Ohio State University
Horticulture and Crop Science

Soybean Yield Advantage II
Title No. 2:
Trial ID: 12 SOYDEMO2 Protocol ID: 12 SOYDEMO2
Location: Western Branch F-9 E Study Director: Bryan Reeb
Project ID: DEM-H-2012-US-D9F-G-01.0 Investigator: Dr. Mark M. Loux
Sponsor Contact: Caren Schmidt, 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 °: 39.85882 N
State/Prov.: Ohio Longitude of LL Corner °: 83.67294 W
Postal Code: 45368
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: pioneer 93y51 Description: Round Up Ready
BBCH Scale: BSOY Planting Date: Apr-30-2012
Planting Method: PLANTD planted Rate, Unit: 168000 P/A
Depth, Unit: 0.5 in
Row Spacing, Unit: 15 in
Seed Bed: MEDIUM medium Soil Temperature, Unit: 63 F
Soil Moisture: SLIWET slightly wet Emergence Date: May-9-2012
Harvest Date: Oct-17-2012 Harvest Equipment: MASSEY 8 XP
Harvested Width, Unit: 6.25 FT Harvested Length, Unit: 30 FT
% Standard Moisture: 13.0 Moisture Meter: HARVEST MASTER
Weighing Equipment: HARVEST MASTER 401

Pest Description

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

Pest 2 Type: W Code: CAPBP Capsella bursa-pastoris
Common Name: Shepherd's purse

Pest 3 Type: W Code: VERPG Veronica peregrina
Common Name: Purslane speedwell

Pest 4 Type: W Code: VERAG Veronica agrestis
Common Name: Field speedwell

Pest 5 Type: W Code: RANAB Ranunculus abortivus
Common Name: Smallflower buttercup

Pest 6 Type: W Code: SENGL Senecio glabellus
Common Name: Cressleaf groundsel

Pest 7 Type: W Code: CHEAL Chenopodium album
Common Name: Common lambsquarters

Pest 8 Type: W Code: AMBTR Ambrosia trifida
Common Name: Giant ragweed

Pest 9 Type: W Code: ERICA Conyza canadensis
Common Name: Canada horseweed

Pest10 Type: W Code: SETFA Setaria faberi
Common Name: Giant foxtail

Pest11 Type: W Code: AMBEL Ambrosia artemisiifolia
Common Name: Common ragweed

Pest12 Type: W Code: POLPY Persicaria pensylvanica
Common Name: Pennsylvania smartweed

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: RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	CORN	2011

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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	D
Application Date:	Apr-25-2012	Apr-29-2012	Jun-6-2012	Jul-12-2012
Time of Day:	9:30 AM	4:00 PM	9:00AM	8:45AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	7 EPP	3 EPP	3-4"WDS	R3
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	REEB	DOBBELS	REEB	REEB
Air Temperature, Unit:	55 F	65 F	60 F	78 F
% Relative Humidity:	62	54	71	71
Wind Velocity, Unit:	5 MPH	6 MPH	5 MPH	2 MPH
Wind Direction:	S	W	N	E
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	45 F	57 F	58 F	75 F
Soil Moisture:	GOOD	MOIST	DRY	DRY
% Cloud Cover:	3	75	0	0
Next Rain Occurred On:	Apr-26-2012	Apr-30-2012	Jun-11-2012	Jul-15-2012

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:			BBCH	BBCH
Stage Majority, Percent:			12 100	69 100
Height, Unit:			5 IN	19 IN
Height Minimum, Maximum:			5 5	18 20

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Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	LAMPU W	LAMPU W	LAMPU W	LAMPU W
Stage Majority, Percent:	65 100	65 100		
Height, Unit:	5 IN	5 IN		
Height Minimum, Maximum:	3 5	3 5		
Density, Unit:	4 m2	6.65 m2		
Pest 2 Code, Type, Scale:	CAPBP W	CAPBP W	CAPBP W	CAPBP W
Stage Majority, Percent:	65 100	65 100		
Height, Unit:	16 IN	16 IN		
Height Minimum, Maximum:	14 16	14 16		
Density, Unit:	6.65 m2	0.25 m2		
Pest 3 Code, Type, Scale:	VERPG W	VERPG W	VERPG W	VERPG W
Stage Majority, Percent:	65 100	65 100		
Diameter, Unit:	8 IN	8 IN		
Height, Unit:	6 IN	6 IN		
Height Minimum, Maximum:	4 6	4 6		
Density, Unit:	0.25 m2	0.25 m2		
Pest 4 Code, Type, Scale:	VERAG W	VERAG W	VERAG W	VERAG W
Stage Majority, Percent:	65 100	65 100		
Diameter, Unit:	8 IN	8 IN		
Height, Unit:	4 IN	4 IN		
Height Minimum, Maximum:	2 4	2 4		
Density, Unit:	0.25 m2	0.25 m2		
Pest 5 Code, Type, Scale:	RANAB W	RANAB W	RANAB W	RANAB W
Stage Majority, Percent:	65 100	65 100		
Height, Unit:	9 IN	9 IN		
Height Minimum, Maximum:	7 9	7 9		
Density, Unit:	0.25 m2	0.25 M2		
Pest 6 Code, Type, Scale:	SENGL W	SENGL W	SENGL W	SENGL W
Stage Majority, Percent:	65 100	65 100	69 100	
Height, Unit:	13 IN	13 IN	18 IN	
Height Minimum, Maximum:	10 13	10 13	12 24	
Density, Unit:	1.33 m2	1.33 m2	1.33 M2	
Pest 7 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W	CHEAL W
Stage Majority, Percent:	18 100	18 100	19 100	
Height, Unit:	3 IN	3 IN	10 IN	
Height Minimum, Maximum:	1 3	1 3	10 10	
Density, Unit:	6.65 m2	6.65 M2	6.65 M2	
Pest 8 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:	18 100	18 100	19 100	
Height, Unit:	4 IN	4 IN	16 IN	
Height Minimum, Maximum:	2 4	2 4	12 18	
Density, Unit:	10.64 M2	10.64 M2	10.64 M2	
Pest 9 Code, Type, Scale:	ERICA W	ERICA W	ERICA W	ERICA W
Stage Majority, Percent:	16 100	16 100	19 100	
Height, Unit:	0.25 IN	0.25 IN	3 IN	
Height Minimum, Maximum:	0.1 0.25	0.1 0.25	3 3	
Density, Unit:	10.64 m2	10.64 m2	10.64 M2	
Pest10 Code, Type, Scale:	SETFA W	SETFA W	SETFA W	SETFA W
Stage Majority, Percent:			15 100	
Height, Unit:			7.5 IN	
Height Minimum, Maximum:			6 9	
Density, Unit:			125 M2	
Pest11 Code, Type, Scale:	AMBEL W	AMBEL W	AMBEL W	AMBEL W
Stage Majority, Percent:			19 100	
Height, Unit:			4 IN	
Height Minimum, Maximum:			4 4	
Density, Unit:			2 M2	
Pest12 Code, Type, Scale:	POLPY W	POLPY W	POLPY W	POLPY W
Stage Majority, Percent:			19 100	
Height, Unit:			5 IN	
Height Minimum, Maximum:			5 5	
Density, Unit:			0.25 M2	

Application Equipment

	A	B	C	D
Appl. Equipment:	Backpack	TRACTOR	Backpack	Backpack
Equipment Type:	SPRBAC	SPTRMO	SPRBAC	SPRBAC
Operation Pressure, Unit:	44 PSI	33 PSI	44 PSI	44 PSI
Nozzle Type:	AIXR	DG	AIXR	AIXR
Nozzle Size:	110015	11002	110015	110015
Nozzle Spacing, Unit:	18 IN	20 IN	18 IN	18 IN
Boom Length, Unit:	10 FT	6.67 FT	10 FT	10 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN
Ground Speed, Unit:	3 MPH	6 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac
Mix Size, Unit:	3 Liters	10 gallons	3 Gallons	3 Liters
Propellant:	COMCO2	PUMROL	COMCO2	COMCO2

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Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	10	11	12
	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-17-2012	Oct-17-2012	Oct-17-2012
	Rating Type							YIELD	MOICON	YIELD
	Rating Unit							LBS	%	BU
	Number of Subsamples							1	1	1
	Rating Timing									
	Days After First/Last Applic.							175 97	175 97	175 97
	Trt-Eval Interval									
	Plant-Eval Interval							170 DP-1	170 DP-1	170 DP-1
	Days After Emergence							161 DE-1	161 DE-1	161 DE-1
	ARM Action Codes									TY1
	Number of Decimals							1	1	1
1	Roundup Power Max	0.77	lb ae/a	22	oz/a	3-4" WDS	C	9.9 c	12.6 a	38.4 c
1	Firstrate	0.0158	lb ai/a	0.3	oz/a	3-4" WDS	C			
1	N-pak ams	5	% v/v	3	qt/a	3-4" WDS	C			
2	Roundup Weathermax	0.77	lb ae/a	22	oz/a	7 EPP	A	11.5 bc	13.1 a	44.5 bc
2	Weedone LV-6	0.56	lb ai/a	12	oz/a	7 EPP	A			
2	N-pak ams	5	% v/v	3	qt/a	7 EPP	A			
2	NIS	0.25	% v/v	0.15	qt/a	7 EPP	A			
2	Roundup Power Max	0.77	lb ae/a	22	oz/a	3-4" WDS	C			
2	Firstrate	0.0158	lb ai/a	0.3	oz/a	3-4" WDS	C			
2	N-pak ams	5	% v/v	3	qt/a	3-4" WDS	C			
3	Roundup Power Max	0.77	lb ae/a	22	oz/a	3 EPP	B	12.9 ab	12.5 a	50.1 ab
3	OpTill	0.085	lb ai/a	2	oz/a	3 EPP	B			
3	Outlook	0.47	lb ai/a	10	oz/a	3 EPP	B			
3	MSO	1	% v/v	0.6	qt/a	3 EPP	B			
3	N-pak ams	5	% v/v	3	qt/a	3 EPP	B			
3	Roundup Power Max	0.77	lb ae/a	22	oz/a	3-4" WDS	C			
3	Firstrate	0.0158	lb ai/a	0.3	oz/a	3-4" WDS	C			
3	N-pak ams	5	% v/v	3	qt/a	3-4" WDS	C			
4	Roundup Power Max	0.77	lb ae/a	22	oz/a	3 EPP	B	14.4 a	12.6 a	56.2 a
4	OpTill	0.085	lb ai/a	2	oz/a	3 EPP	B			
4	Outlook	0.47	lb ai/a	10	oz/a	3 EPP	B			
4	MSO	1	% v/v	0.6	qt/a	3 EPP	B			
4	N-pak ams	5	% v/v	3	qt/a	3 EPP	B			
4	Roundup Power Max	0.77	lb ae/a	22	oz/a	3-4" WDS	C			
4	Firstrate	0.0158	lb ai/a	0.3	oz/a	3-4" WDS	C			
4	N-pak ams	5	% v/v	3	qt/a	3-4" WDS	C			
4	Priaxor	0.13	lb ai/a	4	oz/a	R3	D			
4	Preference	1.67	% v/v	1	qt/a	R3	D			
4	Interlock	0.208	% v/v	4	oz/a	R3	D			
5	Roundup Power Max	0.77	lb ae/a	22	oz/a	3 EPP	B	14.4 a	12.4 a	56.3 a
5	OpTill	0.085	lb ai/a	2	oz/a	3 EPP	B			
5	Outlook	0.47	lb ai/a	10	oz/a	3 EPP	B			
5	MSO	1	% v/v	0.6	qt/a	3 EPP	B			
5	N-pak ams	5	% v/v	3	qt/a	3 EPP	B			
5	Roundup Power Max	0.77	lb ae/a	22	oz/a	3-4" WDS	C			
5	Firstrate	0.0158	lb ai/a	0.3	oz/a	3-4" WDS	C			
5	N-pak ams	5	% v/v	3	qt/a	3-4" WDS	C			
5	Fastac	0.026	lb ai/a	4	oz/a	R3	D			
5	Priaxor	0.13	lb ai/a	4	oz/a	R3	D			

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-17-201 2	Oct-17-201 2	Oct-17-201 2
Rating Type									YIELD	MOICON	YIELD
Rating Unit									LBS	%	BU
Number of Subsamples									1	1	1
Rating Timing											
Days After First/Last Applic.									175 97	175 97	175 97
Trt-Eval Interval											
Plant-Eval Interval									170 DP-1	170 DP-1	170 DP-1
Days After Emergence									161 DE-1	161 DE-1	161 DE-1
ARM Action Codes											TY1
Number of Decimals									1	1	1

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	10	11	12
5	Preference	1.67	% v/v	1	qt/a	R3	D			
5	Interlock	0.208	% v/v	4	oz/a	R3	D			
6	Roundup Power Max	0.77	lb ae/a	22	oz/a	3 EPP	B	13.7 a	12.6 a	53.4 a
6	OpTill	0.085	lb ai/a	2	oz/a	3 EPP	B			
6	Outlook	0.47	lb ai/a	10	oz/a	3 EPP	B			
6	MSO	1	% v/v	0.6	qt/a	3 EPP	B			
6	N-pak ams	5	% v/v	3	qt/a	3 EPP	B			
6	Roundup Power Max	0.77	lb ae/a	22	oz/a	3-4" WDS	C			
6	Firstrate	0.0158	lb ai/a	0.3	oz/a	3-4" WDS	C			
6	N-pak ams	5	% v/v	3	qt/a	3-4" WDS	C			
6	Fastac	0.026	lb ai/a	4	oz/a	R3	D			
6	Priaxor	0.13	lb ai/a	4	oz/a	R3	D			
6	AG 8050	0.5	% v/v	0.3	qt/a	R3	D			
6	MAX-IN	4.18	lb ai/a	2	qt/a	R3	D			

LSD (P=.05)	2.20	0.85	8.53
Standard Deviation	1.85	0.71	7.17
CV	14.44	5.64	14.39

Crop Code
GLXMA, BSOY, Glycine max, = US
Rating Type
YIELD = yield
MOICON = moisture content
Rating Unit
% = percent
BU = bushel
Plant-Eval Interval
170 DP-1 = 1 GLXMA Apr-30-2012
ARM Action Codes
TY1 = 3.872*[10]*(100-[11])/87