

# Ohio State University Horticulture and Crop Science

## Glyphosate with and with out Gly-Force

Title No. 2:  
 Trial ID: 11SOYYLD1      Protocol ID: 11SOYYLD1  
 Location: Western Branch      Study Director: Bryan Reeb  
 Project ID: 11SOYYLD1      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 °:** 39.86026 N USA 49.376656 - 24.53833  
**State/Prov.:** Ohio      **Longitude of LL Corner °:** -83.67165 W -124.715843 - -66.968887  
**Postal Code:** 45368  
**Country:** USA

### Crop Description

**Crop 1:** GLXMA Glycine max Soybean  
**Variety:** Seed Consultants 9330      **Description:** Round Up Ready  
**BBCH Scale:** BSOY      **Planting Date:** Jun-6-2011  
**Planting Method:** SEEDED seeded      **Rate, Unit:** 197000 S/A  
**Depth, Unit:** 1 IN  
**Row Spacing, Unit:** 15 IN  
**Seed Bed:** MEDIUM medium      **Soil Temperature, Unit:** 76 F  
**Soil Moisture:** NORMAL normal      **Emergence Date:** Jun-13-2011  
**Harvested Width, Unit:** 6.25 FT      **Harvested Length, Unit:** 30 FT

### Pest Description

**Pest 1 Type:** W      **Code:** SETFA Setaria faberi  
**Common Name:** Giant foxtail

**Pest 2 Type:** W      **Code:** ABUTH Abutilon theophrasti  
**Common Name:** Velvetleaf

**Pest 3 Type:** W      **Code:** SETPU Setaria pumila  
**Common Name:** yellow foxtail

### 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

### Application Description

**Application Date:** Jun-30-2011  
**Time of Day:** 10:20 AM  
**Application Method:** SPRAY  
**Application Timing:** MPO  
**Application Placement:** BROFOL  
**Air Temperature, Unit:** 86.5 F  
**% Relative Humidity:** 44.7  
**Wind Velocity, Unit:** 3.4 MPH  
**Wind Direction:** W  
**Dew Presence (Y/N):** N no  
**Soil Temperature, Unit:** 69 F  
**Soil Moisture:** GOOD  
**% Cloud Cover:** 0  
**Next Rain Occurred On:** Jul-2-2011

### Crop Stage At Each Application

**Crop 1 Code, BBCH Scale:** GLXMA BSOY  
**Stage Scale Used:** BBCH  
**Stage Majority, Percent:** 13 100  
**Height, Unit:** 6 IN  
**Height Minimum, Maximum:** 5 6

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### Pest Stage At Each Application

	<b>A</b>
<b>Pest 1 Code, Type, Scale:</b>	SETFA W
<b>Stage Majority, Percent:</b>	15 100
<b>Height, Unit:</b>	6 IN
<b>Height Minimum, Maximum:</b>	5 6
<b>Density, Unit:</b>	174.66 M2
<b>Pest 2 Code, Type, Scale:</b>	ABUTH W
<b>Stage Majority, Percent:</b>	13 100
<b>Height, Unit:</b>	3 IN
<b>Height Minimum, Maximum:</b>	2 3
<b>Density, Unit:</b>	6.66 M2
<b>Pest 3 Code, Type, Scale:</b>	SETPU W
<b>Stage Majority, Percent:</b>	13 100
<b>Height, Unit:</b>	4 IN
<b>Height Minimum, Maximum:</b>	3 4

### Application Equipment

	<b>A</b>
<b>Appl. Equipment:</b>	Backpack
<b>Equipment Type:</b>	SPRBAC
<b>Operation Pressure, Unit:</b>	46 PSI
<b>Nozzle Type:</b>	DG
<b>Nozzle Size:</b>	110015
<b>Nozzle Spacing, Unit:</b>	18 IN
<b>Boom Length, Unit:</b>	10 FT
<b>Boom Height, Unit:</b>	18 IN
<b>Ground Speed, Unit:</b>	3 MPH
<b>Carrier:</b>	WATER
<b>Spray Volume, Unit:</b>	15 gal/ac
<b>Mix Size, Unit:</b>	0.5 gallons
<b>Propellant:</b>	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.	103	103	103
Trt-Eval Interval	103 DA-A	103 DA-A	103 DA-A
Plant-Eval Interval	127 DP-1	127 DP-1	127 DP-1
Days After Emergence	120 DE-1	120 DE-1	120 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt	Treatment	Rate	Other	Other	Appl					
No.	Name	Rate	Unit	Rate	Rate	Unit	Code	15	16	17
1	Roundup Power Max	0.075 lb ae/a		2.13 oz/a		A		11.6 bc	12.0 ab	45.6 bcd
2	Roundup Power Max	0.19 lb ae/a		5.4 oz/a		A		11.5 bc	10.8 b	46.0 bc
3	Roundup Power Max	0.38 lb ae/a		10.8 oz/a		A		12.6 ab	9.5 b	51.1 abc
4	Roundup Power Max	0.56 lb ae/a		16 oz/a		A		14.0 a	9.5 b	56.9 a
5	Roundup Power Max	0.75 lb ae/a		21.3 oz/a		A		12.9 ab	9.4 b	52.3 abc
6	Roundup Power Max	0.075 lb ae/a		2.13 oz/a		A		11.1 bc	12.8 ab	43.3 cd
	6 Gly Force	2.09 lb ai/a		32 oz/a		A				
7	Roundup Power Max	0.19 lb ae/a		5.4 oz/a		A		12.2 ab	10.5 b	48.9 abc
	7 Gly Force	2.09 lb ai/a		32 oz/a		A				
8	Roundup Power Max	0.38 lb ae/a		10.8 oz/a		A		13.3 ab	10.2 b	53.6 ab
	8 Gly Force	2.09 lb ai/a		32 oz/a		A				
9	Roundup Power Max	0.56 lb ae/a		16 oz/a		A		12.8 ab	9.5 b	51.9 abc
	9 Gly Force	2.09 lb ai/a		32 oz/a		A				
10	UTC							9.4 c	14.9 a	36.4 d
	LSD (P=.05)							2.27	3.36	9.46
	Standard Deviation							1.57	2.31	6.52
	CV							12.89	21.21	13.41
	Bartlett's X2							15.819	58.798	14.852
	P(Bartlett's X2)							0.071	0.001*	0.095
	Replicate F							2.529	0.816	2.758
	Replicate Prob(F)							0.0784	0.4963	0.0616
	Treatment F							2.777	2.471	3.334
	Treatment Prob(F)							0.0192	0.0334	0.0073

### Crop Code

GLXMA, BSOY, Glycine max, = US

### Rating Type

YIELD = yield

### Rating Unit

LB = pound

% = percent

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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BU = bushel  
Plant-Eval Interval  
127 DP-1 = 1 Jun-6-2011  
ARM Action Codes  
TY1 =  $3.872 * [C15] * (100 - [C16]) / 86.5$