

Ohio State University
Horticulture and Crop Science

PRE AND POST WEED CONTROL IN GLYPHOSATE & ALS RESISTANT COMMON RAGWEED

Trial ID: 08GRALSCORW_1 Study Dir.: Anthony F. Dobbels
Location: MARKEY Investigator: Dr. Mark M. Loux

GENERAL TRIAL INFORMATION

Study Director: Anthony F. Dobbels
Investigator: Dr. Mark M. Loux

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

CROP AND WEED DESCRIPTION

Weed Code Common Name Scientific Name
1. AMBEL Common ragweed Ambrosia artemisiifolia

Crop 1: GLXMA SOYBEAN Variety: SEED CONSULTANTS SC9336
Planting Date: May/07/2008 Planting Method: JOHN DEERE 7000
Rate: 188000 SEED/A Depth: 0.75 IN
Row Spacing: 30 IN Seed Bed: NO-TILL

SITE AND DESIGN

Plot Width, Unit: 10 FT Plot Length, Unit: 40 FT Reps: 4
Tillage Type: NO-TILL Study Design: FACTORIAL

MAINTENANCE

Field Prep./Maintenance: APPLIED ALL PRE TREATMENTS WITH 3 PTS GRAMOXONE INTEON + NIS 0.25% V/V DUE TO EMERGED COMMON RAGWEED. 5-7-08

SOIL DESCRIPTION

% Sand: 24.4 % OM: 2.0 Texture: SILT LOAM
% Silt: 62.5 pH: 7.3 Soil Name: WESTBORO-SCHAFFEEER
% Clay: 13.1 CEC: 10.5 Fert. Level: GOOD

APPLICATION DESCRIPTION

	A	B
Application Date:	May/07/2008	Jun/24/2008
Time of Day:	10:00 A.M	11:00 A.M
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Applic. Placement:	BROADCAST	BROADCAST
Air Temp., Unit:	69 F	70 F
% Relative Humidity:	50	56
Wind Velocity, Unit:	9 S	3 W
Soil Temp., Unit:	58 F	69 F
Soil Moisture:	DRY/MOIST	MOIST/WET
% Cloud Cover:	10	15

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	GLXMA	GLXMA V4
Stage Scale:	DESC	
Height, Unit:	5 IN	

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	AMBEL 0.5"	AMBEL 2-7"
Stage Scale:	2 LVS	4-16 LVS
Density, Unit:	56 M2	56 M2

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Operating Pressure:	53	53
Nozzle Type:	DG	DG
Nozzle Size:	11002	11002
Nozzle Spacing, Unit:	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA
Propellant:	CO2	CO2

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Location: MARKEY Investigator: Dr. Mark M. Loux

Weed Code		AMBEL		AMBEL		AMBEL		AMBEL			
Crop Code		GLXMA		GLXMA		GLXMA		GLXMA			
Rating Data Type		PHYTO	CONTROL	PHYTO	CONTROL	PHYTO	CONTROL	PHYTO	CONTROL		
Rating Unit		PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT		
Rating Date		Jun/11/2008	Jun/11/2008	Jun/24/2008	Jun/24/2008	Jun/24/2008	Jun/24/2008	Jul/08/2008	Aug/25/2008		
Trt-Eval Interval		35 DA-A	35 DA-A	48 DA-A	48 DA-A	48 DA-A	48 DA-A	14 DA-B	62 DA-B		
# Subsamples, Dec.		0	0	0	0	0	0	0	0		
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6
1	METRIBUZIN	8.1 oz/a		PRE	A	4 a	47 ab	0 a	46 bc	55 b	28 b
1	ROUNDUP POWERMAX	42.7 oz/a		POST	B						
1	FIRSTRATE	0.3 % w/w		POST							
1	AMS	4 qt/a		POST							
2	METRIBUZIN	8.1 oz/a		PRE	A	5 a	55 ab	0 a	53 abc	98 a	95 a
2	FLEXSTAR	1.33 pt/a		POST	B						
2	SELECT MAX	9 oz/a		POST							
2	MSO	0.8 qt/a		POST							
2	AMS	4 qt/a		POST							
3	METRIBUZIN	8.1 oz/a		PRE	A	3 a	40 b	0 a	38 c	94 a	83 a
3	FLEXSTAR	1.33 pt/a		POST	B						
3	ROUNDUP POWERMAX	21.3 oz/a		POST							
3	MSO	0.8 qt/a		POST							
3	AMS	4 qt/a		POST							
4	METRIBUZIN	8.1 oz/a		PRE	A	3 a	47 ab	0 a	40 bc	95 a	90 a
4	FLEXSTAR	1 pt/a		POST	B						
4	BASAGRAN	1 pt/a		POST							
4	SELECT MAX	9 oz/a		POST							
4	MSO	0.8 qt/a		POST							
4	AMS	4 qt/a		POST							
5	CANOPY	3.5 oz/a		PRE	A	3 a	53 ab	0 a	56 abc	55 b	40 b
5	METRIBUZIN	5.1 oz/a		PRE							
5	ROUNDUP POWERMAX	42.7 oz/a		POST	B						
5	FIRSTRATE	0.3 % w/w		POST							
5	AMS	4 qt/a		POST							
6	CANOPY	3.5 oz/a		PRE	A	7 a	47 ab	0 a	53 abc	100 a	98 a
6	METRIBUZIN	5.1 oz/a		PRE							
6	FLEXSTAR	1.33 pt/a		POST	B						
6	SELECT MAX	9 oz/a		POST							
6	MSO	0.8 qt/a		POST							
6	AMS	4 qt/a		POST							
7	CANOPY	3.5 oz/a		PRE	A	5 a	40 b	0 a	55 abc	95 a	93 a
7	METRIBUZIN	5.1 oz/a		PRE							
7	FLEXSTAR	1.33 pt/a		POST	B						
7	ROUNDUP POWERMAX	21.3 oz/a		POST							
7	MSO	0.8 qt/a		POST							
7	AMS	4 qt/a		POST							
8	CANOPY	3.5 oz/a		PRE	A	9 a	38 b	0 a	45 bc	98 a	95 a
8	METRIBUZIN	5.1 oz/a		PRE							
8	FLEXSTAR	1 pt/a		POST	B						
8	BASAGRAN	1 pt/a		POST							
8	SELECT MAX	9 oz/a		POST							
8	MSO	0.8 qt/a		POST							
8	AMS	4 qt/a		POST							
9	VALOR SX	2 oz/a		PRE	A	12 a	60 ab	0 a	55 abc	56 b	30 b
9	ROUNDUP POWERMAX	42.7 oz/a		POST	B						
9	FIRSTRATE	0.3 % w/w		POST							
9	AMS	4 qt/a		POST							
10	VALOR SX	2 oz/a		PRE	A	8 a	70 ab	0 a	56 abc	100 a	99 a
10	FLEXSTAR	1.33 pt/a		POST	B						
10	SELECT MAX	9 oz/a		POST							
10	MSO	0.8 qt/a		POST							
10	AMS	4 qt/a		POST							

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Weed Code						AMBEL		AMBEL		AMBEL	
Crop Code						GLXMA		GLXMA		AMBEL	AMBEL
Rating Data Type						PHYTO	CONTROL	PHYTO	CONTROL	CONTROL	CONTROL
Rating Unit						PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date						Jun/11/2008	Jun/11/2008	Jun/24/2008	Jun/24/2008	Jul/08/2008	Aug/25/2008
Trt-Eval Interval						35 DA-A	35 DA-A	48 DA-A	48 DA-A	14 DA-B	62 DA-B
# Subsamples, Dec.						0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6
11	VALOR SX	2 oz/a		PRE	A	8 a	69 ab	0 a	59 abc	100 a	98 a
11	FLEXSTAR	1.33 pt/a		POST	B						
11	ROUNDUP POWERMAX	21.3 oz/a		POST							
11	MSO	0.8 qt/a		POST							
11	AMS	4 qt/a		POST							
12	VALOR SX	2 oz/a		PRE	A	12 a	57 ab	0 a	55 abc	98 a	98 a
12	FLEXSTAR	1 pt/a		POST	B						
12	BASAGRAN	1 pt/a		POST							
12	SELECT MAX	9 oz/a		POST							
12	MSO	0.8 qt/a		POST							
12	AMS	4 qt/a		POST							
13	VALOR XLT 3.5 OZ					13 a	62 ab	0 a	65 ab	59 b	33 b
13	VALOR SX	2.05 oz/a		PRE	A						
13	CLASSIC	1.45 oz/a		PRE							
13	ROUNDUP POWERMAX	42.7 oz/a		POST	B						
13	FIRSTRATE	0.3 % w/w		POST							
13	AMS	4 qt/a		POST							
14	VALOR XLT 3.5 OZ					11 a	45 ab	0 a	61 abc	99 a	100 a
14	VALOR SX	2.05 oz/a		PRE	A						
14	CLASSIC	1.45 oz/a		PRE							
14	FLEXSTAR	1.33 pt/a		POST	B						
14	SELECT MAX	9 oz/a		POST							
14	MSO	0.8 qt/a		POST							
14	AMS	4 qt/a		POST							
15	VALOR XLT 3.5 OZ					13 a	72 ab	0 a	59 abc	100 a	100 a
15	VALOR SX	2.05 oz/a		PRE	A						
15	CLASSIC	1.45 oz/a		PRE							
15	FLEXSTAR	1.33 pt/a		POST	B						
15	ROUNDUP POWERMAX	21.3 oz/a		POST							
15	MSO	0.8 qt/a		POST							
15	AMS	4 qt/a		POST							
16	VALOR XLT 3.5 OZ					10 a	65 ab	0 a	59 abc	100 a	100 a
16	VALOR SX	2.05 oz/a		PRE	A						
16	CLASSIC	1.45 oz/a		PRE							
16	FLEXSTAR	1 pt/a		POST	B						
16	BASAGRAN	1 pt/a		POST							
16	SELECT MAX	9 oz/a		POST							
16	MSO	0.8 qt/a		POST							
16	AMS	4 qt/a		POST							
17	PREFIX	2 pt/a		PRE	A	5 a	69 ab	0 a	64 abc	55 b	40 b
17	ROUNDUP POWERMAX	42.7 oz/a		POST	B						
17	FIRSTRATE	0.3 % w/w		POST							
17	AMS	4 qt/a		POST							
18	PREFIX	2 pt/a		PRE	A	0 a	70 ab	0 a	74 a	100 a	100 a
18	FLEXSTAR	1.33 pt/a		POST	B						
18	SELECT MAX	9 oz/a		POST							
18	MSO	0.8 qt/a		POST							
18	AMS	4 qt/a		POST							
19	PREFIX	2 pt/a		PRE	A	0 a	75 a	0 a	75 a	98 a	100 a
19	FLEXSTAR	1.33 pt/a		POST	B						
19	ROUNDUP POWERMAX	21.3 oz/a		POST							
19	MSO	0.8 qt/a		POST							
19	AMS	4 qt/a		POST							

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				AMBEL		AMBEL		AMBEL	AMBEL		
Weed Code	Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
Rating Data Type	Rating Unit	PHYTO	PHYTO	PHYTO	PHYTO	PHYTO	PHYTO	PHYTO	PHYTO		
Rating Date	Trt-Eval Interval	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT		
# Subsamples, Dec.		Jun/11/2008	Jun/11/2008	Jun/24/2008	Jun/24/2008	Jun/24/2008	Jun/24/2008	Jul/08/2008	Aug/25/2008		
		35 DA-A	35 DA-A	48 DA-A	48 DA-A	48 DA-A	48 DA-A	14 DA-B	62 DA-B		
		0	0	0	0	0	0	0	0		
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6
20	PREFIX	2	pt/a	PRE	A	3 a	68 ab	0 a	75 a	100 a	98 a
20	FLEXSTAR	1	pt/a	POST	B						
20	BASAGRAN	1	pt/a	POST							
20	SELECT MAX	9	oz/a	POST							
20	MSO	0.8	qt/a	POST							
20	AMS	4	qt/a	POST							
LSD (P=.05)						8.0	18.2	0.0	14.9	7.1	10.9
Standard Deviation						4.8	10.9	0.0	10.5	5.1	7.7
CV						72.7	19.03	0.0	18.43	5.76	9.54
Bartlett's X2						5.703	13.777	0.0	21.089	31.052	72.0
P(Bartlett's X2)						0.991	0.615	.	0.332	0.003*	0.001*
Replicate F						2.951	2.165	0.000	19.895	6.499	1.505
Replicate Prob(F)						0.0707	0.1298	1.0000	0.0001	0.0007	0.2231
Treatment F						2.249	3.681	0.000	3.883	55.879	53.304
Treatment Prob(F)						0.0294	0.0004	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.