

Ohio State University Horticulture and Crop Science

Glyphosate with and with out Gly-Force

Title No. 2:

Trial ID: 11SOYYLD2 Protocol ID: 11SOYYLD2
Location: Western Branch Study Director: Bryan Reeb
Project ID: 11SOYYLD2 Investigator: Dr. Mark M. Loux
Sponsor Contact: Jim, Wellman Seed

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 °:** 39.86028 N
State/Prov.: Ohio **Longitude of LL Corner °:** -83.67199 W
Postal Code: 45368
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Seed Consultants 9330
BBCH Scale: BSOY **Description:** Round Up Ready
Planting Method: SEEDED seeded **Planting Date:** 6/6/11
Depth, Unit: 1 IN **Rate, Unit:** 197000 S/A
Row Spacing, Unit: 15 IN
Seed Bed: MEDIUM medium **Soil Temperature, Unit:** 76 F
Soil Moisture: NORMAL normal **Emergence Date:** 6/13/11

Pest Description

- Pest 1 Type:** W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail
- Pest 2 Type:** W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed
- Pest 3 Type:** W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters
- Pest 4 Type:** W **Code:** AMARE Amaranthus retroflexus
Common Name: Redroot pigweed
- Pest 5 Type:** W **Code:** AMBEL Ambrosia artemisiifolia
Common Name: Common ragweed
- Pest 6 Type:** W **Code:** IPOHE Ipomoea hederacea
Common Name: Ivyleaf morningglory
- Pest 7 Type:** W **Code:** HIBTR Hibiscus trionum
Common Name: Venice mallow
- Pest 8 Type:** W **Code:** SIDSP Sida spinosa
Common Name: Prickly sida

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:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: F-7 West
% OM: 3.1 **Texture:** SICL silty clay loam
pH: 7.1 **Soil Name:** Kokomo Silty Clay Loam
CEC: 22.2 **Fert. Level:** G good
Soil Drainage: G good

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Application Description

A
Application Date: 7/11/11
Time of Day: 8:30 A.M.
Application Method: SPRAY
Application Placement: BROFOL
Air Temperature, Unit: 78.6 F
% Relative Humidity: 71
Wind Velocity, Unit: 3.2 MPH
Wind Direction: SW
Dew Presence (Y/N): Y yes
Soil Temperature, Unit: 72 F
Soil Moisture: DRY
% Cloud Cover: 0
Next Rain Occurred On: 7/11/11

Crop Stage At Each Application

A
Crop 1 Code, BBCH Scale: GLXMA BSOY
Stage Scale Used: BBCH
Stage Majority, Percent: 15 100
Height, Unit: 11 IN
Height Minimum, Maximum: 11 12

Pest Stage At Each Application

A
Pest 1 Code, Type, Scale: SETFA W
Stage Majority, Percent: 16 100
Height, Unit: 12 IN
Height Minimum, Maximum: 12 15
Density, Unit: 169 M2
Pest 2 Code, Type, Scale: AMBTR W
Stage Majority, Percent: 16 100
Height, Unit: 15 IN
Height Minimum, Maximum: 14 16
Density, Unit: 3 M2
Pest 3 Code, Type, Scale: CHEAL W
Stage Majority, Percent: 18 100
Height, Unit: 6 IN
Height Minimum, Maximum: 5 7
Density, Unit: 2 M2
Pest 4 Code, Type, Scale: AMARE W
Stage Majority, Percent: 16 100
Height, Unit: 7 IN
Height Minimum, Maximum: 6 8
Density, Unit: 9 M2
Pest 5 Code, Type, Scale: AMBEL W
Stage Majority, Percent: 16 100
Height, Unit: 7 IN
Height Minimum, Maximum: 6 8
Pest 6 Code, Type, Scale: IPOHE W
Stage Majority, Percent: 14 100
Height, Unit: 5 IN
Height Minimum, Maximum: 5 5
Density, Unit: 6 M2
Pest 7 Code, Type, Scale: HIBTR W
Stage Majority, Percent: 16 100
Height, Unit: 5 IN
Height Minimum, Maximum: 4 7
Density, Unit: 3 M2
Pest 8 Code, Type, Scale: SIDSP W
Stage Majority, Percent: 16 100
Height, Unit: 5 IN
Height Minimum, Maximum: 4 6
Density, Unit: 5 M2

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Application Equipment

A

Appl. Equipment: Backpack
Equipment Type: SPRBAC
Operating Pressure, Unit: 46 PSI
Nozzle Type: DG
Nozzle Size: 110015
Nozzle Spacing, Unit: 18 IN
Boom Length, Unit: 10 FT
Boom Height, Unit: 18 IN
Ground Speed, Unit: 3 MPH
Carrier: WATER
Spray Volume, Unit: 15 gal/ac
Mix Size, Unit: 0.5 gallons
Propellant: COMCO2

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Pest Type		W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code		SETFA	ECHCG	AMBTR	AMBEL	AMARE
Pest Scientific Name		Setaria faberi	Echinochloa cr>	Ambrosia trifi>	Ambrosia artem>	Amaranthus ret>
Pest Name		Giant foxtail	Common barnyar>	Giant ragweed	Common ragweed	Redroot pigweed
Crop Code	GLXMA					
BBCH Scale	BSOY					
Crop Scientific Name	Glycine max					
Crop Name	Soybean					
Rating Date	7/19/11	7/28/11	7/28/11	7/28/11	7/28/11	7/28/11
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Days After First/Last Applic.	8 8	17 17	17 17	17 17	17 17	17 17
Trt-Eval Interval	8 DA-A	17 DA-A	17 DA-A	17 DA-A	17 DA-A	17 DA-A
Plant-Eval Interval	43 DP-1	52 DP-1	52 DP-1	52 DP-1	52 DP-1	52 DP-1
Days After Emergence	36 DE-1	45 DE-1	45 DE-1	45 DE-1	45 DE-1	45 DE-1
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	1	2	3	4	5	6
1	Roundup Power Max	4.5	2.13 oz/a		A	0	5	0	5	3	0
2	Roundup Power Max	4.5	5.4 oz/a		A	0	48	20	20	6	0
3	Roundup Power Max	4.5	10.8 oz/a		A	0	83	60	48	43	39
4	Roundup Power Max	4.5	16 oz/a		A	0	88	64	68	48	80
5	Roundup Power Max	4.5	21.3 oz/a		A	0	100	79	74	54	73
6	Roundup Power Max	4.5	2.13 oz/a		A	0	48	18	30	8	8
6	Gly Force	100	32 oz/a		A						
7	Roundup Power Max	4.5	5.4 oz/a		A	0	68	30	33	23	22
7	Gly Force	100	32 oz/a		A						
8	Roundup Power Max	4.5	10.8 oz/a		A	0	90	63	59	64	90
8	Gly Force	100	32 oz/a		A						
9	Roundup Power Max	4.5	16 oz/a		A	0	96	73	66	91	93
9	Gly Force	100	32 oz/a		A						
10	UTC					0	0	0	0	0	0
LSD (P=.05)						0.0	12.0	14.4	15.4	20.9	23.0
Standard Deviation						0.0	8.2	9.9	10.6	14.0	15.7
CV						0.0	13.2	24.41	26.33	41.26	38.64
Bartlett's X2						0.0	5.745	7.106	11.641	11.626	1.295
P(Bartlett's X2)						.	0.57	0.311	0.168	0.071	0.972
Replicate F						0.000	5.839	0.583	2.162	2.753	1.463
Replicate Prob(F)						1.0000	0.0034	0.6313	0.1167	0.0767	0.2534
Treatment F						0.000	78.793	37.435	25.389	19.629	25.652
Treatment Prob(F)						1.0000	0.0001	0.0001	0.0001	0.0001	0.0001

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	SIDSP	IPOHE	SETFA	ECHCG	AMBTR					
Pest Scientific Name	Sida spinosa	Ipomoea hederata	Setaria faberi	Echinochloa cr	Ambrosia trifida					
Pest Name	Prickly sida	Ivyleaf mornin	Giant foxtail	Common barnyar	Giant ragweed					
Crop Code										
BBCH Scale										
Crop Scientific Name										
Crop Name										
Rating Date	7/28/11	7/28/11	8/10/11	8/10/11	8/10/11					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%					
Number of Subsamples	1	1	1	1	1					
Days After First/Last Applic.	17 17	17 17	30 30	30 30	30 30					
Trt-Eval Interval	17 DA-A	17 DA-A	30 DA-A	30 DA-A	30 DA-A					
Plant-Eval Interval	52 DP-1	52 DP-1	65 DP-1	65 DP-1	65 DP-1					
Days After Emergence	45 DE-1	45 DE-1	58 DE-1	58 DE-1	58 DE-1					
Number of Decimals	0	0	0	0	0					
Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	7	8	9	10	11
1	Roundup Power Max	4.5	2.13 oz/a		A	0	0	18	15	8
2	Roundup Power Max	4.5	5.4 oz/a		A	0	0	71	45	40
3	Roundup Power Max	4.5	10.8 oz/a		A	30	20	90	79	48
4	Roundup Power Max	4.5	16 oz/a		A	29	20	95	88	76
5	Roundup Power Max	4.5	21.3 oz/a		A	33	30	95	85	77
6	Roundup Power Max	4.5	2.13 oz/a		A	0	0	59	33	29
6	Gly Force	100	32 oz/a		A					
7	Roundup Power Max	4.5	5.4 oz/a		A	0	3	81	56	45
7	Gly Force	100	32 oz/a		A					
8	Roundup Power Max	4.5	10.8 oz/a		A	18	23	90	81	61
8	Gly Force	100	32 oz/a		A					
9	Roundup Power Max	4.5	16 oz/a		A	30	33	96	88	66
9	Gly Force	100	32 oz/a		A					
10	UTC					0	0	0	0	0
LSD (P=.05)						7.5	10.6	14.3	17.8	17.0
Standard Deviation						5.1	7.3	9.8	12.2	11.7
CV						36.83	57.25	14.14	21.47	26.06
Bartlett's X2						2.288	6.4	18.668	16.072	13.631
P(Bartlett's X2)						0.319	0.171	0.005*	0.024*	0.092
Replicate F						0.919	3.928	0.313	2.698	3.189
Replicate Prob(F)						0.4456	0.0195	0.8154	0.0664	0.0403
Treatment F						35.124	13.666	48.983	28.235	20.829
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	0.0001

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Pest Type	W Weed	W Weed	W Weed	W Weed						
Pest Code	AMBEL	AMARE	SIDSP	IPOHE						
Pest Scientific Name	Ambrosia artem>	Amaranthus ret>	Sida spinosa	Ipomoea hederata>						
Pest Name	Common ragweed	Redroot pigweed	Prickly sida	Ivyleaf mornin>						
Crop Code										
BBCH Scale										
Crop Scientific Name										
Crop Name										
Rating Date	8/10/11	8/10/11	8/10/11	8/10/11						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	%	%	%	%						
Number of Subsamples	1	1	1	1						
Days After First/Last Applic.	30 30	30 30	30 30	30 30						
Trt-Eval Interval	30 DA-A	30 DA-A	30 DA-A	30 DA-A						
Plant-Eval Interval	65 DP-1	65 DP-1	65 DP-1	65 DP-1						
Days After Emergence	58 DE-1	58 DE-1	58 DE-1	58 DE-1						
Number of Decimals	0	0	0	0						
Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	12	13	14	15	16
1	Roundup Power Max	4.5	2.13 oz/a		A	18	15	15		8
2	Roundup Power Max	4.5	5.4 oz/a		A	72	63	30		25
3	Roundup Power Max	4.5	10.8 oz/a		A	93	84	40		28
4	Roundup Power Max	4.5	16 oz/a		A	100	95	57		48
5	Roundup Power Max	4.5	21.3 oz/a		A	92	93	55		50
6	Roundup Power Max	4.5	2.13 oz/a		A	46	58	30		13
6	Gly Force	100	32 oz/a		A					
7	Roundup Power Max	4.5	5.4 oz/a		A	70	63	30		15
7	Gly Force	100	32 oz/a		A					
8	Roundup Power Max	4.5	10.8 oz/a		A	95	91	50		43
8	Gly Force	100	32 oz/a		A					
9	Roundup Power Max	4.5	16 oz/a		A	95	100	61		45
9	Gly Force	100	32 oz/a		A					
10	UTC					0	0	0		0
LSD (P=.05)						22.2	22.7	12.6		24.1
Standard Deviation						15.0	15.6	8.6		16.6
CV						22.07	23.66	23.45		60.74
Bartlett's X2						6.139	8.335	5.102		3.83
P(Bartlett's X2)						0.524	0.304	0.531		0.799
Replicate F						0.168	0.764	0.213		1.398
Replicate Prob(F)						0.9168	0.5250	0.8867		0.2658
Treatment F						22.350	19.508	20.794		4.839
Treatment Prob(F)						0.0001	0.0001	0.0001		0.0007

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Title No. 2:

Trial ID: 11SOYYLD2 Protocol ID: 11SOYYLD2
Location: Western Branch Study Director: Bryan Reeb
Project ID: 11SOYYLD2 Investigator: Dr. Mark M. Loux
Sponsor Contact: Jim, Wellman Seed

Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

SETFA, *Setaria faberi*, = US
ECHCG, *Echinochloa crus-galli*, = US
AMBTR, *Ambrosia trifida*, = US
AMBEL, *Ambrosia artemisiifolia*, = US
AMARE, *Amaranthus retroflexus*, = US
SIDSP, *Sida spinosa*, = US
IPOHE, *Ipomoea hederacea*, = US

Crop Code

GLXMA, BSOY, *Glycine max*, = US

Rating Type

PHYGEN = phytotoxicity - general / injury
CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

43 DP-1 = 1 6/6/11
52 DP-1 = 1 6/6/11
65 DP-1 = 1 6/6/11