

Evaluate weed control of Cheetah MAX programs on Liberty Link soybeans

Trial ID: 15 POSTSOY1 Location: G-6 WEST END Trial Year: 2015  
Protocol ID: 15 POSTSOY1 Investigator: Dr. Mark M. Loux  
Project ID: H 2015 110 OH Study Director: Bryan Reeb  
Sponsor Contact: Bob Bruss, Nufarm

**General Trial Information**

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

**Latitude of LL Corner** °: 39.85958 N  
**Longitude of LL Corner** °: 83.67619 W

**Conducted Under GLP:** No  
**Conducted Under GEP:** No

**Contacts**

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

**Crop Description**

**Crop 1:** GLXMA Glycine max  
**Variety:** Credenz 3841 LL  
**Description:** Liberty Link

**BBCH Scale:** BSOY  
Soybean

**Planting Rate, Unit:** 175000 S/A  
**Depth, Unit:** 1 IN  
**Row Spacing, Unit:** 15 IN

**Planting Date:** 5-4-2015  
**Planting Method:** PLANTD planted  
**Planting Equipment:** KINZE  
**Emergence Date:** 5-11-2015  
**Harvested Width, Unit:** 6.25 FT  
**Harvested Length, Unit:** 30 FT

**Soil Temperature, Unit:** 63 F  
**Soil Moisture:** GOOD good  
**Seed Bed:** MEDIUM medium

**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:** AMARE *Amaranthus retroflexus*  
**Common Name:** Redroot pigweed
- Pest 4 Type:** W **Code:** CHEAL *Chenopodium album*  
**Common Name:** Common lambsquarters
- Pest 5 Type:** W **Code:** IPOHE *Ipomoea hederacea*  
**Common Name:** Ivyleaf morningglory
- Pest 6 Type:** W **Code:** SIDSP *Sida spinosa*  
**Common Name:** Prickly sida
- Pest 7 Type:** W **Code:** ABUTH *Abutilon theophrasti*  
**Common Name:** velvetleaf
- Pest 8 Type:** W **Code:** AMBEL *Ambrosia artemisiifolia*  
**Common Name:** Common ragweed
- Pest 9 Type:** W **Code:** SOLPT *Solanum ptycanthum*  
**Common Name:** Eastern black nightshade
- Pest10 Type:** W **Code:** POLPY *Persicaria pensylvanica*  
**Common Name:** Pennsylvania smartweed

**Site and Design**

**Treated Plot Width:** 10 FT  
**Treated Plot Length:** 30 FT  
**Treated Plot Area:** 300 FT2 **Treatments:** 8  
**Replications:** 4

**Site Type:** FIELD field  
**Experimental Unit:** 1 PLOT plot  
**Tillage Type:** CONTIL conventional-till  
**Study Design:** RACOB� Randomized Complete Block (RCB)

**Soil Description**

**Description Name:** G-6

**% OM:** 2.2

**pH:** 6.3

**CEC:** 13.6

**Texture:** SICL silty clay loam

**Soil Name:** Crosby

**Fert. Level:** G good

**Soil Drainage:** G good

**Application Description**

	<b>A</b>	<b>B</b>	<b>C</b>
<b>Application Date:</b>	5-4-2015	5-28-2015	5-28-2015
<b>Appl. Start Time:</b>	3:00 PM	8:50 AM	12:45 PM
<b>Appl. Stop Time:</b>	3:15 PM	9:10 AM	1:00 PM
<b>Application Method:</b>	SPRAY	SPRAY	SPRAY
<b>Application Timing:</b>	PRE	EPO 2-3" WDS	V3
<b>Application Placement:</b>	BROSOI	BROFOL	BROFOL
<b>Applied By:</b>	DOBBELS	REEB	BARCLAY
<b>Air Temperature, Unit:</b>	76 F	69 F	78 F
<b>% Relative Humidity:</b>	46	75	60
<b>Wind Velocity, Unit:</b>	10 MPH	2.5 MPH	3 MPH
<b>Wind Direction:</b>	W	E	SSE
<b>Dew Presence (Y/N):</b>	N no	N no	N no
<b>Soil Temperature, Unit:</b>	63 F	66 F	72 F
<b>Soil Moisture:</b>	DRY	DRY/MOIST	MOIST
<b>% Cloud Cover:</b>	100	60	70
<b>Next Moisture Occurred On:</b>	5-5-2015	5-30-2015	5-30-2015
<b>Time to Next Moisture, Unit:</b>	1 DAY	2 DAY	2 DAY

**Crop Stage At Each Application**

	<b>A</b>		<b>B</b>		<b>C</b>	
<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>			13	100	13	100
<b>Height, Unit:</b>			5	IN	5	IN
<b>Height Minimum, Maximum:</b>			5	6	5	6

**Pest Stage At Each Application**

	<b>A</b>	<b>B</b>	<b>C</b>
<b>Pest 1 Code, Type, Scale:</b>	SETFA W	SETFA W	SETFA W
<b>Stage Majority, Percent:</b>	12	100	12 100
<b>Stage Minimum, Percent:</b>	12	100	12 100
<b>Stage Maximum, Percent:</b>	14	100	14 100
<b>Height, Unit:</b>	3	IN	4 IN
<b>Height Minimum, Maximum:</b>	1	6	3 5
<b>Density, Unit:</b>	56.75 M2		
<b>Pest 2 Code, Type, Scale:</b>	AMBTR W	AMBTR W	AMBTR W
<b>Stage Majority, Percent:</b>	14	100	14 100
<b>Stage Minimum, Percent:</b>	12	100	12 100
<b>Stage Maximum, Percent:</b>	16	100	16 100
<b>Height, Unit:</b>	3	IN	4 IN
<b>Height Minimum, Maximum:</b>	1	5	1 5
<b>Density, Unit:</b>	1.75 M2		
<b>Pest 3 Code, Type, Scale:</b>	AMARE W	AMARE W	AMARE W
<b>Stage Majority, Percent:</b>	12	100	12 100
<b>Stage Minimum, Percent:</b>	12	100	12 100
<b>Stage Maximum, Percent:</b>	14	100	14 100
<b>Height, Unit:</b>	1	IN	1 IN
<b>Height Minimum, Maximum:</b>	1	2	1 2
<b>Density, Unit:</b>	24.25 M2		
<b>Pest 4 Code, Type, Scale:</b>	CHEAL W	CHEAL W	CHEAL W
<b>Stage Majority, Percent:</b>	14	100	14 100
<b>Stage Minimum, Percent:</b>	14	100	14 100
<b>Stage Maximum, Percent:</b>	16	100	16 100
<b>Height, Unit:</b>	1	IN	1 IN
<b>Height Minimum, Maximum:</b>	1	2	1 2
<b>Density, Unit:</b>	1 M2		
<b>Pest 5 Code, Type, Scale:</b>	IPOHE W	IPOHE W	IPOHE W
<b>Stage Majority, Percent:</b>	12	100	
<b>Stage Minimum, Percent:</b>	12	100	
<b>Stage Maximum, Percent:</b>	14	100	
<b>Height, Unit:</b>	1	IN	
<b>Height Minimum, Maximum:</b>	1	2	
<b>Pest 6 Code, Type, Scale:</b>	SIDSP W	SIDSP W	SIDSP W
<b>Pest 7 Code, Type, Scale:</b>	ABUTH W	ABUTH W	ABUTH W
<b>Density, Unit:</b>	0.5 M2		
<b>Pest 8 Code, Type, Scale:</b>	AMBEL W	AMBEL W	AMBEL W
<b>Pest 9 Code, Type, Scale:</b>	SOLPT W	SOLPT W	SOLPT W
<b>Pest10 Code, Type, Scale:</b>	POLPY W	POLPY W	POLPY W

**Application Equipment**

	<b>A</b>	<b>B</b>	<b>C</b>
<b>Appl. Equipment:</b>	6' BACKPACK	10' BACKPACK	10' BACKPACK
<b>Equipment Type:</b>	BACCAI	BACCAI	BACCAI
<b>Operation Pressure, Unit:</b>	44 PSI	50 PSI	50 PSI
<b>Nozzle Type:</b>	AIXR	AIXR	AIXR
<b>Nozzle Size:</b>	11015	11015	11015
<b>Nozzle Spacing, Unit:</b>	18 IN	18 IN	18 IN
<b>Nozzles/Row:</b>	4	6	6
<b>Boom Length, Unit:</b>	6.67 FT	10 FT	10 FT
<b>Boom Height, Unit:</b>	20 IN	20 IN	20 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>	1 liters	2 liters	2 liters
<b>Propellant:</b>	COMCO2	COMCO2	COMCO2

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 Project ID: H 2015 110 OH      Study Director: Bryan Reeb  
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Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Crop Variety	Credenz 3841 LL	Credenz 3841 LL	Credenz 3841 LL	Credenz 3841 LL
Description	LL	LL	LL	LL
Part Rated				
Rating Date	9-28-2015	9-28-2015	9-28-2015	9-28-2015
Rating Type	WEIGHT	MOICON	WEITES	YIELD
Rating Unit	LBS	%	LBS/BU	BU
Sample Size, Unit	1 PLOT			1 A
Number of Subsamples	1	1	1	1
SE Group No.	18	19	20	21
Days After First/Last Applic.	147 123	147 123	147 123	147 123
Plant-Eval Interval	147 DP-1	147 DP-1	147 DP-1	147 DP-1
Days After Emergence	140 DE-1	140 DE-1	140 DE-1	140 DE-1
ARM Action Codes				TY1
Number of Decimals				1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	17	18	19	20
1	UTC					0.80813 c	12.205 a	7.0153 b	3.0 b
2	Cheetah Max	1 qt/a		B	EPO - V3	17.93918 ab	13.873 a	52.5230 a	68.7 a
2	N-pak ams	1.5 qt/a		B	EPO - V3				
3	Cheetah	29 oz/a		B	EPO - V3	17.86005 b	14.523 a	52.1338 a	67.9 a
3	N-pak ams	1.5 qt/a		B	EPO - V3				
4	Cheetah Max	1 qt/a		B	EPO - V3	19.19355 ab	14.740 a	53.6030 a	72.8 a
4	Dual II Magnum	1 pt/a		B	EPO - V3				
5	Cheetah	29 oz/a		B	EPO - V3	19.09128 ab	14.750 a	51.7470 a	72.4 a
5	Dual II Magnum	1 pt/a		B	EPO - V3				
6	Cheetah	29 oz/a		B	EPO - V3	19.18470 ab	13.898 a	52.7720 a	73.5 a
6	Dual II Magnum	1.33 pt/a		B	EPO - V3				
7	Satellite hydra cap	1.5 pt/a		A	PRE	19.50295 a	17.498 a	47.1425 a	71.6 a
7	Liberty	29 oz/a		C	2-3" wds				
7	N-pak ams	1.5 qt/a		C	2-3" wds				

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.

Pest Type	Weight	Moisture	TestWeight	Weight
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Crop Variety	Credenz 3841 LL	Credenz 3841 LL	Credenz 3841 LL	Credenz 3841 LL
Description	LL	LL	LL	LL
Part Rated				
Rating Date	9-28-2015	9-28-2015	9-28-2015	9-28-2015
Rating Type	WEIGHT	MOICON	WEITES	YIELD
Rating Unit	LBS	%	LBS/BU	BU
Sample Size, Unit	1 PLOT			1 A
Number of Subsamples	1	1	1	1
SE Group No.	18	19	20	21
Days After First/Last Applic.	147 123	147 123	147 123	147 123
Plant-Eval Interval	147 DP-1	147 DP-1	147 DP-1	147 DP-1
Days After Emergence	140 DE-1	140 DE-1	140 DE-1	140 DE-1
ARM Action Codes				TY1
Number of Decimals				1
Trt Treatment	Other Other	Appl Appl		
No. Name	Rate Rate Unit	Code Description	17	18
8 Satellite hydra cap	1.5 pt/a	A PRE	18.81770 ab	14.178 a
8 Interline	29 oz/a	C 2-3" wds		52.5893 a
8 N-pak ams	1.5 qt/a	C 2-3" wds		71.8 a
LSD P=.05	1.587546	4.3063	6.69363	6.30
Standard Deviation	1.079589	2.9284	4.55191	4.28
CV	6.52	20.26	9.85	6.83
Grand Mean	16.549692	14.4578	46.19072	62.73
Bartlett's X2	5.663	17.186	16.157	2.926
P(Bartlett's X2)	0.58	0.016*	0.024*	0.892
Skewness	-2.2498*	-0.4674	-2.2957*	-2.2522*
Kurtosis	3.5654*	3.0212*	4.075*	3.5686*
Replicate F	1.243	1.591	1.735	0.711
Replicate Prob(F)	0.3194	0.2213	0.1904	0.5565
Treatment F	140.075	1.014	49.121	127.964
Treatment Prob(F)	0.0001	0.4498	0.0001	0.0001

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

WEIGHT = weight

MOICON = moisture content

WEITES = weight - test

YIELD = yield

Rating Unit

% = percent

BU = bushel

PLOT = total plot

A = acre

Plant-Eval Interval

147 DP-1 = 1 GLXMA 5-4-2015

ARM Action Codes

TY1 = 3.872\*[17]\*(100-[18])/87