

# The Ohio State University

Trial ID: 22CORNSHOW      Cooperator Trial ID:  
 Protocol ID: 22CORNSHOW      Location:      Trial Year: 2022  
 Project ID:      Project ID 2:      Project ID 3:  
 Study Director:      Sponsor Contact:  
 Investigator (Creator): Dr. Mark M. Loux

Status: E      established  
 ARM Trial Created On: Mar-31-2022  
 Initiation Date: May-1-2022

## Trial Location

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

Latitude of LL Corner °: 39.8594      N  
 Longitude of LL Corner °: -83.67435      W  
 Altitude of LL Corner: 1085.00 FT

Conducted Under GLP: No  
 Conducted Under GEP: No  
 None

## Crop Description

Crop 1: C      ZEAMXZea mays      Corn      Stage Scale: BBCH  
 Entry Date: May-3-2022  
 Variety: Pioneer P1077AM  
 Attributes: Glyphosate-R, Glufosinate-R  
 Seed Size: 1588 S/LB  
 Planting Rate: 32097      S/A  
 Planting Date: May-2-2022  
 Depth: 2      IN  
 Rows per Plot: 4  
 Row Spacing: 30      IN  
 Planting Method: PLANTD      planted  
 Planting Equipment: FPP      finger pickup planter  
 Seed Bed: MEDIUM      medium  
 Soil Moisture: DRY      dry  
 Soil Temperature: 52      F  
 Emergence Date: May-16-2022  
 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: AMBTR Ambrosia trifida      Entry Date: Jun-6-2022  
 Common Name: Giant ragweed      Stage Scale: BBCH  
 Pest 2 Type: W      Code: SETFA Setaria faberi      Entry Date: Jun-6-2022  
 Common Name: Giant foxtail      Stage Scale: BBCH  
 Pest 3 Type: W      Code: CHEAL Chenopodium album      Entry Date: Jun-6-2022  
 Common Name: common lambsquarters      Stage Scale: BBCH  
 Pest 4 Type: W      Code: IPOHE Ipomoea hederacea      Entry Date: Jun-6-2022  
 Common Name: ivy-leaf morning glory      Stage Scale: BBCH  
 Pest 5 Type: W      Code: ECHCG Echinochloa crus-galli      Entry Date: Jun-6-2022  
 Common Name: common barnyardgrass      Stage Scale: BBCH  
 Pest 6 Type: W      Code: ABUTH Abutilon theophrasti      Entry Date: Jun-6-2022  
 Common Name: velvetleaf      Stage Scale: BBCH  
 Pest 7 Type: W      Code: SIDSP Sida spinosa      Entry Date: Jun-6-2022  
 Common Name: Prickly sida      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<sup>2</sup>      Tillage Type: CONTIL      conventional-till  
 Replications: 4      Treatments: 10      Plots: 40      Study Design: RACOB      Randomized Complete Block (RCB)

Previous  
 No.      Crop      Year  
 1.      SOYBEAN      2021

## Soil Description

Description Name: G-6  
 % Sand: 32      % OM: 2.2      Texture: SICL silty clay loam  
 % Silt: 53      Soil Name: Kokomo  
 % Clay: 15      Fert. Level: G good  
 pH: 5.9      CEC: 14  
 g o o d

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## Application Description

	A	B
Application Date	May-2-2022	Jun-3-2022
Appl. Start Time	5:00 PM	9:50 AM
Appl. Stop Time	5:30 PM	10:05 AM
Application Method	NONINC	SPRAY
Application Timing	PRE	POST
Application Placement	BROSOL	BROFOL
Applied By	Loux	Loux
Appl. Entry Date	May-3-2022	Jun-6-2022
Air Temperature Start, Stop	71, 71 F	67, 67 F
% Relative Humidity Start, Stop	34, 34	52, 52
Wind Velocity+Dir. Start	9.5 MPH, W	4 MPS, W
Wind Velocity+Dir. Stop	9 MPH, W	4 MPS, W
Wind Velocity+Dir. Max	11 MPH, W	4 MPS, W
Wet Leaves (Y/N)	N, no	N, no
Soil Temperature	62 F	65 F
Soil Moisture	DRY	DRY
Soil Surface Condition	MEDIUM	MEDIUM
% Cloud Cover	33	0
Next Moisture Occurred On	May-3-2022	Jun-6-2022
Time to Next Moisture	14.0 HR	3.0 DAY
Moisture 6 Hours after Appl.	0 IN	0 IN
Moisture 1 Week after Appl.	2.09 IN	1.08 IN

## Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	ZEAMX, BCOR	ZEAMX, BCOR
Days after Emergence	-14	18
Stage Majority, Percent		15, 100
Height Average		14 IN
Height Minimum, Maximum		10, 18

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## Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	AMBTR, W, BBCH	AMBTR, W, BBCH
Stage Majority, Percent		16, 50
Stage Minimum, Percent		14, 20
Stage Maximum, Percent		18, 20
Height Average		6 IN
Height Minimum, Maximum		2, 8
Density Average		12 PLA/m2
Density Minimum, Maximum		8, 15
Pest 2 Code, Type, Scale	SETFA, W, BBCH	SETFA, W, BBCH
Stage Majority, Percent		13, 80
Stage Minimum, Percent		12, 20
Stage Maximum, Percent		13, 80
Height Average		4 IN
Height Minimum, Maximum		2, 6
Density Average		125 pla/m2
Density Minimum, Maximum		100, 150
Pest 3 Code, Type, Scale	CHEAL, W, BBCH	CHEAL, W, BBCH
Stage Majority, Percent		16, 80
Stage Minimum, Percent		14, 20
Stage Maximum, Percent		16, 80
Height Average		2 IN
Height Minimum, Maximum		2, 4
Density Average		12 pla/m2
Density Minimum, Maximum		8, 16
Pest 4 Code, Type, Scale	IPOHE, W, BBCH	IPOHE, W, BBCH
Stage Majority, Percent		12, 100
Height Average		2 IN
Height Minimum, Maximum		2, 4
Density Average		3 pla/m2
Density Minimum, Maximum		1, 5
Pest 5 Code, Type, Scale	ECHCG, W, BBCH	ECHCG, W, BBCH
Stage Majority, Percent		13, 100
Height Average		4 IN
Height Minimum, Maximum		2, 4
Density Average		25 pla/m2
Density Minimum, Maximum		15, 30
Pest 6 Code, Type, Scale	ABUTH, W, BBCH	ABUTH, W, BBCH
Stage Majority, Percent		13, 80
Stage Minimum, Percent		13, 80
Stage Maximum, Percent		14, 20
Height Average		2 IN
Height Minimum, Maximum		2, 4
Density Average		2 pla/m2
Density Minimum, Maximum		0, 7
Pest 7 Code, Type, Scale	SIDSP, W, BBCH	SIDSP, W, BBCH
Stage Majority, Percent		12, 90
Stage Minimum, Percent		12, 90
Stage Maximum, Percent		13, 10
Height Average		2 IN
Height Minimum, Maximum		2, 4
Density Average		3 pla/m2
Density Minimum, Maximum		1, 9

## Application Equipment

	A	B
Appl. Equipment	6' TTI	10' AIXR
Equipment Type	BACCAI	BACCAI
Operation Pressure	44 PSI	44 PSI
Nozzle Model	1110015	110015
Nozzle Type	TTI	AI XR
Nozzle TradeName	Turbo Tee Induction	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
Mix Size	1 L	2 L
Spray pH	7.8	7.8
Propellant	COMCO2	COMCO2
Tank Mix (Y/N)		Y, yes

## Notes

Context	Date	By	Notes
STATUS	Mar-31-2022	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	May-3-2022	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'E' when Initiation Date entered.

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Pest Type				
Pest Code				
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.	162, 130	162, 130	162, 130	162, 130
Trt-Eval Interval				
Days After Emergence	148 DE-1	148 DE-1	148 DE-1	148 DE-1
ARM Action Codes			TY1	
Number of Decimals			1	

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	26*	27*	28*	29*
1	Bicep II Magnum	2.06 lb ai/a	A		51.773-	18.53-	258.7-	58.08-
1	Impact	0.0219 lb ai/a	B					
1	Atrazine	0.5 lb ai/a	B					
1	HC MSO	0.5 % v/v	B					
1	N Pak AMS	2.5 % v/v	B					
2	Bicep II Magnum	2.06 lb ai/a	A		49.160-	18.40-	246.2-	57.90-
2	Impact Core	1.68 lb ai/a	B					
2	Atrazine	0.5 lb ai/a	B					
2	HC MSO	0.5 % v/v	B					
2	N Pak AMS	2.5 % v/v	B					
3	Bicep II Magnum	2.06 lb ai/a	A		49.945-	18.45-	249.9-	58.25-
3	Sinate	0.48 lb ai/a	B					
3	Atrazine	0.5 lb ai/a	B					
3	HC MSO	0.5 % v/v	B					
3	N Pak AMS	2.5 % v/v	B					
4	Bicep II Magnum	2.06 lb ai/a	A		50.350-	18.38-	252.1-	58.50-
4	Shieldex	0.035 lb ai/a	B					
4	Atrazine	0.5 lb ai/a	B					
4	COC	1 % v/v	B					
4	N Pak AMS	2.5 % v/v	B					
5	Restraint	1.83 lb ai/a	A		50.030-	18.38-	250.6-	57.93-
5	Shieldex	0.035 lb ai/a	B					
5	COC	1 % v/v	B					
5	N Pak AMS	2.5 % v/v	B					
6	SURESTART II	1.38 lb ai/a	A		52.513-	18.78-	261.7-	58.55-
6	Resicore XL	1.22 lb ai/a	B					
6	Atrazine	1 lb ai/a	B					
6	Durango DMA	1 lb ae/a	B					
6	NIS	0.25 % v/v	B					
6	N Pak AMS	2.5 % v/v	B					
7	Trivolt	0.57 lb ai/a	A		51.873-	18.15-	260.5-	58.43-
7	Harness Max	1.22 lb ai/a	B					
7	Atrazine	1 lb ai/a	B					
7	Roundup Powermax 3	1 lb ae/a	B					
7	NIS	0.25 % v/v	B					
7	N Pak AMS	2.5 % v/v	B					
8	Maverick	0.287 lb ai/a	A		52.915-	18.53-	264.5-	58.23-
8	Maverick	0.223 lb ai/a	B					
8	Atrazine	1 lb ai/a	B					
8	Roundup Powermax 3	1 lb ae/a	B					
8	NIS	0.25 % v/v	B					
8	N Pak AMS	2.5 % v/v	B					

Means followed by same letter or symbol do not significantly differ (P=0.05, Student-Newman-Keuls).  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

\* Adjusted means

^Calculated from residual.

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Trt	Treatment	Rate	Rate Unit	Appl Code	26*	27*	28*	29*
	9Acuron	1.29 lb ai/a	A		51.620-	18.45-	258.2-	58.33-
	9Acuron GT	2.01 lb ai/a	B					
	9Atrazine	1 lb ai/a	B					
	9NIS	0.25 % v/v	B					
	9N Pak AMS	2.5 % v/v	B					
	10Bicep II Magnum	2.9 lb ai/a	A		51.673-	18.38-	258.8-	58.78-
	10Roundup Powermax 3	0.75 lb ae/a	B					
	10Status	0.0875 lb ai/a	B					
	10N Pak AMS	2.5 % v/v	B					
LSD P=.05					2.6097	0.925	11.80	1.091
Standard Deviation					1.7987	0.637	8.13	0.752
CV					3.51	3.46	3.17	1.29
Grand Mean					51.1850	18.440	256.13	58.295
Levene's F^					0.653	0.431	0.581	0.861
Levene's Prob(F)					0.743	0.908	0.802	0.569
Rank X2					.	.	.	.
P(Rank X2)					.	.	.	.
Skewness^					-0.8414*	-0.1675	-0.8096*	0.589
Kurtosis^					0.3415	-0.1849	0.5161	1.4959*
Replicate F					11.353	5.880	10.642	1.288
Replicate Prob(F)					0.0001	0.0032	0.0001	0.2985
Treatment F					1.878	0.246	2.173	0.553
Treatment Prob(F)					0.0994	0.9835	0.0577	0.8228

### 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

### ARM Action Codes

TY1 = 5.18571429\*[26]\*(100-[27])/84.5

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\* Adjusted means

^Calculated from residual.