

Ohio State University Horticulture and Crop Science

2010/AUTHORITY XL/SOYBEANS/FALL PROGRAMS/

Title No. 2:
 Trial ID: 11FALLSOY1 Protocol ID: 11FALLSOY1
 Location: Study Director:
 Project ID: Investigator: Dr. Mark M. Loux
 Sponsor Contact: Joe Reed, FMC

General Trial Information

Study Director: Anthony F. Dobbels **Title:** Research Specialist
Investigator: Dr. Mark M. Loux **Title:** Professor

Trial Location

City: South Charleston **Latitude of LL Corner °:** 39.85868 N
State/Prov.: Ohio **Longitude of LL Corner °:** -83.67052 W
Postal Code: 45368
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Seed Consultants SCS9330RR **Description:** Roundup Ready
BBCH Scale: BSOY **Planting Date:** May-14-2011
Planting Method: SEEDED seeded **Rate, Unit:** 197000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Seed Bed: MEDIUM medium
Soil Moisture: GOOD good **Soil Temperature, Unit:** 71 F
Harvested Width, Unit: 6.25 FT **Harvested Length, Unit:** 30 FT

Pest Description

Pest 1 Type: W **Code:** LAMPU *Lamium purpureum*
Common Name: Purple deadnettel

Pest 2 Type: W **Code:** TAROF *Taraxacum officinale*
Common Name: Common dandelion

Pest 3 Type: W **Code:** ERICA *Conyza canadensis*
Common Name: Canada horseweed

Pest 4 Type: W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed

Pest 5 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Site and Design

Plot Width, Unit: 6.67 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 200.1 FT² **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RAOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: F-9 East
% OM: 2.8 **Texture:** SICL silty clay loam
pH: 6.4 **Soil Name:** Kokomo
CEC: 19.6 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	Oct-19-2010	Nov-9-2010	Dec-3-2010
Time of Day:	11:00 A.M	1:00 P.M.	11:00 A.M
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	OCT	NOV	DEC
Application Placement:	BROFO	BROFO	BROFO
Air Temperature, Unit:	59.5 F	71 F	33 F
% Relative Humidity:	47.4	35	72
Wind Velocity, Unit:	2 MPH	2.4 MPH	3 MPH
Wind Direction:	NE	SSW	W
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	50 F	48 F	34 F
Soil Moisture:	MOIST	DRY	MOIST
% Cloud Cover:	0	0	85
Next Rain Occurred On:	Oct-26-2010	Nov-16-2010	Dec-4-2010

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Crop Stage At Each Application

	A		B		C
Crop 1 Code, BBCH Scale:	GLXMA	BSOY	GLXMA	BSOY	GLXMA BSOY

Pest Stage At Each Application

	A		B		C
Pest 1 Code, Type, Scale:	LAMPU W	LAMPU W	LAMPU W	LAMPU W	LAMPU W
Stage Majority, Percent:	12 100	14 100	18 100	18 100	
Diameter, Unit:	0.5 IN	0.5 IN	2	IN	
Height, Unit:	0.5 IN	0.5 IN	1	IN	
Height Minimum, Maximum:	0.5 1	0.5 1	1	2	
Pest 2 Code, Type, Scale:	TAROF W	TAROF W	TAROF W	TAROF W	
Stage Majority, Percent:	16 100	18 80	18 100		
Stage Minimum, Percent:		16 20			
Stage Maximum, Percent:		18 80			
Diameter, Unit:	6 IN	6 IN	6	IN	
Height, Unit:	1 IN	1 IN	1	IN	
Height Minimum, Maximum:	1 1	1 1	0.5	1	
Density, Unit:	16 M2	16 M2	16	M2	
Pest 3 Code, Type, Scale:	ERICA W	ERICA W	ERICA W		
Density, Unit:	10.66 M2	10.66 M2	10.66	M2	
Pest 4 Code, Type, Scale:	AMBEL W	AMBEL W	AMBEL W		
Density, Unit:	2.66 M2	2.66 M2	2.66	M2	
Pest 5 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W		
Density, Unit:	4 M2	4 M2	4	M2	

Application Equipment

	A		B		C
Appl. Equipment:	6 foot boom	6 foot boom	6 foot boom		
Equipment Type:	SPRBAC	SPRBAC	SPRBAC		
Operation Pressure, Unit:	53 PSI	53 PSI	53 PSI		
Nozzle Type:	TEEJET DG	TEEJET DG	TEEJET DG		
Nozzle Size:	8002	8002	8002		
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN		
Boom Length, Unit:	6 FT	6 FT	6 FT		
Boom Height, Unit:	20 IN	20 IN	20 IN		
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH		
Carrier:	WATER	WATER	WATER		
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA		
Mix Size, Unit:	0.33 Gallons	0.33 Gallons	0.33 Gallons		
Propellant:	CO2	CO2	CO2		

Date By Notes

Jun-3-2011 Dobbels Applied Post application of 32 oz. Roundup Powermax + 0.5 oz. Cadet and 2.5% N Pak AMS

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Pest Type	Pest Code	Pest Scientific Name	Pest Name	Crop Code	GLXMA	GLXMA	GLXMA		
BBCH Scale	Crop Scientific Name	Crop Name	Description	Rating Date	BSOY	BSOY	BSOY		
Rating Type	Rating Unit	Number of Subsamples	Days After First/Last Applic.	Trt-Eval Interval	Glycine max Soybean	Glycine max Soybean	Glycine max Soybean		
Plant-Eval Interval	ARM Action Codes	Number of Decimals			Oct-11-2011	Oct-11-2011	Oct-11-2011		
					YIELD	MOISTURE	YIELD		
					LBS	%	BU		
					1	1	1		
					357 312	357 312	357 312		
					HARVEST	HARVEST	HARVEST		
					150 DP-1	150 DP-1	150 DP-1		
							TY1		
					1	1	1		
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	34	35	36
1	UNTREATED					A	15.7 a	19.7 a	56.8 a
2	AUTHORITY XL	3.2 oz/a		3.2 oz/a		A	19.2 a	17.3 a	71.3 a
	2 ROUNDUP POWERMAX	22 oz/a		0.69 qt/a		A			
	2 RAGE D-TECH	16 oz/a		16 oz/a		A			
	2 N-PAK AMS	2.5 % v/v		2 qt/a		A			
3	AUTHORITY XL	4 oz/a		4 oz/a		A	19.4 a	17.5 a	71.9 a
	3 ROUNDUP POWERMAX	22 oz/a		0.69 qt/a		A			
	3 RAGE D-TECH	16 oz/a		16 oz/a		A			
	3 N-PAK AMS	2.5 % v/v		2 qt/a		A			
4	AUTHORITY XL	3.2 oz/a		3.2 oz/a		B	17.0 a	19.0 a	61.7 a
	4 ROUNDUP POWERMAX	22 oz/a		0.69 qt/a		B			
	4 RAGE D-TECH	16 oz/a		16 oz/a		B			
	4 N-PAK AMS	2.5 % v/v		2 qt/a		B			
5	AUTHORITY XL	4 oz/a		4.0 oz/a		B	18.1 a	15.1 a	68.7 a
	5 ROUNDUP POWERMAX	22 oz/a		0.69 qt/a		B			
	5 RAGE D-TECH	16 oz/a		16 oz/a		B			
	5 N-PAK AMS	2.5 % v/v		2 qt/a		B			
6	AUTHORITY XL	3.2 oz/a		3.2 oz/a		C	17.7 a	16.0 a	67.0 a
	6 ROUNDUP POWERMAX	22 oz/a		0.69 qt/a		C			
	6 RAGE D-TECH	16 oz/a		16 oz/a		C			
	6 N-PAK AMS	2.5 % v/v		2 qt/a		C			
7	AUTHORITY XL	4 oz/a		4.0 oz/a		C	19.2 a	17.0 a	71.5 a
	7 ROUNDUP POWERMAX	22 oz/a		0.69 qt/a		C			
	7 RAGE D-TECH	16 oz/a		16 oz/a		C			
	7 N-PAK AMS	2.5 % v/v		2 qt/a		C			
8	CANOPY EX 2.2 OZ						16.8 a	20.7 a	60.8 a
	8 Classic	0.0156 lb ai/a		1 oz/a		C			
	8 Express	0.0047 lb ai/a		0.15 oz/a		C			
	8 2,4-D Ester	0.75 lb ai/a		1.5 pt/a		C			
	8 COC	1 % v/v		0.8 qt/a		C			
9	CANOPY EX 2.2 OZ						18.5 a	17.3 a	68.5 a
	9 Classic	0.0156 lb ai/a		1 oz/a		C			
	9 Express	0.0047 lb ai/a		0.15 oz/a		C			
	9 RAGE D-TECH	16 oz/a		16 oz/a		C			

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		
Description						
Rating Date		Oct-11-2011	Oct-11-2011	Oct-11-2011		
Rating Type		YIELD	MOISTURE	YIELD		
Rating Unit		LBS	%	BU		
Number of Subsamples		1	1	1		
Days After First/Last Applic.		357 312	357 312	357 312		
Trt-Eval Interval		HARVEST	HARVEST	HARVEST		
Plant-Eval Interval		150 DP-1	150 DP-1	150 DP-1		
ARM Action Codes				TY1		
Number of Decimals		1	1	1		
Trt Treatment	Rate	Rate	Other	Other	Appl	
No. Name	Rate	Unit	Rate	Rate	Unit Code	
9 COC	1 % v/v		0.8 qt/a		C	
10 AUTHORITY XL	4 oz/a		4.0 oz/a		C	17.7 a
10 ROUNDUP POWERMAX	22 oz/a		0.69 qt/a		C	20.1 a
10 2,4-D Ester	24 oz/a		1.5 pt/a		C	63.3 a
10 N-PAK AMS	2.5 % v/v		2 qt/a		C	
LSD (P=.05)						4.76
Standard Deviation						2.77
CV						15.47
Bartlett's X2						7.076
P(Bartlett's X2)						0.629
Replicate F						1.312
Replicate Prob(F)						0.2939
Treatment F						0.565
Treatment Prob(F)						0.8079
						2.556
						0.1054
						0.628
						0.7591
						1.471
						0.2560
						0.546
						0.8226

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

YIELD = yield

Rating Unit

% = percent

BU = bushel

Plant-Eval Interval

150 DP-1 = 1 May-14-2011

ARM Action Codes

TY1 = 3.872*[C34]*(100-[C35])/86.5

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Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.