

Ohio State University Horticulture and Crop Science

Get the most out of every soybean acre.

Title No. 2:
 Trial ID: 11SOYDEMO Protocol ID: 11SOYDEMO
 Location: Western Branch F-10W Study Director: Bryan Reeb
 Project ID: 11SOYDEMO Investigator: Dr. Mark M. Loux
 Sponsor Contact: Caren Judge, BASF

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** °: 39.85872 N USA 49.376656 - 24.53833
State/Prov.: Ohio **Longitude of LL Corner** °: -83.67178 W -124.715843 - -66.968887
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-14-2011
Planting Method: PLANTD planted **Rate, Unit:** 197000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Seed Bed: MEDTRA medium/trashy
Soil Moisture: SLIWET slightly wet
Harvested Width, Unit: 6.25 FT **Emergence Date:** May-24-2011
Harvested Length, Unit: 30 FT

Pest Description

- Pest 1 Type:** W **Code:** LAMPU Lamium purpureum
Common Name: Purple deadnettel
- Pest 2 Type:** W **Code:** ERYRE Erysimum repandum
Common Name: Bushy wallflower
- Pest 3 Type:** W **Code:** LEPCA Lepidium campestre
Common Name: Field pepperweed
- Pest 4 Type:** W **Code:** TAROF Taraxacum officinale
Common Name: Common dandelion
- Pest 5 Type:** W **Code:** CAPBP Capsella bursa-pastoris
Common Name: Shepherd's purse
- Pest 6 Type:** W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail
- Pest 7 Type:** W **Code:** ERICA Conyza canadensis
Common Name: Canada horseweed
- Pest 8 Type:** W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed
- Pest 9 Type:** W **Code:** AMBEL Ambrosia artemisiifolia
Common Name: Common ragweed
- Pest10 Type:** W **Code:** VERPG Veronica peregrina
Common Name: Purslane speedwell
- Pest11 Type:** W **Code:** ECHSS Echinochloa sp.
Common Name: Barnyardgrass
- Pest12 Type:** W **Code:** SOLPT Solanum ptycanthum
Common Name: Eastern black nightshade
- Pest13 Type:** W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters

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: 6 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

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Maintenance

No.	Date	Maintenance Treatment Name	Rate	Unit
1.	Jun-27-2011	FIRSTRATE	0.3	oz/ac

Soil Description

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

Application Description

	A	B	C
Application Date:	Apr-21-2011	Jun-6-2011	Jul-21-2011
Time of Day:	9:00 AM	1:45 P.M.	1:00 PM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	7 EPP	EPO	R3
Application Placement:	BROFOL	BROFOL	BROFOL
Air Temperature, Unit:	43 F	88.6 F	90 F
% Relative Humidity:	64	37.5	69
Wind Velocity, Unit:	6 MPH	4.4 MPH	6 MPH
Wind Direction:	NNE	WSW	WEST
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	42 F		79 F
Soil Moisture:	VERWET	GOOD	MOIST
% Cloud Cover:	5	15	15
Next Rain Occurred On:	Apr-22-2011	Jun-4-2011	Jul-24-2011

Crop Stage At Each Application

	A		B		C	
Crop 1 Code, BBCH Scale:	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY
Stage Scale Used:			BBCH		BBCH	
Stage Majority, Percent:			12	100	69	100
Height, Unit:			4	IN	27	IN
Height Minimum, Maximum:			2	4	25	29

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Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	LAMPU W	LAMPU W	LAMPU W
Stage Majority, Percent:	65	100	
Diameter, Unit:	4	IN	
Pest 2 Code, Type, Scale:	ERYRE W	ERYRE W	ERYRE W
Stage Majority, Percent:	65	100	
Height, Unit:	8	IN	
Height Minimum, Maximum:	5	8	
Pest 3 Code, Type, Scale:	LEPCA W	LEPCA W	LEPCA W
Stage Majority, Percent:	65	100	
Height, Unit:	10	IN	
Height Minimum, Maximum:	6	10	
Pest 4 Code, Type, Scale:	TAROF W	TAROF W	TAROF W
Stage Majority, Percent:	65	100	
Diameter, Unit:	5	IN	
Density, Unit:	0.66	M2	0.66 M2
Pest 5 Code, Type, Scale:	CAPBP W	CAPBP W	CAPBP W
Stage Majority, Percent:	19	100	
Height, Unit:	11	IN	
Height Minimum, Maximum:	5	11	
Pest 6 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Height, Unit:		5	IN
Height Minimum, Maximum:		3	6
Density, Unit:	4.66	M2	4.66 M2
Pest 7 Code, Type, Scale:	ERICA W	ERICA W	ERICA W
Height, Unit:		3	IN
Height Minimum, Maximum:		2	4
Density, Unit:	78.66	M2	78.66 M2
Pest 8 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Height, Unit:		5	IN
Height Minimum, Maximum:		4	6
Density, Unit:	5.33	M2	5.33 M2
Pest 9 Code, Type, Scale:	AMBEL W	AMBEL W	AMBEL W
Height, Unit:		2	IN
Height Minimum, Maximum:		2	3
Density, Unit:	2	M2	2 M2
Pest10 Code, Type, Scale:	VERPG W	VERPG W	VERPG W
Height, Unit:		3	IN
Height Minimum, Maximum:		3	3
Pest11 Code, Type, Scale:	ECHSS W	ECHSS W	ECHSS W
Density, Unit:	27.33	M2	27.33 M2
Pest12 Code, Type, Scale:	SOLPT W	SOLPT W	SOLPT W
Density, Unit:	4.66	M2	4.66 M2
Pest13 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W
Density, Unit:	4.66	M2	4.66 M2

Application Equipment

	A	B	C
Appl. Equipment:	Backpack	Backpack	Backpack
Equipment Type:	SPRBAC	SPRBAC	SPRBAC
Operation Pressure, Unit:	46	PSI	46
Nozzle Type:	DG	DG	DG
Nozzle Size:	11002	11002	110015
Nozzle Spacing, Unit:	18	IN	18
Boom Length, Unit:	10	FT	10
Boom Height, Unit:	18	IN	18
Ground Speed, Unit:	3	MPH	3
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	15	gal/ac	15
Mix Size, Unit:	0.5	gallons	0.5
Propellant:	COMCO2	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	MOISTURE	YIELD	
Rating Unit	LB	%	BU	
Number of Subsamples	1	1	1	
Days After First/Last Applic.	173 82	173 82	173 82	
Trt-Eval Interval				
Plant-Eval Interval	150 DP-1	150 DP-1	150 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	Rate	Unit	Other Rate	Other Unit	Appl Code	16	17	18
1	Sharpen	0.0223 lb ai/a		1 oz/a		A	19.2 c	11.8 a	75.7 c
1	Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
1	MSO	1 % v/v		0.6 qt/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	2,4-D Ester	0.5 lb ai/a		1 pt/a		A	18.8 c	11.9 a	74.0 c
2	Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
2	N-pak ams	5 % v/v		3 qt/a		A			
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	OpTill	0.085 lb ai/a		2 oz/a		A	19.0 c	11.8 a	75.0 c
3	Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
3	MSO	1 % v/v		0.6 qt/a		A			
3	N-pak ams	5 % v/v		3 qt/a		A			
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	OpTill	0.085 lb ai/a		2 oz/a		A	20.5 b	11.7 a	81.0 b
4	Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
4	MSO	1 % v/v		0.6 qt/a		A			
4	N-pak ams	5 % v/v		3 qt/a		A			
4	Roundup Power Max	0.77 lb ae/a		22 oz/a		B			
4	N-pak ams	5 % v/v		3 qt/a		B			
4	Priaxor	0.13 lb ai/a		4 oz/a		C			
4	NIS	0.25 % v/v		0.15 qt/a		C			
5	OpTill	0.085 lb ai/a		2 oz/a		A	21.9 a	11.5 a	86.6 a
5	Roundup Power Max	0.77 lb ae/a		22 oz/a		A			
5	MSO	1 % v/v		0.6 qt/a		A			
5	N-pak ams	5 % v/v		3 qt/a		A			
5	Roundup Power Max	0.77 lb ae/a		22 oz/a		B			
5	N-pak ams	5 % v/v		3 qt/a		B			
5	Priaxor	0.13 lb ai/a		4 oz/a		C			
5	Fastac	0.026 lb ai/a		4 oz/a		C			
5	NIS	0.25 % v/v		0.15 qt/a		C			
5	Firstrate	0.0158 lb ai/a		0.3 oz/a					
LSD (P=.05)							1.29	0.76	5.14
Standard Deviation							1.07	0.63	4.27
CV							5.38	5.36	5.44

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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BBCH Scale		BSOY	BSOY	BSOY					
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Days After Emergence		140 DE-1	140 DE-1	140 DE-1					
ARM Action Codes				TY1					
Number of Decimals		1	1	1					
Trt Treatment									
No. Name	Rate	Unit	Other Rate	Other Rate	Unit Code	16	17	18	
Bartlett's X2						4.325	10.836	6.037	
P(Bartlett's X2)						0.364	0.028*	0.196	
Replicate F						2.400	1.227	2.274	
Replicate Prob(F)						0.0736	0.3330	0.0863	
Treatment F						8.884	0.300	9.172	
Treatment Prob(F)						0.0003	0.8744	0.0002	

Crop Code
 GLXMA, BSOY, Glycine max, = US
Rating Type
 YIELD = yield
Rating Unit
 LB = pound
 % = percent
 BU = bushel
Plant-Eval Interval
 150 DP-1 = 1 May-14-2011
ARM Action Codes
 TY1 = 3.872*[16]*(100-[17])/86.5

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