

# Ohio State University Horticulture and Crop Science

Evaluate residual herbicides with the first app of Ignite and demonstrate how that compares to either a pre followed by post or post app alone

Title No. 2:

Trial ID: 11LLSOY  
Location: Western Branch F-7  
Project ID: 11LLSOY

Protocol ID: 11LLSOY  
Study Director: Bryan Reeb  
Investigator: Dr. Mark M. Loux  
Sponsor Contact: Dave Lamore, Bayer

### 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 °:** 39.86018 N  
**State/Prov.:** Ohio      **Longitude of LL Corner °:** -83.67059 W  
**Postal Code:** 45368  
**Country:** USA

### Crop Description

**Crop 1:** GLXMA      Glycine max      Soybean  
**Variety:** Seed Consultant SC 3381 LL      **Description:** Liberty Link  
**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 Moisture:** NORMAL      normal  
**Harvested Width, Unit:** 6.25      FT      **Soil Temperature, Unit:** 76      F  
**Harvested Length, Unit:** 30      FT

### Pest Description

- Pest 1 Type:** W      **Code:** SETFA      *Setaria faberi*  
**Common Name:** Giant foxtail
- Pest 2 Type:** W      **Code:** IPOHE      *Ipomoea hederacea*  
**Common Name:** Ivyleaf morningglory
- Pest 3 Type:** W      **Code:** CHEAL      *Chenopodium album*  
**Common Name:** Common lambsquarters
- Pest 4 Type:** W      **Code:** ABUTH      *Abutilon theophrasti*  
**Common Name:** Velvetleaf
- Pest 5 Type:** W      **Code:** AMBTR      *Ambrosia trifida*  
**Common Name:** Giant ragweed
- Pest 6 Type:** W      **Code:** HIBTR      *Hibiscus trionum*  
**Common Name:** Venice mallow
- Pest 7 Type:** W      **Code:** SIDSP      *Sida spinosa*  
**Common Name:** Prickly sida

### Site and Design

**Plot Width, Unit:** 6.67 FT      **Site Type:** FIELD      field  
**Plot Length, Unit:** 30 FT      **Experimental Unit:** 1      PLOT plot  
**Plot Area, Unit:** 200.1 FT<sup>2</sup>      **Tillage Type:** CONTIL      conventional-till  
**Replications:** 3      **Study Design:** RACOB      Randomized Complete Block (RCB)  
**Untreated Arrangement:** INCLUDED      single control randomized in each block

### Soil Description

**Description Name:** F-7 East  
**% OM:** 1.8      **Texture:** SIL      silt loam  
**pH:** 5.7      **Soil Name:** Crosby Silt Loam  
**CEC:** 16.2      **Fert. Level:** G      good  
**Soil Drainage:** G      good

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### Application Description

	A	B	C
<b>Application Date:</b>	Jun-6-2011	Jun-27-2011	Jul-7-2011
<b>Time of Day:</b>	1:45 P.M.	8:45 A.M.	10:00 A.M
<b>Application Method:</b>	SPRAY	SPRAY	SPRAY
<b>Application Placement:</b>	BROFOL	BROFOL	BROFOL
<b>Air Temperature, Unit:</b>	88.6 F	67.5 F	87 F
<b>% Relative Humidity:</b>	37.5	72.5	87
<b>Wind Velocity, Unit:</b>	4.4 MPH	1.9 MPH	1.1 MPH
<b>Wind Direction:</b>	WSW	SSW	W
<b>Dew Presence (Y/N):</b>	N no	Y yes	N no
<b>Soil Temperature, Unit:</b>	76 F	62 F	77 F
<b>Soil Moisture:</b>	GOOD	GOOD	MOIST
<b>% Cloud Cover:</b>	15	75	20
<b>Next Rain Occurred On:</b>	Jun-10-2011	Jul-2-2011	Jul-8-2011

### Crop Stage At Each Application

	A		B		C	
<b>Crop 1 Code, BBCH Scale:</b>	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY
<b>Stage Scale Used:</b>			BBCH		BBCH	
<b>Stage Majority, Percent:</b>			V4	100	14	100
<b>Stage Minimum, Percent:</b>					16	100
<b>Height, Unit:</b>			3	IN	9	IN
<b>Height Minimum, Maximum:</b>			2	4	6	9

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### Pest Stage At Each Application

	A		B		C	
<b>Pest 1 Code, Type, Scale:</b>	SETFA	W	SETFA	W	SETFA	W
<b>Stage Majority, Percent:</b>			13	100	13	50
<b>Stage Minimum, Percent:</b>					12	25
<b>Stage Maximum, Percent:</b>					16	25
<b>Height, Unit:</b>			2	IN	4	IN
<b>Height Minimum, Maximum:</b>			2	3	1	6
<b>Density, Unit:</b>	49.33	M2	49.33	M2	49.33	M2
<b>Pest 2 Code, Type, Scale:</b>	IPOHE	W	IPOHE	W	IPOHE	W
<b>Stage Majority, Percent:</b>			12	100	12	80
<b>Stage Minimum, Percent:</b>					12	80
<b>Stage Maximum, Percent:</b>					16	20
<b>Height, Unit:</b>			2	IN	3	IN
<b>Height Minimum, Maximum:</b>			1	2	2	4
<b>Density, Unit:</b>	5.33	M2	5.33	M2	5.33	M2
<b>Pest 3 Code, Type, Scale:</b>	CHEAL	W	CHEAL	W	CHEAL	W
<b>Stage Majority, Percent:</b>			14	100	16	80
<b>Stage Minimum, Percent:</b>					12	10
<b>Stage Maximum, Percent:</b>					18	10
<b>Height, Unit:</b>			1	IN	3	IN
<b>Height Minimum, Maximum:</b>			1	1	1	4
<b>Density, Unit:</b>	13.33	M2	13.33	M2	13.33	M2
<b>Pest 4 Code, Type, Scale:</b>	ABUTH	W	ABUTH	W	ABUTH	W
<b>Stage Majority, Percent:</b>			13	100	13	60
<b>Stage Minimum, Percent:</b>					12	20
<b>Stage Maximum, Percent:</b>					14	20
<b>Height, Unit:</b>			1	IN	3	IN
<b>Height Minimum, Maximum:</b>			1	1	1	4
<b>Density, Unit:</b>	4	M2	4	M2	4	M2
<b>Pest 5 Code, Type, Scale:</b>	AMBTR	W	AMBTR	W	AMBTR	W
<b>Stage Majority, Percent:</b>			14	100	16	80
<b>Stage Minimum, Percent:</b>					14	10
<b>Stage Maximum, Percent:</b>					18	10
<b>Height, Unit:</b>			2	IN	6	IN
<b>Height Minimum, Maximum:</b>			1	2	4	8
<b>Density, Unit:</b>	5.33	M2	5.33	M2	5.33	M2
<b>Pest 6 Code, Type, Scale:</b>	HIBTR	W	HIBTR	W	HIBTR	W
<b>Stage Majority, Percent:</b>					12	80
<b>Stage Minimum, Percent:</b>					12	80
<b>Stage Maximum, Percent:</b>					14	20
<b>Height, Unit:</b>					2	IN
<b>Height Minimum, Maximum:</b>					1	4
<b>Density, Unit:</b>	6.66	M2	6.66	M2	6.66	M2
<b>Pest 7 Code, Type, Scale:</b>	SIDSP	W	SIDSP	W	SIDSP	W
<b>Stage Majority, Percent:</b>					12	80
<b>Stage Minimum, Percent:</b>					12	80
<b>Stage Maximum, Percent:</b>					18	10
<b>Height, Unit:</b>					2	IN
<b>Height Minimum, Maximum:</b>					1	4
<b>Density, Unit:</b>	6.66	M2	6.66	M2	6.66	M2

### Application Equipment

	A	B	C
<b>Appl. Equipment:</b>	Backpack	Backpack	Backpack
<b>Equipment Type:</b>	SPRBAC	SPRBAC	SPRBAC
<b>Operation Pressure, Unit:</b>	46 PSI	46 PSI	46 PSI
<b>Nozzle Type:</b>	DG	DG	DG
<b>Nozzle Size:</b>	8015	8015	8015
<b>Nozzle Spacing, Unit:</b>	18 IN	18 IN	18 IN
<b>Boom Length, Unit:</b>	6.67 FT	6.67 FT	6.67 FT
<b>Boom Height, Unit:</b>	18 IN	18 IN	18 IN
<b>Ground Speed, Unit:</b>	3 MPH	3 MPH	3 MPH
<b>Carrier:</b>	WATER	WATER	WATER
<b>Spray Volume, Unit:</b>	15 gal/ac	15 gal/ac	15 gal/ac
<b>Mix Size, Unit:</b>	0.33 gallons	0.33 gallons	0.33 gallons
<b>Propellant:</b>	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.		127 96	127 96	127 96
Trt-Eval Interval				
Plant-Eval Interval		127 DP-1	127 DP-1	127 DP-1
ARM Action Codes				TY1
Number of Decimals		1	1	1

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	28	29	30
1	UTC						6.4 d	37.0 a	20.3 d
2	Prefix	1.65 lb ai/a		2.5 pt/a		A	13.6 abc	17.2 bc	43.2 abc
2	Ignite	0.53 lb ai/a		29 oz/a		C			
2	N-pak ams	2.5 % v/v		1.5 qt/a		C			
3	Authority First	0.263 lb ai/a		6 oz/a		A	15.3 a	14.7 bc	48.5 a
3	Ignite	0.53 lb ai/a		29 oz/a		C			
3	N-pak ams	2.5 % v/v		1.5 qt/a		C			
4	Prefix	1.65 lb ai/a		2.5 pt/a		B	13.3 bc	14.0 c	42.3 bc
4	Ignite	0.53 lb ai/a		29 oz/a		B			
4	N-pak ams	2.5 % v/v		1.5 qt/a		B			
5	Dual II Magnum	1.27 lb ai/a		1.33 pt/a		B	13.3 bc	18.9 bc	42.3 bc
5	Ignite	0.53 lb ai/a		29 oz/a		B			
5	N-pak ams	2.5 % v/v		1.5 qt/a		B			
6	Ignite	0.53 lb ai/a		29 oz/a		B	14.5 abc	18.3 bc	46.1 abc
6	N-pak ams	2.5 % v/v		1.5 qt/a		B			
6	Ignite	0.53 lb ai/a		29 oz/a		C			
6	N-pak ams	2.5 % v/v		1.5 qt/a		C			
7	Fierce	0.143 lb ai/a		3 oz/a		A	13.9 abc	22.4 bc	44.2 abc
7	Ignite	0.53 lb ai/a		29 oz/a		C			
7	N-pak ams	2.5 % v/v		1.5 qt/a		C			
8	Valor XLT @ 3.0 oz						14.8 ab	13.4 c	46.9 ab
8	Valor SX	0.056 lb ai/a		1.76 oz/a		A			
8	Classic	0.0194 lb ai/a		1.24 oz/a		A			
8	Ignite	0.53 lb ai/a		29 oz/a		C			
8	N-pak ams	2.5 % v/v		1.5 qt/a		C			
9	Authority MTZ	0.45 lb ai/a		16 oz/a		A	13.9 abc	18.9 bc	44.1 abc
9	Ignite	0.53 lb ai/a		29 oz/a		C			
9	N-pak ams	2.5 % v/v		1.5 qt/a		C			
10	KIH 485	0.16 lb ai/a		3 oz/a		A	13.2 bc	25.6 abc	41.9 bc
10	Ignite	0.53 lb ai/a		29 oz/a		B			
10	N-pak ams	2.5 % v/v		1.5 qt/a		B			
11	Ignite	0.66 lb ai/a		36 oz/a		B	13.7 abc	23.2 bc	43.6 abc

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-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.

127 96 127 96 127 96

Trt-Eval Interval

Plant-Eval Interval

127 DP-1 127 DP-1 127 DP-1

ARM Action Codes

Number of Decimals

1 1 1

Trt	Treatment	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	28	29	30
11	N-pak ams	2.5 %	v/v	1.5 qt/a		B			
12	F9310-6	0.094 lb	ai/a	6 oz/a		A	12.8 c	26.5 ab	40.7 c
12	Ignite	0.53 lb	ai/a	29 oz/a		C			
12	N-pak ams	2.5 %	v/v	1.5 qt/a		C			
LSD (P=.05)							1.92	12.34	6.09
Standard Deviation							1.13	7.29	3.60
CV							8.57	34.97	8.57
Bartlett's X2							3.535	15.351	3.535
P(Bartlett's X2)							0.982	0.167	0.982
Replicate F							4.199	6.253	4.198
Replicate Prob(F)							0.0285	0.0071	0.0286
Treatment F							12.015	2.513	12.014
Treatment Prob(F)							0.0001	0.0316	0.0001

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

YIELD = yield

Rating Unit

LB = pound

% = percent

BU = bushel

Plant-Eval Interval

127 DP-1 = 1 Jun-6-2011

ARM Action Codes

TY1 = 3.178173\*[28]

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.