

The Ohio State University

MOC+Partners and Valent vs competitors pre herbicides in conventional till soybeans

Trial ID: 16 PRES1
 Protocol ID: 16 PRES1
 Project ID: Fierce 64.02/2016-29-OH

Location: Western Branch
 Investigator: Dr. Mark M. Loux
 Study Director: Bryan Reeb
 Sponsor Contact: Eric Ott, Valent/George Hackman,Sipcam

Trial Year: 2016

General Trial Information

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

Latitude of LL Corner °: 39.86006 N
Longitude of LL Corner °: 83.6698 W
Altitude of LL Corner, Unit: 1086.00 FT

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: AG3536
Description: Asgrow RR2

BBCH Scale: BSOY

Planting Rate, Unit: 175000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Soil Temperature, Unit: 67 F
Soil Moisture: DRY dry
Seed Bed: MEDIUM medium

Planting Date: 5-25-2016
Planting Method: PLANTD planted
Planting Equipment: FE Field Equipment
Emergence Date: 6-1-2016

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail

Pest 2 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyard grass

Pest 3 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 4 Type: W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed

Pest 5 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: common lambsquarters

Pest 6 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf

Pest 7 Type: W **Code:** IPOHE *Ipomoea hederacea*
Common Name: ivy-leaf morning glory

Pest 8 Type: W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida

Site and Design

Treated Plot Width: 6.67 FT

Treated Plot Length: 30 FT

Treated Plot Area: 200.1 FT² **Treatments:** 10
Replications: 3

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: F-8 East

% OM: 2.4 **Texture:** SICL silty clay loam
pH: 6.2 **Soil Name:** Kokomo
CEC: 16 **Fert. Level:** G good
Soil Drainage: G good

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Application Description

A
 Application Date: 5-25-2016
 Appl. Start Time: 10:30 AM
 Appl. Stop Time: 10:45 AM
 Application Method: SPRAY
 Application Timing: PRE
 Application Placement: BROSOI
 Applied By: LAMB
 Air Temperature, Unit: 79 F
 % Relative Humidity: 47
 Wind Velocity, Unit: 9 MPH
 Wind Direction: SSW
 Dew Presence (Y/N): N no
 Soil Temperature, Unit: 66 F
 Soil Moisture: DRY
 % Cloud Cover: 75
 Next Moisture Occurred On: 5-29-2016
 Time to Next Moisture, Unit: 4 days

Crop Stage At Each Application

A
 Crop 1 Code, BBCH Scale: GLXMA BSOY

Pest Stage At Each Application

A
 Pest 1 Code, Type, Scale: SETFA W
 Density, Unit: 50 m2
 Pest 2 Code, Type, Scale: ECHCG W
 Density, Unit: 100 m2
 Pest 3 Code, Type, Scale: AMBTR W
 Density, Unit: 3.5 m2
 Pest 4 Code, Type, Scale: AMARE W
 Density, Unit: 15 m2
 Pest 5 Code, Type, Scale: CHEAL W
 Density, Unit: 8 m2
 Pest 6 Code, Type, Scale: ABUTH W
 Density, Unit: 1 m2
 Pest 7 Code, Type, Scale: IPOHE W
 Density, Unit: 1 m2
 Pest 8 Code, Type, Scale: SIDSP W
 Density, Unit: 5 m2

Application Equipment

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

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	SETFA	AMBTR	ABUTH	IPHOE	XANOR	AMARE			
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Abutilon theophrasti	Ipomoea hederacea	Xanthium orientale	Amaranthus retrofractus			
Pest Name	Giant foxtail	Giant ragweed	velvetleaf	Ivyleaf morningglow	Common cocklebur	Redroot pigweed			
Rating Date	6-14-2016	6-14-2016	6-14-2016	6-14-2016	6-14-2016	6-14-2016			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1			
Assessed By	ACKLEY	ACKLEY	ACKLEY	ACKLEY	ACKLEY	ACKLEY			
SE Group No.	1	2	3	4	5	6			
Rating Timing	35 DAPL	35 DAPL	35 DAPL	35 DAPL	35 DAPL	35 DAPL			
Days After First/Last Applic.	20 20	20 20	20 20	20 20	20 20	20 20			
Trt-Eval Interval	20 DA-A	20 DA-A	20 DA-A	20 DA-A	20 DA-A	20 DA-A			
Plant-Eval Interval	20 DP-1	20 DP-1	20 DP-1	20 DP-1	20 DP-1	20 DP-1			
Days After Emergence	13 DE-1	13 DE-1	13 DE-1	13 DE-1	13 DE-1	13 DE-1			
Number of Decimals	0	0	0	0	0	0			
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	1*	2*	3*	4*	5*	6*
1 UTC				0 c	0 b	0 c	0 c	0 b	0 c
2 Authority XL	4 oz/a		A	81 ab	80 a	98 ab	100 a	100 a	100 a
3 Authority XL	7.5 oz/a		A	93 a	88 a	100 a	100 a	100 a	100 a
4 Fierce XLT	4 oz/a		A	88 a	85 a	100 a	97 a	100 a	99 a
5 Fierce XLT	5.25 oz/a		A	93 a	83 a	100 a	100 a	93 a	100 a
6 Surveil Premix	3.5 oz/a		A	67 b	87 a	100 a	100 a	100 a	100 a
7 Stalwart	32 oz/a		A	92 a	75 a	93 ab	87 b	100 a	92 b
8 SA-0071024	32 oz/a		A	88 a	83 a	100 a	100 a	97 a	100 a
9 SA-0071025	32 oz/a		A	95 a	85 a	97 ab	87 b	97 a	99 a
10 Prefix	32 oz/a		A	90 a	88 a	90 b	82 b	98 a	100 a
LSD P=.05				14.8	13.4	8.8	8.9	7.3	6.0
Standard Deviation				8.6	7.8	5.2	5.2	4.2	3.5
CV				10.93	10.35	5.87	6.09	4.78	3.91
Bartlett's X2				8.577	6.019	3.383	3.703	3.36	7.987
P(Bartlett's X2)				0.379	0.421	0.336	0.295	0.339	0.018*
Skewness				-2.1179*	-2.3639*	-2.654*	-2.4486*	-2.7107*	-2.7406*
Kurtosis				3.6263*	4.8941*	5.7006*	4.9614*	5.922*	6.03*
Replicate F				4.677	1.516	1.348	2.443	2.658	1.101
Replicate Prob(F)				0.0231	0.2463	0.2847	0.1151	0.0974	0.3539
Treatment F				33.769	35.388	108.854	105.186	163.155	243.801
Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter or symbol do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

* Adjusted means

Could not calculate LSD (% mean diff) for columns 11,13 because error mean square = 0.

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Pest Scientific Name	Setaria faberi	Ambrosia trifid	Abutilon theophrasti	Ipomoea hederacea	Xanthium orientale	Amaranthus retrofractus					
Pest Name	Giant foxtail	Giant ragweed	velvetleaf	Ipomoea hederacea	Common cocklebur	Redroot pigweed					
Rating Date	7-6-2016	7-6-2016	7-6-2016	7-6-2016	7-6-2016	7-6-2016					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%	%					
Number of Subsamples	1	1	1	1	1	1					
Assessed By											
SE Group No.	8	9	10	11	12	13					
Rating Timing											
Days After First/Last Applic.	42 42	42 42	42 42	42 42	42 42	42 42					
Trt-Eval Interval	42 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A					
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1					
Days After Emergence	35 DE-1	35 DE-1	35 DE-1	35 DE-1	35 DE-1	35 DE-1					
Number of Decimals											
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	7*	8*	9*	10*	11*	12*	13
1	UTC				0.0 d	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b
2	Authority XL	4 oz/a		A	46.7 bc	43.3 a	100.0 a	90.0 a	100.0 a	100.0 a	100.0 a
3	Authority XL	7.5 oz/a		A	53.3 ab	50.0 a	100.0 a	83.3 a	100.0 a	100.0 a	100.0 a
4	Fierce XLT	4 oz/a		A	50.0 abc	50.0 a	100.0 a	76.7 a	100.0 a	100.0 a	100.0 a
5	Fierce XLT	5.25 oz/a		A	43.3 bc	33.3 a	100.0 a	70.0 a	100.0 a	100.0 a	100.0 a
6	Surveil Premix	3.5 oz/a		A	33.3 c	60.0 a	100.0 a	96.7 a	100.0 a	100.0 a	100.0 a
7	Stalwart	32 oz/a		A	46.7 bc	36.7 a	100.0 a	86.7 a	100.0 a	100.0 a	100.0 a
8	SA-0071024	32 oz/a		A	68.3 a	33.3 a	90.0 a	80.0 a	100.0 a	90.0 a	90.0 a
9	SA-0071025	32 oz/a		A	66.7 a	63.3 a	100.0 a	91.7 a	100.0 a	100.0 a	100.0 a
10	Prefix	32 oz/a		A	53.3 ab	53.3 a	93.3 a	86.7 a	100.0 a	90.0 a	90.0 a
	LSD P=.05				19.61	30.13	10.70	39.67	.	10.39	.
	Standard Deviation				11.43	17.56	6.24	23.13	0.00	6.06	.
	CV				24.76	41.49	7.06	30.37	0.0	6.88	.
	Bartlett's X2				7.134	4.649	0.312	8.646	0.0	0.561	.
	P(Bartlett's X2)				0.522	0.794	0.576	0.373	.	0.454	.
	Skewness				-0.7928	-0.2147	-2.6147*	-1.4339*	-2.8091*	-2.6015*	.
	Kurtosis				0.7312	-0.4822	5.4872*	0.8485	6.3081*	5.4443*	.
	Replicate F				0.887	0.724	2.143	1.048	0.000	1.909	
	Replicate Prob(F)				0.4293	0.4985	0.1463	0.3709	1.0000	0.1770	
	Treatment F				8.505	3.218	75.286	4.348	0.000	79.636	
	Treatment Prob(F)				0.0001	0.0167	0.0001	0.0039	1.0000	0.0001	

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Pest Type

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

Pest Code

SETFA, Setaria faberi, = US
AMBTR, Ambrosia trifida, = US
ABUTH, Abutilon theophrasti, = US
IPOHE, Ipomoea hederacea, = US
XANOR, Xanthium orientale, = US
AMARE, Amaranthus retroflexus, = US

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

20 DP-1 = 1 GLXMA 5-25-2016
42 DP-1 = 1 GLXMA 5-25-2016