

Authority / Anthem / Liberty Link soybean programs

Trial ID: 15 RAGPOST Location: G-6 WEST END Trial Year: 2015
Protocol ID: 15 RAGPOST Investigator: Dr. Mark M. Loux
Project ID: SULF.SOY.15.JPR.12(a) Study Director: Bryan Reeb
Sponsor Contact: Joe Reed, FMC

General Trial Information

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

Latitude of LL Corner °: 39.85957 N
Longitude of LL Corner °: 83.676 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

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 *Abitilon theophrasti*
Common Name: velvetleaf
- Pest 8 Type:** W **Code:** POLPY *Persicaria pensylvanica*
Common Name: Pennsylvania smartweed
- Pest 9 Type:** W **Code:** SOLPT *Solanum ptycanthum*
Common Name: Eastern black nightshade
- Pest10 Type:** W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 30 FT
Treated Plot Area: 200.1 FT2 **Treatments:** 10
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 Texture: SICL silty clay loam
pH: 6.3 Soil Name: Crosby
CEC: 13.6 Fert. Level: G good
Soil Drainage: G good

Application Description

Table with 4 columns (A, B, C, D) and 15 rows of application data including dates, times, methods, and environmental conditions.

Crop Stage At Each Application

Table with 4 columns (A, B, C, D) and 5 rows of crop stage data including BBCH scale, majority, height, and minimum/maximum values.

Pest Stage At Each Application

Table with 4 columns (A, B, C, D) and 10 rows of pest stage data including pest codes, scales, majority, height, and density for various pest types.

Application Equipment

	A	B	C	D
Appl. Equipment:	6' BACKPACK	6' BACKPACK	10' BACKPACK	10' BACKPACK
Equipment Type:	BACCAI	BACCAI	BACCAI	BACCAI
Operation Pressure, Unit:	44 PSI	44 PSI	50 PSI	50 PSI
Nozzle Type:	AIXR	AIXR	AIXR	AIXR
Nozzle Size:	11015	11015	11015	11015
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN	18 IN
Nozzles/Row:	4	4	6	6
Boom Length, Unit:	6.67 FT	6.67 FT	10 FT	10 FT
Boom Height, Unit:	20 IN	20 IN	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac
Mix Size, Unit:	1 liters	1 liters	2 liters	2 liters
Propellant:	COMCO2	COMCO2	COMCO2	COMCO2

Date	By	Notes
6-3-2015		Authority MTZ treatments: setfa- 10, ambtr- 0, amare- 75, cheal- 90 Authority MAXX treatments: setfa- 20, ambtr- 40, amare- 60, cheal- 80

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Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	15	16	17
1	Authority MAXX	6.4 oz/a		A	PRE	18.5 a-d	13.5 ab	53.7 a
1	Liberty	29 oz/a		B	EPO 4-6" RGWD			
1	N-pak ams	3 qt/a		B	EPO 4-6" RGWD			
1	COC	0.6 qt/a		B	EPO 4-6" RGWD			
2	Authority MTZ	16 oz/a		A	PRE	19.5 a	12.5 b	49.5 b
2	Liberty	29 oz/a		B	EPO 4-6" RGWD			
2	N-pak ams	3 qt/a		B	EPO 4-6" RGWD			
2	COC	0.6 qt/a		B	EPO 4-6" RGWD			
3	Liberty	29 oz/a		B	EPO 4-6" RGWD	17.2 cd	12.6 b	53.4 ab
3	N-pak ams	3 qt/a		B	EPO 4-6" RGWD			
3	COC	0.6 qt/a		B	EPO 4-6" RGWD			
4	Authority MAXX	6.4 oz/a		A	PRE	18.6 abc	12.5 b	54.4 a
4	Liberty	29 oz/a		C	MPO 8-12" RGWD			
4	N-pak ams	3 qt/a		C	MPO 8-12" RGWD			
4	COC	0.6 qt/a		C	MPO 8-12" RGWD			
5	Authority MTZ	16 oz/a		A	PRE	18.3 a-d	12.7 b	54.3 a
5	Liberty	29 oz/a		C	MPO 8-12" RGWD			
5	N-pak ams	3 qt/a		C	MPO 8-12" RGWD			
5	COC	0.6 qt/a		C	MPO 8-12" RGWD			
6	Liberty	29 oz/a		C	MPO 8-12" RGWD	19.3 ab	15.1 a	51.6 ab
6	N-pak ams	3 qt/a		C	MPO 8-12" RGWD			
6	COC	0.6 qt/a		C	MPO 8-12" RGWD			
7	Authority MAXX	6.4 oz/a		A	PRE	16.7 d	14.9 a	52.7 ab
7	Liberty	29 oz/a		D	LPO 12" + RGWD			
7	N-pak ams	3 qt/a		D	LPO 12" + RGWD			
7	COC	0.6 qt/a		D	LPO 12" + RGWD			

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							
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	
Crop Variety		Credenz 3841 LL		Credenz 3841 LL		Credenz 3841 LL	
Description		LL		LL		LL	
Part Rated							
Rating Date		9-28-2015		9-28-2015		9-28-2015	
Rating Type		WEIGHT		MOICON		WEITES	
Rating Unit		LBS		%		LB/BU	
Sample Size, Unit		1 PLOT					
Number of Subsamples		1		1		1	
SE Group No.		15		16		17	
Days After First/Last Applic.		147 98		147 98		147 98	
Plant-Eval Interval		147 DP-1		147 DP-1		147 DP-1	
Days After Emergence		140 DE-1		140 DE-1		140 DE-1	
ARM Action Codes							
Number of Decimals		1		1		1	
Trt Treatment	Other Other	Appl Appl					
No. Name	Rate Rate Unit	Code Description	15	16	17		
8 Authority MTZ	16 oz/a	A PRE	17.6 bcd	12.6 b	53.2 ab		
8 Liberty	29 oz/a	D LPO 12" + RGWD					
8 N-pak ams	3 qt/a	D LPO 12" + RGWD					
8 COC	0.6 qt/a	D LPO 12" + RGWD					
9 Liberty	29 oz/a	D LPO 12" + RGWD	18.1 a-d	15.1 a	52.2 ab		
9 N-pak ams	3 qt/a	D LPO 12" + RGWD					
9 COC	0.6 qt/a	D LPO 12" + RGWD					
10 UTC			0.0 e	0.0 c	0.0 c		
LSD P=.05			1.86	1.72	4.12		
Standard Deviation			1.28	1.19	2.84		
CV			7.82	9.75	5.99		
Grand Mean			16.36	12.15	47.49		
Bartlett's X2			9.328	24.993	20.189		
P(Bartlett's X2)			0.315	0.002*	0.01*		
Skewness			-2.4385*	-2.0934*	-2.6092*		
Kurtosis			4.8927*	4.1025*	5.3677*		
Replicate F			2.007	2.113	2.744		
Replicate Prob(F)			0.1367	0.1220	0.0625		
Treatment F			82.635	55.453	138.833		
Treatment Prob(F)			0.0001	0.0001	0.0001		

Pest Type
 Pest Code
 Pest Scientific Name
 Pest Name
 Crop Code GLXMA
 BBCH Scale BSOY
 Crop Scientific Name Glycine max
 Crop Name Soybean
 Crop Variety Credeuz 3841 LL
 Description LL
 Part Rated
 Rating Date 9-28-2015
 Rating Type YIELD
 Rating Unit BU
 Sample Size, Unit 1 A
 Number of Subsamples 1
 SE Group No. 18
 Days After First/Last Applic. 147 98
 Plant-Eval Interval 147 DP-1
 Days After Emergence 140 DE-1
 ARM Action Codes TY1
 Number of Decimals 1

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description	
						18
1	Authority MAXX	6.4 oz/a		A	PRE	71.1 ab
1	Liberty	29 oz/a		B	EPO 4-6" RGWD	
1	N-pak ams	3 qt/a		B	EPO 4-6" RGWD	
1	COC	0.6 qt/a		B	EPO 4-6" RGWD	
2	Authority MTZ	16 oz/a		A	PRE	75.9 a
2	Liberty	29 oz/a		B	EPO 4-6" RGWD	
2	N-pak ams	3 qt/a		B	EPO 4-6" RGWD	
2	COC	0.6 qt/a		B	EPO 4-6" RGWD	
3	Liberty	29 oz/a		B	EPO 4-6" RGWD	66.9 bc
3	N-pak ams	3 qt/a		B	EPO 4-6" RGWD	
3	COC	0.6 qt/a		B	EPO 4-6" RGWD	
4	Authority MAXX	6.4 oz/a		A	PRE	72.3 ab
4	Liberty	29 oz/a		C	MPO 8-12" RGWD	
4	N-pak ams	3 qt/a		C	MPO 8-12" RGWD	
4	COC	0.6 qt/a		C	MPO 8-12" RGWD	
5	Authority MTZ	16 oz/a		A	PRE	70.9 ab
5	Liberty	29 oz/a		C	MPO 8-12" RGWD	
5	N-pak ams	3 qt/a		C	MPO 8-12" RGWD	
5	COC	0.6 qt/a		C	MPO 8-12" RGWD	
6	Liberty	29 oz/a		C	MPO 8-12" RGWD	73.1 ab
6	N-pak ams	3 qt/a		C	MPO 8-12" RGWD	
6	COC	0.6 qt/a		C	MPO 8-12" RGWD	
7	Authority MAXX	6.4 oz/a		A	PRE	63.1 c
7	Liberty	29 oz/a		D	LPO 12" + RGWD	
7	N-pak ams	3 qt/a		D	LPO 12" + RGWD	
7	COC	0.6 qt/a		D	LPO 12" + RGWD	

Pest Type					
Pest Code					
Pest Scientific Name					
Pest Name					
Crop Code	GLXMA				
BBCH Scale	BSOY				
Crop Scientific Name	Glycine max				
Crop Name	Soybean				
Crop Variety	Credenz 3841 LL				
Description	LL				
Part Rated					
Rating Date	9-28-2015				
Rating Type	YIELD				
Rating Unit	BU				
Sample Size, Unit	1 A				
Number of Subsamples	1				
SE Group No.	18				
Days After First/Last Applic.	147 98				
Plant-Eval Interval	147 DP-1				
Days After Emergence	140 DE-1				
ARM Action Codes	TY1				
Number of Decimals	1				
<hr/>					
Trt Treatment	Other Other	Appl Appl			
No. Name	Rate Rate	Unit Code	Description		18
8 Authority MTZ	16 oz/a	A	PRE		68.3 bc
8 Liberty	29 oz/a	D	LPO 12" + RGWD		
8 N-pak ams	3 qt/a	D	LPO 12" + RGWD		
8 COC	0.6 qt/a	D	LPO 12" + RGWD		
9 Liberty	29 oz/a	D	LPO 12" + RGWD		68.3 bc
9 N-pak ams	3 qt/a	D	LPO 12" + RGWD		
9 COC	0.6 qt/a	D	LPO 12" + RGWD		
10 UTC					0.0 d
LSD P=.05					7.05
Standard Deviation					4.86
CV					7.71
Grand Mean					62.99
Bartlett's X2					9.277
P(Bartlett's X2)					0.319
Skewness					-2.4454*
Kurtosis					4.884*
Replicate F					1.667
Replicate Prob(F)					0.1975
Treatment F					85.166
Treatment Prob(F)					0.0001

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Location: G-6 WEST END Trial Year: 2015

Protocol ID: 15 RAGPOST

Investigator: Dr. Mark M. Loux

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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 = $3.872 * [15] * (100 - [16]) / 87$