

The Ohio State University

Xtend gly-R giant ragweed efficacy

Trial ID: 17XTENDGRW Location: Trial Year: 2017
 Protocol ID: 17XTENDGRW 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:** USWARM US Warm Continental

Latitude of LL Corner °: 39.86036 N
Longitude of LL Corner °: 83.67316 W
Altitude of LL Corner, Unit: 1089.00 FT
Conducted Under GLP: No
Conducted Under GEP: No
No.

Contacts

Investigator: Dr. Mark M. Loux
Organization: The Ohio State University
Address: 2021 Coffey Road
City+State/Prov: Columbus, Ohio
Postal Code: 43210
Country: USA United States

Cooperator/Landowner

Other Contacts

Crop Description

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:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf
- Pest 5 Type:** W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed
- Pest 6 Type:** W **Code:** CHEAL *Chenopodium album*
Common Name: common lambsquarters
- Pest 7 Type:** W **Code:** POLPY *Persicaria pensylvanica*
Common Name: annual smartweed
- Pest 8 Type:** W **Code:** IPOHE *Ipomoea hederacea*
Common Name: ivy-leaf morning glory
- Pest 9 Type:** W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida

Site and Design

Treated Plot Width: 6.67 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT **Experimental Unit:** 1 PLOT plot
Treated Plot Area: 200.1 FT2 **Treatments:** 14 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOB Randomized Complete Block (RCB)
No. Previous Crop Year
 1. Corn 2016

Maintenance

No.	Date	Type	Maintenance Product Name	Form Conc	Form Unit	Form Type	Form Rate	Form Unit	Maintenance Rate	Maintenance Tank Mix
1.	6-15-2017	HERB	Select Max	0.97	LBA/GAL	EC	9	oz/a	yes	
2.	6-15-2017	ADJ	NIS	100	%	SL	0.25	% v/v	yes	

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Soil Description

Description Name: F-7 West
% OM: 3.8 **Texture:** SICL silty clay loam
pH: 7.2 **Soil Name:** Kokomo
CEC: 23.6 **Fert. Level:** G good
Soil Drainage: G good

Additional Measured Elements

Application Description

	A	B	C
Application Date:	6-12-2017	6-21-2017	7-3-2017
Appl. Start Time:	9:15 AM	8:40 AM	7:30 AM
Appl. Stop Time:	9:35 AM	9:00 AM	7:50 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	EPO	POST	LPO
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	Ackley	ACKLEY	Dobbels
Air Temperature, Unit:	81 F	71 F	67 F
% Relative Humidity:	55	63	84
Wind Velocity, Unit:	4 MPH	3.5 MPH	1 MPH
Wind Direction:	ENE	ENE	W
Dew Presence (Y/N):	N no	N no	Y yes
Soil Temperature, Unit:	72 F	64 F	68 F
Soil Moisture:	DRY	SLIWET	MOIST
% Cloud Cover:	30	35	5
Next Moisture Occurred On:	6-13-2017	6-23-2017	
Time to Next Moisture, Unit:	1 DAY	2 DAY	

Crop Stage At Each Application

B C

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Pest Stage At Each Application

	A		B		C	
Pest 1 Code, Type, Scale:	SETFA	W	SETFA	W	SETFA	W
Stage Majority, Percent:	14	100				
Height, Unit:	5	IN				
Height Minimum, Maximum:	4	5				
Density, Unit:	68	m2				
Pest 2 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:	16	100	19	100	19	100
Height, Unit:	5	IN	15	IN	5	IN
Height Minimum, Maximum:	4	6	12	18	4	6
Density, Unit:	35	m2	35	M2	3	M2
Pest 3 Code, Type, Scale:	AMARE	W	AMARE	W	AMARE	W
Stage Majority, Percent:	15	100	18	100	19	100
Height, Unit:	2.5	IN	7.5	IN	5	IN
Height Minimum, Maximum:	2	3	7	8	4	6
Density, Unit:	9	m2			9	M2
Pest 4 Code, Type, Scale:	ABUTH	W	ABUTH	W	ABUTH	W
Stage Majority, Percent:	15	100	18	100	16	100
Height, Unit:	2	IN	7.5	IN	6	IN
Height Minimum, Maximum:	1	3	7	8	5	8
Density, Unit:	5	m2	5	M2	5	M2
Pest 5 Code, Type, Scale:	AMBEL	W	AMBEL	W	AMBEL	W
Stage Majority, Percent:	14	100	19	100	16	100
Height, Unit:	3	IN	7.5	IN	4	IN
Height Minimum, Maximum:	2	4	7	8	3	4
Density, Unit:	1	M2	1	M2	1	M2
Pest 6 Code, Type, Scale:	CHEAL	W	CHEAL	W	CHEAL	W
Stage Majority, Percent:	16	100	19	100	19	100
Height, Unit:	2	IN	7.5	IN	6	IN
Height Minimum, Maximum:	1	3	7	8	4	7
Density, Unit:	56	m2	56	M2	40	M2
Pest 7 Code, Type, Scale:	POLPY	W	POLPY	W	POLPY	W
Stage Majority, Percent:	19	100	18	100	19	100
Diameter, Unit:					8	IN
Height, Unit:	5	IN	6	IN	3	IN
Height Minimum, Maximum:	4	6			3	4
Density, Unit:	8	m2	8	M2	8	M2
Pest 8 Code, Type, Scale:	IPOHE	W	IPOHE	W	IPOHE	W
Stage Majority, Percent:	17	80				
Height, Unit:	3	IN				
Height Minimum, Maximum:	2	4				
Density, Unit:	1	m2				
Pest 9 Code, Type, Scale:	SIDSP	W	SIDSP	W	SIDSP	W
Stage Majority, Percent:	15	100	15	100	16	100
Height, Unit:	1.5	IN	3	IN	3	IN
Height Minimum, Maximum:	1	2	2	3	2	3
Density, Unit:	19	m2	19	M2	19	M2

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Pest Type		W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code		AMBTR	AMBEL	CHEAL	AMARE	ABUTH	POLPY	SIDSP		
Pest Name		Giant ragweed		Common ragweed	lamb's quarters	Redroot pigweed	velvetleaf	annual smartweed	Prickly sida	
Rating Date		6-30-2017	6-30-2017	6-30-2017	6-30-2017	6-30-2017	6-30-2017	6-30-2017	6-30-2017	
Rating Type										
Number of Subsamples		1	1	1	1	1	1	1	1	
Days After First/Last Applic.		18 9	18 9	18 9	18 9	18 9	18 9	18 9	18 9	
Trt Treatment	Rate	Unit	Code	1	2	3	4	5	6	7
9 Xtendimax	0.25 lb ai/a	A		98.3 a	90.0 a	80.0 ab	65.0 bc	60.0 abc	36.7 bc	20.0 cd
9 Liberty	0.402 lb ai/a	A								
9 Liberty	0.402 lb ai/a	C								
9 N PAK AMS	2.5 % v/v	C								
10 Xtendimax	0.25 lb ai/a	B		56.7 e	67.5 a	56.7 cd	50.0 cd	36.7 d	63.3 a	25.0 cd
11 Xtendimax	0.5 lb ai/a	B		56.7 e	70.0 a	63.3 c	60.0 cd	36.7 d	65.0 a	30.0 bc
12 Xtendimax	0.25 lb ai/a	B		73.3 d	75.0 a	63.3 c	63.3 c	50.0 cd	30.0 bc	40.0 ab
12 Flexstar	0.235 lb ai/a	B								
13 Xtendimax	0.25 lb ai/a	B		91.7 abc	100.0 a	91.7 a	90.0 a	71.7 a	60.0 ab	50.0 a
13 Liberty	0.402 lb ai/a	B								
14 Untreated				0.0 f	0.0 b	0.0 e	0.0 e	0.0 e	0.0 d	0.0 e
LSD P=.05				9.31	29.09	13.14	15.99	14.29	21.94	11.64
Standard Deviation				5.55	12.83	7.83	9.53	8.48	12.44	6.91
CV				6.97	18.07	12.5	16.47	17.53	33.56	26.07
Bartlett's X2				9.841	0.424	7.307	5.58	3.814	6.39	2.117
P(Bartlett's X2)				0.364	0.809	0.837	0.849	0.702	0.495	0.977
Skewness				-1.9395*	-1.5136*	-1.0449*	-0.7848*	-0.9409*	0.1339	-0.3707
Kurtosis				3.5434*	1.2086	1.6885*	1.6702*	2.17*	-0.5273	0.5688
Replicate F				0.688	1.075	0.738	0.492	1.796	1.994	1.791
Replicate Prob(F)				0.5114	0.4231	0.4876	0.6172	0.1876	0.1757	0.1883
Treatment F				71.886	9.329	26.404	15.129	12.131	4.844	7.080
Treatment Prob(F)				0.0001	0.0221	0.0001	0.0001	0.0001	0.0038	0.0001

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Pest Code		AMBTR	AMBEL	CHEAL	AMARE	ABUTH	POLPY	SIDSP		
Pest Name		Giant ragweed		Common ragweed	lamb's ears	Redroot pigweed	velvetleaf	annual smartweed	Prickly sida	
Rating Date		7-25-2017		7-25-2017	7-25-2017	7-25-2017	7-25-2017	7-25-2017	7-25-2017	
Rating Type										
Number of Subsamples		1		1	1	1	1	1	1	
Days After First/Last Applic.		43 22		43 22	43 22	43 22	43 22	43 22	43 22	
Trt Treatment	Rate	Unit	Appl Code	8	9	10	11	12	13	14
9 Xtendimax	0.25 lb ai/a	A		86.7 abc	100.0 a	96.7 a	53.3 cd	26.7 ab	26.7 cde	40.0 ab
9 Liberty	0.402 lb ai/a	A								
9 Liberty	0.402 lb ai/a	C								
9 N PAK AMS	2.5 % v/v	C								
10 Xtendimax	0.25 lb ai/a	B		76.7 bc	90.0 ab	50.0 c	53.3 cd	40.0 a	33.3 cd	16.7 de
11 Xtendimax	0.5 lb ai/a	B		88.3 abc	100.0 a	56.7 bc	53.3 cd	40.0 a	30.0 cde	16.7 de
12 Xtendimax	0.25 lb ai/a	B		70.0 c	78.3 b	58.3 bc	40.0 cd	26.7 ab	26.7 cde	6.7 de
12 Flexstar	0.235 lb ai/a	B								
13 Xtendimax	0.25 lb ai/a	B		78.3 bc	100.0 a	68.3 b	56.7 bcd	40.0 a	53.3 bc	23.3 bcd
13 Liberty	0.402 lb ai/a	B								
14 Untreated				0.0 d	0.0 c	0.0 e	0.0 e	0.0 c	0.0 e	0.0 e
LSD P=.05				19.81	12.26	14.37	24.11	14.49	30.11	19.81
Standard Deviation				11.81	7.30	8.56	14.37	8.63	17.83	11.81
CV				13.87	8.06	15.17	27.43	27.89	44.86	51.65
Bartlett's X2				22.308	1.535	4.337	8.669	6.491	15.704	10.488
P(Bartlett's X2)				0.002*	0.215	0.959	0.652	0.592	0.152	0.573
Skewness				-2.2657*	-3.0104*	-0.3957	0.1264	-0.5858	0.79*	0.6268
Kurtosis				4.6345*	7.9458*	-0.0393	0.19	1.4744*	0.0007	-0.6747
Replicate F				0.232	1.216	1.778	0.565	0.415	0.559	1.589
Replicate Prob(F)				0.7945	0.3126	0.1889	0.5751	0.6645	0.5792	0.2234
Treatment F				15.204	40.368	27.595	7.886	4.501	5.041	4.962
Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001	0.0005	0.0004	0.0003

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Pest Type		W Weed	W Weed
Pest Code		AMBTR	AMBTR
Pest Name		Giant ragweed	Giant ragweed
Rating Date		7-25-2017	7-25-2017
Rating Type		new plants	old plants
Number of Subsamples		1	1
Days After First/Last Applic.		43 22	43 22
Trt No.	Treatment Name	Rate	Appl Code
		Rate Unit	
			15
			16
1	Xtendimax	0.5 lb ai/a A	0.7 -
1	Xtendimax	0.25 lb ai/a C	0.0 b
2	Xtendimax	0.5 lb ai/a A	0.0 -
2	Cobra	0.125 lb ai/a C	0.0 b
2	COC	1 % v/v C	
3	Xtendimax	0.25 lb ai/a A	0.0 -
3	Cobra	0.125 lb ai/a C	0.0 b
3	COC	1 % v/v C	
4	Xtendimax	0.5 lb ai/a A	1.3 -
4	Liberty	0.402 lb ai/a C	0.0 b
4	N PAK AMS	2.5 % v/v C	
5	Xtendimax	0.25 lb ai/a A	0.0 -
5	Liberty	0.402 lb ai/a C	0.0 b
5	N PAK AMS	2.5 % v/v C	
6	Xtendimax	0.25 lb ai/a A	0.0 -
6	Flexstar	0.235 lb ai/a A	0.0 b
6	Cobra	0.125 lb ai/a C	
6	COC	1 % v/v C	
7	Xtendimax	0.25 lb ai/a A	0.0 -
7	Flexstar	0.235 lb ai/a A	0.0 b
7	Liberty	0.402 lb ai/a C	
7	N PAK AMS	2.5 % v/v C	
8	Xtendimax	0.25 lb ai/a A	0.0 -
8	Liberty	0.402 lb ai/a A	0.0 b
8	Cobra	0.125 lb ai/a C	
8	COC	1 % v/v C	

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Pest Type	W Weed	W Weed
Pest Code	AMBTR	AMBTR
Pest Name	Giant ragweed	Giant ragweed
Rating Date	7-25-2017	7-25-2017
Rating Type	new plants	old plants
Number of Subsamples	1	1
Days After First/Last Applic.	43 22	43 22

Trt No.	Treatment Name	Rate	Unit	Appl Code	15	16
9	Xtendimax	0.25 lb ai/a	A		0.0 -	0.0 b
9	Liberty	0.402 lb ai/a	A			
9	Liberty	0.402 lb ai/a	C			
9	N PAK AMS	2.5 % v/v	C			
10	Xtendimax	0.25 lb ai/a	B		0.0 -	2.0 b
11	Xtendimax	0.5 lb ai/a	B		0.0 -	0.0 b
12	Xtendimax	0.25 lb ai/a	B		0.0 -	3.3 b
12	Flexstar	0.235 lb ai/a	B			
13	Xtendimax	0.25 lb ai/a	B		0.0 -	0.0 b
13	Liberty	0.402 lb ai/a	B			
14	Untreated				0.0 -	19.3 a
LSD P=.05					1.18	6.07
Standard Deviation					0.70	3.62
CV					490.42	205.24
Bartlett's X2					0.877	7.091
P(Bartlett's X2)					0.349	0.029*
Skewness					5.1113*	4.6028*
Kurtosis					26.9802*	23.302*
Replicate F					0.582	1.580
Replicate Prob(F)					0.5658	0.2250
Treatment F					0.910	6.096
Treatment Prob(F)					0.5548	0.0001

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Pest Type

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

Pest Code

AMBTR, Ambrosia trifida, Giant ragweed = US
AMBEL, Ambrosia artemisiifolia, Common ragweed = US
CHEAL, Chenopodium album, common lambsquarters = US
AMARE, Amaranthus retroflexus, Redroot pigweed = US
ABUTH, Abutilon theophrasti, velvetleaf = US
POLPY, Persicaria pensylvanica, annual smartweed = US
SIDSP, Sida spinosa, Prickly sida = US