

Ohio State University Horticulture and Crop Science

MAX YIELD INPUT TRIAL, HERBICIDE, FUNGICIDE AND INSECTICIDE

Title No. 2:

Trial ID: 10SOYMAX Protocol ID: 10SOYMAX
 Location: Western Branch G-7 Study Director: Bryan Reeb
 Project ID: 10SOYMAX Investigator: Dr. Mark M. Loux
 Sponsor Contact: CAREN JUDGE, BASF

General Trial Information

Study Director: Bryan Reeb
Investigator: Dr. Mark M. Loux

Trial Location

City: South Charleston **Latitude of LL Corner °:** 39.85814 N
State/Prov.: Ohio **Longitude of LL Corner °:** 83.67628 W
Postal Code: 45368 **Altitude of LL Corner, Unit:** 1093.00 FT
Country: USA

Personnel

Study Director: Bryan Reeb
Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: SC 9349 RR **Description:** RR
BBCH Scale: BSOY **Planting Date:** Apr-29-2010
Planting Method: SEEDED seeded **Rate, Unit:** 196000 S/A
Depth, Unit: 0.75 IN
Row Spacing, Unit: 15 IN
Seed Bed: N0-TIL
Soil Moisture: GOOD good **Emergence Date:** May-7-2010
Harvested Width, Unit: 6.25 FT **Harvested Length, Unit:** 30 FT

Pest Description

Pest 1 Type: W **Code:** ERICA Conyza canadensis
Common Name: horseweed

Pest 2 Type: W **Code:** LAMPU Lamium purpureum
Common Name: Purple deadnettel

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

Pest 4 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail

Pest 5 Type: W **Code:** SENGL Senecio glabellus
Common Name: Cressleaf groundsel

Pest 6 Type: W **Code:** STEME Stellaria media
Common Name: Common chickweed

Pest 7 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

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

Soil Description

Description Name: G-7
% OM: 2 **Texture:** SIL silt loam
pH: 6.2 **Soil Name:** Crosby Silt Loam
CEC: 14 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	Apr-21-2010	Jun-8-2010	Jul-8-2010
Time of Day:	9:00 AM	9:40 AM	8:45 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	7 EPP	EPO	LPO
Application Placement:	BROFOL	BROFOL	BROFOL
Air Temperature, Unit:	53 F	60 F	81.5 F
% Relative Humidity:	49	65	73
Wind Velocity, Unit:	3 MPH	5 MPH	0 MPH
Wind Direction:	WSW	ESE	
Dew Presence (Y/N):	N no	N no	Y yes
Soil Temperature, Unit:	50 F	62 F	75 F
Soil Moisture:	DRY	GOOD	DRY
% Cloud Cover:	2	10	0
Next Rain Occurred On:	Apr-24-2010	Jun-8-2010	Jul-8-2010

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:			13	100	69	100
Height, Unit:			10	IN	26	IN
Height Minimum, Maximum:			8	10	24	28

Pest Stage At Each Application

	A		B		C	
Pest 1 Code, Type, Scale:	ERICA	W	ERICA	W	ERICA	W
Stage Majority, Percent:	19	100	19	100	19	100
Diameter, Unit:	3	IN				
Height, Unit:	3	IN	6	IN	28	IN
Height Minimum, Maximum:	2	3	3	6	26	30
Pest 2 Code, Type, Scale:	LAMPU	W	LAMPU	W	LAMPU	W
Stage Majority, Percent:	65	100				
Diameter, Unit:	5	IN				
Height, Unit:	6	IN				
Height Minimum, Maximum:	5	6				
Pest 3 Code, Type, Scale:	VERPG	W	VERPG	W	VERPG	W
Stage Majority, Percent:	65	100				
Diameter, Unit:	3	IN				
Height, Unit:	6	IN				
Height Minimum, Maximum:	4	6				
Pest 4 Code, Type, Scale:	SETFA	W	SETFA	W	SETFA	W
Stage Majority, Percent:			15	100		
Height, Unit:			10	IN		
Height Minimum, Maximum:			8	10		
Pest 5 Code, Type, Scale:	SENGL	W	SENGL	W	SENGL	W
Stage Majority, Percent:	19	100				
Height, Unit:	6	IN				
Height Minimum, Maximum:	4	6				
Pest 6 Code, Type, Scale:	STEME	W	STEME	W	STEME	W
Stage Majority, Percent:	19	100				
Diameter, Unit:	6	IN				
Pest 7 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:			18	100		
Height, Unit:			10	IN		
Height Minimum, Maximum:			8	10		

Application Equipment

	A	B	C
Appl. Equipment:	Backpack	Backpack	Backpack
Equipment Type:	SPRBAC	SPRBAC	SPRBAC
Operating Pressure, Unit:	52 PSI	52 PSI	52 PSI
Nozzle Type:	DG	DG	DG
Nozzle Size:	8002	11002	8002
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN
Boom Length, Unit:	6.67 FT	10 FT	10 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	20 gal/ac	20 gal/ac	20 gal/ac
Mix Size, Unit:	0.33 gallons	3 gallons	0.33 gallons
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	Sep-22-2010	Sep-22-2010	Sep-22-2010
Rating Type	YIELD	MOICON	YIELD
Rating Unit	LBS	%	BU
Number of Subsamples	1	1	1
Days After First/Last Applic.	154 76	154 76	154 76
Trt-Eval Interval			
Plant-Eval Interval	146 DP-1	146 DP-1	146 DP-1
Days After Emergence	138 DE	138 DE	138 DE
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt No.	Treatment Name	Form Conc	Form Unit	Other Rate	Other Unit	Appl Code	19	20	21
1	Untreated Check						9.2 c	11.1 a	36.5 c
2	Roundup Power Max	4.5 LBAE/GAL		22 oz/a		A	16.4 b	9.8 bc	65.6 b
	2 2,4-D	4 LBA/GAL		1 pt/a		A			
	2 Nis	100 %		0.2 qt/a		A			
	2 N-pak ams	100 %		4 qt/a		A			
	2 Roundup Power Max	4.5 LBAE/GAL		22 oz/a		B			
	2 N-pak ams	100 %		4 qt/a		B			
	2 Nis	100 %		0.2 qt/a		B			
3	Roundup Power Max	4.5 LBAE/GAL		22 oz/a		A	16.4 b	10.4 ab	65.6 b
	3 OpTill	68 %AW/W		2 oz/a		A			
	3 Mso	100 %		0.8 qt/a		A			
	3 N-pak ams	100 %		4 qt/a		A			
	3 Roundup Power Max	4.5 LBAE/GAL		22 oz/a		B			
	3 N-pak ams	100 %		4 qt/a		B			
	3 Nis	100 %		0.2 qt/a		B			
4	Roundup Power Max	4.5 LBAE/GAL		22 oz/a		A	18.3 a	9.4 c	73.7 a
	4 OpTill	68 %AW/W		2 oz/a		A			
	4 Mso	100 %		0.8 qt/a		A			
	4 N-pak ams	100 %		4 qt/a		A			
	4 Roundup Power Max	4.5 LBAE/GAL		22 oz/a		B			
	4 N-pak ams	100 %		4 qt/a		B			
	4 Nis	100 %		0.2 qt/a		B			
	4 Headline	2.09 LBA/GAL		6 oz/a		C			
	4 Nis	100 %		0.2 qt/a		C			
5	Roundup Power Max	4.5 LBAE/GAL		22 oz/a		A	17.5 ab	10.0 bc	70.1 ab
	5 OpTill	68 %AW/W		2 oz/a		A			
	5 Mso	100 %		0.8 qt/a		A			
	5 N-pak ams	100 %		4 qt/a		A			
	5 Roundup Power Max	4.5 LBAE/GAL		22 oz/a		B			
	5 N-pak ams	100 %		4 qt/a		B			
	5 Nis	100 %		0.2 qt/a		B			
	5 Headline	2.09 LBA/GAL		6 oz/a		C			
	5 Respect	100 %		3.2 oz/a		C			
	5 Nis	100 %		0.2 qt/a		C			
6	Roundup Power Max	4.5 LBAE/GAL		22 oz/a		A	16.5 b	9.8 bc	66.2 b
	6 Sharpen	2.85 LBA/GAL		1 oz/a		A			
	6 Scepter	70 %AW/W		2.8 oz/a		A			
	6 N-pak ams	100 %		2 qt/a		A			
	6 Roundup Power Max	4.5 LBAE/GAL		22 oz/a		B			
	6 N-pak ams	100 %		4 qt/a		B			
LSD (P=.05)							1.76	0.89	7.38
Standard Deviation							1.48	0.75	6.20
CV							9.43	7.43	9.85
Bartlett's X2							1.157	15.446	1.32
P(Bartlett's X2)							0.949	0.009*	0.933
Replicate F							1.993	1.370	1.654
Replicate Prob(F)							0.1146	0.2692	0.1825
Treatment F							29.151	3.637	27.742
Treatment Prob(F)							0.0001	0.0131	0.0001

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 Code

GLXMA, BSOY, Glycine max, = US

Rating Type

YIELD = yield

MOICON = moisture content

Rating Unit

% = percent

BU = bushel

Plant-Eval Interval

146 DP-1 = 1 Apr-29-2010

ARM Action Codes

TY1 = $3.872 * [C19] * (100 - [C20]) / 87$