



# The Ohio State University

## Herbicide - Sales Support - 2022 US

Trial ID: USNK0H4042022 Official Trial ID: Cooperator Trial ID:  
 Protocol ID: HAISSUP4-2022US Location: Bruns Dain FS Trial Year: 2022  
 Master Protocol ID:  
 Study Director: Sponsor Contact: Gordon Vail  
 Investigator (Creator): Dain Bruns Trial Origin: P public institution trial Conducted Under GEP: No

### Pest Description

Pest 1 Type: W	Code: SETFA	Setaria faberi	Entry Date: May-25-2022
		Common Name: Giant foxtail	Stage Scale: BBCH
Pest 2 Type: W	Code: ECHCG	Echinochloa crus-galli	Entry Date: Jul-6-2022
		Common Name: common barnyardgrass	Stage Scale: BBCH
Pest 3 Type: W	Code: SETLU	Setaria pumila	Entry Date: Jul-6-2022
		Common Name: foxtail, yellow	Stage Scale: BBCH
Pest 4 Type: W	Code: AMBTR	Ambrosia trifida	Entry Date: May-25-2022
		Common Name: Giant ragweed	Stage Scale: BBCH
Pest 5 Type: W	Code: CHEAL	Chenopodium album	Entry Date: May-25-2022
		Common Name: common lambsquarters	Stage Scale: BBCH
Pest 6 Type: W	Code: AMARE	Amaranthus retroflexus	Entry Date: May-25-2022
		Common Name: Redroot pigweed	Stage Scale: BBCH
Pest 7 Type: W	Code: ABUTH	Abutilon theophrasti	Entry Date: May-25-2022
		Common Name: velvetleaf	Stage Scale: BBCH
Pest 8 Type: W	Code: POLPY	Persicaria pensylvanica	Entry Date: May-25-2022
		Common Name: annual smartweed	Stage Scale: BBCH
Pest 9 Type: W	Code: HIBTR	Hibiscus trionum	Entry Date: May-25-2022
		Common Name: Venice mallow	Stage Scale: BBCH
Pest10 Type: W	Code: SIDSP	Sida spinosa	Entry Date: May-25-2022
		Common Name: Prickly sida	Stage Scale: BBCH
Pest11 Type: W	Code: IPOHE	Ipomoea hederacea	Entry Date: Jun-6-2022
		Common Name: ivy-leaf morning glory	Stage Scale: BBCH

### Site and Design

Treated Plot Width: 6.67 FT Total Plot Width: 10 FT Site Type: FIELD field  
 Treated Plot Length: 30 FT Total Plot Length: 30 FT Experimental Unit: 1 PLOT plot  
 Treated Plot Area: 200.1 FT<sup>2</sup> Tillage Type: CONTIL conventional-till  
 Replications: 4 Treatments: 12 Plots: 48 Study Design: RACOB Randomized Complete Block (RCB)  
 Untreated Arrangement: INCLUDED single control randomized in each block

### Previous

No. Crop Year  
 1. GLXMA 2021

### Soil Description

Description Name: F-8 East  
 % Sand: 37 % OM: 2.7 Texture: L loam  
 % Silt: 48 Soil Name: Kokomo  
 % Clay: 15 Fert. Level: G good  
 pH: 6.0 CEC: 16.9

### Application Description

	A	B	C
Application Date	May-2-2022	May-24-2022	Jun-3-2022
Appl. Start Time	4:45 PM	12:45 PM	10:45 AM
Appl. Stop Time	5:15 PM	1:00 AM	10:55 AM
Interval to Prev. Appl.		22 DAYS	10 DAYS
Application Method	SPRAY	SPRAY	SPRAY
Application Timing	PREPRE	EAPOCR	LAPOCR
Application Placement	BROSOL	BROFOL	BROFOL
Applied By	Dobbels	Dobbels	Dobbels
Appl. Entry Date	May-3-2022	May-25-2022	Jun-6-2022
Air Temperature Start, Stop	71, 71 F	68, 68 F	67, 67 F
% Relative Humidity Start, Stop	34, 34	42, 42	52, 52
Wind Velocity+Dir. Start	9.5 MPH, W	10 MPH, NE	4 MPH, W
Wind Velocity+Dir. Stop	9 MPH, W	10 MPH, NE	4 MPH, W
Wind Velocity+Dir. Max	11 MPH, W	10 MPH, NE	4 MPH, W
Wet Leaves (Y/N)	N, no	Y, yes	N, no
Soil Temperature	62 F	69 F	65 F
Soil Moisture	DRY	DRY	DRY
% Cloud Cover	33	25	0
Next Moisture Occurred On	May-3-2022	May-25-2022	Jun-6-2022
Time to Next Moisture	14.0 HR	1.0 DAY	3.0 DAY
Moisture 1 Week after Appl.	2.09 IN	1.23 IN	1.08 IN
Weather Source	WSFIELD	WSFIELD	WSFIELD

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### Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale	ZEAMX, BCORZEAMX, BCORZEAMX, BCOR		
Stage Scale Used	BBCH	BBCH	BBCH
Stage Majority, Percent	00, 100	13, 100	15, 100
Height Average		5 IN	17 IN
Height Minimum, Maximum		4.5, 5	13, 17

### Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale	SETFA, W, BBCH	SETFA, W, BBCH	SETFA, W, BBCH
Stage Majority, Percent		13, 80	
Stage Minimum, Percent		12, 10	
Stage Maximum, Percent		13, 10	
Height Average		3 IN	
Height Minimum, Maximum		1, 4	
Density Average		96 PLA/m2	
Density Minimum, Maximum		87, 145	
Pest 2 Code, Type, Scale	ECHCG, W, BBCH	ECHCG, W, BBCH	ECHCG, W, BBCH
Density Average		12 PLA/M2	
Density Minimum, Maximum		8, 29	
Pest 3 Code, Type, Scale	SETLU, W, BBCH	SETLU, W, BBCH	SETLU, W, BBCH
Density Average		8 PLA/m2	
Density Minimum, Maximum		3, 10	
Pest 4 Code, Type, Scale	AMBTR, W, BBCH	AMBTR, W, BBCH	AMBTR, W, BBCH
Stage Majority, Percent		12, 80	18, 80
Stage Minimum, Percent		11, 10	18, 10
Stage Maximum, Percent		12, 10	19, 10
Height Average		2 IN	10 IN
Height Minimum, Maximum		1, 2	4, 12
Density Average		13 PLA/M2	3 PLA/M2
Density Minimum, Maximum		8, 15	1, 5
Pest 5 Code, Type, Scale	CHEAL, W, BBCH	CHEAL, W, BBCH	CHEAL, W, BBCH
Stage Majority, Percent		14, 80	18, 80
Stage Minimum, Percent		14, 10	18, 10
Stage Maximum, Percent		16, 10	19, 10
Height Average		0.5 IN	4 IN
Height Minimum, Maximum		0.25, 1	2, 4
Density Average		15 PLA/m2	8 PLA/M2
Density Minimum, Maximum		9, 21	6, 12
Pest 6 Code, Type, Scale	AMARE, W, BBCH	AMARE, W, BBCH	AMARE, W, BBCH
Stage Majority, Percent		12, 80	16, 80
Stage Minimum, Percent		12, 10	14, 20
Stage Maximum, Percent		14, 10	16, 80
Height Average		1 IN	6 IN
Height Minimum, Maximum		0.5, 1.5	4, 8
Density Average		8 PLA/m2	6 PLA/M2
Density Minimum, Maximum		1, 9	2, 8
Pest 7 Code, Type, Scale	ABUTH, W, BBCH	ABUTH, W, BBCH	ABUTH, W, BBCH
Stage Majority, Percent		12, 100	14, 80
Stage Minimum, Percent			14, 10
Stage Maximum, Percent			26, 10
Height Average		1 IN	4 IN
Height Minimum, Maximum		0.5, 1	3, 5
Density Average		1 PLA/M2	1 PLA/M2
Density Minimum, Maximum		0, 3	0, 3
Pest 8 Code, Type, Scale	POLPY, W, BBCH	POLPY, W, BBCH	POLPY, W, BBCH
Stage Majority, Percent		12, 100	
Height Average		1 IN	
Height Minimum, Maximum		0.5, 1	
Density Average		8 PLA/M2	
Density Minimum, Maximum		0, 10	
Pest 9 Code, Type, Scale	HIBTR, W, BBCH	HIBTR, W, BBCH	HIBTR, W, BBCH
Stage Majority, Percent		12, 100	13, 100
Height Average		0.5 IN	3 IN
Height Minimum, Maximum		0.25, 0.5	2, 3
Density Average		6 PLA/M2	15 PLA/M2
Density Minimum, Maximum		4, 20	14, 20
Pest10 Code, Type, Scale	SIDSP, W, BBCH	SIDSP, W, BBCH	SIDSP, W, BBCH
Stage Majority, Percent		10, 100	13, 100
Height Average		1 IN	3 IN
Height Minimum, Maximum		0.5, 1	1, 3
Density Average		5 PLA/M2	10 PLA/M2
Density Minimum, Maximum		1, 8	8, 15
Pest11 Code, Type, Scale	IPOHE, W, BBCH	IPOHE, W, BBCH	IPOHE, W, BBCH
Stage Majority, Percent			11, 100
Diameter Average			2 IN
Diameter Minimum, Maximum			1, 2
Height Average			2 IN
Height Minimum, Maximum			1, 2
Density Average			2 PLA/M2
Density Minimum, Maximum			0, 3

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### Application Equipment

	A	B	C
Appl. Equipment	6' TTI	10' AIXR	10' AIXR
Equipment Type	BACCAI	BACCAI	BACCAI
Operation Pressure	44 PSI	44 PSI	44 PSI
Nozzle Model	1110015	110015	110015
Nozzle Type	TEEJAI	ARINDH	ARINDH
Nozzle TradeName	Turbo Tee Induction	TeeJet AI XR	TeeJet AI XR
Nozzle Tip Size, Color	015, GREEN	015, green	015, green
Nozzle Spacing	18 IN	18 IN	18 IN
Nozzle Filter Mesh	100	100	100
Boom Length	6.67 FT	10 FT	10 FT
Boom Height	20 IN	20 IN	20 IN
Ground Speed	3 MPH	3 MPH	3 MPH
Carrier	WATER	WATER	WATER
Water Hardness (ppm CaCO3)	250	250	250
Application Amount	15 GAL/AC	15 GAL/AC	15 GAL/AC
Minimum Mix/Treatment	1.0433 L	1.0433 L	1.0433 L
Mix Overage		25 mL	25 mL
Mix Size	1.5 L	2 L	2 L
Spray pH	7.8	7.8	7.8
Propellant	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N)		Y, yes	Y, yes

Pest ID Code				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop ID Code		1, ZEAMX	1, ZEAMX	1, ZEAMX
BBCH Scale		BCOR	BCOR	BCOR
Crop Scientific Name		Zea mays	Zea mays	Zea mays
Crop Name		Corn	Corn	Corn
Crop Variety		DKC59-81RIB	DKC59-81RIB	DKC59-81RIB
Rating Date		Oct-11-2022	Oct-11-2022	Oct-11-2022
SE Group No.		64	64	64
SE Name		ZUSX052A	ZUSX052B	ZUSX052_C3
SE Description		Yield/A	Yield/A	Yield/A
Part Rated		GRAIN, -	GRAIN, -	GRAIN, -
Rating Type		YIELD	CONMOI	YIELD
Rating Unit/Min/Max		LB, -, -	%, 0, 100	BU, -, -
Calculation		IN	NC	IN
Sample Size		150 FT2	1 PLOT	1 A
Collection Basis		1 PLOT	1 PLOT	1 PLOT
Reporting Basis		150 FT2	1 PLOT	1 A
Number of Subsamples		1	1	1
Data Entry Date		Oct-12-2022	Oct-12-2022	Oct-12-2022
Rating Timing				
Days After First/Last Applic.		162, 130	162, 130	162, 130
Trt-Eval Interval				
Plant-Eval Interval		162 DP-1	162 DP-1	162 DP-1
Days After Emergence		150 DE-1	150 DE-1	150 DE-1
ARM Action Codes				TY1
Number of Decimals				1

Trt Treatment No. Name	Rate Rate Unit	Appl Code	33*	34*	35*	36*
1 CHECK			36.955 b	14.875 -	193.0 b	57.40 ab
2 ACURON 3.44 ZC	2900 g ai/ha	A	48.835 a	14.975 -	254.8 a	59.48 a
3 RESICORE 3.29 SC	2540 g ai/ha	A	47.450 a	14.200 -	249.9 a	56.73 b
3 AATREX 4L	840 g ai/ha	A				
4 TRIVOLT	640 g ai/ha	A	47.560 a	14.325 -	250.1 a	58.73 ab
4 AATREX 4L	840 g ai/ha	A				
5 MAVERICK CORN HERBICIDE	570 g ai/ha	A	46.743 a	14.100 -	246.4 a	56.98 ab
5 AATREX 4L	840 g ai/ha	A				
6 BICEP II MAGNUM	2320 g ai/ha	A	50.005 a	14.300 -	262.9 a	58.50 ab
6 AMSOL	2.5 % v/v	B				
6 ACURON GT	2260 g ai/ha	B				
6 AATREX 4L	560 g ai/ha	B				
6 NIS	0.25 % v/v	B				

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Pest ID Code	1, ZEAMX	1, ZEAMX	1, ZEAMX	1, ZEAMX		
Pest Code	BCOR	BCOR	BCOR	BCOR		
Pest Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays		
Pest Name	Corn	Corn	Corn	Corn		
Crop ID Code	DKC59-81RIB	DKC59-81RIB	DKC59-81RIB	DKC59-81RIB		
BBCH Scale	Oct-11-2022	Oct-11-2022	Oct-11-2022	Oct-11-2022		
Crop Scientific Name	64	64	64	63		
Crop Name	ZUSX052A	ZUSX052B	ZUSX052_C3			
Crop Variety	Yield/A	Yield/A	Yield/A			
Rating Date	GRAIN, -	GRAIN, -	GRAIN, -	GRAIN, -		
SE Group No.	YIELD	CONMOI	YIELD	WEITES		
SE Name	LB, -, -	% , 0, 100	BU, -, -	BU, -, -		
SE Description	IN	NC	IN	NC		
Part Rated	150 FT2	1 PLOT	1 A	1 QT		
Rating Type	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Rating Unit/Min/Max	150 FT2	1 PLOT	1 A	1 BU		
Calculation	1	1	1	1		
Sample Size	Oct-12-2022	Oct-12-2022		Oct-12-2022		
Collection Basis	162, 130	162, 130	162, 130	162, 130		
Reporting Basis	162 DP-1	162 DP-1	162 DP-1	162 DP-1		
Number of Subsamples	150 DE-1	150 DE-1	150 DE-1	150 DE-1		
Data Entry Date			TY1			
Rating Timing			1			
Days After First/Last Applic.						
Trt-Eval Interval						
Plant-Eval Interval						
Days After Emergence						
ARM Action Codes						
Number of Decimals						
Trt Treatment No. Name	Rate Unit	Appl Code	33*	34*	35*	36*
7 LEXAR EZ 3.7 ZC	1820 g ai/ha	A	51.468 a	15.225-	267.7 a	58.03 ab
7 AMSOL	2.5 % v/v	B				
7 ACURON GT	2260 g ai/ha	B				
7 AATREX 4L	560 g ai/ha	B				
7 NIS	0.25 % v/v	B				
8 BICEP II MAGNUM	2320 g ai/ha	A	52.128 a	14.975-	271.8 a	58.95 ab
8 AMSOL	2.5 % v/v	C				
8 ACURON GT	2260 g ai/ha	C				
8 AATREX 4L	560 g ai/ha	C				
8 NIS	0.25 % v/v	C				
9 LEXAR EZ 3.7 ZC	1820 g ai/ha	A	51.505 a	14.950-	268.8 a	58.85 ab
9 AMSOL	2.5 % v/v	C				
9 ACURON GT	2260 g ai/ha	C				
9 AATREX 4L	560 g ai/ha	C				
9 NIS	0.25 % v/v	C				
10 AMSOL	2.5 % v/v	B	50.640 a	15.650-	262.2 a	58.75 ab
10 ACURON GT	2260 g ai/ha	B				
10 AATREX 4L	840 g ai/ha	B				
10 NIS	0.25 % v/v	B				
11 AMSOL	2.5 % v/v	B	52.138 a	15.685-	269.8 a	58.83 ab
11 MAVERICK CORN HERBICIDE	250 g ai/ha	B				
11 AATREX 4L	840 g ai/ha	B				
11 ROUNDUP POWERMAX 3 HERBICIDE	1050 g ae/ha	B				

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Pest ID Code	1, ZEAMX	1, ZEAMX	1, ZEAMX	1, ZEAMX		
Pest Code	BCOR	BCOR	BCOR	BCOR		
Pest Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays		
Pest Name	Corn	Corn	Corn	Corn		
Crop ID Code	DKC59-81RIB	DKC59-81RIB	DKC59-81RIB	DKC59-81RIB		
BBCH Scale	Oct-11-2022	Oct-11-2022	Oct-11-2022	Oct-11-2022		
Crop Scientific Name	64	64	64	63		
Crop Name	ZUSX052A	ZUSX052B	ZUSX052 C3			
Crop Variety	Yield/A	Yield/A	Yield/A			
Rating Date	GRAIN, -	GRAIN, -	GRAIN, -	GRAIN, -		
SE Group No.	YIELD	CONMOI	YIELD	WEITES		
SE Name	LB, -, -	% , 0, 100	BU, -, -	BU, -, -		
SE Description	IN	NC	IN	NC		
Part Rated	150 FT2	1 PLOT	1 A	1 QT		
Rating Type	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Rating Unit/Min/Max	150 FT2	1 PLOT	1 A	1 BU		
Calculation	1	1	1	1		
Sample Size	Oct-12-2022	Oct-12-2022		Oct-12-2022		
Collection Basis	162, 130	162, 130	162, 130	162, 130		
Reporting Basis	162 DP-1	162 DP-1	162 DP-1	162 DP-1		
Number of Subsamples	150 DE-1	150 DE-1	150 DE-1	150 DE-1		
Data Entry Date			TY1			
Rating Timing			1			
Days After First/Last Applic.						
Trt-Eval Interval						
Plant-Eval Interval						
Days After Emergence						
ARM Action Codes						
Number of Decimals						
Trt Treatment	Rate Unit	Appl Code	33*	34*	35*	36*
No. Name						
12AMSOL	2.5% v/v	B	51.590 a	14.570-	270.5 a	58.13 ab
12RESICORE 3.29 SC	1150 g ai/ha	B				
12AATREX 4L	840 g ai/ha	B				
12ROUNDUP POWERMAX 3 HERBICIDE	1050 g ae/ha	B				
LSD P=.05	4.8238	1.2994	25.05	1.487		
Standard Deviation	3.3531	0.9032	17.41	1.034		
CV	6.85	6.1	6.81	1.77		
Grand Mean	48.9179	14.8192	255.65	58.277		
Levene's F^	1.12	0.494	1.357	0.797		
Levene's Prob(F)	0.375	0.894	0.235	0.642		
Rank X2	.	.	.	.		
P(Rank X2)	.	.	.	.		
Skewness^	0.3119	-0.3479	0.4946	0.0606		
Kurtosis^	4.4465*	-0.6701	4.7189*	0.4942		
Replicate F	1.525	2.729	1.460	1.548		
Replicate Prob(F)	0.2263	0.0596	0.2434	0.2206		
Treatment F	6.371	1.404	6.200	2.704		
Treatment Prob(F)	0.0001	0.2173	0.0001	0.0133		

Crop ID Code  
 1, ZEAMX, BCOR, Zea mays, Corn, DKC59-81RIB = Glyphosate-R, Glufosinate-R

Part Rated

GRAIN = grain

Rating Type

YIELD = yield

CONMOI = content - moisture

WEITES = weight - test

Rating Unit/Min/Max

LB, , = pound

% , 0, 100 = percent

BU, , = bushel

Calculation

IN = increase

NC = no calculation

FT2 = square foot

PLOT = total plot

A = acre

QT = quart

PLOT = total plot

FT2 = square foot

PLOT = total plot

A = acre

BU = bushel

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### Plant-Eval Interval

162 DP-1 = 1 ZEAMX May-2-2022

### ARM Action Codes

TY1 = 5.18571429\*[C33]\*(100-[C34])/84.5