

The Ohio State University

Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS Location: Trial Year: 2016
 Protocol ID: 16-TPAC-BufferZone Investigator: Dr. Mark M. Loux
 Project ID: Study Director:
 Sponsor Contact:

General Trial Information

Study Director: Bryan Reeb
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 °: 39.85703 N
Longitude of LL Corner °: 83.6701 W
Altitude of LL Corner, Unit: 1084.00 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 Soybean
Variety: AG29X6
Description: Asgrow RRX

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:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 3 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters

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

Pest 5 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf

Pest 6 Type: W **Code:** HIBTR *Hibiscus trionum*
Common Name: Venice mallow

Pest 7 Type: W **Code:** IPOHE *Ipomoea hederacea*
Common Name: Ivyleaf morningglory

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)

No. Previous Crop Year
 1. Corn 2015

Soil Description

Description Name: BIG E
% OM: 2.2 **Texture:** SICL silty clay loam
pH: 6.1 **Soil Name:** KOKOMO SILTY CLAY LOAM
CEC: 14 **Fert. Level:** G good
Soil Drainage: G good

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	Application Description			
	A	B	C	D
Application Date:	5-25-2016	6-14-2016	6-24-2016	6-28-2016
Appl. Start Time:	3:00 PM	9:10 AM	8:00 AM	8:45 AM
Appl. Stop Time:	3:15 PM	9:20 AM	8:15 AM	9:00 AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	POST	POST	LPO
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL
Applied By:	LAMB	Bolte	REEB	Bolte
Air Temperature, Unit:	79 F	74 f	69 F	70 F
% Relative Humidity:	50	41	78	72
Wind Velocity, Unit:	12 MPH	5 MPH	5 MPH	5 MPH
Wind Direction:	S	ENE	ENE	NW
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	66 F	71 F	69 F	69 F
Soil Moisture:	DRY	DRY	SLIDRY	MOIST
% Cloud Cover:	75	20	20	0
Next Moisture Occurred On:	5-29-2016	6-15-2016	6-26-2016	7-1-2016
Time to Next Moisture, Unit:	4 DAY	1 DAY	2 DAYS	3 DAY

	Crop Stage At Each Application							
	A		B		C		D	
	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY
Crop 1 Code, BBCH Scale:	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY
Stage Scale Used:	BBCH		BBCH		BBCH		BBCH	
Stage Majority, Percent:			13	100	14	100	15	100
Height, Unit:			3	IN	7	IN	12	IN

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Pest Stage At Each Application

	A		B		C		D	
Pest 1 Code, Type, Scale:	SETFA	W	SETFA	W	SETFA	W	SETFA	W
Stage Majority, Percent:			12	90	16	60	23	100
Stage Minimum, Percent:			12	90	19	40		
Stage Maximum, Percent:			13	10	16	60		
Height, Unit:			3	IN	7	IN	12	IN
Height Minimum, Maximum:			2	4	4	10	8	12
Density, Unit:			365	M2	365	M2	125	M2
Pest 2 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:			14	90	19	100		
Stage Minimum, Percent:			14	90				
Stage Maximum, Percent:			16	10				
Height, Unit:			3	IN	16	IN		
Height Minimum, Maximum:			2	4	12	18		
Density, Unit:			6	M2	6	M2		
Pest 3 Code, Type, Scale:	CHEAL	W	CHEAL	W	CHEAL	W	CHEAL	W
Stage Majority, Percent:			14	90	17	60	19	100
Stage Minimum, Percent:			14	90	19	40		
Stage Maximum, Percent:			16	10	17	60		
Diameter, Unit:			1	IN				
Height, Unit:			1	IN	6	IN	6	IN
Height Minimum, Maximum:			0.5	1	4	6	4	7
Density, Unit:			3	M2	3	M2	0.25	M2
Pest 4 Code, Type, Scale:	AMARE	W	AMARE	W	AMARE	W	AMARE	W
Stage Majority, Percent:			12	100				
Diameter, Unit:			0.5	IN				
Height, Unit:			1	IN				
Height Minimum, Maximum:			0.5	1				
Density, Unit:			2	M2				
Pest 5 Code, Type, Scale:	ABUTH	W	ABUTH	W	ABUTH	W	ABUTH	W
Stage Majority, Percent:			12	90				
Stage Minimum, Percent:			12	90				
Stage Maximum, Percent:			13	10				
Diameter, Unit:			0.5	IN				
Height, Unit:			2	IN				
Height Minimum, Maximum:			1	2				
Density, Unit:			3	M2				
Pest 6 Code, Type, Scale:	HIBTR	W	HIBTR	W	HIBTR	W	HIBTR	W
Stage Majority, Percent:			12	100				
Height, Unit:			0.5	IN				
Height Minimum, Maximum:			0.25	0.5				
Density, Unit:			5	M2				
Pest 7 Code, Type, Scale:	IPOHE	W	IPOHE	W	IPOHE	W	IPOHE	W
Stage Majority, Percent:			12	100				
Diameter, Unit:			2	IN				
Height, Unit:			0.5	IN				
Height Minimum, Maximum:			0.5	1				
Density, Unit:			0.33	M2				

Application Equipment

	A		B		C		D	
Appl. Equipment:	10' BACKPACK		6 Foot TTI		6 Foot TTI		6 Foot TTI	
Equipment Type:	BACCAI		SPRBAC		SPRBAC		SPRBAC	
Operation Pressure, Unit:	48 PSI		48 PSI		48 PSI		48 PSI	
Nozzle Type:	AIXR		TTI		TTI		TTI	
Nozzle Size:	11015		110015		110015		110015	
Nozzle Spacing, Unit:	18 IN		18 IN		18 IN		18 IN	
Nozzles/Row:	6							
Boom Length, Unit:	10 FT		10 FT		10 FT		10 FT	
Boom Height, Unit:	20 IN		20 IN		20 IN		20 IN	
Ground Speed, Unit:	3 MPH		3 MPH		3 MPH		3 MPH	
Carrier:	WATER		WATER		WATER		WATER	
Spray Volume, Unit:	15 gal/ac		15 GPA		15 GPA		15 GPA	
Mix Size, Unit:	2 liters		1 Liters		1 Liters		1 Liters	
Propellant:	COMCO2		CO2		CO2		CO2	

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL	AMARE	ABUTH
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu	Redroot pigweed	velvetleaf
Crop Code	GLXMA				
Crop Name	Soybean				
Rating Date	6-14-2016	6-14-2016	6-14-2016	6-14-2016	6-14-2016 6-14-2016
Rating Type	PHYDEF	CONTRO	CONTRO	CONTRO	CONTRO CONTRO
Rating Unit	%	%	%	%	% %
Number of Subsamples	1	1	1	1	1 1
Days After First/Last Applic.	20 20	20 20	20 20	20 20	20 20 20 20
Trt-Eval Interval	0 DA-B	0 DA-B	0 DA-B	0 DA-B	0 DA-B 0 DA-B
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 No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	1*	2*	3*	4*	5*	6*
1	UNTREATED				0 b	0 c	0 b	0 d	0 b	0 b
2	NON-BUFFER				3 a	50 b	60 a	67 c	100 a	100 a
	ROWEL FX	4 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	WARRANT	3 pt/a		D						
	N-PAK AMS	2.5 % v/v		D						
3	NON-BUFFER				3 a	47 b	63 a	87 b	100 a	100 a
	ROWEL FX	4 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		B						
	WARRANT	3 pt/a		B						
	N-PAK AMS	2.5 % v/v		B						
	CLARITY	16 fl oz/a		D						
4	NON-BUFFER				3 a	78 a	60 a	100 a	100 a	100 a
	FIERCE XLT	4.5 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	WARRANT	3 pt/a		D						
	N-PAK AMS	2.5 % v/v		D						
5	NON-BUFFER				3 a	78 a	73 a	100 a	100 a	100 a
	FIERCE XLT	4.5 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		B						
	WARRANT	3 pt/a		B						
	N-PAK AMS	2.5 % v/v		B						
	CLARITY	16 fl oz/a		D						
6	BUFFER									
	ROWEL FX	4 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
7	BUFFER									
	FIERCE XLT	4.5 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
8	BUFFER									
	ROWEL FX	4 oz/a		A						
	TRICOR	5.33 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						

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.

Due to missing data, larger LSD values (col. 15: >=1.6 and <=1.9) are used for mean comparisons of treatment pairs with missing data.

* Adjusted means

Could not calculate LSD (% mean diff) for columns 1,5,6,7,8,12,13,14,19,27,28,33,34,35,41,42,43,44,48,49,50,51 because error mean square = 0.

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL	AMARE	ABUTH
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu	Redroot pigweed	velvetleaf
Crop Code	GLXMA				
Crop Name	Soybean				
Rating Date	6-14-2016	6-14-2016	6-14-2016	6-14-2016	6-14-2016 6-14-2016
Rating Type	PHYDEF	CONTRO	CONTRO	CONTRO	CONTRO CONTRO
Rating Unit	%	%	%	%	% %
Number of Subsamples	1	1	1	1	1 1
Days After First/Last Applic.	20 20	20 20	20 20	20 20	20 20 20 20
Trt-Eval Interval	0 DA-B	0 DA-B	0 DA-B	0 DA-B	0 DA-B 0 DA-B
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 No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	1*	2*	3*	4*	5*	6*
9	9 BUFFER									
	FIERCE XLT	4.5 oz/a		A						
	TRICOR	5.33 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
10	10 NON BUFFER				3 a	70 a	57 a	100 a	100 a	100 a
	FIERCE XLT	4.5 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	N-PAK AMS	2.5 % v/v		D						
	LSD P=.05					11.9	16.8	12.7		
	Standard Deviation				0.0	6.6	9.2	7.0	0.0	0.0
	CV				0.0	12.18	17.71	9.22	0.0	0.0
	Bartlett's X2				0.0	5.702	3.207	9.151	0.0	0.0
	P(Bartlett's X2)					0.223	0.361	0.01*		
	Skewness				-1.9558*	-1.0616	-1.3634*	-1.4754*	-1.9558*	-1.9558*
	Kurtosis				2.04	-0.0711	0.9749	0.788	2.04	2.04
	Replicate F				0.000	1.387	0.844	0.505	0.000	0.000
	Replicate Prob(F)				1.0000	0.2940	0.4584	0.6180	1.0000	1.0000
	Treatment F				0.000	61.677	24.104	95.103	0.000	0.000
	Treatment Prob(F)				1.0000	0.0001	0.0001	0.0001	1.0000	1.0000

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	HIBTR	SETFA	AMBTR	CHEAL	AMARE
Pest Name	Venice mallow	Giant foxtail	Giant ragweed	Common lambsqu>	Redroot pigweed
Crop Code		GLXMA			
Crop Name		Soybean			
Rating Date	6-14-2016	6-24-2016	6-24-2016	6-24-2016	6-24-2016
Rating Type	CONTRO	PHYDEF	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	20 20	30 10	30 10	30 10	30 10
Trt-Eval Interval	0 DA-B	0 DA-C	0 DA-C	0 DA-C	0 DA-C
Days After Emergence	13 DE-1	23 DE-1	23 DE-1	23 DE-1	23 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	7*	8*	9*	10*	11*	12*
1	UNTREATED					0 b				
2	NON-BUFFER					100 a				
	ROWEL FX	4 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	WARRANT	3 pt/a		D						
	N-PAK AMS	2.5 % v/v		D						
3	NON-BUFFER					100 a				
	ROWEL FX	4 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		B						
	WARRANT	3 pt/a		B						
	N-PAK AMS	2.5 % v/v		B						
	CLARITY	16 fl oz/a		D						
4	NON-BUFFER					100 a				
	FIERCE XLT	4.5 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	WARRANT	3 pt/a		D						
	N-PAK AMS	2.5 % v/v		D						
5	NON-BUFFER					100 a				
	FIERCE XLT	4.5 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		B						
	WARRANT	3 pt/a		B						
	N-PAK AMS	2.5 % v/v		B						
	CLARITY	16 fl oz/a		D						
6	BUFFER						0 -	57 -	50 -	87 -
	ROWEL FX	4 oz/a		A						100 -
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
7	BUFFER						0 -	67 -	60 -	87 -
	FIERCE XLT	4.5 oz/a		A						100 -
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
8	BUFFER						0 -	60 -	47 -	100 -
	ROWEL FX	4 oz/a		A						
	TRICOR	5.33 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						

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Pest Code	HIBTR		SETFA		AMBTR		CHEAL		AMARE	
Pest Name	Venice mallow		Giant foxtail		Giant ragweed		Common lambsqu>		Redroot pigweed	
Crop Code	GLXMA		GLXMA		GLXMA		GLXMA		GLXMA	
Crop Name	Soybean		Soybean		Soybean		Soybean		Soybean	
Rating Date	6-14-2016	6-24-2016	6-24-2016	6-24-2016	6-24-2016	6-24-2016	6-24-2016	6-24-2016	6-24-2016	6-24-2016
Rating Type	CONTRO		PHYDEF		CONTRO		CONTRO		CONTRO	
Rating Unit	%		%		%		%		%	
Number of Subsamples	1		1		1		1		1	
Days After First/Last Applic.	20	20	30	10	30	10	30	10	30	10
Trt-Eval Interval	0 DA-B		0 DA-C		0 DA-C		0 DA-C		0 DA-C	
Days After Emergence	13 DE-1		23 DE-1		23 DE-1		23 DE-1		23 DE-1	
Number of Decimals	0		0		0		0		0	
Trt Treatment No. Name	Other Rate	Other Rate	Unit	Code	7*	8*	9*	10*	11*	12*
9 BUFFER						0 -	73 -	57 -	100 -	100 -
FIERCE XLT	4.5 oz/a			A						
TRICOR	5.33 oz/a			A						
ROUNDUP POWERMAX	32 fl oz/a			C						
WARRANT ULTRA	3 pt/a			C						
N-PAK AMS	2.5 % v/v			C						
10 NON BUFFER					100 a					
FIERCE XLT	4.5 oz/a			A						
CLARITY	16 fl oz/a			B						
ROUNDUP POWERMAX	32 fl oz/a			D						
N-PAK AMS	2.5 % v/v			D						
LSD P=.05							18.8	28.5	26.6	
Standard Deviation					0.0	0.0	9.4	14.2	13.3	0.0
CV					0.0	0.0	14.69	26.7	14.29	0.0
Bartlett's X2					0.0	0.0	0.473	1.089	0.0	0.0
P(Bartlett's X2)					.	.	0.925	0.78	.	.
Skewness					-1.9558*	.	-0.167	0.1468	-2.0552*	.
Kurtosis					2.04	.	-1.0899	-0.98	2.64*	.
Replicate F					0.000	0.000	6.000	4.233	3.000	0.000
Replicate Prob(F)					1.0000	1.0000	0.0370	0.0714	0.1250	1.0000
Treatment F					0.000	0.000	1.844	0.548	1.000	0.000
Treatment Prob(F)					1.0000	1.0000	0.2398	0.6676	0.4547	1.0000

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ABUTH	HIBTR	SETFA	AMBTR	CHEAL
Pest Name	velvetleaf	Venice mallow	Giant foxtail	Giant ragweed	Common lambsqu>
Crop Code			GLXMA		
Crop Name			Soybean		
Rating Date	6-24-201	6-24-2016	6-28-2016	6-28-2016	6-28-2016
Rating Type	6				
Rating Unit	CONTRO	CONTRO	PHYDEF	CONTRO	CONTRO
Number of Subsamples	%	%	%	%	%
Days After First/Last Applic.	1	1	1	1	1
Trt-Eval Interval	30 10	30 10	34 4	34 4	34 4
Days After Emergence	0 DA-C	0 DA-C	0 DA-D	0DAC/14DAB	0DAC/14DAB
Number of Decimals	23 DE-1	23 DE-1	27 DE-1	27 DE-1	27 DE-1
	0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	13*	14*	15*	16*	17*	18*
1	UNTREATED						0 d			
2	NON-BUFFER						6 ab	47 b	100 -	87 -
	ROWEL FX	4 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	WARRANT	3 pt/a		D						
	N-PAK AMS	2.5 % v/v		D						
3	NON-BUFFER						6 ab	97 a	100 -	85 -
	ROWEL FX	4 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		B						
	WARRANT	3 pt/a		B						
	N-PAK AMS	2.5 % v/v		B						
	CLARITY	16 fl oz/a		D						
4	NON-BUFFER						4 bc	67 b	100 -	87 -
	FIERCE XLT	4.5 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	WARRANT	3 pt/a		D						
	N-PAK AMS	2.5 % v/v		D						
5	NON-BUFFER						7 a	100 a	98 -	97 -
	FIERCE XLT	4.5 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		B						
	WARRANT	3 pt/a		B						
	N-PAK AMS	2.5 % v/v		B						
	CLARITY	16 fl oz/a		D						
6	BUFFER				100 -	100 -				
	ROWEL FX	4 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
7	BUFFER				100 -	100 -				
	FIERCE XLT	4.5 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
8	BUFFER				100 -	100 -				
	ROWEL FX	4 oz/a		A						
	TRICOR	5.33 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						

The Ohio State University

Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS Location: Trial Year: 2016
 Protocol ID: 16-TPAC-BufferZone Investigator: Dr. Mark M. Loux
 Project ID: Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ABUTH	HIBTR	SETFA	AMBTR	CHEAL
Pest Name	velvetleaf	Venice mallow	Giant foxtail	Giant ragweed	Common lambsqu>
Crop Code			GLXMA		
Crop Name			Soybean		
Rating Date	6-24-201	6-24-2016	6-28-2016	6-28-2016	6-28-2016
Rating Type	6				
Rating Unit	CONTRO	CONTRO	PHYDEF	CONTRO	CONTRO
Number of Subsamples	%	%	%	%	%
Days After First/Last Applic.	1	1	1	1	1
Trt-Eval Interval	30 10	30 10	34 4	34 4	34 4
Days After Emergence	0 DA-C	0 DA-C	0 DA-D	0DAC/14DAB	0DAC/14DAB
Number of Decimals	23 DE-1	23 DE-1	27 DE-1	27 DE-1	27 DE-1
Trt No. Name	13*	14*	15*	16*	17*
Treatment	18*				
9 BUFFER	100 -	100 -			
FIERCE XLT	4.5 oz/a	A			
TRICOR	5.33 oz/a	A			
ROUNDUP POWERMAX	32 fl oz/a	C			
WARRANT ULTRA	3 pt/a	C			
N-PAK AMS	2.5 % v/v	C			
10 NON BUFFER			4 c	67 b	98 -
FIERCE XLT	4.5 oz/a	A			
CLARITY	16 fl oz/a	B			
ROUNDUP POWERMAX	32 fl oz/a	D			
N-PAK AMS	2.5 % v/v	D			
LSD P=.05	.	.	1.6	28.3	3.0
Standard Deviation	0.0	0.0	0.9	15.1	1.6
CV	0.0	0.0	20.09	19.99	1.59
Bartlett's X2	0.0	0.0	0.0	9.174	0.0
P(Bartlett's X2)	.	.	.	0.027*	.
Skewness	.	.	-0.944	-0.1533	-2.4048*
Kurtosis	.	.	0.3916	-1.9847	4.3491*
Replicate F	0.000	0.000	2.357	0.449	2.667
Replicate Prob(F)	1.0000	1.0000	0.1502	0.6537	0.1296
Treatment F	0.000	0.000	17.798	6.735	1.000
Treatment Prob(F)	1.0000	1.0000	0.0002	0.0112	0.4609

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Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS
 Protocol ID: 16-TPAC-BufferZone
 Project ID:

Location: Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	AMARE	ABUTH	HIBTR	SETFA	ECHCG					
Pest Name	Redroot pigweed	velvetleaf	Venice mallow	Giant foxtail	Common barnyar>					
Crop Code				GLXMA						
Crop Name				Soybean						
Rating Date	6-28-2016	6-28-2016	6-28-2016	7-8-2016	7-8-2016					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%					
Number of Subsamples	1	1	1	1	1					
Days After First/Last Applic.	34 4	34 4	34 4	44 10	44 10					
Trt-Eval Interval	0DAC/14DAB	0DAC/14DA	0DAC/14DAB	14 DA-C	14 DA-C					
		B								
Days After Emergence	27 DE-1	27 DE-1	27 DE-1	37 DE-1	37 DE-1					
Number of Decimals	0	0	0	0	0					
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	19*	20*	21*	22*	23*	24*
1	UNTREATED							0 b	0 c	0 c
2	NON-BUFFER				100 -	100 -	100 -	0 b	90 b	80 ab
	ROWEL FX	4 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	WARRANT	3 pt/a		D						
	N-PAK AMS	2.5 % v/v		D						
3	NON-BUFFER				100 -	100 -	100 -	0 b	98 a	93 a
	ROWEL FX	4 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		B						
	WARRANT	3 pt/a		B						
	N-PAK AMS	2.5 % v/v		B						
	CLARITY	16 fl oz/a		D						
4	NON-BUFFER				100 -	100 -	97 -	1 b	88 b	77 b
	FIERCE XLT	4.5 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	WARRANT	3 pt/a		D						
	N-PAK AMS	2.5 % v/v		D						
5	NON-BUFFER				100 -	100 -	100 -	1 b	97 a	95 a
	FIERCE XLT	4.5 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		B						
	WARRANT	3 pt/a		B						
	N-PAK AMS	2.5 % v/v		B						
	CLARITY	16 fl oz/a		D						
6	BUFFER							4 a	97 a	90 ab
	ROWEL FX	4 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
7	BUFFER							4 a	99 a	95 a
	FIERCE XLT	4.5 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
8	BUFFER							5 a	100 a	88 ab
	ROWEL FX	4 oz/a		A						
	TRICOR	5.33 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						

The Ohio State University

Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS
 Protocol ID: 16-TPAC-BufferZone
 Project ID:

Location: Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	AMARE	ABUTH	HIBTR	SETFA	ECHCG					
Pest Name	Redroot pigweed	velvetleaf	Venice mallow	Giant foxtail	Common barnyar>					
Crop Code				GLXMA						
Crop Name				Soybean						
Rating Date	6-28-2016	6-28-2016	6-28-2016	7-8-2016	7-8-2016					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%					
Number of Subsamples	1	1	1	1	1					
Days After First/Last Applic.	34 4	34 4	34 4	44 10	44 10					
Trt-Eval Interval	0DAC/14DAB	0DAC/14DA	0DAC/14DAB	14 DA-C	14 DA-C					
Days After Emergence	27 DE-1	27 DE-1	27 DE-1	37 DE-1	37 DE-1					
Number of Decimals	0	0	0	0	0					
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	19*	20*	21*	22*	23*	24*
9	BUFFER							5 a	99 a	90 ab
	FIERCE XLT	4.5 oz/a		A						
	TRICOR	5.33 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
10	NON BUFFER				100 -	95 -	100 -	0 b	100 a	87 ab
	FIERCE XLT	4.5 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	N-PAK AMS	2.5 % v/v		D						
LSD P=.05					.	7.3	4.9	1.5	4.5	15.5
Standard Deviation					0.0	3.9	2.6	0.9	2.6	9.0
CV					0.0	3.91	2.6	45.4	3.01	11.36
Bartlett's X2					0.0	0.0	0.0	0.603	5.509	4.272
P(Bartlett's X2)					.	.	.	0.896	0.48	0.748
Skewness					.	-3.873*	-3.873*	0.4179	-2.6868*	-2.1956*
Kurtosis					.	15.0*	15.0*	-1.6731*	5.8548*	4.1467*
Replicate F					0.000	1.000	1.000	2.250	1.098	3.409
Replicate Prob(F)					1.0000	0.4096	0.4096	0.1342	0.3550	0.0555
Treatment F					0.000	1.000	1.000	17.962	416.371	30.020
Treatment Prob(F)					1.0000	0.4609	0.4609	0.0001	0.0001	0.0001

The Ohio State University

Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS
 Protocol ID: 16-TPAC-BufferZone
 Project ID:

Location: Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	CHEAL	AMARE	ABUTH	HIBTR	SETFA
Pest Name	Giant Common lambsqu> Redroot pigweed velvetleaf Venice mallow Giant foxtail					
Crop Code						
Crop Name						
Rating Date	7-8-2016	7-8-2016	7-8-2016	7-8-2016	7-8-2016	7-11-2016
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Days After First/Last Applic.	44 10	44 10	44 10	44 10	44 10	47 13
Trt-Eval Interval	14 DA-C	14 DA-C	14 DA-C	14 DA-C	14 DA-C	14DAB/28DAC
Days After Emergence	37 DE-1	37 DE-1	37 DE-1	37 DE-1	37 DE-1	40 DE-1
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	25*	26*	27*	28*	29*	30*
1	UNTREATED				0 e	0 c	0 b	0 b	0 b	0 c
2	NON-BUFFER				100 a	100 a	100 a	100 a	100 a	92 b
	ROWEL FX	4 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	WARRANT	3 pt/a		D						
	N-PAK AMS	2.5 % v/v		D						
3	NON-BUFFER				100 a	100 a	100 a	100 a	100 a	98 a
	ROWEL FX	4 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		B						
	WARRANT	3 pt/a		B						
	N-PAK AMS	2.5 % v/v		B						
	CLARITY	16 fl oz/a		D						
4	NON-BUFFER				100 a	100 a	100 a	100 a	100 a	88 b
	FIERCE XLT	4.5 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	WARRANT	3 pt/a		D						
	N-PAK AMS	2.5 % v/v		D						
5	NON-BUFFER				100 a	100 a	100 a	100 a	100 a	97 a
	FIERCE XLT	4.5 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		B						
	WARRANT	3 pt/a		B						
	N-PAK AMS	2.5 % v/v		B						
	CLARITY	16 fl oz/a		D						
6	BUFFER				86 bcd	98 b	100 a	100 a	100 a	97 a
	ROWEL FX	4 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
7	BUFFER				94 ab	100 a	100 a	100 a	93 a	99 a
	FIERCE XLT	4.5 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
8	BUFFER				83 d	100 a	100 a	100 a	93 a	100 a
	ROWEL FX	4 oz/a		A						
	TRICOR	5.33 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						

The Ohio State University

Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS
 Protocol ID: 16-TPAC-BufferZone
 Project ID:

Location: Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	AMBTR	CHEAL	AMARE	ABUTH	HIBTR	SETFA				
Pest Name	Giant Common lambsqu> Redroot pigweed velvetleaf Venice mallow Giant foxtail									
Crop Code										
Crop Name										
Rating Date	7-8-2016	7-8-2016	7-8-2016	7-8-2016	7-8-2016	7-11-2016				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1				
Days After First/Last Applic.	44 10	44 10	44 10	44 10	44 10	47 13				
Trt-Eval Interval	14 DA-C	14 DA-C	14 DA-C	14 DA-C	14 DA-C	14DAB/28DAC				
Days After Emergence	37 DE-1	37 DE-1	37 DE-1	37 DE-1	37 DE-1	40 DE-1				
Number of Decimals	0	0	0	0	0	0				
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	25*	26*	27*	28*	29*	30*
9	BUFFER				84 cd	100 a	100 a	100 a	95 a	99 a
	FIERCE XLT	4.5 oz/a		A						
	TRICOR	5.33 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
10	NON BUFFER				93 abc	100 a	100 a	100 a	100 a	100 a
	FIERCE XLT	4.5 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	N-PAK AMS	2.5 % v/v		D						
LSD P=.05					9.6	1.6	.	.	8.9	4.7
Standard Deviation					5.6	0.9	0.0	0.0	5.2	2.7
CV					6.62	1.02	0.0	0.0	5.87	3.13
Bartlett's X2					12.223	0.0	0.0	0.0	0.196	6.425
P(Bartlett's X2)					0.016*	.	.	.	0.907	0.377
Skewness					-2.4097*	-2.8046*	-2.8091*	-2.8091*	-2.6495*	-2.6953*
Kurtosis					4.8548*	6.2913*	6.3081*	6.3081*	5.6741*	5.884*
Replicate F					3.877	1.000	0.000	0.000	3.768	1.466
Replicate Prob(F)					0.0398	0.3874	1.0000	1.0000	0.0430	0.2571
Treatment F					88.998	3587.667	0.000	0.000	108.543	385.659
Treatment Prob(F)					0.0001	0.0001	1.0000	1.0000	0.0001	0.0001

The Ohio State University

Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS
 Protocol ID: 16-TPAC-BufferZone
 Project ID:

Location: Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ECHCG	AMBTR	CHEAL	AMARE	ABUTH
Pest Name	Common barnyar>	Giant ragweed	Common lambsqu>	Redroot pigweed	velvetleaf
Crop Code					
Crop Name					
Rating Date	7-11-2016	7-11-2016	7-11-2016	7-11-2016	7-11-2016
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	47 13	47 13	47 13	47 13	47 13
Trt-Eval Interval	14DAB/28DAC	14DAB/28DAC	14DAB/28DAC	14DAB/28DAC	14DAB/28DAC
Days After Emergence	40 DE-1	40 DE-1	40 DE-1	40 DE-1	40 DE-1
Number of Decimals	0	0	0	0	0

Trt Treatment No. Name	Other Rate	Other Rate Unit	Appl Code	31*	32*	33*	34*	35*
1 UNTREATED				0 c	0 d	0 b	0 b	0 b
2 NON-BUFFER				83 ab	100 a	100 a	100 a	100 a
ROWEL FX	4 oz/a		A					
CLARITY	16 fl oz/a		B					
ROUNDUP POWERMAX	32 fl oz/a		D					
WARRANT	3 pt/a		D					
N-PAK AMS	2.5 % v/v		D					
3 NON-BUFFER				93 a	100 a	100 a	100 a	100 a
ROWEL FX	4 oz/a		A					
ROUNDUP POWERMAX	32 fl oz/a		B					
WARRANT	3 pt/a		B					
N-PAK AMS	2.5 % v/v		B					
CLARITY	16 fl oz/a		D					
4 NON-BUFFER				77 b	100 a	100 a	100 a	100 a
FIERCE XLT	4.5 oz/a		A					
CLARITY	16 fl oz/a		B					
ROUNDUP POWERMAX	32 fl oz/a		D					
WARRANT	3 pt/a		D					
N-PAK AMS	2.5 % v/v		D					
5 NON-BUFFER				95 a	100 a	100 a	100 a	100 a
FIERCE XLT	4.5 oz/a		A					
ROUNDUP POWERMAX	32 fl oz/a		B					
WARRANT	3 pt/a		B					
N-PAK AMS	2.5 % v/v		B					
CLARITY	16 fl oz/a		D					
6 BUFFER				90 ab	88 bc	100 a	100 a	100 a
ROWEL FX	4 oz/a		A					
ROUNDUP POWERMAX	32 fl oz/a		C					
WARRANT ULTRA	3 pt/a		C					
N-PAK AMS	2.5 % v/v		C					
7 BUFFER				95 a	95 ab	100 a	100 a	100 a
FIERCE XLT	4.5 oz/a		A					
ROUNDUP POWERMAX	32 fl oz/a		C					
WARRANT ULTRA	3 pt/a		C					
N-PAK AMS	2.5 % v/v		C					
8 BUFFER				88 ab	83 c	100 a	100 a	100 a
ROWEL FX	4 oz/a		A					
TRICOR	5.33 oz/a		A					
ROUNDUP POWERMAX	32 fl oz/a		C					
WARRANT ULTRA	3 pt/a		C					
N-PAK AMS	2.5 % v/v		C					

The Ohio State University

Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS
 Protocol ID: 16-TPAC-BufferZone
 Project ID:

Location: Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	ECHCG	AMBTR	CHEAL	AMARE	ABUTH				
Pest Name	Common barnyar>	Giant ragweed	Common lambsqu>	Redroot pigweed	velvetleaf				
Crop Code									
Crop Name									
Rating Date	7-11-2016	7-11-2016	7-11-2016	7-11-2016	7-11-2016				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1				
Days After First/Last Applic.	47 13	47 13	47 13	47 13	47 13				
Trt-Eval Interval	14DAB/28DAC	14DAB/28DAC	14DAB/28DAC	14DAB/28DAC	14DAB/28DAC				
Days After Emergence	40 DE-1	40 DE-1	40 DE-1	40 DE-1	40 DE-1				
Number of Decimals	0	0	0	0	0				
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	31*	32*	33*	34*	35*
9	BUFFER				90 ab	88 bc	100 a	100 a	100 a
	FIERCE XLT	4.5 oz/a	A						
	TRICOR	5.33 oz/a	A						
	ROUNDUP POWERMAX	32 fl oz/a	C						
	WARRANT ULTRA	3 pt/a	C						
	N-PAK AMS	2.5 % v/v	C						
10	NON BUFFER				87 ab	93 ab	100 a	100 a	100 a
	FIERCE XLT	4.5 oz/a	A						
	CLARITY	16 fl oz/a	B						
	ROUNDUP POWERMAX	32 fl oz/a	D						
	N-PAK AMS	2.5 % v/v	D						
	LSD P=.05				15.9	8.4	.	.	.
	Standard Deviation				9.2	4.9	0.0	0.0	0.0
	CV				11.58	5.79	0.0	0.0	0.0
	Bartlett's X2				3.879	4.727	0.0	0.0	0.0
	P(Bartlett's X2)				0.794	0.316	.	.	.
	Skewness				-2.2233*	-2.4893*	-2.8091*	-2.8091*	-2.8091*
	Kurtosis				4.2289*	5.1405*	6.3081*	6.3081*	6.3081*
	Replicate F				2.939	4.958	0.000	0.000	0.000
	Replicate Prob(F)				0.0786	0.0193	1.0000	1.0000	1.0000
	Treatment F				28.700	114.822	0.000	0.000	0.000
	Treatment Prob(F)				0.0001	0.0001	1.0000	1.0000	1.0000

The Ohio State University

Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS
 Protocol ID: 16-TPAC-BufferZone
 Project ID:

Location: Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	HIBTR	SETFA	ECHCG	AMBTR	CHEAL
Pest Name	Venice mallow	Giant foxtail	Common barnyar	Giant ragweed	Common lambsqu
Crop Code					
Crop Name					
Rating Date	7-11-2016	7-22-2016	7-22-2016	7-22-2016	7-22-2016
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	47 13	58 24	58 24	58 24	58 24
Trt-Eval Interval	14DAB/28DAC	28 DA-C	28 DA-C	28 DA-C	28 DA-C
Days After Emergence	40 DE-1	51 DE-1	51 DE-1	51 DE-1	51 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	36*	37*	38*	39*	40*
1	UNTREATED				0 b	0 c	0 c	0 c	0 c
2	NON-BUFFER				100 a	99 a	93 b	100 a	100 a
	ROWEL FX	4 oz/a		A					
	CLARITY	16 fl oz/a		B					
	ROUNDUP POWERMAX	32 fl oz/a		D					
	WARRANT	3 pt/a		D					
	N-PAK AMS	2.5 % v/v		D					
3	NON-BUFFER				100 a	100 a	97 ab	100 a	100 a
	ROWEL FX	4 oz/a		A					
	ROUNDUP POWERMAX	32 fl oz/a		B					
	WARRANT	3 pt/a		B					
	N-PAK AMS	2.5 % v/v		B					
	CLARITY	16 fl oz/a		D					
4	NON-BUFFER				100 a	93 b	93 b	100 a	100 a
	FIERCE XLT	4.5 oz/a		A					
	CLARITY	16 fl oz/a		B					
	ROUNDUP POWERMAX	32 fl oz/a		D					
	WARRANT	3 pt/a		D					
	N-PAK AMS	2.5 % v/v		D					
5	NON-BUFFER				100 a	100 a	98 ab	100 a	100 a
	FIERCE XLT	4.5 oz/a		A					
	ROUNDUP POWERMAX	32 fl oz/a		B					
	WARRANT	3 pt/a		B					
	N-PAK AMS	2.5 % v/v		B					
	CLARITY	16 fl oz/a		D					
6	BUFFER				100 a	100 a	98 ab	87 b	95 b
	ROWEL FX	4 oz/a		A					
	ROUNDUP POWERMAX	32 fl oz/a		C					
	WARRANT ULTRA	3 pt/a		C					
	N-PAK AMS	2.5 % v/v		C					
7	BUFFER				95 a	100 a	100 a	92 ab	100 a
	FIERCE XLT	4.5 oz/a		A					
	ROUNDUP POWERMAX	32 fl oz/a		C					
	WARRANT ULTRA	3 pt/a		C					
	N-PAK AMS	2.5 % v/v		C					
8	BUFFER				97 a	100 a	100 a	88 b	100 a
	ROWEL FX	4 oz/a		A					
	TRICOR	5.33 oz/a		A					
	ROUNDUP POWERMAX	32 fl oz/a		C					
	WARRANT ULTRA	3 pt/a		C					
	N-PAK AMS	2.5 % v/v		C					

The Ohio State University

Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS
 Protocol ID: 16-TPAC-BufferZone
 Project ID:

Location: Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	HIBTR	SETFA	ECHCG	AMBTR	CHEAL				
Pest Name	Venice mallow	Giant foxtail	Common barnyar>	Giant ragweed	Common lambsqu>				
Crop Code									
Crop Name									
Rating Date	7-11-2016	7-22-2016	7-22-2016	7-22-2016	7-22-2016				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1				
Days After First/Last Applic.	47 13	58 24	58 24	58 24	58 24				
Trt-Eval Interval	14DAB/28DAC	28 DA-C	28 DA-C	28 DA-C	28 DA-C				
Days After Emergence	40 DE-1	51 DE-1	51 DE-1	51 DE-1	51 DE-1				
Number of Decimals	0	0	0	0	0				
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	36*	37*	38*	39*	40*
9	BUFFER				98 a	100 a	100 a	92 ab	100 a
	FIERCE XLT	4.5 oz/a		A					
	TRICOR	5.33 oz/a		A					
	ROUNDUP POWERMAX	32 fl oz/a		C					
	WARRANT ULTRA	3 pt/a		C					
	N-PAK AMS	2.5 % v/v		C					
10	NON BUFFER				100 a	100 a	95 ab	95 ab	100 a
	FIERCE XLT	4.5 oz/a		A					
	CLARITY	16 fl oz/a		B					
	ROUNDUP POWERMAX	32 fl oz/a		D					
	N-PAK AMS	2.5 % v/v		D					
	LSD P=.05				5.3	1.7	6.0	9.7	4.7
	Standard Deviation				3.1	1.0	3.5	5.7	2.7
	CV				3.49	1.08	3.98	6.65	3.06
	Bartlett's X2				1.987	1.874	4.858	1.241	0.0
	P(Bartlett's X2)				0.37	0.171	0.433	0.871	.
	Skewness				-2.7514*	-2.7836*	-2.7187*	-2.513*	-2.7708*
	Kurtosis				6.0855*	6.213*	5.9749*	5.201*	6.156*
	Replicate F				3.115	1.000	2.679	4.448	1.000
	Replicate Prob(F)				0.0689	0.3874	0.0958	0.0269	0.3874
	Treatment F				305.615	3173.655	235.458	86.138	396.556
	Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001	0.0001

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Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS
 Protocol ID: 16-TPAC-BufferZone
 Project ID:

Location: Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMARE	ABUTH	HIBTR	SETFA	ECHCG	AMBTR
Pest Name	Redroot pigweed	velvetleaf	Venice mallow	Giant foxtail	Common barnyar	Giant ragweed
Crop Code						
Crop Name						
Rating Date	7-22-2016	7-22-2016	7-22-2016	7-26-2016	7-26-2016	7-26-2016
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Days After First/Last Applic.	58 24	58 24	58 24	62 28	62 28	62 28
Trt-Eval Interval	28 DA-C	28 DA-C	28 DA-C	28 DA-D	28 DA-D	28 DA-D
Days After Emergence	51 DE-1	51 DE-1	51 DE-1	55 DE-1	55 DE-1	55 DE-1
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	41*	42*	43*	44*	45*	46*
1	UNTREATED				0 b	0 b	0 b	0 b	0 c	0 c
2	NON-BUFFER				100 a	100 a	100 a	100 a	95 b	100 a
	ROWEL FX	4 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	WARRANT	3 pt/a		D						
	N-PAK AMS	2.5 % v/v		D						
3	NON-BUFFER				100 a	100 a	100 a	100 a	100 a	100 a
	ROWEL FX	4 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		B						
	WARRANT	3 pt/a		B						
	N-PAK AMS	2.5 % v/v		B						
	CLARITY	16 fl oz/a		D						
4	NON-BUFFER				100 a	100 a	100 a	100 a	100 a	100 a
	FIERCE XLT	4.5 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	WARRANT	3 pt/a		D						
	N-PAK AMS	2.5 % v/v		D						
5	NON-BUFFER				100 a	100 a	100 a	100 a	100 a	100 a
	FIERCE XLT	4.5 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		B						
	WARRANT	3 pt/a		B						
	N-PAK AMS	2.5 % v/v		B						
	CLARITY	16 fl oz/a		D						
6	BUFFER				100 a	100 a	100 a	100 a	100 a	88 b
	ROWEL FX	4 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
7	BUFFER				100 a	100 a	100 a	100 a	100 a	90 b
	FIERCE XLT	4.5 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
8	BUFFER				100 a	100 a	100 a	100 a	100 a	92 ab
	ROWEL FX	4 oz/a		A						
	TRICOR	5.33 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						

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Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS
 Protocol ID: 16-TPAC-BufferZone
 Project ID:

Location: Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	AMARE	ABUTH	HIBTR	SETFA	ECHCG	AMBTR				
Pest Name	Redroot pigweed velvetleaf Venice mallow Giant foxtail Common barnyar> Giant ragweed									
Crop Code										
Crop Name										
Rating Date	7-22-2016		7-22-2016		7-26-2016					
Rating Type	CONTRO		CONTRO		CONTRO					
Rating Unit	%		%		%					
Number of Subsamples	1		1		1					
Days After First/Last Applic.	58 24		58 24		62 28					
Trt-Eval Interval	28 DA-C		28 DA-C		28 DA-D					
Days After Emergence	51 DE-1		51 DE-1		55 DE-1					
Number of Decimals	0		0		0					
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	41*	42*	43*	44*	45*	46*
9	9 BUFFER				100 a	100 a	100 a	100 a	100 a	93 ab
	FIERCE XLT	4.5 oz/a		A						
	TRICOR	5.33 oz/a		A						
	ROUNDUP POWERMAX	32 fl oz/a		C						
	WARRANT ULTRA	3 pt/a		C						
	N-PAK AMS	2.5 % v/v		C						
10	10 NON BUFFER				100 a	100 a	100 a	100 a	98 a	100 a
	FIERCE XLT	4.5 oz/a		A						
	CLARITY	16 fl oz/a		B						
	ROUNDUP POWERMAX	32 fl oz/a		D						
	N-PAK AMS	2.5 % v/v		D						
	LSD P=.05				.	.	.	.	2.8	8.7
	Standard Deviation				0.0	0.0	0.0	0.0	1.6	5.1
	CV				0.0	0.0	0.0	0.0	1.81	5.91
	Bartlett's X2				0.0	0.0	0.0	0.0	0.376	0.254
	P(Bartlett's X2)				.	.	.	.	0.54	0.968
	Skewness				-2.8091*	-2.8091*	-2.8091*	-2.8091*	-2.7838*	-2.5825*
	Kurtosis				6.3081*	6.3081*	6.3081*	6.3081*	6.2136*	5.4617*
	Replicate F				0.000	0.000	0.000	0.000	1.994	2.530
	Replicate Prob(F)				1.0000	1.0000	1.0000	1.0000	0.1651	0.1076
	Treatment F				0.000	0.000	0.000	0.000	1136.036	108.669
	Treatment Prob(F)				1.0000	1.0000	1.0000	1.0000	0.0001	0.0001

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Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS
 Protocol ID: 16-TPAC-BufferZone
 Project ID:

Location: Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	CHEAL	AMARE	ABUTH	HIBTR
Pest Name	common lambsqu	Redroot pigweed	velvetleaf	Venice mallow
Crop Code				
Crop Name				
Rating Date	7-26-2016	7-26-2016	7-26-2016	7-26-2016
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	62 28	62 28	62 28	62 28
Trt-Eval Interval	28 DA-D	28 DA-D	28 DA-D	28 DA-D
Days After Emergence	55 DE-1	55 DE-1	55 DE-1	55 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	47*	48*	49*	50*	51
1	UNTREATED				0 c	0 b	0 b	0 b	
2	NON-BUFFER				100 a	100 a	100 a	100 a	
	ROWEL FX	4 oz/a		A					
	CLARITY	16 fl oz/a		B					
	ROUNDUP POWERMAX	32 fl oz/a		D					
	WARRANT	3 pt/a		D					
	N-PAK AMS	2.5 % v/v		D					
3	NON-BUFFER				100 a	100 a	100 a	100 a	
	ROWEL FX	4 oz/a		A					
	ROUNDUP POWERMAX	32 fl oz/a		B					
	WARRANT	3 pt/a		B					
	N-PAK AMS	2.5 % v/v		B					
	CLARITY	16 fl oz/a		D					
4	NON-BUFFER				100 a	100 a	100 a	100 a	
	FIERCE XLT	4.5 oz/a		A					
	CLARITY	16 fl oz/a		B					
	ROUNDUP POWERMAX	32 fl oz/a		D					
	WARRANT	3 pt/a		D					
	N-PAK AMS	2.5 % v/v		D					
5	NON-BUFFER				100 a	100 a	100 a	100 a	
	FIERCE XLT	4.5 oz/a		A					
	ROUNDUP POWERMAX	32 fl oz/a		B					
	WARRANT	3 pt/a		B					
	N-PAK AMS	2.5 % v/v		B					
	CLARITY	16 fl oz/a		D					
6	BUFFER				93 b	100 a	100 a	100 a	
	ROWEL FX	4 oz/a		A					
	ROUNDUP POWERMAX	32 fl oz/a		C					
	WARRANT ULTRA	3 pt/a		C					
	N-PAK AMS	2.5 % v/v		C					
7	BUFFER				100 a	100 a	100 a	100 a	
	FIERCE XLT	4.5 oz/a		A					
	ROUNDUP POWERMAX	32 fl oz/a		C					
	WARRANT ULTRA	3 pt/a		C					
	N-PAK AMS	2.5 % v/v		C					
8	BUFFER				100 a	100 a	100 a	100 a	
	ROWEL FX	4 oz/a		A					
	TRICOR	5.33 oz/a		A					
	ROUNDUP POWERMAX	32 fl oz/a		C					
	WARRANT ULTRA	3 pt/a		C					
	N-PAK AMS	2.5 % v/v		C					

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Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS
 Protocol ID: 16-TPAC-BufferZone
 Project ID:

Location: Trial Year: 2016
 Investigator: Dr. Mark M. Loux
 Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed					
Pest Code	CHEAL	AMARE	ABUTH	HIBTR					
Pest Name	common lambsqu> Redroot pigweed velvetleaf Venice mallow								
Crop Code									
Crop Name									
Rating Date	7-26-2016	7-26-2016	7-26-2016	7-26-2016					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%					
Number of Subsamples	1	1	1	1					
Days After First/Last Applic.	62 28	62 28	62 28	62 28					
Trt-Eval Interval	28 DA-D	28 DA-D	28 DA-D	28 DA-D					
Days After Emergence	55 DE-1	55 DE-1	55 DE-1	55 DE-1					
Number of Decimals	0	0	0	0					
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	47*	48*	49*	50*	51
9	BUFFER				100 a	100 a	100 a	100 a	
	FIERCE XLT	4.5 oz/a		A					
	TRICOR	5.33 oz/a		A					
	ROUNDUP POWERMAX	32 fl oz/a		C					
	WARRANT ULTRA	3 pt/a		C					
	N-PAK AMS	2.5 % v/v		C					
10	NON BUFFER				100 a	100 a	100 a	100 a	
	FIERCE XLT	4.5 oz/a		A					
	CLARITY	16 fl oz/a		B					
	ROUNDUP POWERMAX	32 fl oz/a		D					
	N-PAK AMS	2.5 % v/v		D					
	LSD P=.05				6.3	.	.	.	.
	Standard Deviation				3.7	0.0	0.0	0.0	.
	CV				4.09	0.0	0.0	0.0	.
	Bartlett's X2				0.0	0.0	0.0	0.0	.
	P(Bartlett's X2)				.	.	.	.	.
	Skewness				-2.7435*	-2.8091*	-2.8091*	-2.8091*	.
	Kurtosis				6.0387*	6.3081*	6.3081*	6.3081*	.
	Replicate F				1.000	0.000	0.000	0.000	
	Replicate Prob(F)				0.3874	1.0000	1.0000	1.0000	
	Treatment F				222.667	0.000	0.000	0.000	
	Treatment Prob(F)				0.0001	1.0000	1.0000	1.0000	

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Monsanto Buffer Zone

Trial ID: 16PURDUEEDTS Location: Trial Year: 2016
Protocol ID: 16-TPAC-BufferZone Investigator: Dr. Mark M. Loux
Project ID: Study Director:
Sponsor Contact:

Pest Type

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

Pest Code

SETFA, Setaria faberi, = US
AMBTR, Ambrosia trifida, = US
CHEAL, Chenopodium album, = US
AMARE, Amaranthus retroflexus, = US
ABUTH, Abutilon theophrasti, = US
HIBTR, Hibiscus trionum, = US
ECHCG, Echinochloa crus-galli, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

PHYDEF = phyto. deformation (cupping, epinasty, leaf wrap, wrinkling)
CONTRO = control / burndown or knockdown

Rating Unit

% = percent