

The Ohio State University

Tank mix products with Warrant post

Trial ID: 13 POS1 Location: Western Branch Trial Year: 2013
 Protocol ID: 13 POS1 Investigator: Dr. Mark M. Loux
 Project ID: 2013-01-24-08 Study Director: Bryan Reeb
 Sponsor Contact: Rod Stevenson, Monsanto

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Asgrow 3533 **BBCH Scale:** BSOY
Description: Roundup Ready

Planting Rate, Unit: 140000 S/A **Planting Date:** May-15-2013
Depth, Unit: 0.75 IN **Planting Method:** PLANTD planted
Row Spacing, Unit: 15 IN **Planting Equipment:** PP Plot Planter
Soil Moisture: GOOD good **Emergence Date:** May-23-2013
Seed Bed: FINE fine

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

Pest 2 Type: W **Code:** AMARE Amaranthus retroflexus
Common Name: Redroot pigweed

Pest 3 Type: W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters

Pest 4 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail

Pest 5 Type: W **Code:** ABUTH Abutilon theophrasti
Common Name: velvetleaf

Site and Design

Treated Plot Width: 6.67 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT **Experimental Unit:** 1 PLOT plot
Treated Plot Area: 200.1 FT2 **Treatments:** 12 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

Soil Description

Description Name: F-7 East

% OM: 1.8	Texture: SIL	silt loam
pH: 5.7	Soil Name: Crosby Silt Loam	
CEC: 16.2	Fert. Level: G	good
	Soil Drainage: G	good

Application Description

A

Application Date: Jun-4-2013
Appl. Start Time: 9:00 AM
Application Method: SPRAY
Application Timing: POST
Application Placement: BROFOL
Applied By: REEB
Air Temperature, Unit: 61 F
% Relative Humidity: 58
Wind Velocity, Unit: 1 MPH
Wind Direction: SE
Dew Presence (Y/N): Y yes
Soil Temperature, Unit: 58 F
Soil Moisture: NORMAL
% Cloud Cover: 10
Next Moisture Occurred On: Jun-6-2013

Crop Stage At Each Application

A

Crop 1 Code, BBCH Scale: GLXMA BSOY
Stage Scale Used: BBCH
Stage Majority, Percent: 12 100
Height, Unit: 3 IN
Height Minimum, Maximum: 3 4

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Pest Stage At Each Application

A

Pest 1 Code, Type, Scale: AMBTR W
Stage Majority, Percent: 14 100
Height, Unit: 2 IN
Height Minimum, Maximum: 2 4
Density, Unit: 16 M2

Pest 2 Code, Type, Scale: AMARE W
Stage Majority, Percent: 14 50
Stage Minimum, Percent: 13 50
Stage Maximum, Percent: 14 50
Height, Unit: 1 IN
Height Minimum, Maximum: 0.5 1
Density, Unit: 16 M2

Pest 3 Code, Type, Scale: CHEAL W
Stage Majority, Percent: 14 100
Height, Unit: 1 IN
Height Minimum, Maximum: 1 1
Density, Unit: 12 M2

Pest 4 Code, Type, Scale: SETFA W
Stage Majority, Percent: 14 50
Stage Minimum, Percent: 13 50
Stage Maximum, Percent: 14 50
Height, Unit: 3 IN
Height Minimum, Maximum: 3 4
Density, Unit: 496 M2

Pest 5 Code, Type, Scale: ABUTH W
Stage Majority, Percent: 14 100
Height, Unit: 1 IN
Height Minimum, Maximum: 1 2
Density, Unit: 4 M2

Application Equipment

A

Appl. Equipment: Backpack
Equipment Type: SPRBAC
Operation Pressure, Unit: 48 PSI
Nozzle Type: AIXR
Nozzle Size: 110015
Nozzle Spacing, Unit: 18 IN
Boom Length, Unit: 6 FT
Boom Height, Unit: 18 IN
Ground Speed, Unit: 3 MPH
Carrier: WATER
Spray Volume, Unit: 15 gal/ac
Mix Size, Unit: 1 Liters
Propellant: COMCO2

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Pest Code	GLXMA	GLXMA	GLXMA	AMBTR	SETFA	AMARE	CHEAL
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Date	Jun-12-2013	Jun-19-2013	Jul-3-2013	Jul-3-2013	Jul-3-2013	Jul-3-2013	Jul-3-2013
Rating Type	PHYNEC	PHYNEC	PHYNEC	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%	%
Days After First/Last Applic.	8 8	15 15	29 29	29 29	29 29	29 29	29 29
Trt-Eval Interval	8 DA-A	15 DA-A	29 DA-A	29 DA-A	29 DA-A	29 DA-A	29 DA-A
Plant-Eval Interval	28 DP-1	35 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1
Days After Emergence	20 DE-1	27 DE-1	41 DE-1	41 DE-1	41 DE-1	41 DE-1	41 DE-1

Trt Treatment	Other Rate	Other Rate Unit	Growth Stage	Appl Code	1	2	3	4	5	6	7
1 Roundup Power Max	32 oz/a		V2-V3	A							
1 Warrant	48 oz/a		V2-V3	A	2						
1 N-pak ams	1.2 qt/a		V2-V3	A		1	0	67	88	100	75
2 Roundup Power Max	32 oz/a		V2-V3	A	13						
2 Cobra	7.7 oz/a		V2-V3	A		4	0	55	57	99	82
2 MSO	0.6 qt/a		V2-V3	A							
2 N-pak ams	1.2 qt/a		V2-V3	A							
3 Roundup Power Max	32 oz/a		V2-V3	A	15						
3 Warrant	48 oz/a		V2-V3	A		8	0	57	80	100	85
3 Cobra	7.7 oz/a		V2-V3	A							
3 MSO	0.6 qt/a		V2-V3	A							
3 N-pak ams	1.2 qt/a		V2-V3	A							
4 Roundup Power Max	32 oz/a		V2-V3	A	13						
4 Phoenix	12.8 oz/a		V2-V3	A		5	0	53	60	100	85
4 MSO	0.6 qt/a		V2-V3	A							
4 N-pak ams	1.2 qt/a		V2-V3	A							
5 Roundup Power Max	32 oz/a		V2-V3	A	18						
5 Warrant	48 oz/a		V2-V3	A		9	1	60	87	100	90
5 Phoenix	12.8 oz/a		V2-V3	A							
5 MSO	0.6 qt/a		V2-V3	A							
5 N-pak ams	1.2 qt/a		V2-V3	A							
6 Roundup Power Max	32 oz/a		V2-V3	A	12						
6 Flexstar	1.06 pt/a		V2-V3	A		3	0	75	68	97	82
6 NIS	0.15 qt/a		V2-V3	A							
6 N-pak ams	1.2 qt/a		V2-V3	A							
7 Roundup Power Max	32 oz/a		V2-V3	A	12						
7 Warrant	48 oz/a		V2-V3	A		8	1	73	82	100	78
7 Flexstar	1.06 pt/a		V2-V3	A							
7 NIS	0.15 qt/a		V2-V3	A							
7 N-pak ams	1.2 qt/a		V2-V3	A							
8 Roundup Power Max	32 oz/a		V2-V3	A	2						
8 Select Max	6.4 oz/a		V2-V3	A		0	0	47	60	73	65
8 NIS	0.15 qt/a		V2-V3	A							
8 N-pak ams	1.2 qt/a		V2-V3	A							
9 Roundup Power Max	32 oz/a		V2-V3	A	3						
9 Warrant	48 oz/a		V2-V3	A		3	2	57	93	100	82
9 Select Max	6.4 oz/a		V2-V3	A							
9 NIS	0.15 qt/a		V2-V3	A							
9 N-pak ams	1.2 qt/a		V2-V3	A							
10 Roundup Power Max	32 oz/a		V2-V3	A	2						
10 Firstrate	0.38 oz/a		V2-V3	A		0	0	73	73	100	90
10 NIS	0.15 qt/a		V2-V3	A							
10 N-pak ams	1.2 qt/a		V2-V3	A							

t=Mean descriptions are reported in transformed data units, and are not de-transformed.

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Pest Code					AMBTR	SETFA	AMARE	CHEAL				
Crop Code		GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA				
Rating Date		Jun-12-2013	Jun-19-2013	Jul-3-2013	Jul-3-2013	Jul-3-2013	Jul-3-2013	Jul-3-2013				
Rating Type		PHYNEC	PHYNEC	PHYNEC	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit		%	%	%	%	%	%	%				
Days After First/Last Applic.		8 8	15 15	29 29	29 29	29 29	29 29	29 29				
Trt-Eval Interval		8 DA-A	15 DA-A	29 DA-A	29 DA-A	29 DA-A	29 DA-A	29 DA-A				
Plant-Eval Interval		28 DP-1	35 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1				
Days After Emergence		20 DE-1	27 DE-1	41 DE-1	41 DE-1	41 DE-1	41 DE-1	41 DE-1				
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	1	2	3	4	5	6	7
11	Roundup Power Max	32 oz/a		V2-V3	A	2	2	1	85	96	100	93
11	Warrant	48 oz/a		V2-V3	A							
11	Firstrate	0.38 oz/a		V2-V3	A							
11	NIS	0.15 qt/a		V2-V3	A							
11	N-pak ams	1.2 qt/a		V2-V3	A							
12	UTC					0	0	0	0	0	0	0
	LSD (P=.05)					2.0	2.6	0.3t	10.4	10.9	4.2	11.3
	Standard Deviation					1.2	1.5	0.2t	6.1	6.5	2.5	6.6
	CV					14.92	41.54	99.54	10.52	9.18	2.79	8.8
	Bartlett's X2					4.106	6.096	2.325	3.584	13.716	3.976	7.107
	P(Bartlett's X2)					0.392	0.636	0.887	0.937	0.089	0.137	0.715
	Skewness					0.2517	0.6642	0.6871	-1.5254*	-1.6202*	-2.8032*	-2.2715*
	Kurtosis					-1.5334	-0.7431	-1.384	2.6738*	2.652*	6.7604*	4.8987*
	Replicate F					5.098	1.690	1.862	2.442	3.646	0.018	11.170
	Replicate Prob(F)					0.0152	0.2077	0.1790	0.1102	0.0429	0.9822	0.0004
	Treatment F					93.268	14.492	3.252	36.720	48.094	410.959	42.144
	Treatment Prob(F)					0.0001	0.0001	0.0089	0.0001	0.0001	0.0001	0.0001

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Pest Code		AMBTR	SETFA	AMARE	CHEAL
Crop Code		GLXMA	GLXMA	GLXMA	GLXMA
Rating Date		Jul-9-2013	Jul-9-2013	Jul-9-2013	Jul-9-2013
Rating Type		PHYNEC	CONTRO	CONTRO	CONTRO
Rating Unit		%	%	%	%
Days After First/Last Applic.		35 35	35 35	35 35	35 35
Trt-Eval Interval		35 DA-A	35 DA-A	35 DA-A	35 DA-A
Plant-Eval Interval		55 DP-1	55 DP-1	55 DP-1	55 DP-1
Days After Emergence		47 DE-1	47 DE-1	47 DE-1	47 DE-1

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	8	9	10	11	12
1	Roundup Power Max	32 oz/a		V2-V3	A	0	55	83	100	85
1	Warrant	48 oz/a		V2-V3	A					
1	N-pak ams	1.2 qt/a		V2-V3	A					
2	Roundup Power Max	32 oz/a		V2-V3	A	0	40	57	98	88
2	Cobra	7.7 oz/a		V2-V3	A					
2	MSO	0.6 qt/a		V2-V3	A					
2	N-pak ams	1.2 qt/a		V2-V3	A					
3	Roundup Power Max	32 oz/a		V2-V3	A	0	47	85	100	92
3	Warrant	48 oz/a		V2-V3	A					
3	Cobra	7.7 oz/a		V2-V3	A					
3	MSO	0.6 qt/a		V2-V3	A					
3	N-pak ams	1.2 qt/a		V2-V3	A					
4	Roundup Power Max	32 oz/a		V2-V3	A	0	40	63	100	85
4	Phoenix	12.8 oz/a		V2-V3	A					
4	MSO	0.6 qt/a		V2-V3	A					
4	N-pak ams	1.2 qt/a		V2-V3	A					
5	Roundup Power Max	32 oz/a		V2-V3	A	0	53	82	100	98
5	Warrant	48 oz/a		V2-V3	A					
5	Phoenix	12.8 oz/a		V2-V3	A					
5	MSO	0.6 qt/a		V2-V3	A					
5	N-pak ams	1.2 qt/a		V2-V3	A					
6	Roundup Power Max	32 oz/a		V2-V3	A	0	73	73	92	90
6	Flexstar	1.06 pt/a		V2-V3	A					
6	NIS	0.15 qt/a		V2-V3	A					
6	N-pak ams	1.2 qt/a		V2-V3	A					
7	Roundup Power Max	32 oz/a		V2-V3	A	0	70	88	97	90
7	Warrant	48 oz/a		V2-V3	A					
7	Flexstar	1.06 pt/a		V2-V3	A					
7	NIS	0.15 qt/a		V2-V3	A					
7	N-pak ams	1.2 qt/a		V2-V3	A					
8	Roundup Power Max	32 oz/a		V2-V3	A	0	30	70	85	78
8	Select Max	6.4 oz/a		V2-V3	A					
8	NIS	0.15 qt/a		V2-V3	A					
8	N-pak ams	1.2 qt/a		V2-V3	A					
9	Roundup Power Max	32 oz/a		V2-V3	A	0	40	93	100	88
9	Warrant	48 oz/a		V2-V3	A					
9	Select Max	6.4 oz/a		V2-V3	A					
9	NIS	0.15 qt/a		V2-V3	A					
9	N-pak ams	1.2 qt/a		V2-V3	A					
10	Roundup Power Max	32 oz/a		V2-V3	A	0	75	80	100	95
10	Firstrate	0.38 oz/a		V2-V3	A					
10	NIS	0.15 qt/a		V2-V3	A					
10	N-pak ams	1.2 qt/a		V2-V3	A					

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Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Date	Jul-9-2013	Jul-9-2013	Jul-9-2013	Jul-9-2013	Jul-9-2013
Rating Type	PHYNEC	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Days After First/Last Applic.	35 35	35 35	35 35	35 35	35 35
Trt-Eval Interval	35 DA-A	35 DA-A	35 DA-A	35 DA-A	35 DA-A
Plant-Eval Interval	55 DP-1	55 DP-1	55 DP-1	55 DP-1	55 DP-1
Days After Emergence	47 DE-1	47 DE-1	47 DE-1	47 DE-1	47 DE-1

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	8	9	10	11	12
11	Roundup Power Max	32 oz/a		V2-V3	A	0	85	95	100	97
11	Warrant	48 oz/a		V2-V3	A					
11	Firstrate	0.38 oz/a		V2-V3	A					
11	NIS	0.15 qt/a		V2-V3	A					
11	N-pak ams	1.2 qt/a		V2-V3	A					
12	UTC					0	0	0	0	0
LSD (P=.05)						0.3	17.9	13.3	9.4	9.5
Standard Deviation						0.2	10.6	7.9	5.6	5.6
CV						600.0	20.85	10.86	6.22	6.82
Bartlett's X2						0.0	4.003	8.898	4.402	8.172
P(Bartlett's X2)						.	0.947	0.447	0.221	0.417
Skewness						6.0*	-0.3199	-1.8739*	-2.8961*	-2.7286*
Kurtosis						36.0*	-0.3473	3.2918*	7.2274*	6.6792*
Replicate F						1.000	3.551	3.716	0.361	3.257
Replicate Prob(F)						0.3840	0.0461	0.0407	0.7013	0.0577
Treatment F						1.000	14.740	31.629	79.105	66.709
Treatment Prob(F)						0.4767	0.0001	0.0001	0.0001	0.0001

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Pest Code

AMBTR, Ambrosia trifida, = US
SETFA, Setaria faberi, = US
AMARE, Amaranthus retroflexus, = US
CHEAL, Chenopodium album, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

PHYNEC = phytotoxicity - necrosis /burn
CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

28 DP-1 = 1 GLXMA May-15-2013
35 DP-1 = 1 GLXMA May-15-2013
49 DP-1 = 1 GLXMA May-15-2013
55 DP-1 = 1 GLXMA May-15-2013