

# The Ohio State University

Trial ID: 22NTCORNSHOW      Cooperator Trial ID:  
 Protocol ID: 22NTCORNSHOW      Location: Western Branch F-9 W      Trial Year: 2022  
 Project ID:      Project ID 2:      Project ID 3:  
 Study Director:      Sponsor Contact: Joe Reed  
 Investigator (Creator): Dr. Mark M. Loux

Status: E      established  
 ARM Trial Created On: Mar-31-2022  
 Initiation Date: Apr-26-2022

## 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 °: 39.85881      N  
 Longitude of LL Corner °: -83.67241      W  
 Altitude of LL Corner: 1083.00 FT

Conducted Under GLP: No  
 Conducted Under GEP: No  
 None

Role: SPONSR sponsor  
 Sponsor: Joe Reed  
 Organization: UPL

## 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		
	Planting Date: Apr-26-2022	Seed Size: 1826 S/LB	
	Depth: 2      IN	Planting Rate: 32097      S/A	
	Rows per Plot: 4	Planting Method: PLANTD planted	
	Row Spacing: 30      IN	Planting Equipment: FPP      finger pickup planter	
	Soil Temperature: 57      F	Seed Bed: MEDTRA medium/trashy	
	Emergence Date: May-14-2022	Soil Moisture: NORMAL normal, adequate	
	Harvest Date: Oct-11-2022	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: LAMPU Lamium purpureum	Entry Date: May-3-2022
	Common Name: Purple deadnettle	Stage Scale: BBCH
Pest 2 Type: W	Code: RANAB Ranunculus abortivus	Entry Date: May-3-2022
	Common Name: Smallflower buttercup	Stage Scale: BBCH
Pest 3 Type: W	Code: CARPE Cardamine pensylvanica	Entry Date: May-3-2022
	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: DRBSS Draba sp.	Entry Date: May-3-2022
	Common Name: Whitlow-grass	Stage Scale: BBCH
Pest 6 Type: W	Code: VERAG Veronica agrestis	Entry Date: May-3-2022
	Common Name: Procumbent speedwell	Stage Scale: BBCH
Pest 7 Type: W	Code: AMBTR Ambrosia trifida	Entry Date: May-3-2022
	Common Name: Giant ragweed	Stage Scale: BBCH
Pest 8 Type: W	Code: SETFA Setaria faberi	Entry Date: Jun-6-2022
	Common Name: Giant foxtail	Stage Scale: BBCH
Pest 9 Type: W	Code: AMBEL Ambrosia artemisiifolia	Entry Date: Jun-6-2022
	Common Name: Common ragweed	Stage Scale: BBCH
Pest10 Type: W	Code: CHEAL Chenopodium album	Entry Date: Jun-6-2022
	Common Name: common lambsquarters	Stage Scale: BBCH
Pest11 Type: W	Code: ERICA Erigeron canadensis	Entry Date: Jun-6-2022
	Common Name: mare's-tail	Stage Scale: BBCH
Pest12 Type: W	Code: ECHCG Echinochloa crus-galli	Entry Date: Jun-6-2022
	Common Name: common barnyardgrass	Stage Scale: BBCH

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## Site and Design

Treated Plot Width: 10 FT      Site Type: FIELD field  
 Treated Plot Length: 30 FT      Experimental Unit: 1 PLOT plot  
 Treated Plot Area: 300.0 FT<sup>2</sup>      Tillage Type: NOTILL no-till  
 Replications: 3      Treatments: 10 Plots: 30      Study Design: RACOB L Randomized Complete Block (RCB)

Previous  
 No. Crop Year  
 1. SOYBEAN2021

## Soil Description

Description Name: F-9 West  
 % Sand: 33      % OM: 1.6      Texture: SIL silt loam  
 % Silt: 52      Soil Name: Crosby  
 % Clay: 15      Fert. Level: G good  
 pH: 6      CEC: 8.6

## Application Description

	A	B
Application Date	Apr-27-2022	Jun-3-2022
Appl. Start Time	9:00 AM	9:30 AM
Appl. Stop Time	9:20 AM	9:50 AM
Application Method	SPRAY	SPRAY
Application Timing	PRE	POST
Application Placement	BROFOL	BROFOL
Applied By	Dobbels	Mark
Appl. Entry Date	May-3-2022	Jun-6-2022
Air Temperature Start, Stop	34, 35 F	67, 67 F
% Relative Humidity Start, Stop	89, 89	52, 52
Wind Velocity+Dir. Start	7 MPH, SE	4 MPH, W
Wind Velocity+Dir. Stop	7 MPH, SE	4 MPH, W
Wind Velocity+Dir. Max	7 MPH, SE	4 MPH, W
Wet Leaves (Y/N)	Y, yes	N, no
Soil Temperature	45 F	65 F
Soil Moisture	DRY	DRY
Soil Surface Condition	MEDTRA	MEDTRA
% Cloud Cover	0	0
Next Moisture Occurred On	Apr-30-2022	Jun-6-2022
Time to Next Moisture	3.0 DAY	3.0 DAY
Moisture 6 Hours after Appl.	0 IN	0 IN
Moisture 1 Week after Appl.	0.58 IN	1.08 IN

## Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	ZEAMX, BCOR	ZEAMX, BCOR
Days after Emergence	-17	20
Stage Majority, Percent		15, 100
Height Average		14 IN
Height Minimum, Maximum		10, 18

## Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	LAMPU, W, BBCH	LAMPU, W, BBCH
Stage Majority, Percent	65, 80	
Stage Minimum, Percent	60, 20	
Stage Maximum, Percent	65, 80	
Diameter Average	3 IN	
Diameter Minimum, Maximum	1, 3	
Height Average	6 IN	
Height Minimum, Maximum	4, 7	
Density Average	34 PLA/m <sup>2</sup>	
Density Minimum, Maximum	2, 40	
Pest 2 Code, Type, Scale	RANAB, W, BBCH	RANAB, W, BBCH
Stage Majority, Percent	61, 90	
Stage Minimum, Percent	60, 10	
Stage Maximum, Percent	61, 90	
Diameter Average	3 IN	
Diameter Minimum, Maximum	3, 4	
Height Average	6 IN	
Height Minimum, Maximum	4, 8	
Density Average	2 pla/m <sup>2</sup>	
Density Minimum, Maximum	0, 3	
Pest 3 Code, Type, Scale	CARPE, W, BBCH	CARPE, W, BBCH
Stage Majority, Percent	69, 90	
Stage Minimum, Percent	68, 10	
Stage Maximum, Percent	69, 90	
Diameter Average	2 IN	
Diameter Minimum, Maximum	2, 3	
Height Average	6 IN	
Height Minimum, Maximum	4, 7	
Density Average	5 PLA/m <sup>2</sup>	
Density Minimum, Maximum	0, 7	

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Pest 4 Code, Type, Scale	STEME, W, BBCH	STEME, W, BBCH
Stage Majority, Percent	65, 80	
Stage Minimum, Percent	60, 10	
Stage Maximum, Percent	65, 80	
Diameter Average	6 IN	
Diameter Minimum, Maximum	6, 8	
Height Average	1 IN	
Height Minimum, Maximum	0.5, 1	
Density Average	2 PLA/m2	
Density Minimum, Maximum	0, 4	
Pest 5 Code, Type, Scale	DRBSS, W, BBCH	DRBSS, W, BBCH
Stage Majority, Percent	69, 90	
Stage Minimum, Percent	65, 10	
Stage Maximum, Percent	69, 90	
Diameter Average	1.5 IN	
Diameter Minimum, Maximum	1, 2	
Height Average	3 IN	
Height Minimum, Maximum	2, 3	
Density Average	3 PLA/m2	
Density Minimum, Maximum	0, 6	
Pest 6 Code, Type, Scale	VERAG, W, BBCH	VERAG, W, BBCH
Stage Majority, Percent	65, 60	
Stage Minimum, Percent	60, 20	
Stage Maximum, Percent	65, 60	
Diameter Average	4 IN	
Diameter Minimum, Maximum	3, 6	
Height Average	1 IN	
Height Minimum, Maximum	1, 2	
Density Average	6 PLA/m2	
Density Minimum, Maximum	5, 12	
Pest 7 Code, Type, Scale	AMBTR, W, BBCH	AMBTR, W, BBCH
Stage Majority, Percent	10, 60	19, 100
Stage Minimum, Percent	10, 40	
Stage Maximum, Percent	12, 40	
Diameter Average	2 IN	
Diameter Minimum, Maximum	1.5, 2	
Height Average	1 IN	10 IN
Height Minimum, Maximum	1, 2	2, 14
Density Average	8 PLA/m2	8 PLA/m2
Density Minimum, Maximum	3, 12	3, 12
Pest 8 Code, Type, Scale	SETFA, W, BBCH	SETFA, W, BBCH
Stage Majority, Percent		15, 80
Stage Minimum, Percent		13, 10
Stage Maximum, Percent		15, 80
Height Average		4 IN
Height Minimum, Maximum		2, 7
Density Average		187 PLA/m2
Density Minimum, Maximum		135, 190
Pest 9 Code, Type, Scale	AMBEL, W, BBCH	AMBEL, W, BBCH
Stage Majority, Percent		14, 80
Stage Minimum, Percent		14, 80
Stage Maximum, Percent		16, 20
Height Average		4 IN
Height Minimum, Maximum		2, 4
Density Average		3 pla/m2
Density Minimum, Maximum		1, 6
Pest10 Code, Type, Scale	CHEAL, W, BBCH	CHEAL, W, BBCH
Stage Majority, Percent		14, 80
Stage Minimum, Percent		14, 80
Stage Maximum, Percent		16, 20
Height Average		4 IN
Height Minimum, Maximum		1, 4
Density Average		8 PLA/m2
Density Minimum, Maximum		2, 9
Pest11 Code, Type, Scale	ERICA, W, BBCH	ERICA, W, BBCH
Stage Majority, Percent		16, 100
Height Average		2 IN
Height Minimum, Maximum		1, 3
Density Average		3 pla/m2
Density Minimum, Maximum		1, 4
Pest12 Code, Type, Scale	ECHCG, W, BBCH	ECHCG, W, BBCH
Stage Majority, Percent		13, 100
Height Average		4 IN
Height Minimum, Maximum		2, 7
Density Average		34 PLA/m2
Density Minimum, Maximum		14, 38

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## Application Equipment

	A	B
Appl. Equipment	6' AIXR	10' 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

Pest Type	C, ZEAMX			
Pest Code	Corn			
Pest Scientific Name	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	LB, -, -	%, 0, 100	BU, -, -	BU, -, -
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.	167, 130	167, 130	167, 130	167, 130
Trt-Eval Interval				
Plant-Eval Interval	168 DP-1	168 DP-1	168 DP-1	168 DP-1
Days After Emergence	150 DE-1	150 DE-1	150 DE-1	150 DE-1
ARM Action Codes			TY1	
Number of Decimals			1	

Trt Treatment No. Name	Rate	Unit	Appl Code	20*	21*	22*	23*
1 Bicep II Magnum	2.06lb ai/a	A		51.963-	16.80-	265.3-	55.60-
1 Roundup Powermax 3	1 lb ae/a	A					
1 N PAK AMS	2.5% v/v	A					
1 Impact	0.0219lb ai/a	B					
1 Atrazine	0.5lb ai/a	B					
1 HC MSO	0.5% v/v	B					
1 N Pak AMS	2.5% v/v	B					
2 Bicep II Magnum	2.06lb ai/a	A		54.780-	17.77-	276.5-	57.50-
2 Roundup Powermax 3	1 lb ae/a	A					
2 N PAK AMS	2.5% v/v	A					
2 Impact Core	1.68lb ai/a	B					
2 Atrazine	0.5lb ai/a	B					
2 HC MSO	0.5% v/v	B					
2 N Pak AMS	2.5% v/v	B					
3 Bicep II Magnum	2.06lb ai/a	A		51.430-	17.60-	260.0-	56.87-
3 Roundup Powermax 3	1 lb ae/a	A					
3 N PAK AMS	2.5% v/v	A					
3 Sinate	0.48lb ai/a	B					
3 Atrazine	0.5lb ai/a	B					
3 HC MSO	0.5% v/v	B					
3 N Pak AMS	2.5% v/v	B					
4 Bicep II Magnum	2.06lb ai/a	A		52.173-	16.60-	266.9-	56.77-
4 Roundup Powermax 3	1 lb ae/a	A					
4 N PAK AMS	2.5% v/v	A					
4 Shieldex	0.035lb ai/a	B					
4 Atrazine	0.5lb ai/a	B					
4 COC	1% v/v	B					
4 N Pak AMS	2.5% v/v	B					

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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	LB, -, -	%, 0, 100	BU, -, -	BU, -, -			
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.	167, 130	167, 130	167, 130	167, 130			
Trt-Eval Interval							
Plant-Eval Interval	168 DP-1	168 DP-1	168 DP-1	168 DP-1			
Days After Emergence	150 DE-1	150 DE-1	150 DE-1	150 DE-1			
ARM Action Codes	TY1						
Number of Decimals	1						
Trt Treatment No. Name	Rate	Unit	Appl Code	20*	21*	22*	23*
5 Restraint	1.83 lb ai/a	A	A	52.693-	16.83-	269.0-	56.83-
5 Roundup Powermax 3	1 lb ae/a	A	A				
5 N PAK AMS	2.5 % v/v	A	A				
5 Shieldex	0.035 lb ai/a	B	B				
5 COC	1 % v/v	B	B				
5 N Pak AMS	2.5 % v/v	B	B				
6 SURESTART II	1.38 lb ai/a	A	A	47.433-	18.03-	238.7-	56.63-
6 Roundup Powermax 3	1 lb ae/a	A	A				
6 N PAK AMS	2.5 % v/v	A	A				
6 Resicore XL	1.22 lb ai/a	B	B				
6 Atrazine	1 lb ai/a	B	B				
6 Durango DMA	1 lb ae/a	B	B				
6 NIS	0.25 % v/v	B	B				
6 N Pak AMS	2.5 % v/v	B	B				
7 Trivolt	0.57 lb ai/a	A	A	54.123-	18.10-	272.0-	57.23-
7 Roundup Powermax 3	1 lb ae/a	A	A				
7 N PAK AMS	2.5 % v/v	A	A				
7 Harness Max	1.22 lb ai/a	B	B				
7 Atrazine	1 lb ai/a	B	B				
7 Roundup Powermax 3	1 lb ae/a	B	B				
7 NIS	0.25 % v/v	B	B				
7 N Pak AMS	2.5 % v/v	B	B				
8 MAVERICK	2.06 lb ai/a	A	A	50.953-	17.97-	256.5-	56.63-
8 Roundup Powermax 3	1 lb ae/a	A	A				
8 N PAK AMS	2.5 % v/v	A	A				
8 Maverick	1.22 lb ai/a	B	B				
8 Atrazine	1 lb ai/a	B	B				
8 Roundup Powermax 3	1 lb ae/a	B	B				
8 NIS	0.25 % v/v	B	B				
8 N Pak AMS	2.5 % v/v	B	B				
9 Bicep II Magnum	2.06 lb ai/a	A	A	52.183-	18.23-	261.8-	57.47-
9 Roundup Powermax 3	1 lb ae/a	A	A				
9 N PAK AMS	2.5 % v/v	A	A				
9 Acuron	1.29 lb ai/a	B	B				
9 Atrazine	1 lb ai/a	B	B				
9 Roundup Powermax 3	1 lb ae/a	B	B				
9 NIS	0.25 % v/v	B	B				
9 N Pak AMS	2.5 % v/v	B	B				

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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		
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Rating Type	WEIGHT	MOICON	YIELD	WEITES		
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Trt-Eval Interval						
Plant-Eval Interval	168 DP-1	168 DP-1	168 DP-1	168 DP-1		
Days After Emergence	150 DE-1	150 DE-1	150 DE-1	150 DE-1		
ARM Action Codes	TY1					
Number of Decimals	1					
Trt Treatment	Rate	Appl	20*	21*	22*	23*
No. Name	Rate Unit	Code				
10Bicep II Magnum	2.06 lb ai/a	A	53.983-	17.47-	273.5-	56.93-
10Roundup Powermax 3	1 lb ae/a	A				
10N PAK AMS	2.5% v/v	A				
10Acuron GT	47 lb ae/a	B				
10NIS	0.25% v/v	B				
10Atrazine	0.5 lb ai/a	B				
10N PAK AMS	2.5% v/v	B				
LSD P=.05			5.7374	1.537	29.39	1.629
Standard Deviation			3.3446	0.896	17.13	0.950
CV			6.41	5.11	6.49	1.67
Grand Mean			52.1717	17.540	264.03	56.847
Levene's F^			0.167	0.255	0.231	0.581
Levene's Prob(F)			0.995	0.98	0.986	0.797
Rank X2			.	.	.	.
P(Rank X2)			.	.	.	.
Skewness^			-0.2179	0.0667	-0.1343	-0.5203
Kurtosis^			-1.0632	-0.8384	-0.9123	-0.1489
Replicate F			0.675	0.128	0.755	0.173
Replicate Prob(F)			0.5215	0.8804	0.4842	0.8423
Treatment F			1.153	1.333	1.208	0.968
Treatment Prob(F)			0.3788	0.2878	0.3487	0.4961

### 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

LB, , = pound  
 %, 0, 100 = percent  
 BU, , = bushel

### Plant-Eval Interval

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

### ARM Action Codes

TY1 = 5.18571429\*[20]\*(100-[21])/84.5