

The Ohio State University

2021 FALL/SPRING/CORN

Trial ID: 22FALLCORN2 Cooperator Trial ID:
 Protocol ID: H21US-0X1-577-001 Location: Trial Year: 2020
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator (Creator): Dr. Mark M. Loux

General Trial Information

Investigator: Joe Reed

Status: E established
 ARM Trial Created On: Nov-18-2021

Trial Location

Address (Location): 7721 South Charleston Pike
 City: South Charleston Country: USA United States
 State/Prov.: Ohio
 Postal Code: 45368

Latitude of LL Corner °: 39.85879 N
 Longitude of LL Corner °: -83.6721 W
 Altitude of LL Corner: 1088.00 FT

Conducted Under GLP: No
 Conducted Under GEP: No
 None

Role: INVEST investigator
 Investigator: Joe Reed

Crop Description

Crop 1: C ZEAMXZea mays Corn BBCH Scale: BCOR
 Entry Date: May-3-2022 Stage Scale: BBCH
 Variety: Seed Consultants SC1122Q
 Attributes: Glyphosate-R, Glufosinate-R
 Seed Size: 1826 S/LB
 Planting Date: Apr-26-2022 Planting Rate: 32097 S/A
 Depth: 2 IN
 Rows per Plot: 4
 Row Spacing: 30 IN
 Planting Method: PLANTD planted
 Planting Equipment: FPP finger pickup planter
 Seed Bed: MEDTRA medium/trashy
 Soil Temperature: 57 F
 Soil Moisture: NORMAL normal, adequate
 Emergence Date: May-13-2022
 Harvested Width: 6.25 FT
 Harvested Length: 30 FT
 % Standard Moisture: 15.5

Pest Description

Pest 1 Type: W Code: LAMPU Lamium purpureum Entry Date: Apr-1-2022
 Common Name: Purple deadnettle Stage Scale: BBCH
 Pest 2 Type: W Code: RANAB Ranunculus abortivus Entry Date: Apr-1-2022
 Common Name: Smallflower buttercup Stage Scale: BBCH
 Pest 3 Type: W Code: CARPE Cardamine pensylvanica Entry Date: Apr-1-2022
 Common Name: Pennsylvania bittercress Stage Scale: BBCH
 Pest 4 Type: W Code: STEME Stellaria media Entry Date: May-18-2022
 Common Name: chickweed Stage Scale: BBCH
 Pest 5 Type: W Code: SETFA Setaria faberi Entry Date: May-18-2022
 Common Name: Giant foxtail Stage Scale: BBCH
 Pest 6 Type: W Code: AMBTR Ambrosia trifida Entry Date: May-18-2022
 Common Name: Giant ragweed Stage Scale: BBCH
 Pest 7 Type: W Code: AMBEL Ambrosia artemisiifolia Entry Date: May-18-2022
 Common Name: Common ragweed Stage Scale: BBCH
 Pest 8 Type: W Code: CHEAL Chenopodium album Entry Date: Jun-1-2022
 Common Name: common lambsquarters Stage Scale: BBCH
 Pest 9 Type: W Code: ABUTH Abutilon theophrasti Entry Date: Jun-1-2022
 Common Name: velvetleaf 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 FT² Tillage Type: NOTILL no-till
 Replications: 3 Treatments: 6 Plots: 18 Study Design: RACOBL Randomized Complete Block (RCB)

Previous
 No. Crop Year
 1. CORN 2021

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Soil Description

Description Name: F-9 West
 % Sand: 33 % OM: 1.6 Texture: SIL silt loam
 % Silt: 53 Soil Name: Crosby
 % Clay: 15 Fert. Level: G good
 pH: 6 CEC: 8.6

Application Description

	A	B	C	D	E
Application Date	Nov-19-2021	Apr-27-2022	May-17-2022	May-31-2022	Jun-15-2022
Appl. Start Time	1:30 PM	8:30 AM	9:30 AM	11:10 AM	1:10 PM
Appl. Stop Time	1:45 PM	8:40 AM	9:46 AM	11:20 AM	1:20 PM
Interval to Prev. Appl.		159 DAYS	20 DAYS	14 DAYS	15 DAYS
Application Method	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing	FALPRE	SPRPRE	EAPOCR	MIDPOCR	LAPOCR
Application Placement	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL
Applied By	Dobbels	Dobbels	Dobbels	Dobbels	Dobbels
Appl. Entry Date	Apr-1-2022	May-3-2022	May-18-2022	Jun-1-2022	Jul-18-2022
Air Temperature Start, Stop	36, 36 F	35, 35 F	67, 67 -	81, 81 F	91, 91 F
% Relative Humidity Start, Stop	54, 54	79, 79	50, 50	59, 59	57, 57
Wind Velocity+Dir. Start	2 MPH, S	8 MPH, SE	6 MPH, NW	6 MPH, SW	4 MPH, W
Wind Velocity+Dir. Stop	2 MPH, S	8 MPH, SE	6 MPH, NW	6 MPH, SW	4 MPH, W
Wind Velocity+Dir. Max	2 MPH, S	8 MPH, SE	6 MPH, NW	6 MPH, SW	4 MPH, W
Wet Leaves (Y/N)	N, no	Y, yes	N, no	N, no	N, no
Soil Temperature	38 F	45 F	58 F	76 F	80 F
Soil Moisture	moist	NORMAL	DRY	DRY	DRY
Soil Surface Condition	MEDTRA	MEDTRA	MEDTRA	MEDTRA	MEDTRA
% Cloud Cover	20	0	0	10	0
Next Moisture Occurred On	Nov-21-2021	Apr-30-2022	May-18-2022	Jun-1-2022	Jun-26-2022
Time to Next Moisture	3.0 DAY	3.0 DAY	1.0 DAY	1.0 DAY	11.0 DAY
Moisture 6 Hours after Appl.	0 IN	0 IN	0 IN	0 IN	0 IN
Moisture 1 Week after Appl.	0.45 IN	0.58 IN	1.63 IN	0.94 IN	0 IN

Crop Stage At Each Application

	A	B	C	D	E
Crop 1 Code, BBCH Scale	ZEAMX, BCORZEAMX	ZEAMX, BCORZEAMX	ZEAMX, BCORZEAMX	ZEAMX, BCORZEAMX	ZEAMX, BCORZEAMX, BCOR
Days after Emergence	-175	-16	4	18	33
Stage Majority, Percent			10, 100	14, -	
Height Average			2 IN	12 IN	
Height Minimum, Maximum			1.75, 2	11, 12	

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Pest Stage At Each Application

	A	B	C	D	E
Pest 1 Code, Type, Scale	LAMPU, W, BBCH	LAMPU, W, BBCH	LAMPU, W, BBCH	LAMPU, W, BBCH	LAMPU, W, BBCH
Stage Majority, Percent			14, 50		
Stage Minimum, Percent			14, 50		
Stage Maximum, Percent			16, 50		
Diameter Average			1 IN		
Diameter Minimum, Maximum			0.5, 1		
Height Average			1 IN		
Height Minimum, Maximum			0.5, 1		
Pest 2 Code, Type, Scale	RANAB, W, BBCH	RANAB, W, BBCH	RANAB, W, BBCH	RANAB, W, BBCH	RANAB, W, BBCH
Pest 3 Code, Type, Scale	CARPE, W, BBCH	CARPE, W, BBCH	CARPE, W, BBCH	CARPE, W, BBCH	CARPE, W, BBCH
Pest 4 Code, Type, Scale	STEME, W, BBCH	STEME, W, BBCH	STEME, W, BBCH	STEME, W, BBCH	STEME, W, BBCH
Stage Majority, Percent			19, 100		
Diameter Average			4 IN		
Diameter Minimum, Maximum			3, 4		
Height Average			1 IN		
Height Minimum, Maximum			0.5, 1		
Pest 5 Code, Type, Scale	SETFA, W, BBCH	SETFA, W, BBCH	SETFA, W, BBCH	SETFA, W, BBCH	SETFA, W, BBCH
Stage Majority, Percent			12, 80		
Stage Minimum, Percent			11, 10		
Stage Maximum, Percent			13, 10		
Height Average			1 IN	6 IN	
Height Minimum, Maximum			1, 3.5	4, 8	
Pest 6 Code, Type, Scale	AMBTR, W, BBCH	AMBTR, W, BBCH	AMBTR, W, BBCH	AMBTR, W, BBCH	AMBTR, W, BBCH
Stage Majority, Percent			19, 60		
Stage Minimum, Percent			12, 20		
Stage Maximum, Percent			19, 20		
Height Average			8 IN	22 IN	
Height Minimum, Maximum			4, 11	12, 24	
Pest 7 Code, Type, Scale	AMBEL, W, BBCH	AMBEL, W, BBCH	AMBEL, W, BBCH	AMBEL, W, BBCH	AMBEL, W, BBCH
Stage Majority, Percent			16, 60		
Stage Minimum, Percent			12, 20		
Stage Maximum, Percent			28, 20		
Height Average			2.5 IN	4 IN	
Height Minimum, Maximum			0.5, 4	2, 4	
Pest 8 Code, Type, Scale	CHEAL, W, BBCH	CHEAL, W, BBCH	CHEAL, W, BBCH	CHEAL, W, BBCH	CHEAL, W, BBCH
Height Average			4 IN		
Height Minimum, Maximum			2, 4		
Pest 9 Code, Type, Scale	ABUTH, W, BBCH	ABUTH, W, BBCH	ABUTH, W, BBCH	ABUTH, W, BBCH	ABUTH, W, BBCH
Height Average			3 IN		
Height Minimum, Maximum			2, 3		

Application Equipment

	A	BCDE
Appl. Equipment	6' AIXR	
Equipment Type	BACCAI	
Operation Pressure	44 PSI	
Nozzle Model	110015	
Nozzle Type	AI XR	
Nozzle TradeName	TeeJet	
Nozzle Tip Size, Color	015, green	
Nozzle Spacing	18 IN	
Boom Length	10 FT	
Boom Height	20 IN	
Ground Speed	3 MPH	
Carrier	WATER	
Water Hardness (ppm CaCO3)	250	
Application Amount	15 GAL/AC	
Mix Overage	25 mL	
Mix Size	2 L	
Spray pH	7.8	
Propellant	COMCO2	
Tank Mix (Y/N)	Y, yes	

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Pest Type							
Pest Code							
Pest Scientific Name							
Pest Name							
Crop Type, Code	C, ZEAMX	C, ZEAMX	C, ZEAMX	C, ZEAMX			
Crop Name	Corn	Corn	Corn	Corn			
Rating Date	Oct-11-2022	Oct-11-2022	Oct-11-2022	Oct-11-2022			
Rating Type	WEIGHT	MOICON	YIELD	WEITES			
Rating Unit/Min/Max	LBS, -, -	%, 0, 100	BU, -, -	LBS, -, -			
Number of Subsamples	1	1	1	1			
Data Entry Date	Oct-13-2022	Oct-13-2022		Oct-13-2022			
Rating Timing							
Days After First/Last Applic.	326, 118	326, 118	326, 118	326, 118			
Trt-Eval Interval							
Plant-Eval Interval	168 DP-1	168 DP-1	168 DP-1	168 DP-1			
Days After Emergence	151 DE-1	151 DE-1	151 DE-1	151 DE-1			
ARM Action Codes							
Number of Decimals			TY1	1			
Trt Treatment No. Name	Rate Rate Unit	Appl Code	Appl Description	19*	20*	21*	22*
1 Untreated Check		D		40.783 a	19.33-	161.8 a	58.77-
2 Roundup PowerMax	32 fl oz/a A		Fall Application	40.927 a	17.97-	164.8 a	57.30-
2 Preview 2:1 SC	20 fl oz/a A		Fall Application				
2 N Pak AMS	6% v/v A		Fall Application				
2 InterMoc / KFD-235-02	29 fl oz/a C		Early Post Application				
2 NIS	0.25% v/v C		Early Post Application				
2 AMS	6% v/v C		Early Post Application				
2 Interline - Lifeline / KFD-138	32 fl oz/a E		Late Post Application				
2 NIS	0.25% v/v E		Late Post Application				
2 N Pak AMS	6% v/v E		Late Post Application				
3 Roundup PowerMax	32 fl oz/a A		Fall Application	39.940 a	17.90-	160.8 a	57.73-
3 Preview 2:1 SC	25 fl oz/a A		Fall Application				
3 N Pak AMS	6% v/v A		Fall Application				
3 InterMoc / KFD-235-02	29 fl oz/a C		Early Post Application				
3 NIS	0.25% v/v C		Early Post Application				
3 N Pak AMS	6% v/v C		Early Post Application				
3 Interline - Lifeline / KFD-138	32 fl oz/a E		Late Post Application				
3 NIS	0.25% v/v E		Late Post Application				
3 N Pak AMS	6% v/v E		Late Post Application				
4 Roundup PowerMax	32 fl oz/a A		Fall Application	11.800 b	12.90-	48.0 b	37.50-
4 Authority MTZ / KFD-291-02	14 oz/a A		Fall Application				
4 N Pak AMS	6% v/v A		Fall Application				
4 Anthem MAX	2 fl oz/a C		Early Post Application				
4 NIS	0.25% v/v C		Early Post Application				
4 N Pak AMS	6% v/v C		Early Post Application				
4 Interline - Lifeline / KFD-138	32 fl oz/a E		Late Post Application				
4 NIS	0.25% v/v E		Late Post Application				
4 N Pak AMS	6% v/v E		Late Post Application				
5 Roundup PowerMax	32 oz/a A		Fall Application	46.800 a	19.33-	185.4 a	57.20-
5 Audit 1:1	0.75 oz/a A		Fall Application				
5 N Pak AMS	6% v/v A		Fall Application				
5 Preview 2:1 SC	20 fl oz/a B		Spring Application				
5 N Pak AMS	6% v/v B		Spring Application				
5 Interline - Lifeline / KFD-138	32 fl oz/a D		Mid Post Application				
5 NIS	0.25% v/v D		Mid Post Application				
5 N Pak AMS	2.5% v/v D		Mid Post Application				
5 Interline - Lifeline / KFD-138	32 fl oz/a E		Late Post Application				
5 NIS	0.25% v/v E		Late Post Application				
5 N Pak AMS	6% v/v E		Late Post Application				

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. 19-22=3

* Adjusted means

^ Calculated from residual.

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Pest Code				
Pest Scientific Name				
Pest Name				
Crop Type, Code	C, ZEAMX	C, ZEAMX	C, ZEAMX	C, ZEAMX
Crop Name	Corn	Corn	Corn	Corn
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Rating Type	WEIGHT	MOICON	YIELD	WEITES
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Number of Subsamples	1	1	1	1
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Rating Timing				
Days After First/Last Applic.	326, 118	326, 118	326, 118	326, 118
Trt-Eval Interval				
Plant-Eval Interval	168 DP-1	168 DP-1	168 DP-1	168 DP-1
Days After Emergence	151 DE-1	151 DE-1	151 DE-1	151 DE-1
ARM Action Codes			TY1	
Number of Decimals			1	
Trt Treatment	Rate	Appl	Appl	
No. Name	Rate Unit	Code	Description	
6 Roundup PowerMax	32 fl oz/a	B	Spring Application	51.190a
6 Preview 2:1 SC	20 fl oz/a	B	Spring Application	18.23-
6 N Pak AMS	6% v/v	B	Spring Application	205.5a
6 Interline - Lifeline / KFD-138	32 fl oz/a	D	Mid Post Application	56.43-
6 NIS	0.25% v/v	D	Mid Post Application	
6 N Pak AMS	6% v/v	D	Mid Post Application	
6 Interline - Lifeline / KFD-138	32 fl oz/a	E	Late Post Application	
6 NIS	0.25% v/v	E	Late Post Application	
6 N Pak AMS	6% v/v	E	Late Post Application	
LSD P=.05				12.1631
Standard Deviation				6.6857
CV				17.33
Grand Mean				38.5733
Levene's F^				0.475
Levene's Prob(F)				0.788
Rank X2				.
P(Rank X2)				.
Skewness^				0.6196
Kurtosis^				0.3993
Replicate F				0.182
Replicate Prob(F)				0.8361
Treatment F				12.832
Treatment Prob(F)				0.0004
				8.717
				4.791
				27.21
				17.611
				0.652
				0.666
				.
				.
				-1.2457*
				4.1649*
				0.6471
				-1.3486*
				0.0199
				4.5644*
				0.811
				0.4716
				0.751
				0.6041
				0.252
				0.7822
				12.502
				0.0005
				1.336
				0.3061
				1.180
				0.3836

Crop Type, Code

C = EPPO species (Bayer) codes

ZEAMX, BCOR, Zea mays, Corn = US

Rating Type

WEIGHT = weight

MOICON = moisture content

YIELD = yield

WEITES = weight - test

Rating Unit/Min/Max

%, 0, 100 = percent

BU, , = bushel

Plant-Eval Interval

168 DP-1 = 1 ZEAMX Apr-26-2022

ARM Action Codes

TY1 = 4.14857143*[19]*(100-[20])/84.5

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