

# Ohio State University Horticulture and Crop Science

Flexstar/glyphosate antagonism study

Trial ID: 10clrkgrw2 Study Dir.:  
Location: clarksburg Investigator: Dr. Mark M. Loux

## GENERAL TRIAL INFORMATION

Investigator: Dr. Mark M. Loux

Conducted Under GLP (Y/N): Yes Conducted Under GEP (Y/N): Yes

## CROP AND WEED DESCRIPTION

Weed Code	Common Name	Scientific Name
1. AMBTR Gi	ant ragweed	Ambrosia trifida
2. SETFA Gi	ant foxtail	Setaria faberi

Crop 1: GLXMA SOYBEAN Variety: SEED CONSULTANTS SC 9349  
 Planting Date: 4/20/10 Planting Method: SEEDED  
 Rate: 182000 S/A Depth: 0.75 IN  
 Row Spacing: 15 IN Seed Bed: CONVENTIONAL

## SITE AND DESIGN

Plot Width, Unit: 10 FT Plot Length, Unit: 40 FT Reps: 4  
 Study Design: RACOBL

## APPLICATION DESCRIPTION

A  
 Application Date: 6/2/10  
 Time of Day: 8:45 A.M.  
 Application Method: SPRAY  
 Application Timing: POST  
 Applic. Placement: BROFO  
 Air Temp., Unit: 75 F  
 % Relative Humidity: 80  
 Wind Velocity, Unit: 3 MPH  
 Dew Presence (Y/N): N  
 Soil Temp., Unit: 68 F  
 Soil Moisture: SLIWET  
 % Cloud Cover: 100

## CROP STAGE AT EACH APPLICATION

A  
 Crop 1 Code, Stage: GLXMA V3  
 Stage Scale: BBCH  
 Height, Unit: 6

## WEED STAGE AT EACH APPLICATION

A  
 Weed 1 Code, Stage: AMBTR 6"  
 Stage Scale: 6 LVS  
 Weed 2 Code, Stage: SETFA 4"  
 Stage Scale: 3 LVS

## APPLICATION EQUIPMENT

A  
 Appl. Equipment: BACKPACK  
 Operating Pressure: 53  
 Nozzle Type: DG  
 Nozzle Size: 110015  
 Nozzle Spacing, Unit: 18 IN  
 Ground Speed, Unit: 3 MPH  
 Carrier: WATER  
 Spray Volume, Unit: 15 GPA  
 Propellant: CO2

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Weed Code	AMBTR	AMBTR
Rating Data Type	CONTRO	CONTRO
Rating Unit	%	%
Rating Date	6/17/10	7/2/10
Trt-Eval Interval	15 DA-A	30 DA-A
# Subsamples, Dec.	- 0	- 0

Trt No.	Treatment Name	Form Conc	Product Rate	Product Unit	Appl Code	1	2
1	FLEXSTAR	1.88	1.33 pt/a		A	96	94
1	AMS	100	3 qt/a		A		
1	LOVELAND MSO	100	0.3 qt/a		A		
2	FLEXSTAR	1.88	1.33 pt/a		A	98	96
2	AMS	100	3 qt/a		A		
2	LOVELAND MSO	100	0.6 qt/a		A		
3	FLEXSTAR	1.88	1.33 pt/a		A	91	92
3	AMS	100	3 qt/a		A		
3	LOVELAND MSO	100	0.3 qt/a		A		
3	NIS	100	0.3 qt/a		A		
4	FLEXSTAR	1.88	1.33 pt/a		A	89	90
4	AMS	100	3 qt/a		A		
4	LOVELAND MSO	100	0.6 qt/a		A		
4	NIS	100	0.3 qt/a		A		
5	FLEXSTAR	1.88	1.33 pt/a		A	90	87
5	AMS	100	3 qt/a		A		
5	LOVELAND MSO	100	0.3 qt/a		A		
5	NIS	100	0.6 qt/a		A		
6	FLEXSTAR	1.88	1.33 pt/a		A	93	92
6	AMS	100	3 qt/a		A		
6	LOVELAND MSO	100	0.6 qt/a		A		
6	NIS	100	0.6 qt/a		A		
7	FLEXSTAR	1.88	1.33 pt/a		A	100	100
7	AMS	100	3 qt/a		A		
7	ROUNDUP POWERMAX	4.5	22 oz/a		A		
7	LOVELAND MSO	100	0.3 qt/a		A		
8	FLEXSTAR	1.88	1.33 pt/a		A	88	95
8	AMS	100	3 qt/a		A		
8	ROUNDUP POWERMAX	4.5	22 oz/a		A		
8	LOVELAND MSO	100	0.6 qt/a		A		
9	FLEXSTAR	1.88	1.33 pt/a		A	80	90
9	AMS	100	3 qt/a		A		
9	ROUNDUP POWERMAX	4.5	22 oz/a		A		
9	LOVELAND MSO	100	0.3 qt/a		A		
9	NIS	100	0.3 qt/a		A		
10	FLEXSTAR	1.88	1.33 pt/a		A	94	98
10	AMS	100	3 qt/a		A		
10	ROUNDUP POWERMAX	4.5	22 oz/a		A		
10	LOVELAND MSO	100	0.6 qt/a		A		
10	NIS	100	0.3 qt/a		A		
11	FLEXSTAR	1.88	1.33 pt/a		A	91	90
11	AMS	100	3 qt/a		A		
11	ROUNDUP POWERMAX	4.5	22 oz/a		A		
11	LOVELAND MSO	100	0.3 qt/a		A		
11	NIS	100	0.6 qt/a		A		
12	FLEXSTAR	1.88	1.33 pt/a		A	89	88
12	AMS	100	3 qt/a		A		
12	ROUNDUP POWERMAX	4.5	22 oz/a		A		
12	LOVELAND MSO	100	0.6 qt/a		A		

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# Subsamples, Dec.	- 0	- 0			

Trt No.	Treatment Name	Form Conc	Product Rate	Product Rate Unit	Appl Code	1	2
12	NIS	100	0.6	qt/a	A		
13	FLEXSTAR	1.88	1.33	pt/a	A	100	98
13	AMS	100	3	qt/a	A		
13	ROUNDUP POWERMAX	4.5	44	oz/a	A		
13	LOVELAND MSO	100	0.3	qt/a	A		
14	FLEXSTAR	1.88	1.33	pt/a	A	100	98
14	AMS	100	3	qt/a	A		
14	ROUNDUP POWERMAX	4.5	44	oz/a	A		
14	LOVELAND MSO	100	0.6	qt/a	A		
15	FLEXSTAR	1.88	1.33	pt/a	A	99	99
15	AMS	100	3	qt/a	A		
15	ROUNDUP POWERMAX	4.5	44	oz/a	A		
15	LOVELAND MSO	100	0.3	qt/a	A		
15	NIS	100	0.3	qt/a	A		
16	FLEXSTAR	1.88	1.33	pt/a	A	90	91
16	AMS	100	3	qt/a	A		
16	ROUNDUP POWERMAX	4.5	44	oz/a	A		
16	LOVELAND MSO	100	0.6	qt/a	A		
16	NIS	100	0.3	qt/a	A		
17	ROUNDUP POWERMAX	4.5	44	oz/a	A	85	86
17	FLEXSTAR	1.88	1.33	pt/a	A		
17	AMS	100	3	qt/a	A		
17	LOVELAND MSO	100	0.3	qt/a	A		
17	NIS	100	0.6	qt/a	A		
18	ROUNDUP POWERMAX	4.5	44	oz/a	A	97	99
18	FLEXSTAR	1.88	1.33	pt/a	A		
18	AMS	100	3	qt/a	A		
18	LOVELAND MSO	100	0.6	qt/a	A		
18	NIS	100	0.6	qt/a	A		
19	FLEXSTAR	1.88	1.33	pt/a	A	78	81
19	AMS	100	3	qt/a	A		
19	TOUCHDOWN HI-TECH	5	24	oz/a	A		
19	LOVELAND MSO	100	0.3	qt/a	A		
20	FLEXSTAR	1.88	1.33	pt/a	A	91	95
20	AMS	100	3	qt/a	A		
20	TOUCHDOWN HI-TECH	5	24	oz/a	A		
20	LOVELAND MSO	100	0.6	qt/a	A		
21	FLEXSTAR	1.88	1.33	pt/a	A	100	99
21	AMS	100	3	qt/a	A		
21	TOUCHDOWN HI-TECH	5	24	oz/a	A		
21	LOVELAND MSO	100	0.3	qt/a	A		
21	NIS	100	0.3	qt/a	A		
22	FLEXSTAR	1.88	1.33	pt/a	A	91	88
22	AMS	100	3	qt/a	A		
22	TOUCHDOWN HI-TECH	5	24	oz/a	A		
22	LOVELAND MSO	100	0.6	qt/a	A		
22	NIS	100	0.3	qt/a	A		
23	FLEXSTAR	1.88	1.33	pt/a	A	87	90
23	AMS	100	3	qt/a	A		
23	TOUCHDOWN HI-TECH	5	24	oz/a	A		
23	LOVELAND MSO	100	0.3	qt/a	A		
23	NIS	100	0.6	qt/a	A		
24	FLEXSTAR	1.88	1.33	pt/a	A	95	96

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Trt-Eval Interval	15 DA-A	30 DA-A	
# Subsamples, Dec.	- 0	- 0	

Trt Treatment No. Name	Form Conc	Product Rate	Product Rate	Appl Unit Code	1	2
24 AMS	100		3 qt/a	A		
24 TOUCHDOWN HI-TECH	5		24 oz/a	A		
24 LOVELAND MSO	100		0.6 qt/a	A		
24 NIS	100		0.6 qt/a	A		
25 FLEXSTAR	1.88		1.33 pt/a	A	97	96
25 AMS	100		3 qt/a	A		
25 TOUCHDOWN HI-TECH	5		48 oz/a	A		
25 LOVELAND MSO	100		0.3 qt/a	A		
26 FLEXSTAR	1.88		1.33 pt/a	A	99	94
26 AMS	100		3 qt/a	A		
26 TOUCHDOWN HI-TECH	5		48 oz/a	A		
26 LOVELAND MSO	100		0.6 qt/a	A		
27 FLEXSTAR	1.88		1.33 pt/a	A	99	98
27 AMS	100		3 qt/a	A		
27 TOUCHDOWN HI-TECH	5		48 oz/a	A		
27 LOVELAND MSO	100		0.3 qt/a	A		
27 NIS	100		0.3 qt/a	A		
28 FLEXSTAR	1.88		1.33 pt/a	A	100	100
28 AMS	100		3 qt/a	A		
28 TOUCHDOWN HI-TECH	5		48 oz/a	A		
28 LOVELAND MSO	100		0.6 qt/a	A		
28 NIS	100		0.3 qt/a	A		
29 FLEXSTAR	1.88		1.33 pt/a	A	89	86
29 AMS	100		3 qt/a	A		
29 TOUCHDOWN HI-TECH	5		48 oz/a	A		
29 LOVELAND MSO	100		0.3 qt/a	A		
29 NIS	100		0.6 qt/a	A		
30 FLEXSTAR	1.88		1.33 pt/a	A	95	95
30 AMS	100		3 qt/a	A		
30 TOUCHDOWN HI-TECH	5		48 oz/a	A		
30 LOVELAND MSO	100		0.6 qt/a	A		
30 NIS	100		0.6 qt/a	A		
LSD (P=.05)					12.0	12.4
Standard Deviation					8.5	8.7
CV					9.16	9.36
Bartlett's X2					66.068	43.646
P(Bartlett's X2)					0.001*	0.022*
Replicate F					2.041	4.217
Replicate Prob(F)					0.1140	0.0078
Treatment F					1.885	1.271
Treatment Prob(F)					0.0128	0.1977

Weed Code  
 AMBTR = Ambrosia trifida  
Rating Data Type  
 CONTRO = CONTROL / BURNDOWN or KNOCKDOWN  
Rating Unit  
 % = PERCENT