

The Ohio State University

2022-2023/FALL/SPRING/SOYBEAN-CORN/AUDIT 1:1/PREVIEW 2:1/INTERMOC/NO-TILL

Trial ID: 23UPLFALLCORN2
 Protocol ID: H22-US-0XX-REJ Location: Trial Year: 2022
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator:

Crop Description

Crop 1: C	ZEAMX Zea mays	Corn	BBCH Scale: BCOR
	Entry Date: Apr-17-2023	Stage Scale: BBCH	
	Variety: Seed Consultants SC1122Q		
	Attributes: Glyphosate-R, Glufosinate-R		
	Seed Shape: FLAT	Seed Size: 1826 S/LB	
	Planting Date: Apr-13-2023	Planting Rate: 32097 S/A	
	Depth: 2 IN		
	Rows per Plot: 4	Planting Method: PLANTD planted	
	Row Spacing: 30 IN	Planting Equipment: FPP finger pickup planter	
		Seed Bed: MEDTRA medium/trashy	
	Soil Temperature: 54 F	Soil Moisture: NORMAL normal, adequate	
	Emergence Date: May-8-2023		
	Harvest Date: Oct-17-2023	Harvest Equipment: Kincaid 8XP	
	Moisture Meter: Harvest Master	Harvested Width: 5 FT	
	% Standard Moisture: 15.5	Harvested Length: 30 FT	
	Weighing Equipment: Harvest Master HM800		

Pest Description

Pest 1 Type: W	Code: STEME Stellaria media	Entry Date: May-4-2023
	Common Name: chickweed	Stage Scale: BBCH
Pest 2 Type: W	Code: LAMPU Lamium purpureum	Entry Date: May-4-2023
	Common Name: purple deadnettle	Stage Scale: BBCH
Pest 3 Type: W	Code: RANAB Ranunculus abortivus	Entry Date: May-4-2023
	Common Name: Smallflower buttercup	Stage Scale: BBCH
Pest 4 Type: W	Code: ERYRE Erysimum repandum	Entry Date: May-4-2023
	Common Name: spreading treacle mustard	Stage Scale: BBCH
Pest 5 Type: W	Code: SETFA Setaria faberi	Entry Date: May-15-2023
	Common Name: Giant foxtail	Stage Scale: BBCH
Pest 6 Type: W	Code: ABUTH Abutilon theophrasti	Entry Date: May-15-2023
	Common Name: velvetleaf	Stage Scale: BBCH
Pest 7 Type: W	Code: POAAN Poa annua	Entry Date: May-15-2023
	Common Name: Annual bluegrass	Stage Scale: BBCH
Pest 8 Type: W	Code: SETPU Setaria helvola	Entry Date: Jun-8-2023
	Common Name: yellow foxtail	Stage Scale: BBCH
Pest 9 Type: W	Code: CHEAL Chenopodium album	Entry Date: Jun-8-2023
	Common Name: common lambsquarters	Stage Scale: BBCH
Pest10 Type: W	Code: POLPY Persicaria pensylvanica	Entry Date: Jun-8-2023
	Common Name: annual smartweed	Stage Scale: BBCH

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 FT ²	Tillage Type: NOTILL no-till
Replications: 3	Treatments: 6 Plots: 18
	Study Design: RACOBL Randomized Complete Block (RCB)

Previous

No.	Crop	Year
1.	SOYBEAN	2022

Soil Description

Description Name: F-10 West	Texture: L loam
% Sand: 31	% OM: 1.6
% Silt: 54	Soil Name: Crosby
% Clay: 15	Fert. Level: G good
	pH: 6.5
	CEC: 11

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Application Description

	A	B	C	D
Date	Nov-9-2022	Apr-14-2023	May-15-2023	Jun-7-2023
Start Time	9:00 AM	12:01 PM	1:18 PM	9:14 AM
Stop Time	9:14 AM	12:09 PM	1:20 PM	9:20 AM
Interval to Prev. Appl.		156 DAYS	31 DAYS	23 DAYS
Method	SPRAY	SPRAY	SPRAY	SPRAY
Timing	FALL	PRE	EPO	POST
Placement	BROFOL	BROFOL	BROFOL	BROFOL
Applied By	Dobbels	Dobbels		MCCORMICK
Entry Date	May-4-2023	Apr-17-2023	May-15-2023	Jun-8-2023
Air Temperature Start, Stop	49, 49 F	74, 74 F	65, 65 F	62, 62 F
% Relative Humidity Start, Stop	49, 49	45, 45	51, 51	53, 53
Wind Velocity+Dir. Start	7 MPH, W	7 MPH, WSW	4 MPH, NNE	5 MPH, NNE
Wind Velocity+Dir. Stop	7 MPH, W	7 MPH, WSW	4 MPH, NNE	5 MPH, NNE
Wind Velocity+Dir. Max	7 MPH, W	7 MPH, WSW	4 MPH, NNE	8 MPH, NNE
Wet Leaves (Y/N)	N, no	N, no	N, no	N, no
Soil Temperature	45 F	56 F	62 F	63 F
Soil Moisture	VERDRY	NORMAL	SLIWET	DRY
Soil Surface Condition	MEDTRA	MEDTRA	MEDTRA	MEDTRA
% Cloud Cover	2	95	98	10
First Moisture Occurred On	Nov-11-2022	Apr-15-2023	May-16-2023	Jun-11-2023
Time to First Moisture	3.0 DAY	1.0 DAY	1.0 DAY	4.0 DAY
Moisture 6 Hours after Appl.	0 IN	0 IN	0 IN	0 IN
Moisture 24 Hours after Appl.	0 IN	0 IN	0 IN	0 IN
Moisture 1 Week after Appl.	1 IN	0.6 IN	0.13 IN	2.09 IN
Problems with Application?	N, no	N, no	N, no	N, no

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale	ZEAMX, BCOR	ZEAMX, BCOR	ZEAMX, BCOR	ZEAMX, BCOR
Days after Emergence	-180	-24	7	30
Stage Majority, Percent			12, 100	16, 100
Stage Minimum, Percent			12, 100	16, 100
Stage Maximum, Percent			12, 100	16, 100
Height Average			5 IN	19 IN
Height Minimum, Maximum			4, 7	17, 19

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Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale	STEME, W, BBCH	STEME, W, BBCH	STEME, W, BBCH	STEME, W, BBCH
Stage Majority, Percent	18, 80			
Stage Minimum, Percent	18, 80			
Stage Maximum, Percent	25, 20			
Diameter Average	4 IN			
Diameter Minimum, Maximum	4, 6			
Height Average	1 IN			
Height Minimum, Maximum	1, 2			
Pest 2 Code, Type, Scale	LAMPU, W, BBCH	LAMPU, W, BBCH	LAMPU, W, BBCH	LAMPU, W, BBCH
Stage Majority, Percent	14, 80	65, 100		
Stage Minimum, Percent	14, 80			
Stage Maximum, Percent	16, 20			
Diameter Average	1.5 IN	2 IN		
Diameter Minimum, Maximum	1, 2	1, 2		
Height Average	1 IN	3 IN		
Height Minimum, Maximum	0.5, 1.5	1, 4		
Pest 3 Code, Type, Scale	RANAB, W, BBCH	RANAB, W, BBCH	RANAB, W, BBCH	RANAB, W, BBCH
Stage Majority, Percent		14, 80		
Stage Minimum, Percent		12, 10		
Stage Maximum, Percent		14, 80		
Diameter Average		3 IN		
Diameter Minimum, Maximum		1, 3		
Height Average		3 IN		
Height Minimum, Maximum		2, 4		
Pest 4 Code, Type, Scale	ERYRE, W, BBCH	ERYRE, W, BBCH	ERYRE, W, BBCH	ERYRE, W, BBCH
Stage Majority, Percent		19, 100		
Diameter Average		3 IN		
Diameter Minimum, Maximum		2, 3		
Height Average		4 IN		
Height Minimum, Maximum		3, 4		
Pest 5 Code, Type, Scale	SETFA, W, BBCH	SETFA, W, BBCH	SETFA, W, BBCH	SETFA, W, BBCH
Stage Majority, Percent		12, 80	13, 80	
Stage Minimum, Percent		11, 10	13, 80	
Stage Maximum, Percent		13, 10	15, 10	
Height Average		0.5 IN	6 IN	
Height Minimum, Maximum		0.5, 1	4, 8	
Pest 6 Code, Type, Scale	ABUTH, W, BBCH	ABUTH, W, BBCH	ABUTH, W, BBCH	ABUTH, W, BBCH
Stage Majority, Percent		10, 80	19, 70	
Stage Minimum, Percent		10, 80	15, 10	
Stage Maximum, Percent		12, 10	16, 10	
Height Average		0.5 IN	4 IN	
Height Minimum, Maximum		0.5, 1	3, 8	
Pest 7 Code, Type, Scale	POAAN, W, BBCH	POAAN, W, BBCH	POAAN, W, BBCH	POAAN, W, BBCH
Stage Majority, Percent		59, 100		
Height Average		5 IN		
Height Minimum, Maximum		4, 6		
Pest 8 Code, Type, Scale	SETPU, W, BBCH	SETPU, W, BBCH	SETPU, W, BBCH	SETPU, W, BBCH
Stage Majority, Percent			14, 70	
Stage Minimum, Percent			13, 10	
Stage Maximum, Percent			15, 20	
Height Average			3 IN	
Height Minimum, Maximum			3, 4	
Pest 9 Code, Type, Scale	CHEAL, W, BBCH	CHEAL, W, BBCH	CHEAL, W, BBCH	CHEAL, W, BBCH
Stage Majority, Percent			19, 70	
Stage Minimum, Percent			18, 30	
Stage Maximum, Percent			19, 70	
Height Average			4 IN	
Height Minimum, Maximum			3, 6	
Pest 10 Code, Type, Scale	POLPY, W, BBCH	POLPY, W, BBCH	POLPY, W, BBCH	POLPY, W, BBCH
Stage Majority, Percent			19, 100	
Stage Minimum, Percent			19, 100	
Stage Maximum, Percent			19, 100	
Height Average			5 IN	
Height Minimum, Maximum			4, 6	

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Application Equipment

	A	B	C	D
Equipment Name	6' AIXR	6' AIXR	6' AIXR	6' AIXR
Equipment Type	BACCAI	BACCAI	BACCAI	BACCAI
Operation Pressure	44 PSI	44 PSI	44 PSI	44 PSI
Nozzle Model	110015	110015	110015	110015
Nozzle Type	AIXR	AIXR	AIXR	AIXR
Nozzle TradeName	Air Inducted XR Flat	Air Inducted XR Flat	Air Inducted XR Flat	Air Inducted XR Flat
Nozzle Tip Size, Color	015, GREEN	015, GREEN	015, GREEN	015, GREEN
Nozzle Spacing	18 IN	18 IN	18.0 IN	18.0 IN
Boom Length	6.67 FT	6.67 FT	6.67 FT	6.67 FT
Boom Height	20 IN	20 IN	20.0 IN	20.0 IN
Ground Speed	3 MPH	3 MPH	3 MPH	3 MPH
Carrier	WATER	WATER	WATER	WATER
Water Hardness (ppm CaCO3)	250	250	250	250
Application Amount	15 GAL/AC	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size	1 L	1 L	1.0 L	1.0 L
Spray pH	7.8	7.8	7.8	7.8
Propellant	COMCO2	COMCO2	COMCO2	COMCO2

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Rating Date	Oct-17-2023	Oct-17-2023	Oct-17-2023	Oct-17-2023
Part Rated	GRAIN, C	GRAIN, C	GRAIN, C	GRAIN, C
Rating Type	WEIGHT	MOICON	YIELD	WEITES
Rating Unit/Min/Max	LBS, -, -	%, 0, 100	BU, -, -	LBS, -, -
Sample Size	1 PLOT	1 QT	1 A	1 QT
Collection Basis	1 PLOT	1 QT	1 PLOT	1 QT
Reporting Basis	1 PLOT	1 PLOT	1 A	1 BU
Number of Subsamples	1	1	1	1
Crop Type, Code	C, ZEAMX	C, ZEAMX	C, ZEAMX	C, ZEAMX
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays
Crop Name	Corn	Corn	Corn	Corn
Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Days After First/Last Applic.	342, 132	342, 132	342, 132	342, 132
Plant-Eval Interval	187 DP-1	187 DP-1	187 DP-1	187 DP-1
Days After Emergence	162 DE-1	162 DE-1	162 DE-1	162 DE-1
EDC App				
ARM Action Codes			TY1	
Number of Decimals			1	
Data Entry Date	Oct-18-2023	Oct-18-2023		Oct-18-2023

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Appl Description	35*	36*	37*	38*
1	UTC						27.860c	29.00a	120.3d	51.87-
2	Roundup Powermax	32oz/a	1260g ai/ha		A	FALL	61.070a	22.33b	290.8a	52.93-
2	Weedmaster	32oz/a	1080g ai/ha		A	FALL				
2	AMSOL	2.5% v/v	2.5% v/v		A	FALL				
2	Preview	20oz/a	587g ai/ha		B	PRE				
2	AMSOL	6% v/v	3.6qt/a		B	PRE				
2	Intermoc	64oz/a	2000g ai/ha		C	V2-V4				
2	AMSOL	2.5% v/v	2.5% v/v		C	V2-V4				
2	Interline	32oz/a	740g ai/ha		D	V4-V6				
2	AMSOL	6% v/v	3.6qt/a		D	V4-V6				
3	Roundup Powermax	32oz/a	1260g ai/ha		A	FALL	55.340ab	21.80b	265.4ab	53.47-
3	Audit 1:1	0.75oz/a	26.3g ai/ha		A	FALL				
3	AMSOL	2.5% v/v	2.5% v/v		A	FALL				
3	Intermoc	64oz/a	2000g ai/ha		B	PRE				
3	Preview	20oz/a	587g ai/ha		B	PRE				
3	AMSOL	2.5% v/v	2.5% v/v		B	PRE				
3	Interline	32oz/a	740g ai/ha		D	V4-V6				
3	AMSOL	2.5% v/v	2.5% v/v		D	V4-V6				
4	Roundup Powermax	32oz/a	1260g ai/ha		A	FALL	49.663b	24.47b	229.9bc	52.17-
4	Audit 1:1	0.75oz/a	26.3g ai/ha		A	FALL				
4	AMSOL	2.5% v/v	2.5% v/v		A	FALL				
4	Intermoc	64oz/a	2000g ai/ha		B	PRE				
4	Tricor	3oz/a	158g ai/ha		B	PRE				
4	AMSOL	2.5% v/v	2.5% v/v		B	PRE				
4	Interline	32oz/a	740g ai/ha		D	V4-V6				
4	AMSOL	2.5% v/v	2.5% v/v		D	V4-V6				
5	Roundup Powermax	32oz/a	1260g ai/ha		A	FALL	44.573b	22.67b	211.8c	53.10-
5	3384ae	0.75oz/a	26.3g ai/ha		A	FALL				
5	AMSOL	2.5% v/v	2.5% v/v		A	FALL				
5	Interline	32oz/a	740g ai/ha		B	PRE				
5	Tripzin	29oz/a	1020g ai/ha		B	PRE				
5	AMSOL	2.5% v/v	2.5% v/v		B	PRE				
5	Interline	32oz/a	740g ai/ha		D	V4-V6				
5	AMSOL	2.5% v/v	2.5% v/v		D	V4-V6				

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls).
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Due to missing data, the effective replicates used for mean comparisons are: col. 35-38=3
 * Adjusted means
 ^Calculated from residual.

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Rating Date	Oct-17-2023	Oct-17-2023	Oct-17-2023	Oct-17-2023					
Part Rated	GRAIN, C	GRAIN, C	GRAIN, C	GRAIN, C					
Rating Type	WEIGHT	MOICON	YIELD	WEITES					
Rating Unit/Min/Max	LBS, -, -	%, 0, 100	BU, -, -	LBS, -, -					
Sample Size	1 PLOT	1 QT	1 A	1 QT					
Collection Basis	1 PLOT	1 QT	1 PLOT	1 QT					
Reporting Basis	1 PLOT	1 PLOT	1 A	1 BU					
Number of Subsamples	1	1	1	1					
Crop Type, Code	C, ZEAMX	C, ZEAMX	C, ZEAMX	C, ZEAMX					
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays					
Crop Name	Corn	Corn	Corn	Corn					
Pest Type									
Pest Code									
Pest Scientific Name									
Pest Name									
Days After First/Last Applic.	342, 132	342, 132	342, 132	342, 132					
Plant-Eval Interval	187 DP-1	187 DP-1	187 DP-1	187 DP-1					
Days After Emergence	162 DE-1	162 DE-1	162 DE-1	162 DE-1					
EDC App									
ARM Action Codes			TY1						
Number of Decimals			1						
Data Entry Date	Oct-18-2023	Oct-18-2023		Oct-18-2023					
Trt Treatment	Rate	Other	Other	Appl	Appl	35*	36*	37*	38*
No. Name	Rate Unit	Rate	Rate Unit	Code	Description				
6 Roundup Powermax	32 oz/a	1260 g ai/ha		A	FALL	48.167b	21.50b	231.8bc	53.47-
6 Tricor	3 oz/a	158 g ai/ha		A	FALL				
6 Harmony Extra	0.75 oz/a	26.3 g ai/ha		A	FALL				
6 AMSOL	2.5% v/v	2.5% v/v		A	FALL				
6 Intermoc	77 oz/a	2400 g ai/ha		B	PRE				
6 Tricor	2 oz/a	105 g ai/ha		B	PRE				
6 AMSOL	2.5% v/v	2.5% v/v		B	PRE				
6 Interline	32 oz/a	740 g ai/ha		D	V4-V6				
6 AMSOL	2.5% v/v	2.5% v/v		D	V4-V6				
LSD P=.05						8.5629	3.354	37.57	1.591
Standard Deviation						4.7068	1.844	20.65	0.875
CV						9.85	7.8	9.18	1.66
Grand Mean						47.7789	23.628	224.99	52.833
Levene's F^						0.393	0.238	0.322	0.759
Levene's Prob(F)						0.845	0.938	0.89	0.596
Rank X2					
P(Rank X2)					
Shapiro-Wilk^						0.9723	0.9617	0.9702	0.9872
P(Shapiro-Wilk)^						0.8397	0.6351	0.8023	0.9944
Skewness^						0.326	-0.1397	0.1309	-0.0616
P(Skewness)^						0.5814	0.8126	0.8242	0.9167
Kurtosis^						-0.1201	-1.0112	-0.2884	-0.1314
P(Kurtosis)^						0.916	0.3802	0.8003	0.9081
Replicate F						2.668	7.894	1.762	1.388
Replicate Prob(F)						0.1179	0.0088	0.2210	0.2938
Treatment F						17.457	7.067	24.134	1.774
Treatment Prob(F)						0.0001	0.0045	0.0001	0.2059

Part Rated

GRAIN = grain
 C = Crop is Part Rated
Rating Type
 WEIGHT = weight
 MOICON = moisture content
 YIELD = yield
 WEITES = weight - test
Rating Unit/Min/Max
 %, 0, 100 = percent
 BU, , = bushel

PLOT = total plot
 QT = quart
 A = acre

PLOT = total plot
 QT = quart

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PLOT = total plot
A = acre
BU = bushel
Crop Type Code
C = EPPO species (Bayer) codes
ZEAMX, BCOR, Zea mays, Corn = US
Plant-Eval Interval
187 DP-1 = 1 ZEAMX Apr-13-2023
ARM Action Codes
TY1 = 5.18571429*[35]*(100-[36])/84.5

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