	3	4	6
Velvetleaf	2	3	2.5	5

In general the preplant incorporated treatments performed well. With the exceptionally dry conditions, postemergence treatments for control of grass did not perform as well as usual. Preemergence treatments were generally fair. For soybeans, there was no advantage readily apparent for chisel plowing in addiiton to disking. For no-till corn in clover sod, control of clover with triazine only was not very good due to the dry season. Dicamba plus atrazine gave the best control and results with 2,4-D were fair to good. The good weed control in the plots with triazine only may have been due partially to competition from the "living clover mulch." For establishing clover, sethoxydim postemergence performed relatively well for control of grass and bromoxynil for broadleaf weeds. (Dept. of Agronomy, University of Illinois, Urbana).

Table 12. Time and method of herbicide application for a reduced tillage cropping sequence (Knake, Carrick, Paul, Koppatschek, Pike).

Crop 1988	Crop 1987	Tillage 1988	Type of application	Herbicide	Rate lb/A	Percent Control 6/22 Gift	Percent Control 6/22 Vele	Percent Control 6/22 Clover	Percent Control 7/12 Gift	Percent Control 7/12 Vele	Percent Control 7/12 Clover	Yield BU/A
Soybeans	Corn	Chisel-disk	PPI	Trifluralin & clomazone + imazethapyr	1.0 + 0.75 + 0.063	93	94		93	95		36.1
			PRE	Chloramben	3.0	58	83		70	87		15.6
			POST	Fluazifop-P & fomesafen + bentazon + COC	0.19 + 0.25 + 0.5 + 1.0 qt.	57	85		67	83		6.5
Soybeans	Corn	Disk	PPI	Pendimethalin + imazethapyr	0.88 + 0.063	87	96		88	95		36.5
			PRE	Alachlor + metribuzin & chlorimuron	3.0 + 0.45 + 0.045	80	94		89	93		32.9
			POST	Bentazon & acifluorfen + 28% UAN + sethoxydim + Dash	0.75 + 0.17 + 2.0 qt. + 0.2 + 1.0 qt.	63	95		72	94		21.9
Corn	Soybeans	Disk	PPI	EPTC & dichlormid & dietholate + atrazine	4.0 + 2.0	93	95		95	95		98.4
			PRE	Alachlor & atrazine	2.5 + 1.5	75	84		83	95		88.3
			POST	Tridiphane + cyanazine & atrazine + COC	0.5 + 1.125 + 0.375 + 1.0 qt.	75	85		28	92		24.1
Corn	Clover	None	PRE	Cyanazine & atrazine	3.75 + 1.25	93	95	37	93	93	48	24.3
			PRE	Dicamba & atrazine + metolachlor	0.47 + 0.92 + 2.0	85	84	92	82	85	90	85.0
			PRE	2,4-D + metolachlor & atrazine	0.5 + 2.0 + 1.6	72	85	82	85	85	90	81.1
Clover	Soybeans	Disk	PPI-POST	EPTC - bromoxynil	3.0 - 0.38	40	94		47	95		
			PPI-POST	Pendimethalin - 2,4-DB	1.0 - 0.5	48	73		55	73		
			POST	Bromoxynil + 2,4-DB + sethoxydim + COC	0.25 + 0.5 + 0.2 + 1.0 qt.	88	82		93	73		
				LDS .05:	Corn	17.5	12.4		10.8	13.0		46.8
					Soybeans	13.6	13.3		10.8	14.4		10.6
					Clover	22.4	27.3	20.8	24.1	29.3	7.1	

Evaluation of bentazon combinations and adjuvants

Knake, Ellery L., Fritz K. Koppatschek, Lyle E. Paul,
William S. Curran and David R. Pike

The purpose of this study was to evaluate bentazon and acifluorfen premix and tank mix combinations alone and with various adjuvants. The study was established in 1988 at the Northern Illinois Agronomy Research Center near DeKalb on area 1300E. Soil was Drummer silty clay loam with 5 to 6% organic matter. The soil was in a high state of fertility. A randomized complete block design with three replications was used. The field had been moldboard plowed the previous fall and on May 2, a field cultivator with harrow was used twice. Redroot pigweed and ivyleaf morningglory were seeded May 3. BSR 201 soybeans were planted May 5 in 30 inch rows at 54 lb/A to give about 8 plants per foot of row. Individual plots were 10 ft. x 40 ft.

All herbicides were applied postemergence with a tractor mounted compressed air sprayer with flat fan nozzle tips, 30 psi pressure and 3 mph to give 25 gpa. Boom height was 21 inches above the soil surface. Application was made between 8:00 and 9:00 a.m. June 3. The first rating was made seven days after treatment and the second rating 40 days after treatment. There was 0.17 inch of rain seven days prior to treatment and 1.13 inches eleven days prior to treatment. There was essentially no rain in June following treatment except for 0.46 inch on June 29.

Conditions at time of treatment:

Air temperature	64° F
Soil temperature at 4 inches	78° F
Relative humidity	50%
Wind speed (mph) and direction	5 to 10 E
Cloud cover - %	0

	Height inches	No. of leaves
Soybeans	3	1 trifoliolate
Redroot pigweed	2	4
Ivyleaf morningglory	2	3
Yellow nutsedge	3	3
Velvetleaf	2	4

(Dept. of Agronomy, University of Illinois, Urbana).

Table 13. Evaluation of bentazon combinations and adjuvants (Knake, Koppatschek, Paul, Curran and Pike).

Treatment	Rate lb/A	Percent Control 7 DAT Rrpw	Ilmg	Vele	Yens	40 DAT Rrpw	Ilmg	Vele	Yens	Soybean Yield Bu/A
Check - untreated		0	0	0	0	0	0	0	0	27.1
*Bentazon + acifluorfen	0.5 + 0.25	27	37	40	27	73	75	86	10	29.9
**Bentazon + acifluorfen	0.5 + 0.25	47	40	47	37	72	79	93	15	29.9
*Bentazon + acifluorfen + AG98	0.5 + 0.25 + 0.5%	50	40	47	33	73	73	73	23	30.7
**Bentazon + acifluorfen + AG98	0.5 + 0.25 + 0.5%	52	47	52	38	70	68	87	28	30.6
*Bentazon + acifluorfen + COC	0.5 + 0.25 + 1.0 qt.	43	43	55	35	78	72	84	10	27.0
**Bentazon + acifluorfen + COC	0.5 + 0.25 + 1.0 qt.	40	43	47	43	74	78	87	17	28.9
*Bentazon + acifluorfen + Dash	0.5 + 0.25 + 1.0 qt.	47	50	60	45	80	73	83	13	28.1
**Bentazon + acifluorfen + Dash	0.5 + 0.25 + 1.0 qt.	68	72	72	53	84	82	92	28	33.8
*Bentazon + acifluorfen + 32% UAN	0.5 + 0.25 + 1.0 gal.	75	70	75	55	73	70	94	45	36.3
**Bentazon + acifluorfen + 32% UAN	0.5 + 0.25 + 1.0 gal.	67	60	77	50	80	75	95	40	36.0
*Bentazon + acifluorfen + Dash	0.5 + 0.25 + 2.0 qt.	77	73	78	60	80	78	91	32	31.9
LSD .05		23.2	25.8	22.4	18.5	18.1	13.9	13.9	36.0	10.4

*Premix
**Tank mix

Table 14. Evaluation of bentazon combinations and adjuvants (Knake, Koppatschek, Paul, Curran and Pike)..

Treatment	Rate lb/A	Percent Control 7 DAT Rrpw	Ilmg	40 DAT Rrpw	Ilmg	Soybean Yield Bu/A
Check - untreated		0	0	0	0	34.2
*Bentazon + acifluorfen + 28% UAN	0.75 + 0.1675 + 1.0 gal	62	53	65	63	38.9
*Bentazon + acifluorfen + COC	0.75 + 0.1675 + 1.0 qt.	48	52	68	63	36.1
*Bentazon + acifluorfen + Dash	0.75 + 0.1675 + 1.0 gt.	63	47	68	60	37.0
*Bentazon + acifluorfen + 28% UAN + Dash	0.75 + 0.1675 + 1.0 gal + 1.0 qt.	90	75	69	67	43.0
**Bentazon + acifluorfen + COC	0.75 + 0.1675 + 1.0 qt	42	55	66	65	37.0
	LSD .05	14.9	12.2	20.5	14.1	8.1
Check - untreated		0	0	0	0	31.5
**Bentazon + imazaquin + 28% UAN	0.5 + 0.063 + 1.0 gal	45	13	63	53	32.7
**Bentazon + imazaquin + 28% UAN + COC	0.5 + 0.063 + 1.0 gal + 1.0 qt.	52	18	62	58	32.4
**Bentazon + imazaquin + 28% UAN + X-77	0.5 + 0.063 + 1.0 gal + 0.25%	58	20	63	57	39.3
**Bentazon + imazaquin + 28% UAN + Dash	015 + 0.063 + 1.0 gal + 1.0 qt.	58	17	77	58	34.5
	LSD .05	9.8	4.5	10.9	12.1	5.1

*Premix
**Tank mix

Evaluation of bentazon plus atrazine rates and adjuvants

Knake, Ellery L., Fritz K. Koppatschek, Lyle E. Paul and David R. Pike

The purpose of this study was to evaluate two rates of a premix combination of bentazon plus atrazine with various adjuvants. The study was established at the Northern Illinois Agronomy Research Center near DeKalb on Drummer silty clay loam and Flanagan silt loam with 5 to 6% organic matter. A randomized complete block design with four replications was used. Individual plots were 10 by 40 ft. The area was moldboard plowed November 10, 1987 and on May 2 a tandem disk with harrow was used twice. The soil was in a high state of fertility and 180 lb/A nitrogen was applied as ammonium nitrate. Pioneer 3540 corn was planted May 2 in 30 inch rows for a population of 28,300 plants per acre. Chlorpyrifos soil insecticide was band applied at 9.8 lb/A.

All treatments were broadcast postemergence. For the first application, a tractor mounted compressed air sprayer was used with flat fan nozzle tips. The first application was May 28 between 2:00 and 3:00 p.m. A pressure of 30 psi was used and a speed of 3 mph to give 25 gpa. The boom was 20 inches above the soil surface. The second application was made June 28 between 1:00 and 2:00 p.m. using a hand held CO_2 sprayer unit with flat fan nozzle tips, 42 psi pressure, 3 mph, and a boom height of 22 inches to give 20 gpa. There was 0.17 inch of rain the day before the first application and 1.13 inches five days before but no significant rain for a month after treatment. For the second application there was no significant rainfall during the month prior to treatment but 0.46 inch the day following treatment. The first rating was 7 days after treatment and the second rating 53 days after treatment.

Conditions at time of treatment:

Date	May 28	June 28
Air temperature at time of treatment	82° F	85° F
Air temperature--range for day	57-88° F	53-88° F
Soil temperature @ 4 inches	75° F	80° F
Relative humidity	45%	50%
Wind direction and speed	S 10	W 10
Cloud cover	0	0
Soil moisture	Moist	Dry

Stage of growth:

	May 28		June 28	
	Height inches	No of leaves	Height inches	No of leaves
Corn	5	4	20	7
Pennsylvania smartweed	4-5	4-5		
Velvetleaf			6-8	8-10

(Dept. of Agronomy, University of Illinois, Urbana).

Table 15. Evaluation of bentazon plus atrazine (Knake, Koppatschek, Paul, and Pike).

Treatment	Rate lb/A	Application May 28 %Control Pesw 7 DAT	45 DAT	June 28 %Control Vele 7 DAT	53 DAT
Check - untreated		0	0	0	0
Bentazon & atrazine + 28% UAN	0.415 + 0.415	100	100	53	17
Bentazon & atrazine + Dash	0.415 + 0.415	100	100	33	10
Bentazon & atrazine + COC	0.415 + 0.415	100	100	33	17
Bentazon & atrazine + 28% UAN	0.52 + 0.52	100	100	57	13
Bentazon & atrazine + Dash	0.52 + 0.52	100	100	37	17
Bentazon & atrazine + COC	0.52 + 0.52	100	100	40	20
LDS .05		0	0	11.0	17.6

28% UAN @ 1 gal/A, Dash @ 1 qt/A, COC @ 1 qt/A
COC - crop oil concentrate - 83% paraffin oil base, 16% surfactant, 1% inert

Corn no-till in alfalfa sod

Koethe, Robert W., Gary D. Bickmeier, Glenn A. Raines and Ellery L. Knake

The primary purpose of this study was to evaluate herbicides for control of alfalfa and weeds for no-till corn in alfalfa sod. This 1988 study was at the Orr Agricultural Research and Demonstration Center near Perry in western Illinois. It was on plot area 0921(N) with Fayette and Rozetta silt loam with 2% organic matter. The field had a good stand of alfalfa from a seeding the previous year and was in a high state of fertility. Nitrogen at 240 lb/A as ammonium nitrate was applied April 14. No tillage was used. Pioneer 3379 corn was planted in 30 inch rows on May 10 for a population of 24,200 plants per acre. Chlorpyrifos insecticide was band applied at 8.7 lb/A. Individual plots were 10 ft x 60 ft in a randomized complete block design with three replications.

Herbicides were broadcast 11:00 a.m. April 14 with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi pressure and 3 mph to give 25 gpa. There was 0.37 inch of rain 8 days before spraying and 0.04 inch 4 days after. The next significant rain was 1.21 inches 21 days later. There was only 0.81 inch of rain during April and 3.47 inches in May. Growing degree days for April, May and June respectively were 229, 480, and 637. Ratings were made June 20. The 2,4-D formulation was 2-ethylhexyl low volatile ester. The crop oil concentrate was 83% paraffin base petroleum oil with 16% surfactant as a blend and 1% inert.

Conditions on day of spraying:

Air temperature range	40-71° F
Bare soil temperature range @ 4 inches	46-64° F
Soil temperature under sod @ 4 inches	48-54° F
Relatively humidity	60-100%
Wind speed and direction	20 mph NE

All treatments gave very good control of alfalfa and of both annual grass and broadleaf weeds. A good stand of corn was well established. With much of the land in this area of the state on slopes subject to erosion, conservation practices are quite important. With the amount of livestock in the area and also an alfalfa processing plant, legumes are an important consideration and good alfalfa can be a valuable crop.

In 1987, postemergence herbicides for grass control plus 2,4-DB were very effective for establishing an excellent stand of alfalfa in this plot area. In 1988, the success of these very economical treatments with very modest amounts of herbicides for controlling vegetation for no-till corn while leaving some protective mulch from the alfalfa illustrates very well the feasibility of this system for resource conservation. Results are presented in the table. (Dept. of Agronomy, University of Illinois, Urbana).

Table 16. No-till corn in alfalfa sod (Koethe, Bickmeier, Raines and Knake).

Treatment	Rate lb/A	Percent Control Alfalfa	Percent Control Gift	Percent Control Colq	Corn Yield bu/A
2,4-D	1.0	94	97	95	122.8
Dicamba	0.5	93	93	89	120.9
2,4-D + dicamba	0.5 + 0.5	96	93	93	126.4
Clopyralid	0.25	96	92	92	123.7
LSD .05		5.5	5.9	8.7	27.8

Atrazine @ 2 lb/A plus metolachlor @ 2 lb/A plus crop oil concentrate @ 0.68 qt/A was applied to all plots tank mixed with the above.

Herbicides for no-till soybeans

Koethe, Robert W., Gary D. Bickmeier, Glenn A. Raines and Ellery L. Knake

The primary purpose of this study was to evaluate herbicide treatments for no-till soybeans. The study was established in 1988 at the Orr Agricultural Research and Demonstration Center near Perry in western Illinois. The plot area is designated as 0921(S) with Rozetta silt loam having 2% organic matter and 2 to 7% slope. The field was in no-till corn the previous year and had about 90% ground cover. The soil was in a high state of fertility. No tillage was used. Pioneer 9361 soybeans were planted in 30 inch rows at 60 lb/A on May 20. Individual plots were 10 ft x 60 ft in a randomized complete block design with four replications.

Herbicides were applied May 20 with a tractor mounted compressed air sprayer with flat fan nozzle tips, 30 psi and 3 mph to give 25 gpa. There was 1.21 inches of rain 11 days before spraying and a total of 2.24 inches the third and fourth days after spraying. There was a total of 3.47 inches for May and 2.63 inches for June. Growing degree days for April, May and June respectively were 229, 480 and 637. Ratings were made June 20. The 2,4-D formulation was 2-ethylhexyl low volatile ester.

Conditions on day of spraying:

Air temperature range	46-84° F
Bare soil temperature range @ 4 inches	59-80° F
Soil temperature under sod @ 4 inches	60-69° F
Relative humidity	36-100%
Wind speed and direction	7 mph NE
Pan evaporation	0.39 inch

Since giant foxtail had emerged by time of treatment, glyphosate was quite advantageous for burndown. Metolachlor, pendimethalin and cinmethylin each performed well for residual control of annual grass. Metribuzin plus chlorimuron gave good control of annual broadleaf weeds and control of horseweed was noted. Imazethapyr has potential for both postemergence and preemergence activity but in earlier studies was weak on common lambsquarters. Addition of 2,4-D helped to correct the deficiency but is not approved for the time of application used in this study. Results are reported in the table. (Dept. of Agronomy, University of Illinois, Urbana).

Table 17. Herbicides for no-till soybeans (Koethe, Bickmeier, Raines and Knake).

Treatment	Rate lb/A	Percent Control Gift	Percent Control Colq	Soybean Yield bu/A
Metribuzin & chlorimuron + metolachlor	0.35 + 0.035 + 2.0	60	84	15.5
Metribuzin & chlorimuron + metolachlor + glyphosate	0.35 + 0.035 + 2.0 + 1.0	98	87	20.0
Imazethapyr + pendimethalin + 2,4-D + glyphosate	0.094 + 1.0 0.5 + 1.0	97	88	24.7
Metribuzin & chlorimuron + pendimethalin + glyphosate	0.35 + 0.035 1.0 + 1.0	93	88	22.8
Metribuzin & chlorimuron + cinmethylin + glyphosate	0.35 + 0.035 1.0 + 1.0	96	89	21.0
LSD (0.05)		4.5	9.1	3.8

X-77 @ 0.25% was added for each treatment

No till soybeans

Koethe, Robert W., Gary D. Bickmeier, Glenn A. Raines and Ellery L. Knake

The primary purpose of this study was to evaluate herbicides for no-till soybeans. The study was conducted at the Orr Agricultural Research and Demonstration Center near Perry in western Illinois. The plot area had Rozetta silt loam with 2% organic matter and 2 to 7% slope. The area was in no-till corn the previous year. No tillage was used in 1988. The soil was in a moderately high state of fertility and no fertilizer was applied in 1988. Pioneer 9361 soybeans were planted May 20 in 30 inch rows at 60 lb/A.

Herbicides were broadcast on the morning of May 20 with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi pressure and 3 mph to give 25 gpa. There was 1.21 inches of rain eleven days before spraying and a total of 2.24 inches of rain the third and fourth days after spraying. There was a total of 3.47 inches for May and 2.63 inches for June. Growing degree days for April, May and June respectively were 229, 480, and 637. Ratings were made June 20. The 2,4-D formulation was 2-ethylhexyl low volatile ester. Plots were 10 ft x 50 ft in a randomized complete block design with three replications.

Conditions on day of spraying:

Air temperature range	46-84° F
Bare soil temperature range @ 4 inches	59-80° F
Soil temperature under sod @ 4 inches	60-69° F
Relative humidity	36-100%
Wind speed and direction	7 mph NE
Pan evaporation	0.39 inch

Since giant foxtail had already emerged by time of spraying, glyphosate was quite helpful for burndown and treatments without it did not give adequate control of foxtail. Metolachlor and cinmethylin each gave good residual control of giant foxtail. Metribuzin plus chlorimuron or cyanazine plus 2,4-D gave good control of annual broadleaf weeds. Burndown as well as preemergence activity was noted with these combinations. The 2,4-D is not approved for application at the time used for this study. The relatively high rate of glyphosate for this study was used because of a potential problem with tall fescue. A lower rate should be adequate for burndown of many annual weeds. (Dept. of Agronomy, University of Illinois, Urbana).

Table 18. No-till soybeans (Koethe, Bickmeier, Raines and Knake).

Treatment	Rate lb/A	Percent Control Gift	Percent Control Colq
Metribuzin & chlorimuron + metolachlor	0.35 + 0.035 + 2.0	28	87
Metribuzin & chlorimuron + metolachlor + glyphosate	0.35 + 0.035 + 2.0 + 2.0	98	96
Metribuzin & chlorimuron + cinmethylin + glyphosate	0.35 + 0.035 1.0 + 2.0	96	90
Cyanazine + 2,4-D + cinmethylin	2.0 + 0.5 1.0	20	93
LSD .05		9.6	6.5

No till corn in clover-fescue sod

Koethe, Robert W., Gary D. Bickmeier, Glen A. Raines and Ellery L. Knake

The primary purpose of this study was to evaluate treatments for controlling clover and tall fescue sod for no-till planting of corn. The study was conducted at the Orr Agricultural Research and Demonstration Center near Perry in western Illinois on Atlas silt loam with 1 to 2% organic matter and 12 to 18% slope subject to severe erosion. Red clover was established two years earlier in the spring of 1986 and there was still some tall fescue which had been prevalent in the area earlier. The area was in a moderately high state of fertility and 240 lb/A nitrogen as anhydrous ammonia was applied April 14. Corn was planted in 30 inch rows on May 10 for a population of 24,200 plants/A. Chlorpyrifos insecticide was banded at 6.7 lb/A.

Herbicides were applied the morning of May 3 with a tractor mounted compressed air sprayer with flat fan nozzle tips, 30 psi pressure and 3 mph to give 25 gpa. Plots were 10 ft x 50 ft in a randomized complete block design with three replications. There was only 0.04 inch of rain during the 26 day period prior to spraying and 1.21 inches the sixth day after spraying. Ratings were made June 20.

Conditions on day of spraying:

Air temperature range	51-79° F
Bare soil temperature range @ 4 inches	51-72° F
Soil temperature under sod @ 4 inches	51-58° F
Relative humidity	26-84%
Wind speed and direction	12 SE
Pan evaporation	0.43 inch

The triazines plus glyphosate gave good control of the clover. However, control of tall fescue was only fair. Control of annual broadleaf and grass weeds was also considered only fair under the conditions of this study. Corn can be grown no-till in red clover sod, but it is best not to have perennial grass present and favorable moisture is important for triazines to be effective on the clover. (Dept. of Agronomy, University of Illinois, Urbana).

Table 19. No-till corn in clover-fescue sod (Koethe, Bickmeier, Raines and Knake).

Treatment	Rate lb/A	Percent Control Tafe	Gift	Colq	Corn Yield bu/A
Atrazine + metolachlor	3.0 + 2.0	43	78	75	33.8
Cyanazine + metolachlor	3.0 + 2.0	67	70	82	20.7
Cyanazine + atrazine + metolachlor	1.5 + 1.5 2.0	58	82	82	18.1
Cyanazine & atrazine + metolachlor	2.0 + 1.0 2.0	62	80	82	7.6
LSD .05		24.3	13.2	13.9	38.0

Glyphosate @ 2 lb/A and 1.0 qt/A of crop oil concentrate with 83% paraffin base petroleum oil, 16% surfactant, and 1% inert was added to each treatment in a tank mix.

Herbicides for establishment of red clover

Koethe, Robert W., Gary D. Bickmeier, Glenn A. Raines and Ellery L. Knake

The primary purpose of this study was to evaluate herbicides for establishment of red clover. The study was conducted at the Orr Agricultural Research and Demonstration Center near Perry in western Illinois on area 1923E with Rozetta and Elco silt loam with 1 to 2% organic matter and 7 to 12% slope subject to severe erosion. The previous crop was no-till soybeans. The field was in a moderately high state of fertility and no fertilizer was applied. On April 14, the area was disked twice, herbicides broadcast, and the area disked two more times. Red clover was seeded April 19 at 8 lb/A and a tandem corrugated roller used for firming. Individual plots were 10 ft x 50 ft in a randomized complete block design.

Herbicides were applied at 8:00 p.m. April 14 with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi pressure and 3 mph to give 25 gpa. There was 0.37 inch of rain 8 days before spraying and very little rain until 1.21 inches fell 25 days after spraying.

Conditions on day of spraying:

Air temperature range	41-73° F
Bare soil temperature range @ 4 inches	45-65° F
Soil temperature under sod @ 4 inches	49-55° F
Relative humidity	32-100%
Wind speed and direction	17 mph NW

EPTC and the dinitroanilines provided fair to good weed control with relatively good tolerance for red clover. (Dept. of Agronomy, University of Illinois, Urbana).

Table 20. Herbicides for establishment of red clover (Koethe, Bickmeier, Raines and Knake).

Treatment	Rate lb/A	Percent Control Gift	Percent Control Colq
EPTC	3.0	33	82
EPTC & dichlormid & dietholate	3.0	57	83
Trifluralin	1.0	87	75
Pendimethalin	1.0	94	93
LSD .05		16.0	18.2

Herbicides for establishing alfalfa and clover

Koethe, Robert W., Gary D. Bickmeier, Ellery L. Knake and Glenn A. Raines

The primary purpose of this study was to evaluate herbicides for weed control for establishing alfalfa and clover and to determine if there was any antagonistic effect from adding 2,4-DB to herbicides for control of grass weeds. The study was conducted in 1988 at the University of Illinois Orr Agricultural Research and Demonstration Center in western Illinois near Perry on plot area designated as 0122. The area has Rozetta silt loam with 2% organic matter and 2 to 7% slope subject to moderate to severe erosion. A randomized complete block design with four replications was used with individual plots 10 x 55 ft. The field was in no-till soybeans in 1987 and in no-till corn in legume sod in 1986. The area was disked three times and 8 lb/A of seed planted with a drill on March 23.

Herbicides were broadcast May 31 with a tractor mounted compressed air spray unit with flat fan nozzle tips, 30 psi pressure and 3 mph to give 25 gpa. Air temperature ranged from 55 to 87° F, soil temperature under sod 63 to 68° F and humidity 28 to 100%. Wind was from the SE at 3 mph and pan evaporation was 0.35 inch. There was 2.05 inches of rain 7 days before spraying and 1.38 inches 9 days after. At time of spraying, alfalfa was 4 to 6 inches tall, red clover 3 to 4 inches, giant foxtail 6 inches and common lambsquarters 6 inches. Weed control ratings were made June 20. All herbicides for grass control gave excellent control except for dalapon with a mean of 82% control. No significant crop injury was noted and no significant antagonism due to addition of 2,4-DB. (Dept. of Agronomy, University of Illinois, Urbana).

Table 21. Herbicides for establishing alfalfa and clover (Koethe, Bickmeier, Knake and Raines).

Treatment	Rate lb/A	% Control Gift
Sethoxydim	0.188	98
Seth + 2,4-DB	0.188 + 0.5	99
Fluazifop-P	0.188	99
Flfp-P + 2,4-DB	0.188 + 0.5	99
Quizalofop	0.075	98
Qufp + 2,4-DB	0.075 + 0.5	92
Mefluidide	0.5	100
Mefl + 2,4-DB	0.5 + 0.5	100
Dalapon	5.25	79
Dala + 2,4-DB	5.25 + 0.5	85
Haloxyfop	0.125	98
Halx + 2,4-DB	0.125 + 2,4-DB	98
Check - untreated		0
	LSD 0.05	6.6

Herbicides for alfalfa establishment

Koethe, Robert W., Gary D. Bickmeier, Ellery L. Knake and Glenn A. Raines

The primary purpose of this study was to evaluate herbicides for control of giant foxtail for establishment of alfalfa. The study was conducted in 1988 at the Orr Agricultural Research and Demonstration Center in western Illinois near Perry on plot area designated as 1224. This area is Fayette silt loam with 2% organic matter and 7% slope. A randomized complete block design was used with four replications and plots 10 x 25 ft. The area was in no-till soybeans in 1987. On April 14, it was disked three times, seeded with 8 lb/A of Pioneer 5010 alfalfa and then firmed with a tandem corrugated roller.

Herbicides were broadcast May 21 from 2:00 to 3:00 p.m. with a tractor mounted compressed air sprayer with flat fan nozzle tips, 30 psi pressure and 3 mph to give 25 gpa. There was 2.05 inches of rain 7 days earlier and 1.38 inches 9 days after spraying. A dimethylamine salt formulation of 2,4-DB was tank mixed with each herbicides treatment at 0.5 lb/A. At time of spraying, alfalfa was 4 to 6 inches, giant foxtail 6 inches and common lambsquarters 6 inches. Ratings were made June 20.

Conditions on day of spraying:

Air temperature range	55-87° F
Bare soil temperature	64-79° F
Soil temperature under sod at 4 inches	63-68° F
Relative humidity	28-100%
Pan evaporation	0.35 inch
Wind	3 SE
Cumulative growing degree days	867

All herbicides for grass control except mefluidide and dalapon gave better than 90% control of giant foxtail with the lower rates generally being adequate. The 2,4-DB gave good control of annual broadleaf weeds. This study illustrates the effectiveness of herbicides for good weed control for establishing alfalfa. (Dept. of Agronomy, University of Illinois, Urbana).

Table 22. Herbicides for alfalfa establishment (Koethe, Bickmeier, Knake and Raines).

Treatment	Rate lb/A	Percent Control Gift	Percent Control Colq
Sethoxydim	0.125	96	93
Sethoxydim	0.25	97	87
Fluazifop-P	0.125	93	95
Fluazifop-P	0.25	92	89
Mefluidide	0.25	69	85
Mefluidide	0.5	73	93
Clethodim	0.125	92	80
Clethodim	0.25	98	89
Dalapon	2.625	55	85
Dalapon	5.25	78	89
Haloxyfop	0.125	95	90
Haloxyfop	0.25	95	92
2,4-DB only	0.5	0	92
Check untreated		0	0
LSD 0.05		10.8	9.5

2,4-DB @ 0.5 lb/A used with each herbicide treatment

Cultivation with and without herbicides for corn

Koethe, Robert W., Gary D. Bickmeier, Glenn A. Raines and Ellery L. Knake

The primary purpose of this study was to illustrate the benefits of using herbicides as well as cultivation for corn. This study was conducted at the University of Illinois Orr Agricultural Research and Demonstration Center in western Illinois near Perry. The area had been chisel plowed the previous fall. It was in a relatively high state of fertility and 240 lb/A nitrogen was applied as anhydrous ammonia on April 14. A premixed combination of 3 lb/A cyanazine plus 1.5 lb/A atrazine with the addition of 1 qt/A crop oil concentrate with 83% paraffin base petroleum oil, 16% surfactant and 1% inert was broadcast for the herbicide plots. Application was made May 3 with a tractor mounted compressed air spray unit with flat fan nozzle tips, 3 psi pressure, and 3 mph to give 25 gpa. Pioneer 3379 corn was planted in 30 inch rows May 16 for a population of 26,000 plants/A. All plots were cultivated once on June 14. Ratings were made July 9.

Conditions on day of spraying:

Air temperature range	51-79° F
Bare soil temperature at 4 inches	51-72° F
Soil temperature under sod at 4 inches	51-58° F
Relative humidity	26-84%
Pan evaporation inches	0.43
Wind (mph)	12 SE
Cumulative growing degree days	428
Sky	Cloudy

This study illustrates very well the benefits for using herbicides to complement cultivation for weed control. (Dept. of Agronomy, University of Illinois, Urbana).

Table 23. Cultivation with and without herbicides for corn. (Koethe, Bickmeier, Raines and Knake)

Percent Control				Corn Yield bu/A	
No herbicide		Herbicide		No herbicide	Herbicide
Gift	Colq	Gift	Colq		
41	46	98	99	27.6	59.6

LSD .05 for yield = 14.5
Gift = 16.2
Colq = 25.1

No-till corn in alfalfa and clover sod

Knake, Ellery L., William S. Curran, Robert W. Frazee and Michael J. Mainz

The primary purpose of this study was to evaluate herbicides for control of alfalfa and red clover for no-till corn. The study was conducted at the Northwestern Illinois Agricultural Research and Demonstration Center near Monmouth on Tama silt loam with 3% organic matter, 4 to 7% slope, slight to moderate erosion and 5.5 pH. Soil was high in phosphorus and potassium and 180 lb/A nitrogen was applied as urea on April 22. The alfalfa and clover were seeded in separate strips each 45 ft wide in the spring of 1986 and was well established. Individual plots were 10 ft x 45 ft in a randomized complete block design with four replications. Pioneer 3475 corn was planted April 20 in 30 inch rows for a population of 27,700 plants/A. No tillage or cultivation was used. The only significant rain during the two weeks prior to spraying was 0.49 inch 13 days earlier. There was only 0.25 inch for the remainder of April, 1.64 inches in May and 0.84 inch in June.

Herbicides were broadcast 10:30 to 11:30 a.m. April 19 with a tractor mounted compressed air sprayer with flat fan nozzle tips, 30 psi pressure and 3 mph to give 25 gpa. Alfalfa was 6 inches high, clover 3 inches and lambsquarters 0.5 inch with 2 leaves. The 2,4-D formulation was 2-ethylhexyl low volatile ester. Ratings were made May 26 for clover, alfalfa and weeds and again on July 8 for alfalfa.

Conditions on day of application:

Air temperature range	27-53° F
Soil temperature range @ 4 inches	44-53° F
Relative humidity range	22-70%
Wind speed and direction	1.5 mph SW
Sky	Clear

All treatments gave good control of the clover. Triazines alone gave 93% control of clover and addition of a translocated herbicide increased this to 100%. The best control of alfalfa was achieved with 2,4-D plus dicamba. Control of giant foxtail and velvetleaf was fair to good in alfalfa and a little better in clover. The denser mulch from clover may have contributed to the better control. (Dept. of Agronomy, University of Illinois, Urbana).

Table 24. No till corn in alfalfa and red clover sod (Knake, Curran, Frazee and Mainz).

Treatment	Rate lb/A	Percent Control							Corn Yield Bu/A	
		Alfalfa				Clover 5/26				
		Alfalfa 5/26	Alfalfa 7/8	Gift 5/26	Vele 5/26	Clover	Gift	Vele	Alfalfa	Clover
Atrazine + cyanazine	2.0 + 2.0	23	9	89	91	93	98	100	1.2	54.3
2,4-D + metolachlor + atra	1.0 + 2.0 + 2.0	88	50	86	89	100	100	100	35.5	85.3
Dicamba + meto + atra	0.5 + 2.0 + 2.0	79	24	87	96	100	94	100	11.8	71.7
Dica + 2,4-D + meto	0.25 + 0.5 + 2.0	94	94	84	97	100	90	97	31.5	64.8
Dica & atra + meto	0.47 + 0.92 + 2.0	68	13	66	94	100	79	96	0.0	75.9
Clopyralid + atra + meto	0.25 + 2.0 + 2.0	68	21	65	80	100	97	99	0.0	74.8
HOE-39866 + meto + atra	0.75 + 2.0 + 2.0	21	4	82	82	100	93	96	0.9	75.1
HOE-39866 + 2,4-D + meto + atra	0.75 + 0.5 + 2.0 + 2.0	68	16	94	97	100	98	100	9.1	75.0
Glyphosate & atrazine + alachlor + 2,4-D + AMS + X-77	1.5 + 0.6 + 2.5 + 0.5 + 2.0% + 0.5%	85	48	82	88	100	96	96	17.5	66.3
Check - untreated		0	0	0	0	0	0	0	3.4	3.3
LSD 0.05		10.6	11.7	24.0	15.2	4.4	12.9	4.5	14.9	10.1

Nitrogen rates for no-till corn in legume sod

Mainz, Michael J., William S. Curran, Robert W. Frazee and Ellery L. Knake

The primary purpose of this study was to attempt a delineation of nitrogen rates for no-till corn in legume sod to determine how much nitrogen is added by the legumes and what rates would be appropriate for additional nitrogen. The study was established in 1988 at the Northwestern Illinois Agricultural Research and Demonstration Center near Monmouth on plot area C-11 with Tama silt loam having 3% organic matter, 5.5 pH and 2% slope. The P_1 test was 53 and the K test 456. Alfalfa and red clover were seeded in the spring of 1986 in individual strips 45 feet wide and were well established.

Pioneer 3475 corn was planted April 20, 1988 in 30 inch rows for a population of 27,700 plants/A. Nitrogen was applied as urea on April 21 to give 0, 40, 80, 120 and 160 lb/A nitrogen. Herbicides were broadcast April 29 with a tractor mounted sprayer with flat fan nozzle tips, 30 psi pressure and 4 mph to give 20 gpa. Alfalfa was 5 to 7 inches high and clover 3 to 5 inches. There was little other vegetation present. The herbicide application consisted of 0.25 lb/A dicamba plus 0.5 lb/A 2,4-D low volatile iso-octyl ester plus 2 lb/A atrazine and 2.5 lb/A metolachlor broadcast on the entire area.

Conditions at time of spraying:

Soil temperature under sod 4 inches - range	43-53° F
Bare soil temperature 4 inches	33-65° F
Air temperature - range for day	43-63° F
Relative humidity	20-75%
Wind (mph)	7.5 WNW
Cloud cover	0

There was 0.25 inch of rain during the week prior to spraying and 0.57 inch the tenth day after spraying. Rainfall was 1.19, 1.64 and 0.84 inch for April, May and June respectively. A randomized complete block design with four replications was used.

Analysis indicated that corn yields were higher after clover than after alfalfa. This may have been due to greater moisture use by the alfalfa than by the clover. At this yield level, the nitrogen supplied by the legumes was apparently adequate with no significnt yield increase from addition of nitrogen fertilizer. (Dept. of Agronomy, University of Illinois, Urbana).

Table 25. Nitrogen rates for corn in legume sod (Mainz, Curran, Frazee and Knake).

Nitrogen rate	Corn Yield bu/A	
	Alfalfa	Clover
0	52.3	74.6
40	49.7	80.6
80	54.0	75.7
120	58.4	80.9
160	59.6	73.9

NORTHEASTERN ILLINOIS AGRONOMY RESEARCH CENTER - ELWOOD

Effect of pH, tillage and chlorimuron rate on residual effect on corn

Baird, Dale L., Ellery L. Knake and Lyle E. Paul

The primary purpose of this study was to evaluate the potential for chlorimuron applied for soybeans to carryover and affect corn the following year and two years later.

The study was established at the Northeastern Illinois Agronomy Research Center near Elwood on soil ranging from Drummer silty clay loam to Andres silt loam and organic matter of 2 to 5%. For first year corn after soybeans three tillage systems were compared: (1) no-till corn into soybean stubble, (2) large disk (April 20, 1988) followed by a field cultivator and harrow (May 5, 1988), and (3) chisel (April 19, 1988) followed by a field cultivator and harrow (May 5, 1988).

For second year corn the following tillage was performed: shredded stalks (April 14, 1988), chisel (April 19, 1988), disk and harrow (April 20, 1988), and field cultivate and harrow (May 5, 1988). Previously in 1987, the first year of the continuous corn had the following tillage treatments after soybeans: (1) no-till corn into soybean stubble, (2) large disk (April 30, 1987) followed by a smaller tandem disk and harrow (May 4, 1987), and (3) chisel (November 26, 1986) plus tandem disk and harrow (May 4, 1987).

Main plots with tillage are replicated three times and subplots have soil pH adjusted to 5.5, 6.5 and 7.5. The plots are further divided for four rates of chlorimuron which was applied prior to planting soybeans. The first year corn study had chlorimuron applied on May 14, 1987 immediately after planting soybeans and the second year corn study had chlorimuron applied on May 6, 1986 immediately after planting soybeans. Chlorimuron rates were 0, 0.5, 1.0 and 1.5 oz/A a.i. Tillage plots are 40 x 240 feet, pH plots are 40 x 80 feet and herbicide rate plots are 10 x 80 feet.

Nitrogen as 28% UAN was applied at the rate of 240 lb/A nitrogen to all plots on May 4, 1988. Pioneer 3475 corn was planted and Lorsban insecticide (1 lb a.i./A) applied with the planter on May 5, 1988 to give 24,000 plants per acre. All plots had 3 lb/A alachlor applied preemergence on May 10, 1988 and 1 lb/A bentazon plus 1 qt/A COC were applied postemergence on May 31, 1988. All plots were cultivated on June 9, 1988. Hand hoeing was done on June 18, 1988 to maintain all plots weed free. Carbaryl was aerially applied at the rate of 0.5 lb/A on July 20, 1988 to all plots to control corn rootworm beetles. Corn plant populations were counted in 10 feet of row per plot on June 2, 1988. Corn heights were measured on July 2, 1988. Diameter of the stem of corn plants measured at the center of the 4th internode on July 8, 1988. Tassel emergence was determined on July 20, 1988. Plots were harvested on October 13, 1988.

Limited precipitation was received during the 1988 growing season. Precipitation was as follows: May 1-May 31, 1.97 inches; June 1-June 30, 0.38 inches; July 1-July 31, 1.22 inches; August 1-August 18, 1.49 icnhes. Total May 1-August 18, 5.06 inches. Results are reported in the tables. (Department of Agronomy, University of Illinois, Urbana).

Table 26. Effect of pH, tillage and chlorimuron rate on residual effect on 1st year corn (Elwood, 1988) (Baird, Knake and Paul).

Chlorimuron	0-Till			Disk			Chisel		
	pH			pH			pH		
1987 - (oz/A)	5.5	6.5	7.5	5.5	6.5	7.5	5.5	6.5	7.5
	Corn Height - Inches 7/2/88								
0	38.2	41.8	42.7	45.4	42.2	47.2	47.3	48.2	48.7
0.5	39.9	44.2	38.5	46.2	45.7	46.4	47.6	48.4	47.4
1.0	36.6	40.8	38.4	47.4	47.3	44.5	44.7	46.4	45.0
1.5	34.7	42.4	36.1	47.6	46.0	40.8	45.7	46.3	44.0
	Stem Diameter - Inches 7/8/88								
0	0.73	0.74	0.80	0.80	0.86	0.84	0.84	0.88	0.84
0.5	0.76	0.85	0.80	0.82	0.88	0.83	0.84	0.90	0.86
1.0	0.75	0.83	0.70	0.85	0.88	0.78	0.84	0.86	0.82
1.5	0.80	0.80	0.66	0.87	0.84	0.81	0.82	0.90	0.73
	Corn Plants/10 ft. row 6/2/88								
0	13.2	13.5	13.8	12.7	12.5	13.2	12.2	12.7	12.0
0.5	12.8	13.0	12.8	11.7	12.0	12.3	12.7	11.8	13.2
1.0	13.7	14.0	12.8	12.7	12.8	12.7	12.3	12.5	11.8
1.5	12.7	13.2	12.8	11.8	12.7	12.0	11.5	13.2	12.8
	Percent Tassel Emergence 7/16/88								
0	55	76	90	98	83	97	96	95	94
0.5	66	90	84	93	93	96	95	94	97
1.0	65	74	42	96	93	80	87	88	85
1.5	60	71	40	89	95	61	83	86	76
	Percent Silk Emergence 7/20/88								
0	20	43	33	43	18	46	53	75	58
0.5	34	50	39	50	68	72	48	78	50
1.0	10	39	15	70	63	54	33	50	55
1.5	12	40	35	50	48	58	25	40	25

Table 27. Effect of pH, tillage and chlorimuron rate on residual effect on 2nd year corn (Elwood, 1988) (Baird, Knake and Paul).

Chlorimuron 1987 - (oz/A)	0-Till pH 5.5	0-Till pH 6.5	0-Till pH 7.5	Disk pH 5.5	Disk pH 6.5	Disk pH 7.5	Chisel pH 5.5	Chisel pH 6.5	Chisel pH 7.5
	Corn Height - Inches 7/2/88								
0	40.7	40.4	40.6	41.8	42.1	40.4	38.3	43.5	40.2
0.5	39.4	38.6	38.1	44.6	43.5	40.8	38.4	43.8	38.3
1.0	40.2	39.3	40.1	42.7	44.7	39.8	36.4	43.7	40.7
1.5	38.1	39.5	38.4	42.7	43.0	39.4	38.7	44.4	37.6
	Stem Diameter - Inches 7/8/88								
0	0.79	0.72	0.77	0.77	0.80	0.73	0.78	0.84	0.75
0.5	0.76	0.79	0.77	0.91	0.77	0.76	0.77	0.78	0.73
1.0	0.73	0.72	0.79	0.79	0.76	0.80	0.74	0.80	0.77
1.5	0.76	0.71	0.80	0.78	0.80	0.73	0.74	0.77	0.74
	Corn Plants/10 ft. row 6/2/88								
0	12.2	11.7	11.2	11.2	12.3	11.0	11.5	11.7	12.0
0.5	11.5	11.3	12.2	11.2	12.0	12.0	11.8	13.0	12.2
1.0	12.3	11.8	13.0	11.8	11.8	11.3	12.2	12.2	11.3
1.5	12.2	12.0	12.8	13.0	12.7	12.0	11.5	12.5	11.7
	Percent Tassel Emergence 7/16/88								
0.	83	56	50	83	59	57	53	62	50
0.5	55	55	51	74	74	53	69	68	39
1.0	46	33	40	68	73	47	64	64	52
1.5	36	23	37	60	69	48	51	53	34

Table 28. Effect of pH, tillage and chlorimuron rate on residual effect on 1st year corn (Elwood, 1988) (Baird, Knake and Paul).

Tillage	pH	Corn bu/A oz/A chlorimuron 1987				
		0	0.5	1.0	1.5	Mean
Zero	5.5	40.2	53.6	44.9	46.2	46.2
	6.5	56.7	60.7	57.0	54.2	57.2
	7.5	46.1	48.3	50.6	41.1	46.5
	Mean	47.7	54.2	50.8	47.2	50.0
Disk	5.5	62.2	65.0	63.7	62.1	63.2
	6.5	59.4	56.9	68.7	68.8	63.5
	7.5	52.7	61.7	54.1	61.4	57.5
	Mean	58.1	61.2	62.1	64.1	61.4
Chisel	5.5	52.5	54.9	55.6	52.9	54.0
	6.5	46.8	49.5	60.4	53.9	52.6
	7.5	58.0	49.7	51.8	45.4	51.2
	Mean	52.4	51.4	55.9	50.7	52.6
Mean		52.7	55.6	56.3	54.0	54.7

Table 29. Effect of pH, tillage and chlorimuron rate on residual effect on 2nd year corn (Elwood, 1988) (Baird, Knake and Paul)

Tillage	pH	Corn bu/A oz/A chlorimuron 1986				
		0	0.5	1.0	1.5	Mean
Zero	5.5	43.8	33.5	25.6	35.8	34.6
	6.5	28.3	31.5	19.1	28.3	26.8
	7.5	21.8	18.9	14.4	16.5	17.9
	Mean	31.3	27.9	19.7	26.9	26.4
Disk	5.5	36.3	34.6	42.4	42.4	38.9
	6.5	22.1	32.4	34.5	34.1	30.7
	7.5	25.4	21.2	25.5	35.0	26.8
	Mean	27.9	29.4	34.1	37.1	32.1
Chisel	5.5	22.5	21.8	23.5	26.3	23.5
	6.5	36.1	33.9	42.9	28.7	35.4
	7.5	25.3	21.3	26.3	15.6	22.1
	Mean	28.0	25.7	30.9	23.5	27.0
Mean		29.1	27.7	28.2	29.2	28.5

Potential for injury to corn from residual clomazone, imazaquin, imazethapyr, and chlorimuron

Curran, William S. and Ellery L. Knake

The objective of this study is to determine the potential of four soybean herbicides to persist and injure corn the year following application. Previous results for 1986 and 1987 were reported in volume 44:170-172 of the NCWCC Research Report. Studies were repeated with imazaquin, imazethapyr, clomazone, and chlorimuron applied to soybeans in 1987 and the plots planted to corn in 1988 at two locations in Illinois. As in 1986, soybean herbicides were surface-applied using four rates of each at DeKalb and Monmouth Illinois. Chloramben was applied at 3.0 lb/A for the check treatments. The experiment location at DeKalb was on a drummer silty clay loam with approximately 6.0% organic matter and a soil pH of 6.1. The Monmouth soil was a muscatine silt loam with a 4.5% organic matter and soil pH of 7.0. Both studies were established as randomized complete block designs with four replications. Tillage prior to soybean planting included fall chiseling and spring disking at both locations. Herbicides were applied May 6 at Monmouth and May 8 at DeKalb with a tractor mounted compressed air sprayer operated at 30 psi calibrated to give 25 gpa. Soybeans were grown in 1987 and evaluated for crop tolerance. In 1988, Pioneer 3377 corn was planted no-till in the soybean stubble. At DeKalb, 120 lb/A each of P_2O_5 and K_2O, plus 180 lb/A N were applied prior to planting corn. Monmouth fertility levels were P_1 = 95, K test of 552, and 180 lb/A N was applied prior to corn planting. A combination of alachlor at 3.0 lb/A plus 2.0 lb/A atrazine was broadcast over the entire corn plot areas for annual weed control. In addition, 2,4-D (butoxyethyl ester) was applied preplant at a rate of 0.25 lb/A for broadleaf weed control at Monmouth. Early rainfall and soil moisture were low at Monmouth in both the 1987 and 1988 seasons. DeKalb rainfall was near normal in 1987, and approximately 65 percent of normal from May through September in 1988. Corn was cultivated at both locations and all plots of soybeans and corn were maintained weed-free by hand weeding. The corn was evaluated for plant emergence and stand, early and mid-season injury, early and mid-season plant height, seedling dry weight, stalk diameter, and grain yield. Early season evaluations were taken on May 24 at DeKalb and May 25 at Monmouth when the corn was in the 3 to 4 leaf stage of development. Mid-season evaluations were taken on July 7 at DeKalb and July 8 at Monmouth when the corn was at pre-tassel. Visual ratings were expressed as a percent bleaching or whiteness for clomazone and percent stunting or chlorosis for imazaquin, imazethapyr, and chlorimuron.

As in 1986, soybean tolerance was good in 1987 at all rates at both locations (Table 30). Early season corn injury in 1988 was moderate with clomazone at DeKalb and only slight at Monmouth (Tables 31 and 32). However, by mid-season, corn had completely recovered from clomazone injury at both locations. Imazaquin and imazethapyr corn injury was slight early and mid-season at both locations. Chlorimuron injury to corn was greatest at Monmouth where corn injury averaged 15 percent early and 14 percent mid-season (Table 32). At DeKalb, corn injury was slight early and mid-season from the highest rates of chlorimuron. Corn yields indicated recovery at both locations. However, the 1.0 and 0.188 lb/A treatments of clomazone and imazaquin respectively, had significant grain yield reductions at DeKalb. Early season drought stress may have contributed to the reduced yields in these treatments. (Department of Agronomy, University of Illinois, Urbana).

Table 30. Effect of herbicides on weed-free soybeans - 1987 (Curran and Knake).

	lb/A	DeKalb	Monmouth
Clomazone	0.75	43.8	51.1
Clomazone	1.0	42.1	50.2
Clomazone	1.5	42.8	50.5
Clomazone	2.0	44.9	49.8
Imazaquin	0.063	43.0	50.4
Imazaquin	0.125	43.8	49.4
Imazaquin	0.188	42.7	50.2
Imazaquin	0.25	45.7	50.6
Imazethapyr	0.047	42.8	47.7
Imazethapyr	0.094	42.8	51.1
Imazethapyr	0.141	43.4	49.8
Imazethapyr	0.188	41.3	50.0
Chlorimuron	0.016	42.0	50.8
Chlorimuron	0.031	40.5	47.4
Chlorimuron	0.063	41.2	48.0
Chlorimuron	0.094	42.6	50.4
Chloramben	3.0	41.4	49.0
LSD (0.05)		4.9	3.8

Table 31. Effect of clomazone, imazaquin, imazethapyr, and chlorimuron on rotational corn at DeKalb - 1988 (Curran and Knake).

Herbicide	Rate (lb/A)	Injury Early -----(%)-----	Injury Late	Plant ht. Early -----(cm)----	Plant ht. Late	Seedling dry wt. ---(g)---	Grain Yield (bu/A)
Clomazone	0.75	3	1	19.9	155.1	1.14	169.0
Clomazone	1.0	5*	2	19.5	148.2*	1.14	145.9*
Clomazone	1.5	5*	1	20.8	158.2	1.12	160.8
Clomazone	2.0	21*	1	18.2*	159.6	0.97*	157.7
Imazaquin	0.063	0	0	20.2	151.5	1.14	155.9
Imazaquin	0.125	0	0	20.7	156.3	1.26	163.1
Imazaquin	0.188	0	1	19.7	152.4	1.17	151.6*
Imazaquin	0.25	1	1	19.8	147.7*	1.16	155.0
Imazethapyr	0.047	0	0	20.5	161.2	1.43	165.0
Imazethapyr	0.094	0	0	19.2	163.4	1.13	160.9
Imazethapyr	0.141	1	0	20.4	154.0	1.32	157.9
Imazethapyr	0.188	0	0	21.2	151.5	1.48	168.8
Chlorimuron	0.016	0	0	20.8	159.0	1.25	159.6
Chlorimuron	0.031	0	2	21.1	164.6	1.34	164.0
Chlorimuron	0.063	0	4*	20.3	155.6	1.22	157.3
Chlorimuron	0.094	2	5*	17.9*	160.8	1.01*	158.6
Chloramben	3.0	0	0	21.0	160.8	1.38	165.9
LSD (0.05)		3	3	1.9	11.3	0.30	14.2

*Significantly differs from chloramben check treatment.

Table 32. Effect of clomazone, imazaquin, imazethapyr, and chlorimuron on rotational corn at Monmouth - 1988 (Curran and Knake).

Herbicide	Rate (lb/A)	Injury Early -----(%)-----	Injury Late	Plant ht. Early -----(cm)----	Plant ht. Late	Seedling dry wt. ---(g)---	Grain Yield (bu/A)
Clomazone	0.75	2	1	33.0	198.9	2.10	134.3
Clomazone	1.0	3	1	32.5	197.3	2.22	130.1
Clomazone	1.5	2	2	31.2	200.7	1.96	130.0
Clomazone	2.0	3	1	32.0	193.1	1.95	127.7
Imazaquin	0.063	2	0	33.2	203.5	2.10	135.7
Imazaquin	0.125	1	0	32.3	203.5	2.17	126.7
Imazaquin	0.188	0	1	33.7	198.0	2.04	132.1
Imazaquin	0.25	5*	2	32.2	198.6	2.10	138.8
Imazethapyr	0.047	1	0	33.4	201.9	2.12	135.3
Imazethapyr	0.094	3	1	30.4	200.7	1.93	142.3
Imazethapyr	0.141	4	1	32.9	201.2	2.18	133.1
Imazethapyr	0.188	3	2	33.3	198.5	2.02	144.0
Chlorimuron	0.016	4	2	31.0	196.3	1.89	133.4
Chlorimuron	0.031	5*	4	29.0	197.2	1.78	127.9
Chlorimuron	0.063	9*	11*	27.7*	198.4	1.97	126.1
Chlorimuron	0.094	15*	14*	24.1*	192.3	1.37*	139.0
Chloramben	3.0	0	0	32.5	202.0	2.20	141.4
LSD (0.05)		4	6	4.5	10.9	0.50	18.9

*Significantly differs from chloramben check treatment.

APPENDIX

WEATHER CONDITIONS - 1988

NORTHERN ILLINOIS AGRONOMY RESEARCH CENTER - DEKALB
APRIL 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	36	49					T
2	42	60					.81
3	42	52					
4	46	68					
5	45	80					.40
6	40	58					1.09
7	37	62					
8	35	65					
9	39	67					
10	39	50					
11	40	57					
12	36	64					
13	35	74					.07
14	38	53					
15	30	54					
16	32	62					
17	40	77					
18	30	53					
19	27	53			35	54	
20	34	55			43	94	.10
21	26	48			56	100	.05
22	39	53			48	88	.54
23	36	46			75	100	
24	35	58			42	94	
25	38	68			41	86	
26	40	57			50	100	.21
27	35	43			80	100	.14
28	34	62			84	100	
29	32	67			35	100	
30	36	75			28	84	

NORTHERN ILLINOIS AGRONOMY RESEARCH CENTER - DEKALB
MAY 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	38	75			28	75	
2	39	78			30	66	
3	43	75			36	70	
4	39	68			35	92	
5	40	74			34	62	
6	43	82			32	64	
7	45	87			28	72	
8	52	87			40	98	.35
9	52	61			70	98	.06
10	50	72			40	90	
11	44	77			33	92	
12	56	80			45	96	.36
13	44	70			34	70	
14	39	86			26	76	
15	60	80			43	87	.30
16	47	70			52	98	.02
17	40	72			44	87	
18	41	77			40	75	
19	45	82			35	82	
20	46	84			40	74	
21	52	88			36	94	
22	57	88			42	74	
23	55	76			60	100	1.13
24	43	69			37	90	
25	35	70			35	90	T
26	43	80			30	90	T
27	50	85			30	74	.17
28	57	88			30	88	
29	59	90			25	71	
30	59	92			34	80	
31	60	89			36	76	

NORTHERN ILLINOIS AGRONOMY RESEARCH CENTER - DEKALB
JUNE 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	60	94			37	78	
2	54	82			54	74	
3	46	74			40	80	
4	46	82			37	71	
5	56	88			40	63	
6	59	91			39	61	
7	62	94			42	62	
8	50	89			51	85	
9	44	71			37	92	
10	42	78			45	72	
11	46	86			37	71	
12	50	88			39	84	
13	56	94			40	77	
14	62	86			55	79	
15	64	88			43	74	
16	58	86			40	86	T
17	51	82			37	95	T
18	55	90			36	83	
19	62	89			36	66	
20	70	101			40	90	
21	68	101			42	92	
22	68	94			50	76	
23	59	84			42	78	
24	59	86			54	76	
25	66	102			42	76	
26	52	76			40	96	
27	49	84			37	82	
28	53	88			47	100	T
29	47	70			41	100	.46
30	42	74			35	99	

ORR AGRICULTURAL RESEARCH AND DEMONSTRATION CENTER - PERRY
APRIL 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	41	55	39	47	80	100	
2	46	58	44	49	100	100	.27
3	45	77	48	60	37	100	.11
4	42	59	45	54	66	100	
5	47	80	44	61	42	100	
6	45	86	49	68	56	100	.37
7	41	61	44	56	30	100	
8	43	70	43	62	35	100	
9	44	71	46	62	43	100	
10	44	75	50	65	37	100	
11	39	47	45	51	88	100	
12	40	65	44	59	38	94	
13	35	67	45	64	42	100	
14	41	73	45	65	32	100	
15	34	52	44	61	40	90	
16	31	55	43	59	42	100	
17	40	64	42	62	36	100	
18	40	71	46	64	60	100	.04
19	29	54	42	61	26	84	
20	34	58	42	60	52	100	
21	35	74	47	64	56	100	
22	43	56	47	54	58	100	T
23	45	78	47	64	64	100	
24	32	51	44	55	80	100	
25	40	62	42	65	40	100	
26	38	69	49	64	54	100	
27	40	71	47	60	40	100	T
28	39	57	45	57	52	100	
29	32	67	44	63	30	100	
30	35	71	45	69	28	100	

ORR AGRICULTURAL RESEARCH AND DEMONSTRATION CENTER - PERRY
MAY 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	36	74	47	70	26	100	
2	39	77	50	71	74	100	
3	51	79	51	72	26	84	
4	48	69	54	63	72	88	
5	40	70	53	68	48	100	T
6	40	78	51	73	46	100	
7	49	81	54	75	22	100	
8	53	84	56	73	38	100	
9	52	81	56	71	76	100	1.21
10	52	71	53	65	58	88	
11	46	75	51	69	38	100	
12	51	79	53	76	42	100	
13	64	84	59	78	42	100	
14	49	80	61	80	52	100	
15	56	88	60	80	50	100	
16	52	76	60	70	74	100	T
17	40	75	59	76	44	100	
18	46	73	58	78	46	100	
19	45	79	58	79	36	100	
20	46	84	59	80	36	100	
21	53	87	61	82	28	100	
22	56	88	66	80	44	100	
23	59	74	63	69	100	100	.19
24	58	74	62	74	100	100	2.05
25	39	76	55	75	100	100	
26	40	68	53	73	100	100	
27	47	77	53	75	100	100	
28	57	79	56	74	100	100	
29	55	84	59	81	100	100	
30	55	85	64	80	100	100	
31	55	87	64	79	28	100	

ORR AGRICULTURAL RESEARCH AND DEMONSTRATION CENTER - PERRY
JUNE 1988

Date	Air Temp °F Min.	Air Temp °F Max.	Soil Temp °F 4" bare soil Min.	Soil Temp °F 4" bare soil Max.	Humidity % Min.	Humidity % Max.	Precipitation inches
1	55	89	66	81	42	100	
2	64	92	67	85	36	100	
3	56	84	68	83	60	100	
4	43	75	64	83	42	100	
5	45	78	64	83	34	100	
6	49	83	63	84	34	100	
7	54	88	65	86	32	100	
8	62	91	67	87	40	100	
9	51	70	60	71	100	100	1.38
10	57	71	57	74	48	100	
11	46	75	57	76	42	100	
12	46	80	58	81	42	100	
13	56	85	62	82	42	100	
14	62	89	66	85	42	100	
15	70	89	68	85	48	100	
16	84	65	70	78	72	100	T
17	53	83	68	85	42	100	
18	61	86	67	85	40	100	
19	64	89	61	87	42	100	
20	72	92	71	87	52	96	
21	75	96	75	91	52	100	T
22	75	97	76	93	52	100	
23	68	95	77	88	60	100	
24	64	91	76	89	52	100	
25	74	98	75	91	56	100	
26	69	100	79	92	64	74	
27	49	85	73	90	64	68	
28	52	84	72	89	34	98	
29	61	92	72	89	30	100	
30	59	69	67	76	100	100	1.23

NORTHWESTERN ILLINOIS AGRONOMY RESEARCH CENTER - MONMOUTH
APRIL 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	36	54	37	48	49	97	
2	38	53	41	46	65	97	0.14
3	45	71	47	57	54	98	0.24
4	43	57	45	53	52	92	0.06
5	47	76	45	60	40	97	
6	42	80	48	63	52	100	0.49
7	38	59	43	56	32	86	
8	42	68	43	62	30	92	
9	44	71	47	64	31	91	
10	40	74	50	68	33	92	
11	38	44	43	50	68	99	
12	36	62	43	57	53	85	
13	37	65	44	63	25	86	
14	36	73	47	65	23	91	T
15	29	54	43	61	25	81	
16	31	55	43	60	28	81	
17	38	63	43	64	25	62	
18	33	77	46	64	35	90	.01
19	27	53	43	60	22	70	
20	35	55	43	61	22	52	
21	31	67	45	60	37	79	
22	41	54	44	54	39	98	.08
23	28	59	45	53	66	100	
24	26	46	39	47	59	100	
25	40	62	39	63	24	59	
26	43	70	48	64	30	95	.08
27	38	65	39	57	35	91	.09
28	36	55	43	52	30	75	
29	33	65	43	63	20	75	
30	41	71	46	68	19	48	

NORTHWESTERN ILLINOIS AGRONOMY RESEARCH CENTER - MONMOUTH
MAY 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	42	75	50	71	16	53	
2	49	79	53	73	19	59	
3	50	79	54	73	21	46	
4	41	71	54	69	27	83	
5	39	71	53	68	29	71	
6	40	77	53	74	26	65	
7	52	81	55	75	22	46	
8	61	85	59	73	22	70	
9	52	79	55	70	54	96	.57
10	47	67	51	59	46	91	T
11	49	74	51	69	29	89	
12	53	81	55	76	28	91	
13	61	83	62	79	27	67	
14	46	71	60	78	27	59	
15	64	89	59	79	29	62	
16	52	82	63	77	26	79	T
17	45	69	60	77	50	98	
18	46	72	60	79	35	87	
19	52	78	61	80	30	86	
20	51	81	64	80	30	75	
21	54	85	66	84	27	86	
22	58	85	66	82	40	95	
23	58	82	65	76	37	94	.54
24	56	63	60	65	60	88	.53
25	37	71	53	72	32	82	
26	43	69	52	77	29	91	
27	50	77	58	75	25	75	
28	54	80	61	74	32	89	
29	59	86	63	82	25	80	
30	58	86	67	83	34	90	
31	59	88	67	85	29	85	

NORTHWESTERN ILLINOIS AGRONOMY RESEARCH CENTER - MONMOUTH
JUNE 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	60	90	70	76	28	85	
2	61	92	71	88	26	94	
3	54	87	70	90	45	95	.02
4	45	75	65	83	27	80	
5	52	78	65	85	29	68	
6	52	85	67	87	25	86	
7	55	87	70	88	25	90	
8	61	90	71	90	34	99	.06
9	46	73	57	74	46	99	.76
10	42	71	57	73	25	94	
11	49	75	57	81	22	87	
12	55	80	63	83	29	90	
13	59	84	66	85	30	88	
14	63	89	70	87	32	86	
15	68	89	78	92	58	86	
16	60	88	73	90	21	90	
17	56	85	73	90	28	91	
18	65	87	73	87	30	84	
19	66	90	74	88	35	68	
20	72	91	74	87	41	70	
21	69	97	77	92	38	87	
22	73	97	79	92	38	74	
23	65	95	77	89	41	84	
24	73	90	77	92	48	65	
25	73	95	78	89	48	91	
26	62	101	78	93	36	89	
27	49	83	72	88	46	100	
28	54	83	72	89	32	90	
29	64	91	73	90	30	90	T
30	54	72	43	100	69	77	

URBANA AGRONOMY RESEARCH CENTER
APRIL 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil	Humidity %		Precipitation inches
	Min.	Max.	Ave.	Min.	Max.	
1	42	53	44	64	100	.08
2	47	60	48	66	100	.03
3	50	69	48	62	100	.04
4	38	60	49	56	100	.20
5	47	72	52	40	100	
6	43	83	57	34	100	.43
7	40	56	49	34	100	.19
8	39	67	47	26	62	
9	42	68	52	26	100	
10	47	68	57	26	100	
11	39	63	54	36	100	
12	37	66	52	34	62	
13	37	66	54	34	62	
14	43	70	56	24	80	
15	30	57	55	48	62	
16	48	58	53	32	96	
17						
18	38	72	56	52	100	.40
19	32	52	48	20	84	
20	38	54	47	14	84	
21	37	70	49	52	90	
22	35	59	52	24	100	.17
23	46	66	51	46	96	
24	44	60	56	38	82	
25	37	58	56	28	80	
26	41	66	57	24	84	
27	40	72	58	28	100	.07
28	36	50	47	74	100	
29	40	64	52	28	84	
30	39	68	56	16	74	

URBANA AGRONOMY RESEARCH CENTER
MAY 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil	Humidity %		Precipitation inches
	Min.	Max.	Ave.	Min.	Max.	
1	43	73	60	18	74	
2	48	75	60	16	70	
3	50	77	63	18	60	
4	46	76	64	26	58	
5	47	68	63	28	60	
6	53	74	63	26	46	
7	50	81	66	20	58	
8	63	84	67	24	96	
9	54	81	61	36	100	.48
10	49	67	58	50	100	
11	49	72	62	36	100	
12	53	79	66	26	88	.03
13	64	85	18	26	88	.01
14	47	77	69	28	68	
15	65	87	71	26	96	
16	55	87	70	36	100	
17	45	87	69	30	100	.05
18	47	74	67	32	88	
19	53	80	66	24	96	
20	56	82	72	20	66	
21	60	85	74	34	96	
22	58	90	76	24	84	
23	60	84	70	36	100	1.04
24	59	74	60	30	100	.03
25	41	71	60	26	78	
26	42	68	62	22	100	
27	50	78	67	18	86	
28	57	85	69	16	86	.01
29	60	86	75	26	96	
30	59	88	76	28	100	
31	63	91	79	28	80	

URBANA AGRONOMY RESEARCH CENTER
JUNE 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil	Humidity %		Precipitation inches
	Min.	Max.	Ave.	Min.	Max.	
1	63	92	80	24	70	
2	69	93	81	24	64	
3	53	92	79	28	100	
4	50	75	75	32	76	
5	52	80	75	26	76	
6	60	86	78	28	56	
7	58	90	79	77	79	
8	60	92	81	26	94	
9	51	88	74	40	100	.30
10	47	72	70	18	62	
11	50	75	71	24	76	
12	54	87	75	24	92	
13	56	88	76	26	96	
14	64	92	78	26	94	
15	66	93	79	26	86	
16	69	94	79	40	92	
17	58	83	76	36	96	
18	67	88	77	26	80	
19	60	90	80	26	86	
20	63	93	84	26	100	.01
21	72	97	84	32	80	
22	73	99	84	34	70	
23	72	98	84	38	96	
24	65	90	83	36	90	
25	76	95	83	36	90	
26	79	102	86	32	76	
27	54	78	80	46	92	
28	55	83	80	26	80	
29	67	90	81	26	84	
30	54	73	75	78	96	

NORTHEASTERN ILLINOIS AGRONOMY RESEARCH CENTER - ELWOOD
APRIL, 1988

Date	Air Temp °F Min.	Air Temp °F Max.	Soil Temp °F 4" bare soil Min.	Soil Temp °F 4" bare soil Max.	Humidity % Min.	Humidity % Max.	Precipitation inches
1	39	51	40	46	54	100	-
2	42	53	44	45	72	100	.01
3	44	67	46	51	86	100	.22
4	43	58	47	50	32	100	.06
5	49	72	47	56	44	96	-
6	44	83	52	61	34	98	.97
7	34	55	44	59	32	98	.13
8	34	64	43	55	26	98	-
9	40	67	45	58	30	98	-
10	44	67	48	56	32	100	-
11	40	52	47	52	68	90	-
12	39	59	46	54	28	92	-
13	32	62	47	59	22	96	-
14	39	72	46	60	24	98	-
15	29	55	47	59	34	98	-
16	30	53	47	58	30	98	-
17	40	62	46	60	26	76	-
18	34	74	48	59	30	88	-
19	23	54	46	60	28	98	-
20	33	53	46	58	24	64	-
21	29	56	44	49	34	98	.02
22	38	46	45	47	44	98	-
23	36	54	45	48	40	98	.14
24	35	50	44	46	60	98	-
25	35	57	44	56	34	98	-
26	43	67	45	56	28	98	-
27	38	60	47	55	40	98	.20
28	32	42	43	47	84	98	.08
29	29	61	42	56	26	98	-
30	35	68	43	63	16	98	-

NORTHEASTERN ILLINOIS AGRONOMY RESEARCH CENTER - ELWOOD
MAY, 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	39	76	44	65	18	96	-
2	45	74	45	67	22	74	-
3	44	76	52	65	20	76	-
4	41	73	53	66	26	98	-
5	37	65	52	65	36	98	-
6	41	73	54	68	18	98	-
7	42	80	55	70	18	98	-
8	62	87	56	68	14	76	-
9	55	85	57	68	34	100	.52
10	52	61	54	58	64	98	.01
11	46	67	53	60	40	98	-
12	54	77	54	69	22	98	.06
13	56	82	58	71	26	78	-
14	38	64	56	72	36	98	-
15	58	85	55	71	14	92	-
16	52	85	61	69	50	100	.04
17	39	72	56	66	48	98	
18	40	69	55	70	46	98	-
19	45	75	57	71	34	98	-
20	46	78	58	74	26	98	-
21	52	83	61	76	32	98	-
22	57	85	63	77	26	94	-
23	57	88	65	72	36	100	-
24	52	62	60	66	84	98	1.34
25	35	67	53	68	54	98	-
26	38	66	53	68	26	98	-
27	51	78	55	69	18	74	-
28	60	84	58	73	22	78	-
29	58	89	60	75	24	96	-
30	62	90	62	78	28	98	-
31	62	92	64	80	24	96	-

NORTHEASTERN ILLINOIS AGRONOMY RESEARCH CENTER - ELWOOD
JUNE, 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	60	92	68	83	28	98	-
2	59	94	70	82	22	98	-
3	48	80	66	78	52	98	-
4	44	71	65	77	32	98	-
5	54	82	65	80	24	76	-
6	55	90	65	81	26	98	-
7	57	93	69	82	24	98	-
8	60	90	69	83	26	98	-
9	47	90	65	77	38	98	-
10	38	69	63	76	22	98	-
11	43	74	63	76	28	98	-
12	51	85	61	77	22	98	-
13	59	90	66	88	28	94	-
14	64	95	62	79	24	94	-
15	68	95	70	80	28	84	-
16	59	93	71	80	34	98	-
17	54	87	71	82	30	98	-
18	54	90	69	81	20	76	-
19	67	93	69	82	20	76	-
20	73	92	69	82	28	80	-
21	74	101	73	89	32	98	-
22	77	102	76	85	27	63	-
23	64	98	74	83	36	98	-
24	62	84	73	81	22	96	-
25	76	88	74	83	35	82	-
26	76	104	76	85	28	94	-
27	51	76	70	76	36	98	-
28	52	81	69	82	24	98	-
29	61	90	70	88	22	98	.38
30	47	69	63	72	40	98	-

NORTHEASTERN ILLINOIS AGRONOMY RESEARCH CENTER - ELWOOD
JULY, 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	50	75	62	72	26	98	-
2	52	80	63	75	22	98	-
3	50	84	64	77	16	98	-
4	55	91	65	81	18	98	-
5	63	96	65	84	18	98	-
6	68	98	72	85	26	78	-
7	68	99	74	85	30	98	-
8	65	97	77	87	26	98	-
9	66	99	77	85	26	98	-
10	72	98	76	86	24	80	-
11	62	88	74	83	54	98	-
12	52	94	72	86	18	98	-
13	64	92	74	85	26	98	-
14	71	95	74	84	36	98	-
15	68	103	78	88	26	98	-
16	80	103	78	88	45	100	-
17	66	98	76	87	46	98	-
18	74	96	75	86	30	98	.15
19	62	77	72	81	98	98	.35
20	67	89	71	83	29	98	-
21	60	81	71	79	56	98	-
22	57	85	71	82	32	98	-
23	58	86	71	83	30	98	-
24	59	92	71	84	24	98	-
25	66	96	71	85	22	98	.28
26	61	90	73	83	36	98	-
27	55	87	71	83	32	98	-
28	52	95	71	86	21	98	-
29	51	97	75	87	28	98	-
30	52	98	75	88	29	94	-
31	52	99	76	88	51	98	.44

NORTHEASTERN ILLINOIS AGRONOMY RESEARCH CENTER - ELWOOD
AUGUST, 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	63	97	73	101	32	100	.44
2	62	105	78	90	30	98	-
3	64	98	79	100	32	98	-
4	60	96	77	97	33	99	.30
5	74	98	77	100	32	98	-
6	73	98	70	90	36	100	-
7	72	100	73	89	40	98	-
8	42	98	72	101	32	99	-
9	65	99	70	100	34	99	.20
10	58	86	75	100	70	99	-
11	57	82	75	82	80	99	.55
12	60	99	75	92	46	98	-
13	62	100	75	96	48	98	-
14	74	96	74	95	52	98	-
15	60	96	77	87	52	97	-
16	59	99	78	98	46	99	-
17	64	102	79	90	30	99	-
18	62	103	82	103	32	98	-
19	58	103	80	92	38	99	.17
20	57	78	79	80	36	99	.02
21	56	85	78	81	37	99	-
22	49	85	72	85	32	98	-
23	52	78	71	74	60	100	.36
24	57	88	72	82	30	100	-
25	50	86	82	82	28	90	-
26	52	85	70	83	24	98	-
27	51	82	69	81	22	98	-
28	50	78	62	83	32	100	.97
29	45	80	62	84	24	98	-
30	47	76	67	74	31	99	-
31	52	78	63	75	31	98	-

NORTHEASTERN ILLINOIS AGRONOMY RESEARCH CENTER - ELWOOD
SEPTEMBER, 1988

Date	Air Temp °F		Soil Temp °F 4" bare soil		Humidity %		Precipitation inches
	Min.	Max.	Min.	Max.	Min.	Max.	
1	53	84	63	77	26	98	-
2	58	84	66	80	28	99	-
3	55	85	70	75	30	99	-
4	55	86	69	78	34	98	.20
5	41	76	65	76	38	99	.10
6	37	72	62	74	28	96	-
7	52	76	61	75	18	97	-
8	54	82	62	76	22	82	-
9	46	83	63	75	08	97	-
10	54	84	62	77	14	96	-
11	68	86	63	78	43	96	-
12	60	85	64	77	52	96	-
13	51	88	62	78	51	95	-
14	45	78	67	78	34	99	-
15	49	83	66	79	20	98	-
16	44	78	66	75	29	98	-
17	47	74	64	68	36	99	.35
18	55	89	61	72	36	99	-
19	58	91	65	77	54	99	.29
20	43	76	62	71	60	98	.55
21	46	70	60	65	59	100	-
22	52	72	60	70	76	98	.06
23	47	89	61	70	48	98	.61
24	41	72	60	70	50	99	-
25	41	76	59	69	58	99	-
26	40	79	56	73	26	99	-
27	51	82	61	71	24	82	-
28	54	84	62	72	48	100	-
29	54	78	68	71	52	100	-
30	57	81	65	72	40	100	-

TERMINOLOGY FOR HERBICIDES IN THIS REPORT

Common Name or Code Name	Trade Names	Company
Acifluorfen	Blazer, Tackle	BASF, Rhone-Poulenc
Alachlor	Lasso	Monsanto
Alachlor & atrazine	Lariat, Bullet MT	Monsanto
Atrazine	AAtrex	CIBA-Geigy
Bentazon & acifluorfen	Galaxy 4.5:l, Storm 2:l	BASF
Bentazon & atrazine	Laddok	BASF
Bromoxynil	Buctril	Rhone-Poulenc
Butylate & dichlormid	Sutan+	ICI
CGA-136872	Beacon	CIBA-Geigy
Chloramben	Amiben	Rhone-Poulenc
Chlorimuron	Classic	DuPont
Cinmethylin	Cinch	DuPont
Clethodim	Select	Valent
Clomazone	Command	FMC
Clomazone & trifluralin	Commence	Elanco, FMC
Clopyralid	Lontrel	Dow
Cyanazine	Bladex	DuPont
Cyanazine & atrazine 2:l	Extrazine	DuPont
Cyanazine & atrazine 3:l	Conquest	DuPont
Dalapon	Dowpon	Vertac
2,4-D 2-ethylhexyl LVester	----	Growmark
2,4-DB	Butyrac 200	Rhone-Poulenc
Dicamba	Banvel	Sandoz
Dicamba & atrazine	Marksman	Sandoz
DPX-M6316	Harmony	DuPont
DPX-M6316 & chlorimuron	Pinacle	DuPont
DPX-V9360	Accent	DuPont
EL-177 (EL 181977)	----	Elanco
EPTC	Eptam	Stauffer-ICI
EPTC & dichlormid	Eradicane	ICI
EPTC & dichlormid & dietholate	Eradicane Extra	ICI
Ethalfluralin	Sonalan	Elanco
Fenoxaprop	Whip, Option	Hoechst, FMC
Fluazifop-P	Fusilade 2000	ICI
Fluazifop-P & fomesafen	Tornado	ICI
Fluroxypyr	Starane	Dow
Fomesafen	Reflex	ICI
Glyphosate	Roundup	Monsanto
Glyphosate & alachlor (1.4:2.6)	Bronco	Monsanto
Haloxyfop	Verdict	Dow
HOE360EW	----	Hoechst
HOE-39866	Ignite	Hoechst
Imazaquin	Scepter	Cyanamid
Imazethapyr	Pursuit	American Cyanamid
Lactofen	Cobra	PPG - Valent
Linuron	Lorox, Linex	DuPont, Griffin
Mefluidide	Embark, Vistar	3M
Metolachlor & CGA 154281	Dual & Safener	CIBA-Geigy

Common Name or Code Name	Trade Names	Company
Metribuzin	Sencor, Lexone	Mobay, DuPont
Metribuzin & chlorimuron	Preview	DuPont
Metribuzin & metolachlor	Turbo	Mobay
Metribuzin & trifluralin	Salute	Mobay
MON14482 (glyphosate & atrazine)	---	Monsanto
Paraquat	Gramoxone Super	ICI
Pendimethalin	Prowl	American Cyanamid
Pendimethalin & atrazine	Prozine	American Cyanamide
Pendimethalin & imazethapyr	Pursuit Plus	American Cyanamid
Pyridate	Tough	Terra, Gilmore
Quizalofop	Assure	DuPont
SB23031	---	Valent
SB23121	---	Valent
SB53482	---	Valent
SB63596	---	Valent
Sethoxydim	Poast	BASF
Simazine	Princep, Caliber 90	CIBA-Geigy
Tridiphane	Tandem	Dow
Trifluralin	Treflan	Elanco
Trifluralin & clomazone	Commence	Elanco, FMC
UBI-A1237	---	Uniroyal

TRADE NAMES FOR HERBICIDES IN THIS REPORT

Trade Names	Common Names	Company
AAtrex	Atrazine	CIBA-Geigy
Accent	DPX-V9360	DuPont
Amiben	Chloramben	Rhone-Poulenc
Assure	Quizalofop	DuPont
Banvel	Dicamba	Sandoz
Beacon	CGA-136872	CIBA-Geigy
Bladex	Cyanazine	DuPont
Blazer	Acifluorfen	BASF
Brominal	Bromoxynil	Rhone-Poulenc
Bronco	Glyphosate & alachlor (1.4:2.6)	Monsanto
Buctril	Bromoxynil	Rhone-Poulenc
Bullet MT	Alachlor & atrazine	Monsanto
Butyrac 200	2,4-DB	Rhone-Poulenc
Caliber 90	Simazine	CIBA-Geigy
Cinch	Cinmethylin	DuPont
Classic	Chlorimuron	DuPont
Cobra	Lactofen	PPG-Valent
Command	Clomazone	FMC
Commence	Clomazone & trifluralin	Elanco, FMC
Conquest	Cyanazine & atrazine 3:1	DuPont
Dowpon	Dalapon	Vertac
Dual	Metolachlor & GCA-154281	CIBA-Geigy
Embark	Mefluidide	3M
Eptam	EPTC	ICI
Eradicane	EPTC & dichlormid	ICI
Eradicane Extra	EPTC & dichlormid & dietholate	ICI
Extrazine	Cyanazine & atrazine 2:1	DuPont
Fusilade 2000	Fluazifop-P	ICI
Galaxy 4.5:1	Bentazon & acifluorfen	BASF
Gramoxone Super	Paraquat	ICI
Harmony	DPX-M6316	DuPont
Ignite	HOE-39866	Hoechst
Laddok	Bentazon & atrazine	BASF
Lariat	Alachlor & atrazine	Monsanto
Lasso	Alachlor	Monsanto
Lexone	Metribuzin	DuPont
Linex	Linuron	Griffin
Lontrel	Clopyralid	Dow
Lorox	Linuron	DuPont
Marksman	Dicamba & atrazine	Sandoz
Option	Fenoxaprop	FMC
Pinacle	DPX-M6316 & chlorimuron	DuPont
Poast	Sethoxydim	BASF
Preview	Metribuzin & chlorimuron	DuPont
Princep	Simazine	CIBA-Geigy
Prowl	Pendimethalin	American Cyanamid
Prozine	Pendimethalin & atrazine	American Cyanamid
Pursuit	Imazethapyr	American Cyanamid
Pursuit Plus	Pendimethalin & imazethapyr	American Cyanamid
Reflex	Fomesafen	ICI

Trade Names	Common Names	Company
Roundup	Glyphosate	Monsanto
Salute	Metribuzin & trifluralin	Mobay
Scepter	Imazaquin	Cyanamid
Select	Clethodim	Valent
Sencor	Metribuzin	Mobay
Sonalan	Ethalfluralin	Elanco
Starane	Fluroxypyr	Dow
Storm 2:1	Bentazon & acifluorfen	BASF
Sutan+	Butylate & dichlormid	ICI
Tackle	Acifluorfen	Rhone-Poulenc
Tandem	Tridiphane	DOW
Tornado	Fluazifop-P & fomesafen	ICI
Tough	Pyridate	Terra, Gilmore
Treflan	Trifluralin	Elanco
Turbo	Metribuzin & metolachlor	Mobay
Verdict	Haloxyfop	Dow
Vistar	Mefluidide	3M

ABBREVIATIONS FOR HERBICIDE COMMON NAMES

The abbreviations listed below have been established by the NCWCC for common names of herbicides, herbicide antidotes, and other herbicide-modifying chemicals for which common names have been assigned.

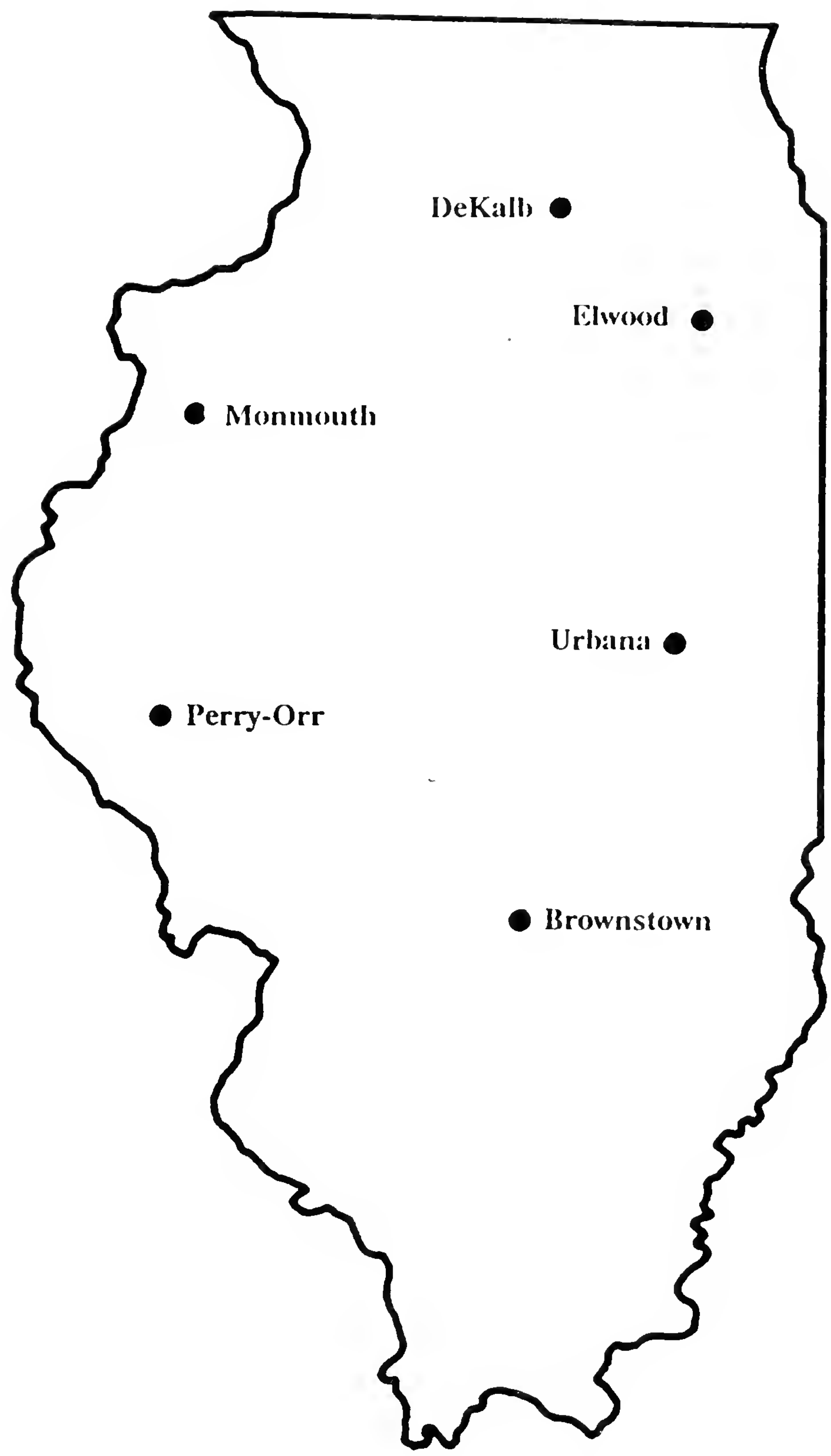
Common Name	Abbre-viation	Common Names	Abbre-viation
Acetochlor	Acet	DSMA	DSMA
Acifluorfen	Acif	Endothall	Endo
Alachlor	Alac	EPTC	EPTC
Ametryn	Amet	Ethalfluralin	Etha
Amitrole	Amit	Fenoxaprop	Fenx
Atrazine	Atra	Flamprop	Flam
Barban	Barb	Fluazifop	Flfp
Benefin	Bnfn	Fluazifop-P	Flfp-P
Benazolin	Bena	Fluorochloridone	Flcd
Bentazon	Bent	Flurazole	Flzl
Benzofluor	Befl	Fluroxypyr	Flox
Benzoylprop	Bepr	Fomesafen	Fome
Bifenox	Bife	Glyphosate	Glyt
Bromacil	Brcl	Haloxyfop	Halx
Bromoxynil	Brox	Hexazinone	Heaz
Butylate	Buty	Imazapyr	Impr
Cacodylic acid	Caco	Imazaquin	Imqn
Chloramben	Clam	Imazethapyr	Imep
Chlorimuron	Clim	Isouron	Isur
Chloroxuron	Clxu	Isoxaben	Isox
Chlorsulfuron	Clsu	Lactofen	Lact
Cinmethylin	Cinm	Linuron	Linu
Clethodim	Clet	MAA	MAA
Clomazone	Clom	MAMA	MAMA
Cloproxydim	Clpx	MCPA	MCPA
Clopyralid	Clpy	MCPB	MCPB
Cyanazine	Cyan	MCPP	MCPP
Cycloate	Cycl	Mefluidide	Mefl
Cyometrinil	Cyom	Methazole	Mezl
2,4-D	2,4-D	Metolachlor	Meto
Dalapon	Dala	Metribuzin	Metr
2,4-DB	2,4-DB	Metsulfuron	Mets
Desmedipham	Desm	Molinate	Moli
Diallate	Dial	MSMA	MSMA
Dicamba	Dica	Naphthalic anhydride	NA
Dichlobenil	Dcbl	Napropamide	Napr
Dichlormid	Ddmd	Naptalam	Napt
Diclofop	Dcfp	Nitrofen	Nifn
Diethatyle	Dtyl	Norflurazon	Norf
Dietholate	Dlat	Oryzalin	Oryz
Difenzoquat	Dife	Oxadiazon	Oxad
Dinoseb	Dino	Oxyfluorfen	Oxyf
Diphenamid	Diph	Paraquat	Para
Diquat	Diqu	Pendimethalin	Pend
Diuron	Diur	Perfluidone	Perf

Common Names	Abbre-viation
Phenmedipham	Phen
Picloram	Picl
Prometryn	Prtr
Pronamid	Pron
Propachlor	Prcl
Propanil	Prnl
Propazine	Przn
Pyrazon	Pyzn
Pyridate	Pydt
Quizalofop	Qufp
Sethoxydim	Seth
Siduron	Sidu
Sulfometuron	Sume
Tebuthiuron	Tebu
Terbacil	Tecl
Terbutryn	Tert
Triallate	Tria
Triclopyr	Trcp
Tridiphane	Trid
Trifluralin	Trif
Vernolate	Vern

Note: Package mix products (consisting of 2 or more active ingredients blended by the manufacturer into one product) are abbreviated by placing the "&" symbol between the abbreviations of the active ingredients.

WEED NAMES AND CODES

Abbreviation	Common Name	Botanical Name
Bucu	Burcucumber	Sicyos angulatus
Bygr	Barnyardgrass	Echinochloa crus-galli
Cath	Canada thistle	Cirsium arvense
Cocb	Common cocklebur	Xanthium strumarium
Coch	Common chickweed	Stellaria media
Colq	Common lambsquarters	Chenopodium album
Corw	Common ragweed	Ambrosia artemisiifolia
Cosf	Common sunflower	Helianthus annuus
Dali	Dandelion	Taraxacum officinale
Ebns	Easter black nightshade	Solanum ptycanthum
Fapa	Fall panicum	Panicum dichotomiflorum
Gift	Giant foxtail	Setaria faberi
Girw	Giant ragweed	Ambrosia trifida
Grft	Green foxtail	Setaria viridis
Howe	Horseweed	Conyza canadensis
Ilmg	Ivyleaf morningglory	Ipomoea hederacea
Jiwe	Jimsonweed	Datura stramonium
Lacg	Large crabgrass	Digitaria sanguinalis
Pesw	Pennsylvania smartweed	Polygonum pensylvanicum
Prsi	Prickly sida	Sida spinosa
Qugr	Quackgrass	Agropyron repens
Rrpw	Redroot pigweed	Amaranthus retroflexus
Shca	Shattercane	Sorghum bicolor
Shpu	Shepherdspurse	Capsella bursa-pastoris
Smgc	Smooth groundcherry	Physalis subglabrata
Smpw	Smooth pigweed	Amaranthus hybridus
Tamg	Tall morningglory	Ipomoea purpurea
Vele	Velvetleaf	Abutilon theophrasti
Vema	Venice mallow	Hibiscus trionum
Yeft	Yellow foxtail	Setaria glauca



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