

# The Ohio State University

## TO DETERMINE HERBICIDAL EFFICACY AND SELECTIVITY OF STATEMENT WHEN APPLIED PRE TO SOYBEAN IN 2013

Trial ID: 13 PREPOS1  
Protocol ID: 13 PREPOS1  
Project ID: HGLXMAFOMME1301,1302

Location: Western Branch Trial Year: 2013  
Investigator: Dr. Mark M. Loux  
Study Director: Bryan Reeb  
Sponsor Contact: Brent Jacobson, Cheminova

### General Trial Information

**Study Director:** Bryan Reeb **Title:** Research Technician  
**Investigator:** Dr. Mark M. Loux **Title:** Professor

**Latitude of LL Corner °:** 3951.621 N  
**Longitude of LL Corner °:** 8340.374 W

**Keywords:** STATEMENT (CHA-044) METOLACHLOR, FOMESAFEN, PREMIX, SOYBEAN, GLYPHOSATE RESISTANT PALMER AMARANTH, WATERHEMP, RAGWEED, ANNUAL GRASS WEEDS, MORNINGGLORY, SELECTIVITY, EFFICACY

### Objectives:

**TX\_RTF32 13.0.501.502;**COMPARE THE ACTIVITY OF STATEMENT TO PREFIX & OTHER COMMERCIAL HERBICIDES WHEN APPLIED PRE TO SOYBEAN

### Crop Description

**Crop 1:** GLXMA Glycine max  
**Variety:** Seed Consultants 9362  
**Description:** Roundup Ready

**BBCH Scale:** BSOY

**Planting Rate, Unit:** 140000 S/A  
**Depth, Unit:** 0.75 IN  
**Row Spacing, Unit:** 15 IN

**Planting Date:** May-15-2013  
**Planting Method:** PLANTD planted  
**Planting Equipment:** PP Plot Planter  
**Emergence Date:** May-23-2013  
**Harvested Width, Unit:** 6.25 FT  
**Harvested Length, Unit:** 40 FT

**Soil Moisture:** GOOD good  
**Seed Bed:** FINE fine

### Pest Description

**Pest 1 Type:** W **Code:** AMARE *Amaranthus retroflexus*  
**Common Name:** Redroot pigweed

**Pest 2 Type:** W **Code:** ABUTH *Abutilon theophrasti*  
**Common Name:** velvetleaf

**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:** AMBTR *Ambrosia trifida*  
**Common Name:** Giant ragweed

**Pest 6 Type:** W **Code:** SOLCA *Solanum carolinense*  
**Common Name:** Horsenettle

**Pest 7 Type:** W **Code:** AMBEL *Ambrosia artemisiifolia*  
**Common Name:** Common ragweed

### Site and Design

**Treated Plot Width:** 6.67 FT  
**Treated Plot Length:** 40 FT  
**Treated Plot Area:** 266.8 FT2  
**Replications:** 4

**Site Type:** FIELD field  
**Experimental Unit:** 1 PLOT plot  
**Tillage Type:** CONTIL conventional-till  
**Study Design:** RACOB� Randomized Complete Block (RCB)

### Soil Description

**Description Name:** F-7 West  
**% OM:** 3.1  
**pH:** 7.1  
**CEC:** 22.2  
**Texture:** SICL silty clay loam  
**Soil Name:** Kokomo Silty Clay Loam  
**Fert. Level:** G good  
**Soil Drainage:** G good

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### Application Description

	A	B
Application Date:	May-16-2013	Jun-4-2013
Appl. Start Time:	8:30	9:00 AM
Appl. Stop Time:	8:45 AM	
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Application Placement:	BROSOI	BROFOL
Applied By:		REEB
Air Temperature, Unit:	67.8 F	61 F
% Relative Humidity:	78.4	58
Wind Velocity, Unit:	1.9 MPH	1 MPH
Wind Direction:	NNW	SE
Dew Presence (Y/N):		Y yes
Soil Temperature, Unit:	62 F	58 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	100	10
Next Moisture Occurred On:	May-17-2013	Jun-6-2013

### Crop Stage At Each Application

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

### Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMARE W	AMARE W
Stage Majority, Percent:		14 100
Height, Unit:		1 IN
Height Minimum, Maximum:		0.5 1
Density, Unit:		8 M2
Pest 2 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:		14 100
Height, Unit:		1 IN
Height Minimum, Maximum:		1 2
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:		14 100
Height, Unit:		1 IN
Height Minimum, Maximum:		1 1
Density, Unit:		44 M2
Pest 4 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		13 100
Height, Unit:		3 IN
Height Minimum, Maximum:		3 4
Density, Unit:		152 M2
Pest 5 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		14 100
Height, Unit:		2 IN
Height Minimum, Maximum:		2 4
Density, Unit:		24 M2
Pest 6 Code, Type, Scale:	SOLCA W	SOLCA W
Stage Majority, Percent:		14 100
Height, Unit:		4 IN
Height Minimum, Maximum:		4 4
Pest 7 Code, Type, Scale:	AMBEL W	AMBEL W
Stage Majority, Percent:		14 100
Height, Unit:		2 IN
Height Minimum, Maximum:		2 3

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### Application Equipment

	A	B
<b>Appl. Equipment:</b>	Backpack	Backpack
<b>Equipment Type:</b>	SPRBAC	SPRBAC
<b>Operation Pressure, Unit:</b>	48 PSI	48 PSI
<b>Nozzle Type:</b>	AIXR	AIXR
<b>Nozzle Size:</b>	110015	110015
<b>Nozzle Spacing, Unit:</b>	18 IN	18 IN
<b>Boom Length, Unit:</b>	6 FT	6 FT
<b>Boom Height, Unit:</b>	18 IN	18 IN
<b>Ground Speed, Unit:</b>	3 MPH	3 MPH
<b>Carrier:</b>	WATER	WATER
<b>Spray Volume, Unit:</b>	15 gal/ac	15 gal/ac
<b>Mix Size, Unit:</b>	2 Liters	2 Liters
<b>Propellant:</b>	COMCO2	COMCO2

Date	By	Notes
Jun-20-2013		49 Day after pre treatment overlay for the pre only treatments, Glyphosate @ 22 oz

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Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	18	19	20
1	STATEMENT	32 fl oz/a		A	11.7 a	26.7 a	78.8 a
2	STATEMENT	40 fl oz/a		A	11.6 a	25.1 a	74.2 a
3	PREFIX	32 fl oz/a		A	11.5 a	25.1 a	74.2 a
4	PREFIX	40 fl oz/a		A	11.6 a	24.2 a	71.5 a
5	STATEMENT	32 fl oz/a		B	17.1 a	12.2 d	34.4 d
	5 Glyphos X-tra	22 oz/a		B			
	5 N-pak ams	1.5 qt/a		B			
6	STATEMENT	40 fl oz/a		B	13.3 a	18.3 b	52.9 b
	6 Glyphos X-tra	22 oz/a		B			
	6 N-pak ams	1.5 qt/a		B			
7	RHYTHM	25.5 fl oz/a		B	15.1 a	16.4 bc	47.5 bc
	7 Glyphos X-tra	22 oz/a		B			
	7 N-pak ams	1.5 qt/a		B			
8	DAWN	24 fl oz/a		B	14.6 a	17.6 bc	50.1 bc
	8 Glyphos X-tra	22 oz/a		B			
	8 N-pak ams	1.5 qt/a		B			
9	PREFIX	32 fl oz/a		B	12.6 a	18.4 b	53.8 b
	9 Glyphos X-tra	22 oz/a		B			
	9 N-pak ams	1.5 qt/a		B			
10	PREFIX	40 fl oz/a		B	13.4 a	16.4 bc	47.4 bc
	10 Glyphos X-tra	22 oz/a		B			
	10 N-pak ams	1.5 qt/a		B			
11	Glyphos X-tra	22 oz/a		B	16.8 a	13.9 cd	39.4 cd
	11 N-pak ams	1.5 qt/a		B			

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

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Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code	GLXMA	GLXMA	GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Oct-10-201	Oct-10-2013	Oct-10-2013	
Rating Type	MOICON	WEIGHT	YIELD	
Rating Unit	%	LBS	BU	
Number of Subsamples	1	1	1	
SE Group No.	19	20	21	
Days After First/Last Applic.	147 128	147 128	147 128	
Plant-Eval Interval	148 DP-1	148 DP-1	148 DP-1	
Days After Emergence	140 DE-1	140 DE-1	140 DE-1	
ARM Action Codes			TY1	
Number of Decimals	1	1	1	
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code
12	UNTREATED			
		11.7 a	22.7 a	66.9 a
	LSD (P=.05)	4.52	4.09	12.95
	Standard Deviation	3.13	2.84	8.97
	CV	23.32	14.35	15.57
	Bartlett's X2	88.861	30.677	34.435
	P(Bartlett's X2)	0.001*	0.001*	0.001*
	Skewness	2.6527*	-0.5511	-0.6204
	Kurtosis	6.8487*	-0.3036	-0.1834
	Replicate F	3.039	3.818	3.891
	Replicate Prob(F)	0.0427	0.0188	0.0174
	Treatment F	1.724	11.631	11.064
	Treatment Prob(F)	0.1111	0.0001	0.0001

Crop Code  
 GLXMA, BSOY, Glycine max, = US  
Rating Type  
 MOICON = moisture content  
 WEIGHT = weight  
 YIELD = yield  
Rating Unit  
 % = percent  
 BU = bushel  
Plant-Eval Interval  
 148 DP-1 = 1 GLXMA May-15-2013  
ARM Action Codes  
 TY1 = 2.904\*[19]\*(100-[18])/87