

The Ohio State University

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

Trial ID: 21V10494PO Location: Trial Year: 2021
 Protocol ID: VUSA2021V10494MD68.05 Investigator (Creator): Dr. Mark M. Loux
 Project ID: 201510 Study Director: Dr. Mark M. Loux
 Sponsor Contact:

General Trial Information

Study Director: Dr. Mark M. Loux

Discipline: H herbicide
Trial Status: E established

ARM Trial Created On: Mar-30-2021
Initiation Date: Apr-27-2021

Trial Location

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

Latitude of LL Corner °: 39.85696 N
Longitude of LL Corner °: -83.67013 W
Altitude of LL Corner: 1101.00 FT

Conducted Under GLP: No
Conducted Under GEP: No

Study Rules: Default

No.	Guideline	Discipline	Description
1.	ADM-C-PUB CO		Confidentiality - Public Trial - No Secrecy Agreement Required

Contacts

Role: STYDIR study director
Study Director: Dr. Mark M. Loux

Crop Description

Crop 1: C	ZEAMX Zea mays	Corn	BBCH Scale: BCOR
Entry Date:	May-3-2021	Stage Scale:	BBCH
Variety:	SCS1111Q		
Attributes:	Glyphosate-R, Glufosinate-R		
Planting Date:	Apr-27-2021	Planting Rate:	32097 S/A
Depth:	2 IN	Planting Method:	PLANTD planted
Rows per Plot:	4	Planting Equipment:	FPP finger pickup planter
Row Spacing:	30 IN	Seed Bed:	MEDIUM medium
Soil Temperature:	63 F	Soil Moisture:	SLIDRY slightly dry
Emergence Date:	May-14-2021	Harvest Equipment:	Kincaid 8XP
Harvest Date:	Oct-11-2021	Harvested Width:	5 FT
Moisture Meter:	Harvest Master	Harvested Length:	30 FT
% Standard Moisture:	15.5		
Weighing Equipment:	Harvest Master HM800		

Pest Description

Pest 1 Type: W	Code: SETFA	Setaria faberi	Entry Date: Jun-2-2021
	Common Name:	Giant foxtail	Stage Scale: BBCH
	Attributes:	Natural population	
Pest 2 Type: W	Code: AMBTR	Ambrosia trifida	Entry Date: Jun-2-2021
	Common Name:	Giant ragweed	Stage Scale: BBCH
	Attributes:	Natural population	
Pest 3 Type: W	Code: CHEAL	Chenopodium album	Entry Date: Jun-2-2021
	Common Name:	common lambsquarters	Stage Scale: BBCH
	Attributes:	Natural population	
Pest 4 Type: W	Code: AMARE	Amaranthus retroflexus	Entry Date: Jun-2-2021
	Common Name:	Redroot pigweed	Stage Scale: BBCH
	Attributes:	Natural population	
Pest 5 Type: W	Code: ABUTH	Abutilon theophrasti	Entry Date: Jun-2-2021
	Common Name:	velvetleaf	Stage Scale: BBCH
	Attributes:	Natural population	
Pest 6 Type: W	Code: POLPY	Persicaria pensylvanica	Entry Date: Jun-2-2021
	Common Name:	annual smartweed	Stage Scale: BBCH
	Attributes:	Natural population	

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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 Treatments: 10 Tillage Type: CONTIL conventional-till
 Replications: 4 Study Design: RACOBL Randomized Complete Block (RCB)

Previous

No. Crop Year
 1. SOYBEAN 2020

Soil Description

Description Name: Big E
 % Sand: 44 % OM: 3.1 Texture: SICL silty clay loam
 % Silt: 45 pH: 6.6 Soil Name: Kokomo
 % Clay: 11 CEC: 15 Fert. Level: G good
 g o o d

Application Description

	A	B	C
Application Date	Apr-28-2021	May-27-2021	Jun-6-2021
Appl. Start Time	8:00 AM	8:00 AM	10:00 AM
Appl. Stop Time	8:30 AM	8:30 AM	10:30 AM
Application Method	NONINC	SPRAY	SPRAY
Application Timing	PREPRE	POSPOS	POSPOS
Application Placement	BROSOIL	BROADC	BROADC
Applied By	ACKLEY	Essman	Ackley
Appl. Entry Date	May-3-2021	Jun-2-2021	Jun-7-2021
Air Temperature Start, Stop	67.7 68.8 F	66 64 F	83 83 F
% Relative Humidity Start, Stop	63 70	79 80	56 56
Wind Velocity+Dir. Start	8 MPH WSW	6 MPH ENE	5 MPH SSW
Wind Velocity+Dir. Stop	8 MPH WSW	6 MPH ENE	5 MPH SSW
Wind Velocity+Dir. Max	9.2 MPH WSW	7 MPH ENE	5 MPH SSW
Wet Leaves (Y/N)	N no	Y yes	N no
Soil Temperature	58 F	63 F	67 F
Soil Moisture	DRY	WET	dry
Soil Surface Condition	MEDIUM	MEDIUM	MEDIUM
% Cloud Cover	60	5	60
Next Moisture Occurred On	Apr-28-2021	May-28-2021	Jun-7-2021
Time to Next Moisture	11.5 HR	1.0 DAY	22.0 HR
Moisture 6 Hours after Appl.	0 IN	0 IN	0 IN
Moisture 1 Week after Appl.	1.1 IN	0.76 IN	0.48 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	BCOR	ZEAMX	BCOR	ZEAMX	BCOR
Days after Emergence	-16		13		23	
Stage Majority, Percent	00	100	13	100	15	100
Height Average			7	IN	12	IN
Height Minimum, Maximum			5	8	11	13

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Pest Stage At Each Application

	A			B			C		
Pest 1 Code, Type, Scale	SETFA	W	BBCH	SETFA	W	BBCH	SETFA	W	BBCH
Stage Majority, Percent				13		90	15		80
Stage Minimum, Percent				11		10	13		10
Stage Maximum, Percent				13		90	15		80
Height Average				3		IN	8		IN
Height Minimum, Maximum				1		5	6		10
Density Average							8		PLA/m2
Density Minimum, Maximum							12		92
Pest 2 Code, Type, Scale	AMBTR	W	BBCH	AMBTR	W	BBCH	AMBTR	W	BBCH
Stage Majority, Percent				14		80	19		80
Stage Minimum, Percent				12		10	14		10
Stage Maximum, Percent				16		10	19		80
Height Average				3		IN			
Height Minimum, Maximum				2		6			
Density Average							18		PLA/m2
Density Minimum, Maximum							4		48
Pest 3 Code, Type, Scale	CHEAL	W	BBCH	CHEAL	W	BBCH	CHEAL	W	BBCH
Stage Majority, Percent				16		60	16		80
Stage Minimum, Percent				12		10	14		10
Stage Maximum, Percent				18		20	18		10
Height Average				1		IN	3		IN
Height Minimum, Maximum				1		2	2		3
Pest 4 Code, Type, Scale	AMARE	W	BBCH	AMARE	W	BBCH	AMARE	W	BBCH
Stage Majority, Percent	14		80	14		80	16		80
Stage Minimum, Percent	12		10	12		10	14		10
Stage Maximum, Percent	16		10	16		10	18		10
Height Average	0.5		IN	0.5		IN	2		IN
Height Minimum, Maximum	0.5		1	0.5		1	1		2
Pest 5 Code, Type, Scale	ABUTH	W	BBCH	ABUTH	W	BBCH	ABUTH	W	BBCH
Stage Majority, Percent				12		100	14		80
Stage Minimum, Percent							12		10
Stage Maximum, Percent							14		80
Height Average				0.5		IN	3		IN
Height Minimum, Maximum				0.5		1	2		3
Pest 6 Code, Type, Scale	POLPY	W	BBCH	POLPY	W	BBCH	POLPY	W	BBCH
Stage Majority, Percent				13		80	14		80
Stage Minimum, Percent				12		10	13		10
Stage Maximum, Percent				14		10	14		80
Height Average				2		IN	3		IN
Height Minimum, Maximum				1		2	2		3
Pest 7 Code, Type, Scale	BBCH			BBCH					

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	TeeJet			TeeJet			TeeJet		
Nozzle Tip Size, Color	015	green		05	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		
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		
Propellant	COMCO2			COMCO2			COMCO2		
Tank Mix (Y/N)				Y	yes		Y	yes	

Notes

Context	Date	By	Notes
STATUS	Mar-30-2021	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	May-3-2021	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'E' when Initiation Date entered.

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 Project ID: 201510
 Investigator (Creator): Dr. Mark M. Loux
 Study Director: Dr. Mark M. Loux
 Sponsor Contact:

Location: Trial Year: 2021

Pest Type	C ZEAM02	C ZEAM02	C ZEAM02	C ZEAM02			
Pest Code							
Pest Scientific Name							
Pest Name							
Crop Type, Code	C ZEAM02	C ZEAM02	C ZEAM02	C ZEAM02			
BBCH Scale	BCOR	BCOR	BCOR	BCOR			
Crop Scientific Name	Zea mays subsp.>	Zea mays subsp.>	Zea mays subsp.>	Zea mays subsp.>			
Crop Name	Corn, BT/Roundu>	Corn, BT/Roundu>	Corn, BT/Roundu>	Corn, BT/Roundu>			
Rating Date							
Part Rated	SEED C	SEED C	SEED C	SEED C			
Rating Type	YIELD	MOICON	YIELD	WEITES			
Rating Unit/Min/Max	WEIGHT - -	% 0	BU - -	LB - -			
		100					
Sample Size	1 PLOT		1 A	1 BU			
Number of Subsamples	1	1	1	1			
Data Entry Date	Oct-12-2021	Oct-12-2021		Oct-12-2021			
Days After First/Last Applic.							
Trt-Eval Interval							
Plant-Eval Interval							
Days After Emergence							
ARM Action Codes			TY1	EC			
Number of Decimals	1	1	1	1			
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	35*	36*	37*	38*
1				14.0 b	15.2 -	72.7 b	53.0
2 ACURON HERBICIDE	3 pt/a		B	51.2 a	14.9 -	267.0 a	54.7 -
ROUNDUP POWER MAX(AE)	1 qt/a		B				
INDUCE	0.25 % v/v		B				
DRY AMMONIUM SULFATE	3 lb/a		B				
3 HALEX GT	2 qt/a		B	37.8 a	13.2 -	201.1 a	52.1 -
INDUCE	0.25 % v/v		B				
DRY AMMONIUM SULFATE	3 lb/a		B				
4 ARMEZON PRO	24 fl oz/a		B	40.9 a	13.8 -	216.1 a	52.8 -
ROUNDUP POWER MAX(AE)	1 qt/a		B				
INDUCE	0.25 % v/v		B				
DRY AMMONIUM SULFATE	3 lb/a		B				
5 RESICORE	44 fl oz/a		B	50.9 a	14.6 -	267.1 a	54.8 -
ROUNDUP POWER MAX(AE)	1 qt/a		B				
INDUCE	0.25 % v/v		B				
DRY AMMONIUM SULFATE	3 lb/a		B				
6 V-10494 2.04 LBAI/GAL SC 2146	14 fl oz/a		B	42.5 a	14.5 -	223.1 a	53.0 -
ROUNDUP POWER MAX(AE)	1 qt/a		B				
INDUCE	0.25 % v/v		B				
DRY AMMONIUM SULFATE	3 lb/a		B				
7 V-10494 2.04 LBAI/GAL SC 2146	14 fl oz/a		B	49.2 a	14.8 -	257.0 a	54.7 -
AATREX	0.75 lb ai/a		B				
ROUNDUP POWER MAX(AE)	1 qt/a		B				
INDUCE	0.25 % v/v		B				
DRY AMMONIUM SULFATE	3 lb/a		B				
8 ACURON HERBICIDE	1.5 qt/a		A	49.9 a	15.1 -	260.1 a	54.9 -
ACURON HERBICIDE	1.5 qt/a		C				
ROUNDUP POWER MAX(AE)	1 qt/a		C				
INDUCE	0.25 % v/v		C				
DRY AMMONIUM SULFATE	3 lb/a		C				
9 V-10494 2.04 LBAI/GAL SC 2146	18 fl oz/a		A	49.8 a	15.0 -	259.6 a	54.0 -
V-10494 2.04 LBAI/GAL SC 2146	14 fl oz/a		C				
ROUNDUP POWER MAX(AE)	1 qt/a		C				
INDUCE	0.25 % v/v		C				
DRY AMMONIUM SULFATE	3 lb/a		C				

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.

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Pest Type							
Pest Code							
Pest Scientific Name							
Pest Name							
Crop Type, Code	C ZEAM02	C ZEAM02	C ZEAM02	C ZEAM02			
BBCH Scale	BCOR	BCOR	BCOR	BCOR			
Crop Scientific Name	Zea mays subsp.>	Zea mays subsp.>	Zea mays subsp.>	Zea mays subsp.>			
Crop Name	Corn, BT/Roundu>	Corn, BT/Roundu>	Corn, BT/Roundu>	Corn, BT/Roundu>			
Rating Date							
Part Rated	SEED C	SEED C	SEED C	SEED C			
Rating Type	YIELD	MOICON	YIELD	WEITES			
Rating Unit/Min/Max	WEIGHT - -	% 0	BU - -	LB - -			
		100					
Sample Size	1 PLOT		1 A	1 BU			
Number of Subsamples	1	1	1	1			
Data Entry Date	Oct-12-2021	Oct-12-2021		Oct-12-2021			
Days After First/Last Applic.							
Trt-Eval Interval							
Plant-Eval Interval							
Days After Emergence							
ARM Action Codes				TY1			
Number of Decimals	1	1	1	1			
Trt Treatment	Other Rate	Other Rate	Appl Unit Code	35*	36*	37*	38*
10 V-10494 2.04 LBAI/GAL SC 2146	18 fl oz/a		A	50.3 a	14.7 -	263.4 a	55.2 -
AATREX	0.5 lb ai/a		A				
V-10494 2.04 LBAI/GAL SC 2146	14 fl oz/a		C				
AATREX	0.5 lb ai/a		C				
ROUNDUP POWER MAX(AE)	1 qt/a		C				
INDUCE	0.25 % v/v		C				
DRY AMMONIUM SULFATE	3 lb/a		C				
LSD P=.05				8.17	1.76	40.69	1.85
Standard Deviation				5.63	1.22	28.04	1.27
CV				12.9	8.35	12.26	2.35
Levene's F^				1.962	1.015	2.029	0.297
Levene's Prob(F)				0.081	0.451	0.071	0.961
Skewness^				-0.3637	0.1982	-0.4846	-0.2898
Kurtosis^				1.1439	-0.6972	1.2404	-0.6675
Replicate F				0.726	2.552	0.582	3.353
Replicate Prob(F)				0.5452	0.0765	0.6319	0.0356
Treatment F				16.599	1.049	18.182	3.132
Treatment Prob(F)				0.0001	0.4295	0.0001	0.0143

Crop Type, Code

C = EPPPO species (Bayer) codes

Part Rated

SEED = seed

C = Crop is Part Rated

Rating Type

YIELD = yield

MOICON = moisture content

WEITES = weight - test

Rating Unit/Min/Max

%, 0, 100 = percent

BU, , = bushel

LB, , = pound

PLOT = total plot

A = acre

BU = bushel

ARM Action Codes

EC = Do not analyze untreated check, while still reporting treatment mean on AOV Means Table

TY1 = 5.18571429*[35]*(100-[36])/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.