

# The Ohio State University

## POST and Sequential weed control with V10494.Primary/Core PRE soil residual

Trial ID: VUSA2022V10494MD68.05 Cooperator Trial ID:  
 Protocol ID: 22MAVPRPO Location: Western Branch F-8 East Trial Year: 2022  
 Project ID: 201510 Project ID 2: Project ID 3:  
 Study Director: Sponsor Contact:  
 Investigator (Creator): Dr. Mark M. Loux

### General Trial Information

Investigator: Dr. Mark M. Loux Title: Professor

Status: E established  
 ARM Trial Created On: Mar-29-2022  
 Initiation Date: May-2-2022

### 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 °: 39.86003 N  
 Longitude of LL Corner °: -83.67032 W  
 Altitude of LL Corner: 1088.00 FT

Conducted Under GLP: No  
 Conducted Under GEP: No Study Rules: Default  
 None

No.	Guideline	Discipline	Description
1.	ADM-C-PUB CO	Confidentiality - Public Trial - No Secrecy Agreement Required	
	Role: INVEST	investigator	
	Investigator: Dr. Mark M. Loux	Title: Professor	
	Organization: The Ohio State University	Org. Type: University	
	Address 1: 2021 Coffey Road		
	Country: USA	United States	
	City: Columbus	State/Prov: OH	Postal Code: 43210

### Crop Description

Crop 1: C	ZEAMXZea mays	Corn	BBCH Scale: BCOR
	Entry Date: May-3-2022	Crop Group: 15	Stage Scale: BBCH
	Variety: DKC59-81RIB		Maturity Group: 109
	Attributes: Glyphosate-R, Glufosinate-R		
	Seed Lot No: H49CCK7JXF		Seed Source: Dekalb
	% Germination: 95		1000 Grain Weight: 0.63 LB
	Planting Date: May-2-2022		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: MEDIUM medium
	Soil Temperature: 52 F		Soil Moisture: DRY dry
	Emergence Date: May-14-2022		
	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: ABUTH Abutilon theophrasti	Stage Scale: POST
	Common Name: velvetleaf	
Pest 2 Type: W	Code: AMBTR Ambrosia trifida	Stage Scale: BBCH
	Common Name: Giant ragweed	
Pest 3 Type: W	Code: SETFA Setaria faberi	Stage Scale: BBCH
	Common Name: Giant foxtail	
Pest 4 Type: W	Code: AMARE Amaranthus retroflexus	Entry Date: May-25-2022
	Common Name: Redroot pigweed	Stage Scale: BBCH
Pest 5 Type: W	Code: CHEAL Chenopodium album	Entry Date: May-25-2022
	Common Name: common lambsquarters	Stage Scale: BBCH
Pest 6 Type: W	Code: XANST Xanthium strumarium	Entry Date: May-25-2022
	Common Name: clotbur	Stage Scale: BBCH
Pest 7 Type: W	Code: POLPY Persicaria pensylvanica	Entry Date: May-25-2022
	Common Name: annual smartweed	Stage Scale: BBCH
Pest 8 Type: W	Code: IPOHE Ipomoea hederacea	Entry Date: May-25-2022
	Common Name: ivy-leaf morning glory	Stage Scale: BBCH

### Site and Design

Treated Plot Width: 6.67 FT  
 Treated Plot Length: 30 FT  
 Treated Plot Area: 200.1 FT<sup>2</sup>  
 Replications: 3 Treatments: 12 Plots: 48  
 Tillage Type: CONTIL conventional-till  
 Study Design: RACOBL Randomized Complete Block (RCB)

# The Ohio State University

## POST and Sequential weed control with V10494.Primary/Core PRE soil residual

Trial ID: VUSA2022V10494MD68.05 Cooperator Trial ID:  
 Protocol ID: 22MAVPRPO Location: Western Branch F-8 East Trial Year: 2022  
 Project ID: 201510 Project ID 2: Project ID 3:  
 Study Director: Sponsor Contact:  
 Investigator (Creator): Dr. Mark M. Loux

### Soil Description

Description Name: F-8 East  
 % Sand: 37 % OM: 2.7 Texture: L loam  
 % Silt: 49 Soil Name: Kokomo  
 % Clay: 15 Fert. Level: G good  
 pH: 6 CEC: 16.9

### Application Description

	A	B	C
Application Date	May-2-2022	May-24-2022	Jun-3-2022
Appl. Start Time	5:20 PM	12:45 PM	
Appl. Stop Time	5:45 PM	1:00 AM	
Interval to Prev. Appl.		22 DAYS	10 DAYS
Application Method	NONINC	SPRAY	SPRAY
Application Timing	PREPRE	POSPOS	POSPOS
Application Placement	BROSOI	BROADC	BROADC
Applied By	Dobbels	Loux	Dobbels
Appl. Entry Date	May-3-2022	May-25-2022	Jun-6-2022
Air Temperature Start, Stop	71, 71 F	68, 68 F	67, 67 F
% Relative Humidity Start, Stop	34, 34	42, 42	52, 52
Wind Velocity+Dir. Start	6 MPH, W	10 MPH, NE	4 MPH, W
Wind Velocity+Dir. Stop	6 MPH, W	10 MPH, NE	4 MPH, W
Wind Velocity+Dir. Max	9 MPH, W	10 MPH, NE	4 MPH, W
Wet Leaves (Y/N)	N, no	Y, yes	N, no
Soil Temperature	62 F	69 F	65 F
Soil Moisture	DRY	DRY	DRY
Soil Surface Condition	MEDIUM	MEDTRA	MEDIUM
% Cloud Cover	33	25	0
Next Moisture Occurred On	May-3-2022	May-26-2022	Jun-6-2022
Time to Next Moisture	14.0 HR	2.0 DAY	3.0 DAY
Moisture 6 Hours after Appl.	0 IN	0 IN	0 IN
Moisture 1 Week after Appl.	2.09 IN	2.08 IN	1.08 IN

### Protocol Application Directions:

One to two application per plot/Three application timings.

### Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale	ZEAMX, BCORZEAMX,	BCORZEAMX,	BCORZEAMX, BCOR
Days after Emergence	-12	10	20
Stage Majority, Percent		13, 100	15, 100
Height Average		5 IN	15 IN
Height Minimum, Maximum		4.5, 5	14, 16

# The Ohio State University

## POST and Sequential weed control with V10494.Primary/Core PRE soil residual

Trial ID: VUSA2022V10494MD68.05 Cooperator Trial ID:  
 Protocol ID: 22MAVPRPO Location: Western Branch F-8 East Trial Year: 2022  
 Project ID: 201510 Project ID 2: Project ID 3:  
 Study Director: Sponsor Contact:  
 Investigator (Creator): Dr. Mark M. Loux

### Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale	ABUTH, W, POST	ABUTH, W, POST	ABUTH, W, POST
Stage Majority, Percent		12, 100	
Height Average		1 IN	
Height Minimum, Maximum		0.5, 1	
Density Average		3 PLA/M2	
Density Minimum, Maximum		1, 4	
Pest 2 Code, Type, Scale	AMBTR, W, BBCH	AMBTR, W, BBCH	AMBTR, W, BBCH
Stage Majority, Percent		12, 100	14, 80
Stage Minimum, Percent			14, 80
Stage Maximum, Percent			16, 20
Height Average		2 IN	6 IN
Height Minimum, Maximum		1, 2	4, 8
Density Average		12 PLA/M2	6 PLA/M2
Density Minimum, Maximum		8, 15	4, 8
Pest 3 Code, Type, Scale	SETFA, W, BBCH	SETFA, W, BBCH	SETFA, W, BBCH
Stage Majority, Percent		13, 100	13, 60
Stage Minimum, Percent			13, 60
Stage Maximum, Percent			17, 10
Height Average		3 IN	4 IN
Height Minimum, Maximum		1, 4	3, 6
Density Average		145 PLA/M2	79 PLA/M2
Density Minimum, Maximum		124, 156	75, 125
Pest 4 Code, Type, Scale	AMARE, W, BBCH	AMARE, W, BBCH	AMARE, W, BBCH
Stage Majority, Percent		12, 80	
Stage Minimum, Percent		12, 10	
Stage Maximum, Percent		14, 10	
Height Average		1 IN	
Height Minimum, Maximum		0.5, 1.5	
Density Average		4 PLA/M2	
Density Minimum, Maximum		2, 6	
Pest 5 Code, Type, Scale	CHEAL, W, BBCH	CHEAL, W, BBCH	CHEAL, W, BBCH
Stage Majority, Percent		14, 60	14, 80
Stage Minimum, Percent		14, 20	12, 10
Stage Maximum, Percent		16, 20	16, 10
Height Average		0.5 IN	2 IN
Height Minimum, Maximum		0.75, 1	1, 4
Density Average		12 PLA/M2	6 PLA/M2
Density Minimum, Maximum		10, 20	2, 8
Pest 6 Code, Type, Scale	XANST, W, BBCH	XANST, W, BBCH	XANST, W, BBCH
Stage Majority, Percent		12, 100	
Height Average		1 IN	
Height Minimum, Maximum		0.5, 1	
Density Average		0.25 PLA/M2	
Density Minimum, Maximum		0, 1	
Pest 7 Code, Type, Scale	POLPY, W, BBCH	POLPY, W, BBCH	POLPY, W, BBCH
Stage Majority, Percent		12, 100	
Height Average		0.5 IN	
Height Minimum, Maximum		0.75, 0.5	
Density Average		3 PLA/M2	
Density Minimum, Maximum		1, 8	
Pest 8 Code, Type, Scale	IPOHE, W, BBCH	IPOHE, W, BBCH	IPOHE, W, BBCH
Stage Majority, Percent		10, 100	12, 100
Height Average		1 IN	2 IN
Height Minimum, Maximum		0.5, 1	1, 2
Density Average		2 PLA/M2	3 PLA/M2
Density Minimum, Maximum		1, 3	1, 5

### Application Equipment

	A	B	C
Appl. Equipment	6' TTI	10' AIXR	10' AIXR
Equipment Type	BACCAI	BACCAI	BACCAI
Operation Pressure	44 PSI	44 PSI	44 PSI
Nozzle Model	1110015	110015	110015
Nozzle Type	TTI	AI XR	AI XR
Nozzle TradeName	Turbo Tee Induction	TeeJet	TeeJet
Nozzle Tip Size, Color	015, green	015, green	015, green
Nozzle Spacing	18 IN	18 IN	18 IN
Boom Length	6.67 FT	10 FT	10 FT
Boom Height	20 IN	20 IN	20 IN
Ground Speed	3 MPH	3 MPH	3 MPH
Carrier	WATER	WATER	WATER
Water Hardness (ppm CaCO3)	250	250	250
Application Amount	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Overage		25 mL	25 mL
Mix Size	1 L	2 L	2 L
Spray pH	7.8	7.8	7.8
Propellant	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N)		Y, yes	Y, yes

# The Ohio State University

## POST and Sequential weed control with V10494.Primary/Core PRE soil residual

Trial ID: VUSA2022V10494MD68.05      Cooperator Trial ID:  
 Protocol ID: 22MAVPRPO      Location: Western Branch F-8 East      Trial Year: 2022  
 Project ID: 201510    Project ID 2:    Project ID 3:  
 Study Director:      Sponsor Contact:  
 Investigator (Creator): Dr. Mark M. Loux

Trt No.	Treatment Name	Rate	Unit	Appl Code	39*	40*	41*	42*
1	UNTREATED CHECK				22.425b	16.63a	114.6b	57.43ab
2	ROUNDUP POWER MAX(AE)	1 qt/a	B		49.955a	15.83ab	258.0a	57.75a
2	Status	2 oz/a	B					
2	INDUCE	0.25% v/v	B					
2	PAK AMS	6% v/v	B					
3	ACURON HERBICIDE	3 pt/a	B		55.960a	16.20a	287.8a	57.95a
3	ROUNDUP POWER MAX(AE)	1 qt/a	B					
3	INDUCE	0.25% v/v	B					
3	PAK AMS	6% v/v	B					
4	HALEX GT	2 qt/a	B		52.470a	15.85ab	270.8a	56.48ab
4	INDUCE	0.25% v/v	B					
4	PAK AMS	6% v/v	B					
5	ARMEZON PRO	24 fl oz/a	B		48.518a	14.55b	254.5a	55.05b
5	ROUNDUP POWER MAX(AE)	1 qt/a	B					
5	INDUCE	0.25% v/v	B					
5	PAK AMS	6% v/v	B					
6	RESICORE	44 fl oz/a	B		53.695a	16.43a	275.3a	57.60a
6	ROUNDUP POWER MAX(AE)	1 qt/a	B					
6	INDUCE	0.25% v/v	B					
6	PAK AMS	6% v/v	B					
7	MAVERICK	14 fl oz/a	B		51.560a	16.53a	264.0a	55.83ab
7	ROUNDUP POWER MAX(AE)	1 qt/a	B					
7	INDUCE	0.25% v/v	B					
7	PAK AMS	6% v/v	B					
8	MAVERICK	14 fl oz/a	B		55.250a	16.68a	282.5a	57.20ab
8	AATREX	0.75 lb ai/a	B					
8	ROUNDUP POWER MAX(AE)	1 qt/a	B					
8	INDUCE	0.25% v/v	B					
8	PAK AMS	6% v/v	B					
9	ACURON HERBICIDE	1.5 qt/a	A		55.913a	16.38a	286.9a	56.90ab
9	ACURON HERBICIDE	1.5 qt/a	C					
9	ROUNDUP POWER MAX(AE)	1 qt/a	C					
9	INDUCE	0.25% v/v	C					
9	PAK AMS	6% v/v	C					

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.

# The Ohio State University

## POST and Sequential weed control with V10494.Primary/Core PRE soil residual

Trial ID: VUSA2022V10494MD68.05      Cooperator Trial ID:  
 Protocol ID: 22MAVPRPO      Location: Western Branch F-8 East      Trial Year: 2022  
 Project ID: 201510    Project ID 2:    Project ID 3:  
 Study Director:      Sponsor Contact:  
 Investigator (Creator): Dr. Mark M. Loux

Treatment	Rate	Appl	39*	40*	41*	42*
No. Name	Rate Unit	Code				
10 MAVERICK	18 fl oz/a	A	54.308 a	17.15 a	276.1 a	57.78 a
10 MAVERICK	14 fl oz/a	C				
10 ROUNDUP POWER MAX(AE)	1 qt/a	C				
10 INDUCE	0.25 % v/v	C				
10 N PAK AMS	6 % v/v	C				
11 MAVERICK	18 fl oz/a	A	54.540 a	17.08 a	277.5 a	57.28 ab
11 AATREX	0.5 lb ai/a	A				
11 MAVERICK	14 fl oz/a	C				
11 AATREX	0.5 lb ai/a	C				
11 ROUNDUP POWER MAX(AE)	1 qt/a	C				
11 INDUCE	0.25 % v/v	C				
11 N PAK AMS	6 % v/v	C				
12 PERPETUO	8 fl oz/a	A	55.148 a	16.30 a	283.3 a	57.63 a
12 AATREX	1 lb ai/a	A				
12 MAVERICK	14 fl oz/a	C				
12 ROUNDUP POWER MAX(AE)	1 qt/a	C				
12 INDUCE	0.25 % v/v	C				
12 N PAK AMS	6 % v/v	C				
LSD P=.05			4.9962	1.101	25.19	1.579
Standard Deviation			3.4729	0.766	17.51	1.097
CV			6.83	4.7	6.71	1.92
Grand Mean			50.8117	16.298	260.95	57.071
Levene's F^			2.284	2.022	2.479	1.915
Levene's Prob(F)			0.031*	0.055	0.02*	0.07
Rank X2			.	.	.	.
P(Rank X2)			.	.	.	.
Skewness^			0.0729	0.0836	0.0532	-0.236
Kurtosis^			2.2699*	-0.1891	2.3741*	-0.5655
Replicate F			2.952	1.261	2.634	1.495
Replicate Prob(F)			0.0469	0.3038	0.0662	0.2339
Treatment F			28.358	3.190	29.235	2.573
Treatment Prob(F)			0.0001	0.0048	0.0001	0.0177

### Crop Type, Code

C = EPP0 species (Bayer) codes  
 ZEAMX, BCOR, Zea mays, Corn = US

### Part Rated

SEED = seed  
 C = Crop is Part Rated

### Rating Type

WEIGHT = weight  
 MOICON = moisture content  
 YIELD = yield  
 WEITES = weight - test

### Rating Unit/Min/Max

BU, , = bushel

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.

\* Adjusted means

^Calculated from residual.

# The Ohio State University

**POST and Sequential weed control with V10494.Primary/Core PRE soil residual**

Trial ID: VUSA2022V10494MD68.05      Cooperator Trial ID:  
Protocol ID: 22MAVPRPO      Location: Western Branch F-8 East      Trial Year: 2022  
Project ID: 201510    Project ID 2:    Project ID 3:  
Study Director:      Sponsor Contact:  
Investigator (Creator): Dr. Mark M. Loux

PLOT = total plot  
A = acre  
Plant-Eval Interval  
162 DP-1 = 1 ZEAMX May-2-2022  
ARM Action Codes  
TY1 = 5.18571429\*[39]\*(100-[40])/84.5

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.  
\* Adjusted means  
^Calculated from residual.