

# The Ohio State University

Trial ID: xtenyld      Location:      Trial Year: 2017  
 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:** USWARM US Warm Continental

**Latitude of LL Corner** °: 39.85939    N  
**Longitude of LL Corner** °: 83.67412    W  
**Altitude of LL Corner, Unit:** 908.00 FT

**Conducted Under GLP:** No  
**Conducted Under GEP:** No

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

### Crop Description

**Crop 1:** GLXMA Glycine max      Soybean  
**Variety:** AG 36X6  
**Description:** RoundUp Ready

**Planting Rate, Unit:** 175000    S/A  
**Depth, Unit:** 1    IN  
**Row Spacing, Unit:** 15    IN  
**Soil Moisture:** GOOD      good  
**Seed Bed:** GOOD

**Planting Date:** May-31-2017  
**Planting Method:** PLANTD planted  
**Planting Equipment:** FE      Field Equipment  
**Emergence Date:** Jun-8-2017

**Crop 2:** GLXMA Glycine max      Soybean  
**Variety:** Seed Consultants SC 3357LL  
**Description:** Liberty Link

**Planting Rate, Unit:** 175000    S/A  
**Depth, Unit:** 1    IN  
**Row Spacing, Unit:** 15    IN  
**Soil Moisture:** GOOD      good  
**Seed Bed:** GOOD

**Planting Date:** May-31-2017  
**Planting Method:** PLANTD planted  
**Planting Equipment:** FE      Field Equipment  
**Emergence Date:** Jun-8-2017

### 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:** XANST Xanthium strumarium  
**Common Name:** Common cocklebur

**Pest 4 Type:** W    **Code:** IPOHE Ipomoea hederacea  
**Common Name:** ivy-leaf morning glory

**Pest 5 Type:** W    **Code:** HIBTR Hibiscus trionum  
**Common Name:** Venice mallow

### Site and Design

**Treated Plot Width:** 10 FT  
**Treated Plot Length:** 30 FT  
**Treated Plot Area:** 300 FT<sup>2</sup>    **Treatments:** 8  
**Replications:** 4

**Site Type:** FIELD    field  
**Experimental Unit:** 1    PLOT    plot  
**Tillage Type:** CONTIL conventional-till  
**Study Design:** SPLPLO Split-Plot

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## Soil Description

**Description Name:** G-6  
**% OM:** 2.2      **Texture:** SICL silty clay loam  
**pH:** 6.3      **Soil Name:** Crosby  
**CEC:** 13.6      **Fert. Level:** G good  
**Soil Drainage:** G good

## Application Description

	A	B	C
<b>Application Date:</b>	Jun-1-2017	Jun-21-2017	Jun-21-2017
<b>Appl. Start Time:</b>	9:15 AM	9:30 AM	9:30 AM
<b>Appl. Stop Time:</b>	9:30 AM	9:50 AM	9:50 AM
<b>Application Method:</b>	SPRAY	SPRAY	SPRAY
<b>Application Placement:</b>	BROFOL	BROFOL	BROFOL
<b>Applied By:</b>	ACKLEY	LAMB	REEB
<b>Air Temperature, Unit:</b>	67 F	71 F	71 F
<b>% Relative Humidity:</b>	46	63	63
<b>Wind Velocity, Unit:</b>	3 MPH	3.5 MPH	3.5 MPH
<b>Wind Direction:</b>	NE	ENE	ENE
<b>Dew Presence (Y/N):</b>	N no	N no	N no
<b>Soil Temperature, Unit:</b>	58 F	64 F	64 F
<b>Soil Moisture:</b>	GOOD	SLIWET	SLIWET
<b>% Cloud Cover:</b>	30	35	35
<b>Next Moisture Occurred On:</b>	Jun-4-2017	Jun-23-2017	Jun-23-2017
<b>Time to Next Moisture, Unit:</b>	3 DAY	2 DAY	2 DAY

## Crop Stage At Each Application

	A	B	C
<b>Crop 1 Code, BBCH Scale:</b>	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
<b>Stage Scale Used:</b>		BBCH	
<b>Stage Majority, Percent:</b>		12 100	
<b>Height, Unit:</b>		4 IN	
<b>Crop 2 Code, BBCH Scale:</b>	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
<b>Stage Scale Used:</b>		BBCH	
<b>Stage Majority, Percent:</b>		12 100	
<b>Height, Unit:</b>		4 IN	

## Pest Stage At Each Application

	A	B	C
<b>Pest 1 Code, Type, Scale:</b>	SETFA W	SETFA W	SETFA W
<b>Stage Majority, Percent:</b>		13 100	13 100
<b>Height, Unit:</b>		3 IN	3 IN
<b>Pest 2 Code, Type, Scale:</b>	AMBTR W	AMBTR W	AMBTR W
<b>Stage Majority, Percent:</b>		16 100	16 100
<b>Height, Unit:</b>		5 IN	5 IN
<b>Pest 3 Code, Type, Scale:</b>	XANST W	XANST W	XANST W
<b>Stage Majority, Percent:</b>		14 100	14 100
<b>Height, Unit:</b>		5.5 IN	5.5 IN
<b>Pest 4 Code, Type, Scale:</b>	IPOHE W	IPOHE W	IPOHE W
<b>Stage Majority, Percent:</b>		12 100	12 100
<b>Height, Unit:</b>		2 IN	2 IN
<b>Pest 5 Code, Type, Scale:</b>	HIBTR W	HIBTR W	HIBTR W
<b>Stage Majority, Percent:</b>		13 100	13 100
<b>Height, Unit:</b>		1 IN	1 IN

## Application Equipment

	A	B	C
<b>Appl. Equipment:</b>	10' BACKPACK	10' BACKPACK	10' BACKPACK
<b>Equipment Type:</b>	BACCAI	BACCAI	BACCAI
<b>Operation Pressure, Unit:</b>	44 PSI	46 PSI	44 PSI
<b>Nozzle Type:</b>	AIXR	TTI	AIXR
<b>Nozzle Size:</b>	11015	11015	11015
<b>Nozzle Spacing, Unit:</b>	18 IN	18 IN	18 IN
<b>Nozzles/Row:</b>	6	4	6
<b>Boom Length, Unit:</b>	10 FT	10 FT	10 FT
<b>Boom Height, Unit:</b>	20 IN	20 IN	20 IN
<b>Ground Speed, Unit:</b>	3 MPH	3 MPH	3 MPH
<b>Carrier:</b>	WATER	WATER	WATER
<b>Spray Volume, Unit:</b>	15 gal/ac	15 gal/ac	15 gal/ac
<b>Mix Size, Unit:</b>	2 liters	2 liters	2 liters
<b>Propellant:</b>	COMCO2	COMCO2	COMCO2

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<b>Date</b>	<b>By</b>	<b>Notes</b>
Aug-1-2017	Reeb/Dobble	Overlayed with Rounup and Liberty on respective plots to clean up for harvest

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Pest Type	O Other	W Weed	W Weed	W Weed	W Weed
Pest Code		SETFA	ECHCG	AMBTR	AMARE
Pest Name		Giant foxtail	Common barnyar>	Giant ragweed	Redroot pigweed
Crop Code	GLXMA				
Crop Name	Soybean				
Rating Date	Jul-20-2017	Jul-20-2017	Jul-20-2017	Jul-20-2017	Jul-20-2017
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	49 29	49 29	49 29	49 29	49 29
Days After Emergence	42 DE-1	42 DE-1	42 DE-1	42 DE-1	42 DE-1

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	1	2	3	4	5
1	RRX				0.0 a	0.0 d	0.0 c	0.0 c	0.0 b
1	UTC								
2	RRX				0.0 a	99.5 a	97.8 a	97.5 a	100.0 a
2	1								
2	Rowell FX	3.5 oz/a		A					
2	Intact	0.5 % v/v		B					
2	Xtendimax	22 oz/a		B					
2	Roundup PowerMax	32 oz/a		B					
3	RRX				0.0 a	99.5 a	99.0 a	96.3 a	100.0 a
3	2								
3	Rowell FX	3.5 oz/a		A					
3	Xtendimax	22 oz/a		A					
3	Intact	0.5 % v/v		B					
3	Xtendimax	22 oz/a		B					
3	Roundup PowerMax	32 oz/a		B					
4	RRX				0.0 a	98.5 ab	98.3 a	95.8 a	100.0 a
4	3								
4	Rowell FX	3.5 oz/a		A					
4	Xtendimax	22 oz/a		A					
4	Intact	0.5 % v/v		B					
4	Xtendimax	22 oz/a		B					
4	Roundup PowerMax	32 oz/a		B					
4	Warrant	48 oz/a		B					
5	LL				0.0 a	0.0 d	0.0 c	0.0 c	0.0 b
5	UTC								
6	LL				0.0 a	97.3 b	98.5 a	66.3 b	100.0 a
6	1								
6	Valor XLT	3.5 oz/a		A					
6	Liberty	29 oz/a		C					
7	LL				0.0 a	94.5 c	94.5 b	58.8 b	100.0 a
7	2								
7	Authority XL	6.4 oz/a		A					
7	Liberty	8.5 oz ai/a		C					
7	N-pak ams	1.5 qt/a		C					

Means followed by same letter or symbol 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.  
 Could not calculate LSD (% mean diff) for columns 1,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24 because error mean square = 0.

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Pest Type	O Other	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	ECHCG	AMBTR	AMARE	
Pest Name	Giant foxtail Common barnyar> Giant ragweed Redroot pigweed				
Crop Code	GLXMA				
Crop Name	Soybean				
Rating Date	Jul-20-2017	Jul-20-2017	Jul-20-2017	Jul-20-2017	Jul-20-2017
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	49 29	49 29	49 29	49 29	49 29
Days After Emergence	42 DE-1	42 DE-1	42 DE-1	42 DE-1	42 DE-1
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	
					1 2 3 4 5
8 LL					0.0 a 97.3 b 96.5 ab 58.8 b 100.0 a
8 3					
8 Authority XL	6.4 oz/a			A	
8 Liberty	29 oz/a			C	
8 Zidua	2 oz/a			C	
LSD P=.05					. 2.14 2.83 18.22 .
Standard Deviation					0.00 1.44 1.90 12.26 0.00
CV					0.0 1.96 2.61 20.73 0.0
Bartlett's X2					0.0 7.594 7.462 13.447 0.0
P(Bartlett's X2)					. 0.18 0.188 0.02* .
Replicate F					0.000 2.517 2.678 1.121 0.000
Replicate Prob(F)					1.0000 0.0908 0.0779 0.3666 1.0000
Treatment F					0.000 3962.511 2246.123 42.700 0.000
Treatment Prob(F)					1.0000 0.0001 0.0001 0.0001 1.0000

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Pest Type		W Weed	W Weed																				
Pest Code		CHEAL	IPOHE																				
Pest Name		common lambsqu> ivy-leaf morni>																					
Crop Code																							
Crop Name																							
Rating Date		Jul-20-2017	Jul-20-2017																				
Rating Type		CONTRO	CONTRO																				
Rating Unit		%	%																				
Number of Subsamples		1	1																				
Days After First/Last Applic.		49 29	49 29																				
Days After Emergence		42 DE-1	42 DE-1																				
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	RRX				0.0 b	0.0 b																	
1	UTC																						
2	RRX				100.0 a	100.0 a																	
2	1																						
2	Rowell FX	3.5 oz/a		A																			
2	Intact	0.5 % v/v		B																			
2	Xtendimax	22 oz/a		B																			
2	Roundup PowerMax	32 oz/a		B																			
3	RRX				100.0 a	100.0 a																	
3	2																						
3	Rowell FX	3.5 oz/a		A																			
3	Xtendimax	22 oz/a		A																			
3	Intact	0.5 % v/v		B																			
3	Xtendimax	22 oz/a		B																			
3	Roundup PowerMax	32 oz/a		B																			
4	RRX				100.0 a	100.0 a																	
4	3																						
4	Rowell FX	3.5 oz/a		A																			
4	Xtendimax	22 oz/a		A																			
4	Intact	0.5 % v/v		B																			
4	Xtendimax	22 oz/a		B																			
4	Roundup PowerMax	32 oz/a		B																			
4	Warrant	48 oz/a		B																			
5	LL				0.0 b	0.0 b																	
5	UTC																						
6	LL				100.0 a	100.0 a																	
6	1																						
6	Valor XLT	3.5 oz/a		A																			
6	Liberty	29 oz/a		C																			
7	LL				100.0 a	100.0 a																	
7	2																						
7	Authority XL	6.4 oz/a		A																			
7	Liberty	8.5 oz ai/a		C																			
7	N-pak ams	1.5 qt/a		C																			

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Pest Type O Other  
 Pest Code  
 Pest Name  
 Crop Code  
 Crop Name  
 Rating Date  
 Rating Type  
 Rating Unit  
 Number of Subsamples 1  
 Days After First/Last Applic.  
 Days After Emergence

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	24
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1 RRX  
 1 UTC

2 RRX  
 2 1

2	Rowell FX	3.5 oz/a		A	
2	Intact	0.5 % v/v		B	
2	Xtendimax	22 oz/a		B	
2	Roundup PowerMax	32 oz/a		B	

3 RRX  
 3 2

3	Rowell FX	3.5 oz/a		A	
3	Xtendimax	22 oz/a		A	
3	Intact	0.5 % v/v		B	
3	Xtendimax	22 oz/a		B	
3	Roundup PowerMax	32 oz/a		B	

4 RRX  
 4 3

4	Rowell FX	3.5 oz/a		A	
4	Xtendimax	22 oz/a		A	
4	Intact	0.5 % v/v		B	
4	Xtendimax	22 oz/a		B	
4	Roundup PowerMax	32 oz/a		B	
4	Warrant	48 oz/a		B	

5 LL  
 5 UTC

6 LL  
 6 1

6	Valor XLT	3.5 oz/a		A	
6	Liberty	29 oz/a		C	

7 LL  
 7 2

7	Authority XL	6.4 oz/a		A	
7	Liberty	8.5 oz ai/a		C	
7	N-pak ams	1.5 qt/a		C	

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Pest Type O Other  
 Pest Code  
 Pest Name  
 Crop Code  
 Crop Name  
 Rating Date  
 Rating Type  
 Rating Unit  
 Number of Subsamples 1  
 Days After First/Last Applic.  
 Days After Emergence

Trt No. Name	Treatment	Other Rate	Other Rate	Appl Unit Code	24
8 LL					
8 3					
8 Authority XL		6.4 oz/a		A	
8 Liberty		29 oz/a		C	
8 Zidua		2 oz/a		C	

LSD P=.05 .  
 Standard Deviation .  
 CV .  
 Bartlett's X2 .  
 P(Bartlett's X2) .

Replicate F  
 Replicate Prob(F)  
 Treatment F  
 Treatment Prob(F)

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Project ID:      Study Director:  
Sponsor Contact:

Pest Type

O, Other, G-BYRO7, G-OthStg = Other animal or nematode  
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, Giant foxtail = US  
ECHCG, Echinochloa crus-galli, Common barnyard grass = US  
AMBTR, Ambrosia trifida, Giant ragweed = US  
AMARE, Amaranthus retroflexus, Redroot pigweed = US  
CHEAL, Chenopodium album, common lambsquarters = US  
IPOHE, Ipomoea hederacea, ivy-leaf morning glory = US

Crop Code

GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

PHYGEN = phytotoxicity - general / injury  
CONTRO = control / burndown or knockdown

Rating Unit

% = percent