

Ohio State University Horticulture and Crop Science

Evaluate broadleaf control with Cadet in soybeans

Title No. 2:
 Trial ID: 11NTS6 Protocol ID: 11NTS6
 Location: Western Branch F-10W Study Director: Bryan Reeb
 Project ID: 11NTS6 Investigator: Dr. Mark M. Loux
 Sponsor Contact: Joe Reed, FMC

General Trial Information

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

Trial Location

City: South Charleston **Latitude of LL Corner °:** 39.85877 N
State/Prov.: Ohio **Longitude of LL Corner °:** -83.67275 W
Postal Code: 45368
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 3631 **Description:** Round Up Ready
BBCH Scale: BSOY **Planting Date:** May-22-2011
Planting Method: SEEDED seeded **Rate, Unit:** 197000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Seed Bed: MEDIUM medium
Soil Moisture: DAMP damp
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:** STEME Stellaria media
Common Name: Common chickweed
- Pest 3 Type:** W **Code:** CAPBP Capsella bursa-pastoris
Common Name: Shepherd's purse
- Pest 4 Type:** W **Code:** VERAR Veronica arvensis
Common Name: Corn speedwell
- Pest 5 Type:** W **Code:** ERPSS Erophila sp.
Common Name: Whitlowgrass
- Pest 6 Type:** W **Code:** CARPE Cardamine pensylvanica
Common Name: Pennsylvania bittercress
- Pest 7 Type:** W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed
- Pest 8 Type:** W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail
- Pest 9 Type:** W **Code:** AMBEL Ambrosia artemisiifolia
Common Name: Common ragweed
- Pest10 Type:** W **Code:** ERICA Conyza canadensis
Common Name: Canada horseweed
- Pest11 Type:** W **Code:** SOLPT Solanum ptycanthum
Common Name: Eastern black nightshade
- Pest12 Type:** W **Code:** ABUTH Abutilon theophrasti
Common Name: Velvetleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOB Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

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Soil Description

Description Name: F-10 West
% OM: 2
pH: 6.3
CEC: 12
Texture: SIL silt loam
Soil Name: Crosby Silt Loam
Fert. Level: G good
Soil Drainage: G good

Application Description

	A	B
Application Date:	Apr-14-2011	Jun-13-2011
Time of Day:	10:00 AM	12:45 PM
Application Method:	SPRAY	SPRAY
Application Timing:	14 EPP	EPO
Application Placement:	BROFOL	BROFOL
Air Temperature, Unit:	63 F	76.7 F
% Relative Humidity:	50	51.2
Wind Velocity, Unit:	3 MPH	6.8 MPH
Wind Direction:	N	NW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	48 F	77 F
Soil Moisture:	SLIWET	GOOD
% Cloud Cover:	1	40
Next Rain Occurred On:	Apr-16-2011	Jul-2-2011

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

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Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	LAMPU W	LAMPU W
Stage Majority, Percent:	65	100
Height, Unit:	3 IN	
Height Minimum, Maximum:	2	3
Pest 2 Code, Type, Scale:	STEME W	STEME W
Stage Majority, Percent:	19	100
Diameter, Unit:	7 IN	
Height, Unit:	0.5 IN	
Pest 3 Code, Type, Scale:	CAPBP W	CAPBP W
Stage Majority, Percent:	19	100
Diameter, Unit:	3 IN	
Height, Unit:	1 IN	
Height Minimum, Maximum:	0.5	1
Pest 4 Code, Type, Scale:	VERAR W	VERAR W
Stage Majority, Percent:	65	100
Diameter, Unit:	6 IN	
Height, Unit:	0.5 IN	
Pest 5 Code, Type, Scale:	ERPSS W	ERPSS W
Stage Majority, Percent:	65	100
Diameter, Unit:	1 IN	
Height, Unit:	2 IN	
Pest 6 Code, Type, Scale:	CARPE W	CARPE W
Stage Majority, Percent:	19	100
Height, Unit:	2 IN	
Pest 7 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:	10D 100	16 100
Height, Unit:	0.5 IN	6 IN
Height Minimum, Maximum:		4 6
Density, Unit:	21.33 M2	21.33 M2
Pest 8 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		14 100
Height, Unit:		5 IN
Height Minimum, Maximum:		3 5
Pest 9 Code, Type, Scale:	AMBEL W	AMBEL W
Stage Majority, Percent:		14 100
Height, Unit:		2 IN
Pest10 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:		15 100
Height, Unit:		1 IN
Height Minimum, Maximum:		0.5 1
Density, Unit:	168 M2	168 M2
Pest11 Code, Type, Scale:	SOLPT W	SOLPT W
Stage Majority, Percent:		12 100
Height, Unit:		2 IN
Height Minimum, Maximum:		1 2
Pest12 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:		14 100
Height, Unit:		3 IN
Height Minimum, Maximum:		1 3

Application Equipment

	A	B
Appl. Equipment:	Backpack	Backpack
Equipment Type:	SPRBAC	SPRBAC
Operation Pressure, Unit:	34 PSI	44 PSI
Nozzle Type:	DG	DG
Nozzle Size:	11002	11002
Nozzle Spacing, Unit:	18 IN	18 IN
Boom Length, Unit:	10 FT	10 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac
Mix Size, Unit:	0.5 gallons	0.5 gallons
Propellant:	COMCO2	COMCO2

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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-11-2011	Oct-11-2011	Oct-11-2011		
Rating Type	YIELD	YIELD	YIELD		
Rating Unit	LB	%	BU		
Number of Subsamples	1	1	1		
Days After First/Last Applic.	180 120	180 120	180 120		
Trt-Eval Interval					
Plant-Eval Interval	142 DP-1	142 DP-1	142 DP-1		
ARM Action Codes			TY2		
Number of Decimals	1	1	1		

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	30	31	32
1	Valor XLT @ 1.5 oz						14.9 a	14.4 a	46.2 a
1	Valor SX	0.028 lb ai/a		0.88 oz/a		A			
1	Classic	0.0097 lb ai/a		0.62 oz/a		A			
1	Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
1	2,4-D	0.5 lb ai/a		1 pt/a		A			
1	N-pak ams	5 % v/v		3 qt/a		A			
1	Roundup Power Max	0.77 lb ae/a		22 oz/a		B			
1	N-pak ams	5 % v/v		3 qt/a		B			
2	Valor XLT @ 1.5 oz						15.3 a	11.6 a	47.4 a
2	Valor SX	0.028 lb ai/a		0.88 oz/a		A			
2	Classic	0.0097 lb ai/a		0.62 oz/a		A			
2	Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
2	2,4-D	0.5 lb ai/a		1 pt/a		A			
2	N-pak ams	5 % v/v		3 qt/a		A			
2	Resource	0.0134 lb ai/a		2 oz/a		B			
2	Roundup Power Max	0.77 lb ae/a		22 oz/a		B			
2	N-pak ams	5 % v/v		3 qt/a		B			
3	Valor XLT @ 1.5 oz						14.0 a	13.0 a	43.3 a
3	Valor SX	0.028 lb ai/a		0.88 oz/a		A			
3	Classic	0.0097 lb ai/a		0.62 oz/a		A			
3	Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
3	2,4-D	0.5 lb ai/a		1 pt/a		A			
3	N-pak ams	5 % v/v		3 qt/a		A			
3	Cadet	0.00427 lb ai/a		0.6 oz/a		B			
3	Roundup Power Max	0.77 lb ae/a		22 oz/a		B			
3	N-pak ams	5 % v/v		3 qt/a		B			
4	Prefix	1.32 lb ai/a		32 oz/a		A	14.0 a	17.1 a	43.3 a
4	Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
4	2,4-D	0.5 lb ai/a		1 pt/a		A			
4	N-pak ams	5 % v/v		3 qt/a		A			
4	Cadet	0.00427 lb ai/a		0.6 oz/a		B			
4	Roundup Power Max	0.77 lb ae/a		22 oz/a		B			
4	N-pak ams	5 % v/v		3 qt/a		B			
5	Dual II Magnum	0.51 lb ai/a		8.6 oz/a		A	14.2 a	16.5 a	43.8 a
5	Pursuit	0.0263 lb ai/a		1.68 oz/a		A			
5	Sencor DF	0.113 lb ai/a		2.4 oz/a		A			
5	Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
5	2,4-D	0.5 lb ai/a		1 pt/a		A			
5	N-pak ams	5 % v/v		3 qt/a		A			
5	Cadet	0.00427 lb ai/a		0.6 oz/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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Crop Name		Soybean	Soybean	Soybean	
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Rating Unit		LB	%	BU	
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Plant-Eval Interval		142 DP-1	142 DP-1	142 DP-1	
ARM Action Codes				TY2	
Number of Decimals		1	1	1	

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	30	31	32
5	Roundup Power Max	0.77 lb ae/a		22 oz/a		B			
	5 N-pak ams	5 % v/v		3 qt/a		B			
6	Authority XL	0.175 lb ai/a		4 oz/a		A	16.1 a	13.0 a	49.8 a
	6 Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
	6 2,4-D	0.5 lb ai/a		1 pt/a		A			
	6 N-pak ams	5 % v/v		3 qt/a		A			
	6 Cadet	0.00427 lb ai/a		0.6 oz/a		B			
	6 Roundup Power Max	0.77 lb ae/a		22 oz/a		B			
	6 N-pak ams	5 % v/v		3 qt/a		B			
7	Authority First	0.28 lb ai/a		6.4 oz/a		A	14.3 a	13.5 a	44.1 a
	7 Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
	7 2,4-D	0.5 lb ai/a		1 pt/a		A			
	7 N-pak ams	5 % v/v		3 qt/a		A			
	7 Cadet	0.00427 lb ai/a		0.6 oz/a		B			
	7 Roundup Power Max	0.77 lb ae/a		22 oz/a		B			
	7 N-pak ams	5 % v/v		3 qt/a		B			
8	Sharpen	0.0223 lb ai/a		1 oz/a		A	12.7 a	16.6 a	39.3 a
	8 Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
	8 MSO	1 % v/v		0.6 qt/a		A			
	8 N-pak ams	5 % v/v		3 qt/a		A			
	8 Cadet	0.00427 lb ai/a		0.6 oz/a		B			
	8 Roundup Power Max	0.77 lb ae/a		22 oz/a		B			
	8 N-pak ams	5 % v/v		3 qt/a		B			
LSD (P=.05)							3.59	7.85	11.08
Standard Deviation							2.05	4.48	6.33
CV							14.17	30.93	14.17
Bartlett's X2							9.099	17.547	9.099
P(Bartlett's X2)							0.246	0.014*	0.246
Replicate F							4.571	1.269	4.571
Replicate Prob(F)							0.0297	0.3117	0.0297
Treatment F							0.756	0.623	0.756
Treatment Prob(F)							0.6320	0.7292	0.6320

Crop Code
 GLXMA, BSOY, Glycine max, = US
Rating Type
 YIELD = yield
Rating Unit
 LB = pound
 % = percent

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BU = bushel
Plant-Eval Interval
142 DP-1 = 1 May-22-2011
ARM Action Codes
TY2 = 3.088647*[C30]