

Compare broadaxe XC to Syngenta and competitive herbicide programs, DAS Showcase treatments

Trial ID: 15 PRPOS1	Location: F-7 EAST END	Trial Year: 2015
Protocol ID: 15 PRPOS1	Investigator: Dr. Mark M. Loux	
Project ID: ZSOY80AD-2015US/DAS Showc	Study Director: Bryan Reeb	
	Sponsor Contact: Dain Bruns, Syn/Leah Granke, Dow	

General Trial Information

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

Latitude of LL Corner °: 39.86029 N
Longitude of LL Corner °: 83.67162 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: SCS 9363
Description: RoundUp Ready

BBCH Scale: BSOY

Planting Rate, Unit: 180000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN

Planting Date: 5-7-2015
Planting Method: PLANTD planted
Planting Equipment: KINZE
Emergence Date: 5-15-2015
Harvested Width, Unit: 6.25 FT
Harvested Length, Unit: 30 FT

Soil Temperature, Unit: 70 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:** POLPY *Persicaria pensylvanica*
Common Name: Pennsylvania smartweed
- Pest 8 Type:** W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 30 FT
Treated Plot Area: 200.1 FT²
Replications: 3

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

Soil Description

Description Name: F-7 Middle
% OM: 1.9
pH: 6.4
CEC: 13.3
Texture: SIL silt loam
Soil Name: Crosby
Fert. Level: G good
Soil Drainage: G good

Application Description

	A	B
Application Date:	5-8-2015	6-10-2015
Appl. Start Time:	9:00 AM	9:40 AM
Appl. Stop Time:	10:00 AM	9:55 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE ATPL	POST
Application Placement:	BROSOI	BROFOL
Air Temperature, Unit:	73 F	73 F
% Relative Humidity:	66	72
Wind Velocity, Unit:	1.3 MPH	9 MPH
Wind Direction:	S	SW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	61 F	61 F
Soil Moisture:	DRY	DRY
% Cloud Cover:	10	5
Next Moisture Occurred On:	5-11-2015	6-12-2015
Time to Next Moisture, Unit:	3 DAY	2 DAY

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:		BBCH
Stage Majority, Percent:		14
Stage Minimum, Percent:		13
Stage Maximum, Percent:		14
Height, Unit:		6 IN
Height Minimum, Maximum:		6 8

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		16
Stage Minimum, Percent:		14
Stage Maximum, Percent:		18
Height, Unit:		4 IN
Height Minimum, Maximum:		2 8
Density, Unit:	44.67 M2	
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		18
Stage Minimum, Percent:		16
Stage Maximum, Percent:		19
Height, Unit:		6 IN
Height Minimum, Maximum:		4 10
Density, Unit:	2.67 M2	
Pest 3 Code, Type, Scale:	AMARE W	AMARE W
Stage Majority, Percent:		16
Stage Minimum, Percent:		14
Stage Maximum, Percent:		18
Height, Unit:		3 IN
Height Minimum, Maximum:		2 4
Density, Unit:	2 M2	
Pest 4 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:		16
Stage Minimum, Percent:		16
Stage Maximum, Percent:		18
Height, Unit:		3 IN
Height Minimum, Maximum:		2 4
Density, Unit:	1.33 M2	
Pest 5 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:		16
Stage Minimum, Percent:		14
Stage Maximum, Percent:		16
Height, Unit:		4 IN
Height Minimum, Maximum:		2 4
Pest 6 Code, Type, Scale:	SIDSP W	SIDSP W
Stage Majority, Percent:		16
Stage Minimum, Percent:		14
Stage Maximum, Percent:		16
Height, Unit:		2 IN
Height Minimum, Maximum:		2 4
Pest 7 Code, Type, Scale:	POLPY W	POLPY W
Stage Majority, Percent:		16
Stage Minimum, Percent:		14
Stage Maximum, Percent:		18
Height, Unit:		4 IN
Height Minimum, Maximum:		2 6
Density, Unit:	1 M2	
Pest 8 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:		16
Stage Minimum, Percent:		14
Stage Maximum, Percent:		16
Height, Unit:		4 IN
Height Minimum, Maximum:		2 4

Application Equipment

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

The Ohio State University

Compare broadaxe XC to Syngenta and competitive herbicide programs, DAS Showcase treatments

Trial ID: 15 PRPOS1 Location: F-7 EAST END Trial Year: 2015
 Protocol ID: 15 PRPOS1 Investigator: Dr. Mark M. Loux
 Project ID: ZSOY80AD-2015US/DAS Showc Study Director: Bryan Reeb
 Sponsor Contact: Dain Bruns, Syn/Leah Granke, Dow

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	SCS 9363	SCS 9363	SCS 9363	SCS 9363
Description	RR	RR	RR	RR
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.	22	23	24	25
Days After First/Last Applic.	143 110	143 110	143 110	143 110
Trt-Eval Interval				
Plant-Eval Interval	144 DP-1	144 DP-1	144 DP-1	144 DP-1
Days After Emergence	136 DE-1	136 DE-1	136 DE-1	136 DE-1
ARM Action Codes				TY1
Number of Decimals	1	1	1	1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	Appl Description	16	17	18	19
1	Broadaxe XC	19 oz/a	A	PRE		16.5 a	13.6 a	55.2 a	63.4 a
1	Flexstar GT 3.5	3.5 pt/a	B	MPO 4-6" wds					
1	Destiny HC	0.3 qt/a	B	MPO 4-6" wds					
1	N-pak ams	1.5 qt/a	B	MPO 4-6" wds					
2	Broadaxe XC	25 oz/a	A	PRE		16.5 a	13.3 a	56.2 a	63.7 a
2	Flexstar GT 3.5	3.5 pt/a	B	MPO 4-6" wds					
2	Destiny HC	0.3 qt/a	B	MPO 4-6" wds					
2	N-pak ams	1.5 qt/a	B	MPO 4-6" wds					
3	Tricor	5 oz/a	A	PRE		17.0 a	12.9 a	56.0 a	65.8 a
3	Broadaxe XC	19 oz/a	A	PRE					
3	Flexstar GT 3.5	3.5 pt/a	B	MPO 4-6" wds					
3	Destiny HC	0.3 qt/a	B	MPO 4-6" wds					
3	N-pak ams	1.5 qt/a	B	MPO 4-6" wds					
4	Tricor	3 oz/a	A	PRE		17.7 a	12.7 a	56.3 a	68.7 a
4	Broadaxe XC	25 oz/a	A	PRE					
4	Flexstar GT 3.5	3.5 pt/a	B	MPO 4-6" wds					
4	Destiny HC	0.3 qt/a	B	MPO 4-6" wds					
4	N-pak ams	1.5 qt/a	B	MPO 4-6" wds					
5	Tricor	5 oz/a	A	PRE		17.2 a	14.1 a	55.5 a	66.0 a
5	Broadaxe XC	25 oz/a	A	PRE					
5	Flexstar GT 3.5	3.5 pt/a	B	MPO 4-6" wds					
5	Destiny HC	0.3 qt/a	B	MPO 4-6" wds					
5	N-pak ams	1.5 qt/a	B	MPO 4-6" 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.
 Missing data estimates are included in columns: Yates=16,17,18,19

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	SCS 9363	SCS 9363	SCS 9363	SCS 9363
Description	RR	RR	RR	RR
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.	22	23	24	25
Days After First/Last Applic.	143 110	143 110	143 110	143 110
Trt-Eval Interval				
Plant-Eval Interval	144 DP-1	144 DP-1	144 DP-1	144 DP-1
Days After Emergence	136 DE-1	136 DE-1	136 DE-1	136 DE-1
ARM Action Codes				TY1
Number of Decimals	1	1	1	1

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description	16	17	18	19
6	Classic	1.25 oz/a		A	PRE	17.9 a	13.5 a	55.5 a	69.0 a
6	Broadaxe XC	19 oz/a		A	PRE				
6	Flexstar GT 3.5	3.5 pt/a		B	MPO 4-6" wds				
6	Destiny HC	0.3 qt/a		B	MPO 4-6" wds				
6	N-pak ams	1.5 qt/a		B	MPO 4-6" wds				
7	Classic	1.25 oz/a		A	PRE	17.8 a	13.6 a	56.0 a	68.5 a
7	Broadaxe XC	25 oz/a		A	PRE				
7	Flexstar GT 3.5	3.5 pt/a		B	MPO 4-6" wds				
7	Destiny HC	0.3 qt/a		B	MPO 4-6" wds				
7	N-pak ams	1.5 qt/a		B	MPO 4-6" wds				
8	Boundary	1.75 pt/a		A	PRE	19.3 a	13.8 a	54.9 a	74.2 a
8	Flexstar GT 3.5	3.5 pt/a		B	MPO 4-6" wds				
8	Destiny HC	0.3 qt/a		B	MPO 4-6" wds				
8	N-pak ams	1.5 qt/a		B	MPO 4-6" wds				
9	Valor XLT @ 3 oz					17.8 a	12.6 a	56.6 a	69.1 a
9	Valor SX	1.76 oz/a		A	PRE				
9	Classic	1.24 oz/a		A	PRE				
9	Flexstar GT 3.5	3.5 pt/a		B	MPO 4-6" wds				
9	Destiny HC	0.3 qt/a		B	MPO 4-6" wds				
9	N-pak ams	1.5 qt/a		B	MPO 4-6" wds				
10	Sonic	4 oz/a		A	PRE	18.3 a	13.2 a	56.4 a	70.6 a
10	Flexstar GT 3.5	3.5 pt/a		B	MPO 4-6" wds				
10	Destiny HC	0.3 qt/a		B	MPO 4-6" wds				
10	N-pak ams	1.5 qt/a		B	MPO 4-6" wds				
11	Sonic	4.5 oz/a		A	PRE	19.3 a	13.0 a	56.4 a	74.8 a
11	Durango DMA	32 oz/a		B	MPO 4-6" wds				
11	N-pak ams	1.5 qt/a		B	MPO 4-6" wds				
12	Sonic	6 oz/a		A	PRE	18.6 a	12.9 a	56.4 a	72.2 a
12	Durango DMA	32 oz/a		B	MPO 4-6" wds				
12	N-pak ams	1.5 qt/a		B	MPO 4-6" wds				
13	Surveil Premix	2.8 oz/a		A	PRE	18.6 a	12.8 a	56.1 a	72.2 a
13	Durango DMA	32 oz/a		B	MPO 4-6" wds				
13	N-pak ams	1.5 qt/a		B	MPO 4-6" wds				

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		SCS 9363		SCS 9363		SCS 9363		SCS 9363	
Description		RR		RR		RR		RR	
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.		22		23		24		25	
Days After First/Last Applic.		143 110		143 110		143 110		143 110	
Trt-Eval Interval									
Plant-Eval Interval		144 DP-1		144 DP-1		144 DP-1		144 DP-1	
Days After Emergence		136 DE-1		136 DE-1		136 DE-1		136 DE-1	
ARM Action Codes								TY1	
Number of Decimals		1		1		1		1	
Trt Treatment	Other	Other	Appl	Appl					
No. Name	Rate	Rate	Unit	Code	Description	16	17	18	19
14 Surveil Premix	4.2 oz/a		A	PRE		19.9 a	13.1 a	56.0 a	77.1 a
14 Durango DMA	32 oz/a		B	MPO 4-6" wds					
14 N-pak ams	1.5 qt/a		B	MPO 4-6" wds					
LSD P=.05						2.66	1.47	1.85	10.77
Standard Deviation						1.58	0.87	1.10	6.41
CV						8.78	6.61	1.97	9.2
Grand Mean						18.03	13.22	55.96	69.65
Bartlett's X2						9.426	21.549	12.409	10.504
P(Bartlett's X2)						0.74	0.063	0.494	0.652
Skewness						-0.3146	2.1104*	-1.1314*	-0.3836
Kurtosis						0.3222	5.4483*	1.0187	0.125
Replicate F						1.902	0.920	1.075	1.736
Replicate Prob(F)						0.1702	0.4114	0.3565	0.1968
Treatment F						1.333	0.755	0.646	1.252
Treatment Prob(F)						0.2591	0.6956	0.7929	0.3035

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

144 DP-1 = 1 GLXMA 5-7-2015

ARM Action Codes

TY1 = 3.872*[16]*(100-[17])/87