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USB ROW SPACING STUDY

Trial ID: 14USBROW Location: Western Branch Big E Trial Year: 2014
 Protocol ID: Investigator: Dr. Mark M. Loux
 Project ID: Study Director:
 Sponsor Contact:

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: PIONEER 34T35L **BBCH Scale:** BSOY
Description: LIBERTY LINK
Planting Date: May-28-2014
Depth, Unit: 1 IN
Emergence Date: Jun-3-2014
Soil Temperature, Unit: 60 F
Soil Moisture: DRY dry
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:** HIBTR *Hibiscus trionum*
Common Name: Venice mallow

Pest 5 Type: W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida

Pest 6 Type: W **Code:** IPOHE *Ipomoea hederacea*
Common Name: Ivyleaf morningglory

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 30 FT
Treated Plot Area: 200.1 FT² **Treatments:** 12
Replications: 4 **Study Design:** SPLPLO Split-Plot

Application Description

	A	B	C
Application Date:	May-28-2014	Jun-18-2014	Jun-26-2014
Appl. Start Time:	12:15 PM	8:30 AM	8:00 AM
Appl. Stop Time:	12:30 PM	9:00 AM	8:30 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPO	POST
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	Dobbels	Reeb	Reeb
Air Temperature, Unit:	76 F	78.9 F	76 F
% Relative Humidity:	45	80	77
Wind Velocity, Unit:	5 MPH	3.3 MPH	2 MPH
Wind Direction:	S	SSW	NNW
Dew Presence (Y/N):	N no	N no	Y yes
Soil Temperature, Unit:	65 F	69 F	69 F
Soil Moisture:	DRY	DRY	WET
% Cloud Cover:	10	50	10
Next Moisture Occurred On:	Jun-2-2014	Jun-18-2014	
Time to Next Moisture, Unit:	5 HR	10 HR	

Crop Stage At Each Application

	A		B		C	
Crop 1 Code, BBCH Scale:	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY
Stage Scale Used:			BBCH		BBCH	
Stage Majority, Percent:			12	100	14	100
Height, Unit:			4	IN	9	IN
Height Minimum, Maximum:			4	5	9	10

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Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:		12 100	
Height, Unit:		1 IN	
Height Minimum, Maximum:		1 2	
Pest 3 Code, Type, Scale:	AMARE W	AMARE W	AMARE W
Stage Majority, Percent:		12	
Height, Unit:		1 IN	
Height Minimum, Maximum:		1 2	
Pest 4 Code, Type, Scale:	HIBTR W	HIBTR W	HIBTR W
Stage Majority, Percent:		14	
Height, Unit:		1 IN	
Height Minimum, Maximum:		1 2	
Pest 5 Code, Type, Scale:	SIDSP W	SIDSP W	SIDSP W
Stage Majority, Percent:		12	
Height, Unit:		1 IN	
Height Minimum, Maximum:		1 2	
Pest 6 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W

Application Equipment

	A	B	C
Appl. Equipment:	Tractor	10' AI XR	10' AI XR
Equipment Type:	TRMOSP	SPRBAC	SPRBAC
Operation Pressure, Unit:	25 PSI	46 PSI	46 PSI
Nozzle Type:	AI	AI XR	AI XR
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	20 IN	18 IN	18 IN
Boom Length, Unit:	10 FT	10 FT	10 FT
Boom Height, Unit:	20 IN	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA
Mix Size, Unit:	15 Gallons	0.33 Gallons	0.33 Gallons
Propellant:	PUMROL	CO2	CO2

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Pest Type		W Weed	W Weed	W Weed	W Weed
Pest Code		AMARE	SETFA	AMARE	IPOHE
Pest Scientific Name		Amaranthus ret>	Setaria faberi	Amaranthus ret>	Ipomoea hederata>
Pest Name		Redroot pigweed	Giant foxtail	Redroot pigweed	Ivyleaf mornin>
Crop Code	GLXMA				
BBCH Scale	BSOY				
Crop Scientific Name	Glycine max				
Crop Name	Soybean				
Rating Date	Jun-10-2014	Jun-17-2014	Jun-25-2014	Jun-25-2014	Jun-25-2014
Rating Type	CROPST	COUPLA	COUPLA	COUPLA	COUPLA
Rating Unit		1/2 M2	1/2 M2	1/2 M2	1/2 M2
Number of Subsamples	1	1	1	1	1
SE Group No.	1	2	3	4	5
Days After First/Last Applic.	13 13	20 20	28 7	28 7	28 7
Trt-Eval Interval	13 DA-A	20 DA-A			
Plant-Eval Interval	13 DP-1	20 DP-1	28 DP-1	28 DP-1	28 DP-1
Days After Emergence	7 DE-1	14 DE-1	22 DE-1	22 DE-1	22 DE-1

Trt Treatment No. Name	Rate	Unit	Other Rate	Other Unit	Appl Code	1	2	3	4	5
8 30 Inch Rows	1.32 lb ai/a		2 pt/a		A	196.0		7.3	0.0	0.5
8 PREFIX	1.32 lb ai/a		2 pt/a		A					
8 Sencor 75DF	0.375 lb ai/a		0.5 lb/a		A					
8 Liberty	0.53 lb ai/a		29 oz/a		C					
8 N-PAK AMS	2.5 % v/v		2.5 % v/v		C					
8 130,000 Seeds/acre										
9 30 Inch Rows	1.32 lb ai/a		2 pt/a		A	220.0		11.0	0.0	0.8
9 PREFIX	1.32 lb ai/a		2 pt/a		A					
9 Sencor 75DF	0.375 lb ai/a		0.5 lb/a		A					
9 Liberty	0.53 lb ai/a		29 oz/a		C					
9 N-PAK AMS	2.5 % v/v		2.5 % v/v		C					
9 190,000 Seeds/acre										
10 30 Inch Rows	1.32 lb ai/a		2 pt/a		B	164.8	36.25	35.5	7.3	0.0
10 PREFIX	1.32 lb ai/a		2 pt/a		B					
10 Liberty	0.53 lb ai/a		29 oz/a		B					
10 N-PAK AMS	2.5 % v/v		2.5 % v/v		B					
10 70,000 Seeds/acre										
11 30 Inch Rows	1.32 lb ai/a		2 pt/a		B	209.8	35.00	18.5	0.8	0.0
11 PREFIX	1.32 lb ai/a		2 pt/a		B					
11 Liberty	0.53 lb ai/a		29 oz/a		B					
11 N-PAK AMS	2.5 % v/v		2.5 % v/v		B					
11 130,000 Seeds/acre										
12 30 Inch Rows	1.32 lb ai/a		2 pt/a		B	219.3	28.50	40.3	8.5	0.0
12 PREFIX	1.32 lb ai/a		2 pt/a		B					
12 Liberty	0.53 lb ai/a		29 oz/a		B					
12 N-PAK AMS	2.5 % v/v		2.5 % v/v		B					
12 190,000 Seeds/acre										
LSD (P=.05)						60.25	6.672	26.35	7.27	0.62
Standard Deviation						41.28	4.572	18.06	4.98	0.42
CV						20.37	12.38	98.27	215.37	226.62
Bartlett's X2						22.125	0.388	28.562	9.713	3.36
P(Bartlett's X2)						0.023*	0.996	0.003*	0.046*	0.50
Skewness						0.2498	-0.3256	1.6481*	2.851*	2.6924*
Kurtosis						-0.745	-1.1766	1.9176*	8.2505*	6.7362*
Replicate F						1.114	144.341	8.695	1.448	3.192
Replicate Prob(F)						0.3630	0.0001	0.0004	0.2538	0.0417
Treatment F						6.612	4.782	1.801	2.210	1.542
Treatment Prob(F)						0.0001	0.0036	0.1104	0.0506	0.1808

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SIDSP	CYPES	ABUTH	AMBTR	HIBTR
Pest Scientific Name	Sida spinosa	Cyperus esculentus	Abutilon theophrasti	Ambrosia trifida	Hibiscus trionum
Pest Name	Prickly sida	Yellow nutsedge	velvetleaf	Giant ragweed	Venice mallow
Crop Code					
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	Jun-25-2014	Jun-25-2014	Jun-25-2014	Jun-25-2014	Jun-25-2014
Rating Type	COUPLA	COUPLA	COUPLA	COUPLA	COUPLA
Rating Unit	1/2 M2	1/2 M2	1/2 M2	1/2 M2	1/2 M2
Number of Subsamples	1	1	1	1	1
SE Group No.	6	7	8	9	10
Days After First/Last Applic.	28 7	28 7	28 7	28 7	28 7
Trt-Eval Interval					
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1	28 DP-1	28 DP-1
Days After Emergence	22 DE-1	22 DE-1	22 DE-1	22 DE-1	22 DE-1

Trt Treatment No. Name	Rate	Other	Other	Appl Code	6	7	8	9	10
8 30 Inch Rows	1.32 lb ai/a	2 pt/a		A	0.0	0.0	0.0	10.5	0.0
8 PREFIX	1.32 lb ai/a	2 pt/a		A					
8 Sencor 75DF	0.375 lb ai/a	0.5 lb/a		A					
8 Liberty	0.53 lb ai/a	29 oz/a		C					
8 N-PAK AMS	2.5 % v/v	2.5 % v/v		C					
8 130,000 Seeds/acre									
9 30 Inch Rows	1.32 lb ai/a	2 pt/a		A	0.0	0.0	0.0	12.3	0.0
9 PREFIX	1.32 lb ai/a	2 pt/a		A					
9 Sencor 75DF	0.375 lb ai/a	0.5 lb/a		A					
9 Liberty	0.53 lb ai/a	29 oz/a		C					
9 N-PAK AMS	2.5 % v/v	2.5 % v/v		C					
9 190,000 Seeds/acre									
10 30 Inch Rows	1.32 lb ai/a	2 pt/a		B	0.0	0.8	0.3	4.8	0.0
10 PREFIX	1.32 lb ai/a	2 pt/a		B					
10 Liberty	0.53 lb ai/a	29 oz/a		B					
10 N-PAK AMS	2.5 % v/v	2.5 % v/v		B					
10 70,000 Seeds/acre									
11 30 Inch Rows	1.32 lb ai/a	2 pt/a		B	0.0	0.0	0.3	4.0	0.0
11 PREFIX	1.32 lb ai/a	2 pt/a		B					
11 Liberty	0.53 lb ai/a	29 oz/a		B					
11 N-PAK AMS	2.5 % v/v	2.5 % v/v		B					
11 130,000 Seeds/acre									
12 30 Inch Rows	1.32 lb ai/a	2 pt/a		B	0.0	0.3	0.0	5.0	0.3
12 PREFIX	1.32 lb ai/a	2 pt/a		B					
12 Liberty	0.53 lb ai/a	29 oz/a		B					
12 N-PAK AMS	2.5 % v/v	2.5 % v/v		B					
12 190,000 Seeds/acre									
LSD (P=.05)					0.21	2.63	0.32	5.30	0.21
Standard Deviation					0.14	1.80	0.22	3.63	0.14
CV					346.41	455.44	529.15	54.8	692.82
Bartlett's X2					0.0	25.116	0.0	12.525	0.0
P(Bartlett's X2)					.	0.001*	.	0.325	.
Skewness					4.7366*	6.0708*	4.7366*	0.9377*	6.9282*
Kurtosis					21.3233*	39.1243*	21.3233*	-0.0392	48.0*
Replicate F					4.000	1.733	0.571	22.695	1.000
Replicate Prob(F)					0.0192	0.1870	0.6393	0.0001	0.4098
Treatment F					1.818	0.902	0.779	3.030	1.000
Treatment Prob(F)					0.1069	0.5528	0.6573	0.0112	0.4744

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Pest Type W Weed
 Pest Code CHEAL
 Pest Scientific Name Chenopodium al>
 Pest Name Common lambsqu>
 Crop Code
 BBCH Scale
 Crop Scientific Name
 Crop Name
 Rating Date Jun-25-2014
 Rating Type COUPLA
 Rating Unit 1/2 M2
 Number of Subsamples 1
 SE Group No. 11
 Days After First/Last Applic. 28 7
 Trt-Eval Interval
 Plant-Eval Interval 28 DP-1
 Days After Emergence 22 DE-1

Trt No.	Treatment Name	Rate Rate	Other Unit	Other Rate	Appl Unit Code	
1	15 Inch Rows	1.32 lb ai/a	2 pt/a		A	0.0
	1 PREFIX	1.32 lb ai/a	2 pt/a		A	
	1 Sencor 75DF	0.375 lb ai/a	0.5 lb/a		A	
	1 Liberty	0.53 lb ai/a	29 oz/a		C	
	1 N-PAK AMS	2.5 % v/v	2.5 % v/v		C	
	1 70,000 Seeds/acre					
2	15 Inch Rows	1.32 lb ai/a	2 pt/a		A	0.0
	2 PREFIX	1.32 lb ai/a	2 pt/a		A	
	2 Sencor 75DF	0.375 lb ai/a	0.5 lb/a		A	
	2 Liberty	0.53 lb ai/a	29 oz/a		C	
	2 N-PAK AMS	2.5 % v/v	2.5 % v/v		C	
	2 130,000 Seeds/acre					
3	15 Inch Rows	1.32 lb ai/a	2 pt/a		A	0.0
	3 PREFIX	1.32 lb ai/a	2 pt/a		A	
	3 Sencor 75DF	0.375 lb ai/a	0.5 lb/a		A	
	3 Liberty	0.53 lb ai/a	29 oz/a		C	
	3 N-PAK AMS	2.5 % v/v	2.5 % v/v		C	
	3 190,000 Seeds/acre					
4	15 Inch Rows	1.32 lb ai/a	2 pt/a		B	0.0
	4 PREFIX	1.32 lb ai/a	2 pt/a		B	
	4 Liberty	0.53 lb ai/a	29 oz/a		B	
	4 N-PAK AMS	2.5 % v/v	2.5 % v/v		B	
	4 70,000 Seeds/acre					
5	15 Inch Rows	1.32 lb ai/a	2 pt/a		B	0.0
	5 PREFIX	1.32 lb ai/a	2 pt/a		B	
	5 Liberty	0.53 lb ai/a	29 oz/a		B	
	5 N-PAK AMS	2.5 % v/v	2.5 % v/v		B	
	5 130,000 Seeds/acre					
6	15 Inch Rows	1.32 lb ai/a	2 pt/a		B	0.0
	6 PREFIX	1.32 lb ai/a	2 pt/a		B	
	6 Liberty	0.53 lb ai/a	29 oz/a		B	
	6 N-PAK AMS	2.5 % v/v	2.5 % v/v		B	
	6 190,000 Seeds/acre					
7	30 Inch Rows	1.32 lb ai/a	2 pt/a		A	0.0
	7 PREFIX	1.32 lb ai/a	2 pt/a		A	
	7 Sencor 75DF	0.375 lb ai/a	0.5 lb/a		A	
	7 Liberty	0.53 lb ai/a	29 oz/a		C	
	7 N-PAK AMS	2.5 % v/v	2.5 % v/v		C	
	7 70,000 Seeds/acre					

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Pest Type	W Weed
Pest Code	CHEAL
Pest Scientific Name	Chenopodium al>
Pest Name	Common lambsqu>
Crop Code	
BBCH Scale	
Crop Scientific Name	
Crop Name	
Rating Date	Jun-25-2014
Rating Type	COUPLA
Rating Unit	1/2 M2
Number of Subsamples	1
SE Group No.	11
Days After First/Last Applic.	28 7
Trt-Eval Interval	
Plant-Eval Interval	28 DP-1
Days After Emergence	22 DE-1

Trt Treatment No. Name	Rate Rate Unit	Other Rate Unit	Other Rate Unit	Appl Code	11
8 30 Inch Rows	1.32 lb ai/a	2 pt/a		A	0.0
8 PREFIX	1.32 lb ai/a	2 pt/a		A	
8 Sencor 75DF	0.375 lb ai/a	0.5 lb/a		A	
8 Liberty	0.53 lb ai/a	29 oz/a		C	
8 N-PAK AMS	2.5 % v/v	2.5 % v/v		C	
8 130,000 Seeds/acre					
9 30 Inch Rows	1.32 lb ai/a	2 pt/a		A	0.0
9 PREFIX	1.32 lb ai/a	2 pt/a		A	
9 Sencor 75DF	0.375 lb ai/a	0.5 lb/a		A	
9 Liberty	0.53 lb ai/a	29 oz/a		C	
9 N-PAK AMS	2.5 % v/v	2.5 % v/v		C	
9 190,000 Seeds/acre					
10 30 Inch Rows	1.32 lb ai/a	2 pt/a		B	0.3
10 PREFIX	1.32 lb ai/a	2 pt/a		B	
10 Liberty	0.53 lb ai/a	29 oz/a		B	
10 N-PAK AMS	2.5 % v/v	2.5 % v/v		B	
10 70,000 Seeds/acre					
11 30 Inch Rows	1.32 lb ai/a	2 pt/a		B	0.5
11 PREFIX	1.32 lb ai/a	2 pt/a		B	
11 Liberty	0.53 lb ai/a	29 oz/a		B	
11 N-PAK AMS	2.5 % v/v	2.5 % v/v		B	
11 130,000 Seeds/acre					
12 30 Inch Rows	1.32 lb ai/a	2 pt/a		B	0.0
12 PREFIX	1.32 lb ai/a	2 pt/a		B	
12 Liberty	0.53 lb ai/a	29 oz/a		B	
12 N-PAK AMS	2.5 % v/v	2.5 % v/v		B	
12 190,000 Seeds/acre					
LSD (P=.05)					0.36
Standard Deviation					0.25
CV					400.0
Bartlett's X2					1.321
P(Bartlett's X2)					0.25
Skewness					5.4791*
Kurtosis					31.0744*
Replicate F					3.000
Replicate Prob(F)					0.0504
Treatment F					1.545
Treatment Prob(F)					0.1796

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USB ROW SPACING STUDY

Trial ID: 14USBROW Location: Western Branch Big E Trial Year: 2014
Protocol ID: Investigator: Dr. Mark M. Loux
Project ID: Study Director:
Sponsor Contact:

Pest Type

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

Pest Code

AMARE, Amaranthus retroflexus, = US

SETFA, Setaria faberi, = US

IPOHE, Ipomoea hederacea, = US

SIDSP, Sida spinosa, = US

CYPES, Cyperus esculentus, = US

ABUTH, Abutilon theophrasti, = US

AMBTR, Ambrosia trifida, = US

HIBTR, Hibiscus trionum, = US

CHEAL, Chenopodium album, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

CROPST = cropstand

COUPLA = count - plant / emergence - objective

Plant-Eval Interval

13 DP-1 = 1 GLXMA May-28-2014

20 DP-1 = 1 GLXMA May-28-2014

28 DP-1 = 1 GLXMA May-28-2014