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2020-2021/FALL/SPRING/CORN/AUDIT 1:1/PREVIEW 2:1/INTERMOC/NO-TILL

Trial ID: 22FALLCORN1
 Protocol ID: H21-US-040--577-001 Location: Western Branch F-9 West
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact: Joe Reed
 Investigator (Creator): Dr. Mark M. Loux

Cooperator Trial ID:
 Trial Year: 2021

Status: E established
 ARM Trial Created On: Nov-2-2021
 Initiation Date: Apr-26-2022

Trial Location

City: South Charleston Country: USA United States
 State/Prov.: Ohio
 Postal Code: 45368

Latitude of LL Corner °: 39.85877 N
 Longitude of LL Corner °: -83.67197 W
 Altitude of LL Corner: 1089.00 FT

Conducted Under GLP: No
 Conducted Under GEP: No
 None

Role: SPONSR sponsor
 Sponsor: Joe Reed
 Organization: UPL

Crop Description

Crop 1: C ZEAMX Zea mays Corn
 Entry Date: May-3-2022 Stage Scale: BBCH
 Variety: Seed Consultants SC1122Q
 Attributes: Glyphosate-R, Glufosinate-R
 Seed Size: 1826 S/LB
 Planting Rate: 32097 S/A
 Planting Date: Apr-26-2022
 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 Moisture: NORMAL normal, adequate
 Soil Temperature: 57 F
 Emergence Date: May-12-2022
 Harvest Date: Oct-11-2022
 Moisture Meter: Harvest Master
 Harvest Equipment: Kincaid 8XP
 Harvested Width: 5 FT
 Harvested Length: 30 FT
 % Standard Moisture: 15.5
 Weighing Equipment: Harvest Master HM800

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-3-2022
 Common Name: chickweed Stage Scale: BBCH
 Pest 5 Type: W Code: DRBAS Draba aspera Entry Date: May-3-2022
 Common Name: whitlowgrass Stage Scale: BBCH
 Pest 6 Type: W Code: SETFA Setaria faberi Entry Date: Jun-2-2022
 Common Name: Giant foxtail Stage Scale: BBCH
 Pest 7 Type: W Code: AMBTR Ambrosia trifida Entry Date: Jun-2-2022
 Common Name: Giant ragweed Stage Scale: BBCH
 Pest 8 Type: W Code: AMBEL Ambrosia artemisiifolia Entry Date: Jun-2-2022
 Common Name: Common ragweed Stage Scale: BBCH
 Pest 9 Type: W Code: CHEAL Chenopodium album Entry Date: Jun-2-2022
 Common Name: common lambsquarters Stage Scale: BBCH
 Pest 10 Type: W Code: ABUTH Abutilon theophrasti Entry Date: Jun-2-2022
 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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Trial ID: 22FALLCORN1
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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
Application Date	Nov-8-2021	Apr-27-2022	May-31-2022	Jun-14-2022
Appl. Start Time	10:00 AM	9:00 AM	11:40 AM	1:00 PM
Appl. Stop Time	10:15 AM	9:20 AM	11:50 AM	1:10 PM
Application Method	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing	FALL	PRE	POST	LPO
Application Placement	BROFOL	BROFOL	BROFOL	BROFOL
Applied By	Dobbels	Dobbels	Dobbels	Dobbels
Appl. Entry Date	Apr-1-2022	May-3-2022	Jun-2-2022	Jul-15-2022
Air Temperature Start, Stop	56, 56 F	34, 35 F	81, 81 F	91, 91 F
% Relative Humidity Start, Stop	50, 50	89, 89	59, 59	57, 57
Wind Velocity+Dir. Start	5 MPH, S	7 MPH, SE	6 MPH, SW	4 MPH, W
Wind Velocity+Dir. Stop	6 MPH, S	7 MPH, SE	6 MPH, SW	4 MPH, W
Wind Velocity+Dir. Max	7 MPH, S	7 MPH, SE	6 MPH, SW	4 MPH, W
Wet Leaves (Y/N)	N, no	Y, yes	N, no	N, no
Soil Temperature	44 F	45 F	76 F	80 F
Soil Moisture	NORMAL	DRY	DRY	DRY
Soil Surface Condition	MEDTRA	MEDTRA	MEDTRA	MEDTRA
% Cloud Cover	0	0	10	33
Next Moisture Occurred On	Nov-11-2021	Apr-30-2022	Jun-1-2022	Jun-26-2022
Time to Next Moisture	3.0 DAY	3.0 DAY	1.0 DAY	11.0 DAY
Moisture 6 Hours after Appl.	0 IN	0 IN	0 IN	0 IN
Moisture 1 Week after Appl.	0.55 IN	0.58 IN	0.94 IN	0 IN

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale	ZEAMX, BCORZEAMX, BCORZEAMX, BCORZEAMX, BCOR	ZEAMX, BCORZEAMX, BCORZEAMX, BCORZEAMX, BCOR	ZEAMX, BCORZEAMX, BCORZEAMX, BCORZEAMX, BCOR	ZEAMX, BCORZEAMX, BCORZEAMX, BCORZEAMX, BCOR
Days after Emergence	-185	-15	19	33
Stage Majority, Percent			14, 100	16, 100
Height Average			12 IN	36 IN
Height Minimum, Maximum				36, 38

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Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale	LAMPU, W, BBCH	LAMPU, W, BBCH	LAMPU, W, BBCH	LAMPU, W, BBCH
Stage Majority, Percent	16, 80			
Stage Minimum, Percent	14, 20			
Stage Maximum, Percent	16, 80			
Diameter Average	3 IN			
Diameter Minimum, Maximum	1, 3			
Height Average	2 IN			
Height Minimum, Maximum	1, 3			
Density Average	34 PLA/m2			
Density Minimum, Maximum	2, 40			
Pest 2 Code, Type, Scale	RANAB, W, BBCH	RANAB, W, BBCH	RANAB, W, BBCH	RANAB, W, BBCH
Stage Majority, Percent	12, 90			
Stage Minimum, Percent	12, 90			
Stage Maximum, Percent	13, 10			
Diameter Average	2 IN			
Diameter Minimum, Maximum	2, 3			
Height Average	1 IN			
Height Minimum, Maximum	1, 2			
Density Average	2 pla/m2			
Density Minimum, Maximum	0, 3			
Pest 3 Code, Type, Scale	CARPE, W, BBCH	CARPE, W, BBCH	CARPE, W, BBCH	CARPE, W, BBCH
Stage Majority, Percent	19, 10			
Diameter Average	2 IN			
Diameter Minimum, Maximum	1, 2			
Height Average	0.5 IN			
Height Minimum, Maximum	0.5, 1			
Density Average	1 PLA/m2			
Density Minimum, Maximum	0, 3			
Pest 4 Code, Type, Scale	STEME, W, BBCH	STEME, W, BBCH	STEME, W, BBCH	STEME, W, BBCH
Pest 5 Code, Type, Scale	DRBAS, W, BBCH	DRBAS, W, BBCH	DRBAS, W, BBCH	DRBAS, W, BBCH
Pest 6 Code, Type, Scale	SETFA, W, BBCH	SETFA, W, BBCH	SETFA, W, BBCH	SETFA, W, BBCH
Stage Majority, Percent		13, 80		15, 80
Stage Minimum, Percent		13, 80		15, 80
Stage Maximum, Percent		15, 20		17, 20
Height Average		6 IN		6 IN
Height Minimum, Maximum		4, 8		3, 8
Density Average		96 PLA/m2		96 PLA/m2
Density Minimum, Maximum		50, 125		50, 125
Pest 7 Code, Type, Scale	AMBTR, W, BBCH	AMBTR, W, BBCH	AMBTR, W, BBCH	AMBTR, W, BBCH
Stage Majority, Percent		19, 100		19, 100
Height Average		22 IN		36 IN
Height Minimum, Maximum		12, 24		12, 48
Density Average		20 PLA/M2		20 PLA/M2
Density Minimum, Maximum		15, 25		15, 25
Pest 8 Code, Type, Scale	AMBEL, W, BBCH	AMBEL, W, BBCH	AMBEL, W, BBCH	AMBEL, W, BBCH
Stage Majority, Percent		16, 80		
Stage Minimum, Percent		14, 20		
Stage Maximum, Percent		16, 80		
Height Average		4 IN		
Height Minimum, Maximum		2, 6		
Density Average		5 PLA/M2		
Density Minimum, Maximum		1, 8		
Pest 9 Code, Type, Scale	CHEAL, W, BBCH	CHEAL, W, BBCH	CHEAL, W, BBCH	CHEAL, W, BBCH
Stage Majority, Percent		14, 75		19, 100
Stage Minimum, Percent		14, 75		
Stage Maximum, Percent		16, 25		
Height Average		4 IN		20 IN
Height Minimum, Maximum		2, 4		12, 24
Density Average		15 PLA/M2		15 PLA/M2
Density Minimum, Maximum		6, 18		6, 18
Pest10 Code, Type, Scale	ABUTH, W, BBCH	ABUTH, W, BBCH	ABUTH, W, BBCH	ABUTH, W, BBCH
Stage Majority, Percent		12, 90		
Stage Minimum, Percent		12, 90		
Stage Maximum, Percent		13, 10		
Height Average		3 IN		
Height Minimum, Maximum		2, 3		
Density Average		2 PLA/M2		
Density Minimum, Maximum		0, 3		

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Application Equipment

	A	B	CD
Appl. Equipment	6' AIXR	6' AIXR	
Equipment Type	BACCAI	BACCAI	
Operation Pressure	44 PSI	44 PSI	
Nozzle Model	110015	110015	
Nozzle Type	AI XR	AI XR	
Nozzle TradeName	TeeJet	TeeJet	
Nozzle Tip Size, Color	015, green	015, green	
Nozzle Spacing	18 IN	18 IN	
Boom Length	6.67 FT	10 FT	
Boom Height	20 IN	20 IN	
Ground Speed	3 MPH	3 MPH	
Carrier	WATER	WATER	
Water Hardness (ppm CaCO3)	250	250	
Application Amount	15 GAL/AC	15 GAL/AC	
Mix Overage	25 mL	25 mL	
Mix Size	1.0 L	2 L	
Spray pH	7.8	7.8	
Propellant	COMCO2	COMCO2	
Tank Mix (Y/N)	Y, yes	Y, yes	

Notes

Context	Date	By	Notes
STATUS	Oct-25-2021	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	Nov-19-2021	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'E' when Application Date entered.
STATUS	May-3-2022	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

Pest Type

Pest Code	Pest Name	Crop Type, Code	Crop Name	Rating Date	Rating Type	Rating Unit/Min/Max	Number of Subsamples	Data Entry Date	Rating Timing	Days After First/Last Applic.	Trt-Eval Interval	Days After Emergence	ARM Action Codes	Number of Decimals
		C, ZEAMX	Corn	Oct-11-2022	WEIGHT	LBS, -, -	1	Oct-13-2022		337, 119		152 DE-1		
		C, ZEAMX	Corn	Oct-11-2022	MOICON	% , 0, 100	1	Oct-13-2022		337, 119		152 DE-1		
		C, ZEAMX	Corn	Oct-11-2022	YIELD	BU, -, -	1			337, 119		152 DE-1	TY1	1
		C, ZEAMX	Corn	Oct-11-2022	WEITES	LBS, -, -	1	Oct-13-2022		337, 119		152 DE-1		

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Appl Description	19*	20*	21*	22*
1	Untreated Check					36.613 c	22.87 -	173.4 c	55.50 -
2	Roundup PowerMax	32 fl oz/a	A	Fall	Fall Application	53.687 a	18.47 -	268.5 a	57.50 -
2	Weedmaster	32 fl oz/a	A	Fall	Fall Application				
2	Roundup PowerMax	32 fl oz/a	B	Spring	Spring Burndown				
2	Preview	19.7 fl oz/a	B	Spring	Spring Burndown				
2	Ammonium Sulfate	4.5 % v/v	B	Spring	Spring Burndown				
2	InterMoc	64 fl oz/a	C	V2-4	V2-4				
2	Ammonium Sulfate	3 lb/a	C	V2-4	V2-4				
2	Interline	32 fl oz/a	D	V4-6	V4-6				
2	Ammonium Sulfate	3 lb/a	D	V4-6	V4-6				
3	Roundup PowerMax	32 fl oz/a	A	Fall	Fall Application	53.820 a	18.03 -	270.8 a	57.43 -
3	Audit 1:1	0.75 oz/a	A	Fall	Fall Application				
3	Roundup PowerMax	32 fl oz/a	B	Spring	Spring Burndown				
3	Preview	19.7 fl oz/a	B	Spring	Spring Burndown				
3	Ammonium Sulfate	8.5 % w/v	B	Spring	Spring Burndown				
3	InterMoc	64 fl oz/a	C	V2-4	V2-4				
3	Ammonium Sulfate	3 lb/a	C	V2-4	V2-4				
3	Interline	32 fl oz/a	D	V4-6	V4-6				
3	Ammonium Sulfate	3 lb/a	D	V4-6	V4-6				
4	Roundup PowerMax	32 fl oz/a	A	Fall	Fall Application	43.487 b	17.90 -	219.2 b	56.67 -
4	Audit 1:1	0.75 oz/a	A	Fall	Fall Application				
4	InterMoc	64 fl oz/a	B	Spring	Spring Burndown				
4	Resolve	1 oz/a	B	Spring	Spring Burndown				
4	NIS	0.25 % v/v	B	Spring	Spring Burndown				
4	Ammonium Sulfate	3 lb/a	B	Spring	Spring Burndown				
4	Interline	32 fl oz/a	D	V4-6	V4-6				
4	Ammonium Sulfate	3 lb/a	D	V4-6	V4-6				

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Pest Type	C, ZEAMX			
Pest Code	Corn			
Pest Name	Corn			
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.	337, 119	337, 119	337, 119	337, 119
Trt-Eval Interval				
Days After Emergence	152 DE-1	152 DE-1	152 DE-1	152 DE-1
ARM Action Codes			TY1	
Number of Decimals			1	
Trt Treatment	Rate	Appl	Appl	
No. Name	Rate Unit	Code	Description	
5 Roundup PowerMax	32 fl oz/a	A	Fall Application	41.763b
5 Audit 1:1	0.75 oz/a	A	Fall Application	19.27-
5 InterMoc	64 fl oz/a	B	Spring Burndown	206.9b
5 NIS	0.25 % v/v	B	Spring Burndown	57.30-
5 Ammonium Sulfate	3 lb/a	B	Spring Burndown	
5 Interline	32 fl oz/a	D	V4-6	
5 Resolve	1 oz/a	D	V4-6	
5 NIS	0.25 % v/v	D	V4-6	
5 Ammonium Sulfate	3 lb/a	D	V4-6	
6 Roundup PowerMax	32 fl oz/a	A	Fall Application	52.637a
6 Tricor 75 DF / KFD-232-01	3 oz/a	A	Fall Application	19.13-
6 Harmony Extra SG / KFD-332-01	0.75 oz/a	A	Fall Application	261.1a
6 Roundup PowerMax	32 fl oz/a	B	Spring Burndown	57.40-
6 Preview	19.7 fl oz/a	B	Spring Burndown	
6 Ammonium Sulfate	8.5 % w/v	B	Spring Burndown	
6 InterMoc	64 fl oz/a	C	V2-4	
6 Ammonium Sulfate	3 lb/a	C	V2-4	
6 Interline	32 fl oz/a	D	V4-6	
6 Ammonium Sulfate	3 lb/a	D	V4-6	
LSD P=.05				4.5208
Standard Deviation				3.365
CV				25.30
Grand Mean				1.461
Levene's F^				0.803
Levene's Prob(F)				5.29
Rank X2				9.59
P(Rank X2)				5.96
Skewness^				47.0011
Kurtosis^				19.278
Replicate F				233.32
Replicate Prob(F)				56.967
Treatment F				0.084
Treatment Prob(F)				0.814
				0.994
				0.40
				0.941
				0.562
				.
				.
				.
				.
				0.0221
				0.2367
				0.0823
				-0.0133
				-1.2708
				1.7715
				-0.922
				0.0838
				1.100
				1.551
				0.382
				4.359
				0.3700
				0.2591
				0.6918
				0.0435
				26.297
				2.983
				24.495
				2.830
				0.0001
				0.0665
				0.0001
				0.0759

Crop Type, Code

C = EPP0 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

ARM Action Codes

TY1 = 5.18571429*[19]*(100-[20])/84.5