

The Ohio State University

2 PASS SYSTEM FOR WEED CONTROL IN CORN WITH TOLPYRALATE - MEDIUM OR FINE SOIL

Trial ID: 17-US-H-6-CG409 Location: Western Branch Big E Trial Year: 2017
 Protocol ID: 17-US-H-6-400CG VIS.MFS Investigator: Alan Raeder
 Project ID: SL-573 Study Director: MARK LOUX; OSU
 Sponsor Contact: Alan Raeder

General Trial Information

Study Director: MARK LOUX; OSU
Investigator: Alan Raeder

Trial Location

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

Latitude of LL Corner °: 39.85742 N
Longitude of LL Corner °: 83.67006 W
Altitude of LL Corner, Unit: 1091.00 FT
Conducted Under GLP: No
Conducted Under GEP: No
No.

Contacts

Study Director: MARK LOUX; OSU
Investigator: Alan Raeder

Cooperator/Landowner

Other Contacts

Crop Description

Crop 1: ZEAMX Zea mays
Variety: SC10AQ96 **BBCH Scale:** BCOR
Description: Seed Consultants RR /LL

Planting Rate, Unit: 32097 S/A
Depth, Unit: 1.75 IN
Row Spacing, Unit: 30 IN

Planting Date: 4-25-2017
Planting Method: PLANTD planted
Planting Equipment: FPP Finger Pickup Planter

Soil Temperature, Unit: 56 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:** CHEAL *Chenopodium album*
Common Name: common lambsquarters

Pest 4 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT2 **Treatments:** 10
Replications: 4
No. Previous Crop Year
 1. Soybean 2016

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

Maintenance

No.

Soil Description

Description Name: Big E
% OM: 2.8 **Texture:** SICL silty clay loam
pH: 5.9 **Soil Name:** Kokomo
CEC: 17.44 **Fert. Level:** G good
Soil Drainage: G good

Additional Measured Elements

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Application Description

	A	B
Application Date:	4-25-2017	6-1-2017
Appl. Start Time:	12:30 PM	9:45 AM
Appl. Stop Time:	1:00 PM	10:05 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Application Placement:	BROSOI	BROFOL
Applied By:	Loux	Ackley
Air Temperature, Unit:	72 f	67 F
% Relative Humidity:	55	46
Wind Velocity, Unit:	7 MPH	5 MPH
Wind Direction:	ESE	NE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	56 F	58 F
Soil Moisture:	DRY	SLIDRY
% Cloud Cover:	5	0
Next Moisture Occurred On:	4-27-2017	6-4-2017
Time to Next Moisture, Unit:	2 DAY	3 DAY

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:		BBCH
Stage Majority, Percent:		14 80
Height, Unit:		8 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		13 100
Height, Unit:		5 IN
Height Minimum, Maximum:		4 6
Density, Unit:		132 m2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		19 100
Height, Unit:		13 IN
Height Minimum, Maximum:		12 15
Density, Unit:		13 m2
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:		18 100
Height, Unit:		5 IN
Height Minimum, Maximum:		4 6
Density, Unit:		9 m2
Pest 4 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:		14 100
Height, Unit:		2 IN
Height Minimum, Maximum:		1 3
Density, Unit:		1 m2

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Pest Type	ZEAMX				W Weed	W Weed	W Weed	W Weed
Pest Code	Corn	Corn	Corn	Corn	SETFA	AMBTR	CHEAL	SETFA
Pest Name	Giant foxtail				Giant foxtail	ragweed common	lambsq>	Giant foxtail
Crop Code	6-8-2017	6-14-201	6-14-201	6-14-201	6-14-2017	6-14-2017	6-14-2017	6-29-2017
Crop Name	7	7	7	7				
Rating Date	PHYCHL	PHYCHL	PHYNEC	PHSTU	CONTRO	CONTRO	CONTRO	CONTRO
Rating Type	1	1	1	1	1	1	1	1
Number of Subsamples	44	50	50	50	50	50	50	65
Days After First/Last Applic.	7	13	13	13	13	13	13	28
Trt-Eval Interval	0	0	0	0	0	0	0	0
Number of Decimals								

Trt No.	Treatment Name	Rate	Unit	Appl Code	1*	2*	3*	4*	5*	6*	7*	8*
7	DUAL II MAGNUM	1.67	pt/a	A	2 -	5 a	0 -	0 -	100 a	99 a	100 a	100 a
7	SHIELDDEX	1.03	fl oz/a	B								
7	AATREX	2	pt/a	B								
7	MSO	0.5	% v/v	B								
7	UAN	2.5	% v/v	B								
8	DUAL II MAGNUM	1.67	pt/a	A	5 -	5 a	0 -	0 -	100 a	98 a	99 a	100 a
8	SHIELDDEX	1.37	fl oz/a	B								
8	AATREX	2	pt/a	B								
8	MSO	0.5	% v/v	B								
8	UAN	2.5	% v/v	B								
9	DUAL II MAGNUM	1.67	pt/a	A	2 -	0 c	0 -	0 -	100 a	99 a	97 a	98 a
9	IMPACT	0.98	oz/a	B								
9	MSO	0.5	% v/v	B								
9	UAN	2.5	% v/v	B								
10	DUAL II MAGNUM	1.67	pt/a	A	1 -	1 bc	0 -	0 -	100 a	100 a	100 a	100 a
10	IMPACT	0.98	oz/a	B								
10	AATREX	2	pt/a	B								
10	MSO	0.5	% v/v	B								
10	UAN	2.5	% v/v	B								
LSD P=.05		2.6				1.3	.	.	3.2	9.3	12.8	6.9
Standard Deviation		1.8				0.9	0.0	0.0	2.2	6.4	8.9	4.8
CV		128.64				49.62	0.0	0.0	2.49	8.49	11.57	5.53
Bartlett's X2		5.204				5.142	0.0	0.0	0.008	18.674	18.349	5.416
P(Bartlett's X2)		0.635				0.273	.	.	0.931	0.017*	0.003*	0.247
Skewness		0.9593*				0.5578	.	.	-2.7338*	-1.4718*	-1.3819*	-2.4728*
Kurtosis		-0.7148				-1.5504*	.	.	5.8404*	0.3699	0.1267	4.814*
Replicate F		0.029				2.647	0.000	0.000	1.676	0.118	1.777	1.534
Replicate Prob(F)		0.9931				0.0692	1.0000	1.0000	0.1957	0.9488	0.1754	0.2285
Treatment F		2.224				21.064	0.000	0.000	799.108	146.388	80.017	169.352
Treatment Prob(F)		0.0525				0.0001	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	AMBTR	CHEAL	SETFA	AMBTR	CHEAL			
Pest Name	Giant ragweed common lambsqu>		Giant foxtail	Giant ragweed	common lambsqu>			
Crop Code								
Crop Name								
Rating Date	6-29-2017	6-29-2017	7-14-2017	7-12-2017	7-12-2017			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Number of Subsamples	1	1	1	1	1			
Days After First/Last Applic.	65 28	65 28	80 43	78 41	78 41			
Trt-Eval Interval	28 DA-B	28 DA-B	43 DA-B	43 DA-B	43 DA-B			
Number of Decimals	0	0	0	0	0			
Trt No.	Treatment Name	Rate	Appl Code	9*	10*	11*	12*	13*
1	NONTREATED			0 b	0 c	0 c	0 c	0 d
2	DUAL II MAGNUM	1.67 pt/a	A	0 b	0 c	68 b	0 c	0 d
3	DUAL II MAGNUM	1.67 pt/a	A	84 a	93 ab	97 a	78 b	85 bc
	3 SHIELDEX	0.854 fl oz/a	B					
	3 MSO	0.5 % v/v	B					
	3 UAN	2.5 % v/v	B					
4	DUAL II MAGNUM	1.67 pt/a	A	91 a	79 b	91 a	85 ab	80 c
	4 SHIELDEX	1.03 fl oz/a	B					
	4 MSO	0.5 % v/v	B					
	4 UAN	2.5 % v/v	B					
5	DUAL II MAGNUM	1.67 pt/a	A	87 a	93 ab	97 a	79 b	93 abc
	5 SHIELDEX	1.37 fl oz/a	B					
	5 MSO	0.5 % v/v	B					
	5 UAN	2.5 % v/v	B					
6	DUAL II MAGNUM	1.67 pt/a	A	95 a	100 a	99 a	93 a	100 a
	6 SHIELDEX	0.854 fl oz/a	B					
	6 AATREX	2 pt/a	B					
	6 MSO	0.5 % v/v	B					
	6 UAN	2.5 % v/v	B					

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMBTR	CHEAL	SETFA	AMBTR	CHEAL		
Pest Name	Giant ragweed common lambsqu>			Giant foxtail	Giant ragweed	common lambsqu>	
Crop Code							
Crop Name							
Rating Date	6-29-2017	6-29-2017	7-14-2017	7-12-2017	7-12-2017		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	65 28	65 28	80 43	78 41	78 41		
Trt-Eval Interval	28 DA-B	28 DA-B	43 DA-B	43 DA-B	43 DA-B		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate	Unit Code	9*	10*	11*	12*	13*
7 DUAL II MAGNUM	1.67 pt/a	A	94 a	100 a	100 a	93 a	100 a
7 SHIELDEX	1.03 fl oz/a	B					
7 AATREX	2 pt/a	B					
7 MSO	0.5 % v/v	B					
7 UAN	2.5 % v/v	B					
8 DUAL II MAGNUM	1.67 pt/a	A	93 a	100 a	95 a	87 ab	100 a
8 SHIELDEX	1.37 fl oz/a	B					
8 AATREX	2 pt/a	B					
8 MSO	0.5 % v/v	B					
8 UAN	2.5 % v/v	B					
9 DUAL II MAGNUM	1.67 pt/a	A	89 a	90 ab	95 a	92 a	95 ab
9 IMPACT	0.98 oz/a	B					
9 MSO	0.5 % v/v	B					
9 UAN	2.5 % v/v	B					
10 DUAL II MAGNUM	1.67 pt/a	A	89 a	99 a	100 a	87 ab	100 a
10 IMPACT	0.98 oz/a	B					
10 AATREX	2 pt/a	B					
10 MSO	0.5 % v/v	B					
10 UAN	2.5 % v/v	B					
LSD P=.05			10.9	14.9	12.8	12.9	14.0
Standard Deviation			7.5	10.3	8.8	8.9	9.6
CV			10.4	13.68	10.48	12.83	12.81
Bartlett's X2			8.738	11.338	33.109	7.568	4.677
P(Bartlett's X2)			0.272	0.023*	0.001*	0.372	0.197
Skewness			-1.409*	-1.3122*	-2.1726*	-1.3153*	-1.3187*
Kurtosis			0.2198	-0.0493	3.4906*	0.0487	-0.0345
Replicate F			1.486	1.605	1.441	1.936	2.037
Replicate Prob(F)			0.2407	0.2114	0.2526	0.1476	0.1324
Treatment F			103.567	61.006	49.624	68.882	69.778
Treatment Prob(F)			0.0001	0.0001	0.0001	0.0001	0.0001

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Pest Type

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

Pest Code

SETFA, Setaria faberi, Giant foxtail = US

AMBTR, Ambrosia trifida, Giant ragweed = US

CHEAL, Chenopodium album, common lambsquarters = US

Crop Code

ZEAMX, BCOR, Zea mays, Corn = US

Rating Type

PHYCHL = phytotoxicity - chlorosis

PHYNEC = phytotoxicity - necrosis /burn

CONTRO = control / burndown or knockdown