

The Ohio State University

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:

General Trial Information

Investigator: Dr. Mark M. Loux

Trial Location

City: South Charleston Country: USA United States
 State/Prov.: Ohio
 Postal Code: 45368 Climate Zone: US Warm Continental

Latitude of LL Corner °: 39.85757 N
 Longitude of LL Corner °: 83.67 W

Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: GLXMA Glycine max Soybean
 Variety: PIONEER 34T35L
 Description: LIBERTY LINK

Depth, Unit: 1 IN

Planting Date: 5-28-2014
 Planting Method: SEEDED seeded
 Planting Equipment: FE Field Equipment
 Emergence Date: 6-3-2014
 Harvest Date: 10-24-2014
 Harvested Width, Unit: 5 FT
 Harvested Length, Unit: 40 FT
 Harvest Equipment: Massey Ferguson 8 XP
 % Standard Moisture: 13.0
 Moisture Meter: Harvest Master
 Weighing Equipment: Harvest Master

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

Soil Description

Description Name: Big E
 % OM: 2.8 Texture: SIL silt loam
 pH: 5.9 Soil Name: Kokomo
 CEC: 17.44 Fert. Level: G good
 Soil Drainage: G good

Analyzed By:
 Spectrum Analytic, Washington CourtHouse, OH

Additional Measured Elements

Date	Element	Quantity	Unit
11-13-2012	P	58.1	ppm
11-13-2012	K	163.85	ppm
11-13-2012	Ca	51.76	%
11-13-2012	Mg	18.9	%

The Ohio State University

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:

Application Description

	A	B	C
Application Date:	5-28-2014	6-18-2014	6-26-2014
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:	6-2-2014	6-18-2014	6-28-2014
Time to Next Moisture, Unit:	5 HR	10 HR	2 DAY

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

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

The Ohio State University

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
 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
 Description
 Rating Date 10-24-2014 10-24-2014 10-24-2014 10-24-2014
 Rating Type YIELD MOICON YIELD WEITES
 Rating Unit LBS % BU LBS
 Sample Size, Unit
 Collection Basis, Unit
 Number of Subsamples 1 1 1 1
 Days After First/Last Appl. 149 120 149 120 149 120 149 120
 Trt-Eval Interval
 Plant-Eval Interval 149 DP-1 149 DP-1 149 DP-1 149 DP-1
 Days After Emergence 143 DE-1 143 DE-1 143 DE-1 143 DE-1
 ARM Action Codes ER1 ER1
 Number of Decimals 1 1 1 1

Trt Treatment No. Name	Other Rate	Other Rate	Growth Unit	Appl Stage	Code	26	27	30	31
1 15 Inch Rows	2 pt/a		PRE	A		18.7 ab	14.1 cde	55.9 b	53.4 ab
1 PREFIX	2 pt/a		PRE	A					
1 Sencor 75DF	0.5 lb/a		PRE	A					
1 Liberty	29 oz/a		POST	C					
1 N-PAK AMS	2.5 % v/v		POST	C					
1 70,000 Seeds/acre									
2 15 Inch Rows	2 pt/a		PRE	A		21.8 a	13.2 e	64.6 ab	53.8 a
2 PREFIX	2 pt/a		PRE	A					
2 Sencor 75DF	0.5 lb/a		PRE	A					
2 Liberty	29 oz/a		POST	C					
2 N-PAK AMS	2.5 % v/v		POST	C					
2 130,000 Seeds/acre									
3 15 Inch Rows	2 pt/a		PRE	A		21.4 a	16.7 abc	62.9 ab	54.6 a
3 PREFIX	2 pt/a		PRE	A					
3 Sencor 75DF	0.5 lb/a		PRE	A					
3 Liberty	29 oz/a		POST	C					
3 N-PAK AMS	2.5 % v/v		POST	C					
3 190,000 Seeds/acre									
4 15 Inch Rows	2 pt/a		EPO	B		7.1 c	15.2 b-e	29.5 d	38.2 d
4 PREFIX	2 pt/a		EPO	B					
4 Liberty	29 oz/a		EPO	B					
4 N-PAK AMS	2.5 % v/v		EPO	B					
4 70,000 Seeds/acre									
5 15 Inch Rows	2 pt/a		EPO	B		9.5 c	17.4 ab	35.4 cd	48.7 abc
5 PREFIX	2 pt/a		EPO	B					
5 Liberty	29 oz/a		EPO	B					
5 N-PAK AMS	2.5 % v/v		EPO	B					
5 130,000 Seeds/acre									
6 15 Inch Rows	2 pt/a		EPO	B		9.1 c	15.2 b-e	34.7 cd	45.9 a-d
6 PREFIX	2 pt/a		EPO	B					
6 Liberty	29 oz/a		EPO	B					
6 N-PAK AMS	2.5 % v/v		EPO	B					
6 190,000 Seeds/acre									

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean separations are based on the complete error term.
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Excluded replicate 1 in column 26; 1 in 27

The Ohio State University

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
 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
 Description
 Rating Date 10-24-2014 10-24-2014 10-24-2014 10-24-2014
 Rating Type YIELD MOICON YIELD WEITES
 Rating Unit LBS % BU LBS
 Sample Size, Unit
 Collection Basis, Unit
 Number of Subsamples 1 1 1 1
 Days After First/Last Appl. 149 120 149 120 149 120 149 120
 Trt-Eval Interval
 Plant-Eval Interval 149 DP-1 149 DP-1 149 DP-1 149 DP-1
 Days After Emergence 143 DE-1 143 DE-1 143 DE-1 143 DE-1
 ARM Action Codes ER1 ER1
 Number of Decimals 1 1 1 1

Trt Treatment	Other	Other	Growth	Appl					
No. Name	Rate	Rate	Unit	Stage	Code	26	27	30	31
12 30 Inch Rows	2 pt/a		EPO	B		10.2 c	16.5 a-d	41.0 c	48.8 abc
12 PREFIX	2 pt/a		EPO	B					
12 Liberty	29 oz/a		EPO	B					
12 N-PAK AMS	2.5 % v/v		EPO	B					
12 190,000 Seeds/acre									
LSD (P=.05)						3.61	2.60	10.01	10.37
Standard Deviation						2.14	1.54	6.86	7.11
CV						15.47	10.12	14.01	14.67
Grand Mean						13.85	15.26	48.97	48.43
Bartlett's X2						20.82	13.355	20.703	36.493
P(Bartlett's X2)						0.035*	0.271	0.037*	0.001*
Skewness						-0.1713	0.6152	-0.701*	-1.5663*
Kurtosis						-1.2139	-0.9286	-0.834	1.6637*
Replicate F						9.195	2.728	30.891	2.916
Replicate Prob(F)						0.0011	0.0856	0.0001	0.0549
Treatment F						21.875	3.058	18.314	2.276
Treatment Prob(F)						0.0001	0.0107	0.0001	0.0447

Crop Code
 GLXMA, BSOY, Glycine max, = US
Rating Type
 YIELD = yield
 MOICON = moisture content
 WEITES = weight - test
Rating Unit
 % = percent
 BU = bushel
Plant-Eval Interval
 149 DP-1 = 1 GLXMA 5-28-2014
ARM Action Codes
 ER1 = Excluded replicate 1