

The Ohio State University

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

Trial ID: 22FALLSOY1 Cooperator Trial ID:
 Protocol ID: H21-US-040--577-001 Location: Trial Year: 2021
 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: Oct-26-2021

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 °: 39.85876 N
 Longitude of LL Corner °: -83.67181 W
 Altitude of LL Corner: 1088.00 FT

Conducted Under GLP: No
 Conducted Under GEP: No
 None

Role: SPONSR sponsor
 Sponsor: Joe Reed
 Organization: UPL

Crop Description

Crop 1: C	GLXMA Glycine max	Soybean	BBCH Scale: BSOY
	Entry Date: May-2-2022	Stage Scale: BBCH	
	Variety: P35T15E		
	Attributes: 2,4-D Choline, Glyphosate, Glufosinate Tol		
	Planting Date: Apr-27-2022	Seed Size: 2978 S/LB	
	Depth: 1.5 IN	Planting Rate: 165000 S/A	
	Rows per Plot: 8	Planting Method: PLANTD planted	
	Row Spacing: 15 IN	Planting Equipment: PP plot planter	
		Seed Bed: MEDIUM medium	
	Soil Temperature: 52 F	Soil Moisture: NORMAL normal, adequate	
	Emergence Date: May-16-2022		
	Harvest Date: Oct-12-2022	Harvest Equipment: Kincaid 8XP	
	Moisture Meter: Harvest Master	Harvested Width: 6.25 FT	
	% Standard Moisture: 13	Harvested Length: 30 FT	
	Weighing Equipment: Harvest Master HM800		

Pest Description

Pest 1 Type: W	Code: LAMPU Lamium purpureum	Entry Date: Nov-19-2021
	Common Name: Purple deadnettle	Stage Scale: BBCH
Pest 2 Type: W	Code: RANAB Ranunculus abortivus	Entry Date: Nov-19-2021
	Common Name: Smallflower buttercup	Stage Scale: BBCH
Pest 3 Type: W	Code: CARPE Cardamine pensylvanica	Entry Date: Nov-19-2021
	Common Name: Pennsylvania bittercress	Stage Scale: BBCH
Pest 4 Type: W	Code: SETFA Setaria faberi	Entry Date: Jun-2-2022
	Common Name: Giant foxtail	Stage Scale: BBCH
Pest 5 Type: W	Code: AMBTR Ambrosia trifida	Entry Date: Jun-2-2022
	Common Name: Giant ragweed	Stage Scale: BBCH
Pest 6 Type: W	Code: AMBEL Ambrosia artemisiifolia	Entry Date: Jun-2-2022
	Common Name: Common ragweed	Stage Scale: BBCH
Pest 7 Type: W	Code: CHEAL Chenopodium album	Entry Date: Jun-2-2022
	Common Name: common lambsquarters	Stage Scale: BBCH
Pest 8 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 FT ²	Tillage Type: NOTILL no-till
Replications: 3 Treatments: 6 Plots: 18	Study Design: RACOB Randomized Complete Block (RCB)

Previous
 No. Crop Year
 1. CORN 2021

Soil Description

Description Name: F-9 East	Texture: SICL silty clay loam
% Sand: 36 % OM: 3	Soil Name: Kokomo
% Silt: 49	Fert. Level: G good
% Clay: 15	CEC: 17.8
pH: 6.4	
Soil Drainage: G good	

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Application Description

	A	B	C	D
Application Date	Nov-8-2021	Apr-28-2022	May-31-2022	
Appl. Start Time	10:00 AM	11:00 AM	11:30 AM	
Appl. Stop Time	10:15 AM	11:15 AM	11:40 AM	
Interval to Prev. Appl.		171 DAYS	33 DAYS	
Application Method	SPRAY	SPRAY	SPRAY	
Application Timing	FALL	PRE	POST	
Application Placement	BROFOL	BROFOL	BROFOL	
Applied By	Dobbels	Essman		
Appl. Entry Date	Nov-19-2021	May-2-2022	Jun-1-2022	
Air Temperature Start, Stop	56, 56 F	45, 45 F	81, 81 F	
% Relative Humidity Start, Stop	50, 50	45, 45	59, 59	
Wind Velocity+Dir. Start	5 MPH, S	4 MPH, E	6 MPH, SW	
Wind Velocity+Dir. Stop	6 MPH, S	4 MPH, E	6 MPH, SW	
Wind Velocity+Dir. Max	7 MPH, S	4 MPH, E	6 MPH, SW	
Wet Leaves (Y/N)	N, no	N, no	N, no	
Soil Temperature	44 F	45 F		
Soil Moisture	NORMAL	DRY	DRY	
Soil Surface Condition	MEDTRA	MEDTRA	MEDTRA	
% Cloud Cover	0	90	10	
Next Moisture Occurred On	Nov-11-2021	Apr-30-2022	Jun-1-2022	
Time to Next Moisture	3.0 DAY	2.0 DAY	1.0 DAY	
Moisture 6 Hours after Appl.	0 IN	0 IN	0 IN	
Moisture 1 Week after Appl.	0.55 IN	1.1 IN	0.92 IN	

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale	GLXMA, BSOY	GLXMA, BSOY	GLXMA, BSOY	GLXMA, BSOY
Days after Emergence	-189	-18	15	
Stage Majority, Percent			12, 100	
Height Average			4 IN	
Height Minimum, Maximum			3, 4	

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	SETFA, W, BBCH	SETFA, W, BBCH	SETFA, W, BBCH	SETFA, W, BBCH
Height Average			6 IN	
Height Minimum, Maximum			4, 8	
Pest 5 Code, Type, Scale	AMBTR, W, BBCH	AMBTR, W, BBCH	AMBTR, W, BBCH	AMBTR, W, BBCH
Height Average			22 IN	
Height Minimum, Maximum			12, 24	
Pest 6 Code, Type, Scale	AMBEL, W, BBCH	AMBEL, W, BBCH	AMBEL, W, BBCH	AMBEL, W, BBCH
Height Average			4 IN	
Height Minimum, Maximum			2, 6	
Pest 7 Code, Type, Scale	CHEAL, W, BBCH	CHEAL, W, BBCH	CHEAL, W, BBCH	CHEAL, W, BBCH
Height Average			4 IN	
Height Minimum, Maximum			2, 4	
Pest 8 Code, Type, Scale	ABUTH, W, BBCH	ABUTH, W, BBCH	ABUTH, W, BBCH	ABUTH, W, BBCH
Height Average			3 IN	
Height Minimum, Maximum			2, 3	

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Application Equipment

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

Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Type, Code	C, GLXMA	C, GLXMA	C, GLXMA	C, GLXMA
Crop Name	Soybean	Soybean	Soybean	Soybean
Rating Date	Oct-12-2022	Oct-12-2022	Oct-12-2022	Oct-12-2022
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.	338, 134	338, 134	338, 134	338, 134
Trt-Eval Interval				
Plant-Eval Interval	168 DP-1	168 DP-1	168 DP-1	168 DP-1
Days After Emergence	149 DE-1	149 DE-1	149 DE-1	149 DE-1
ARM Action Codes			TY1	
Number of Decimals		1	1	1

Trt Treatment No. Name	Rate Unit	Appl Code	Appl Description	16*	17*	18*	19*
1 Untreated Check		C		22.4-	15.3-	84.6-	54.9-
2 Roundup PowerMax	32 fl oz/a	A	Fall Application	24.1-	13.9-	92.4-	55.8-
2 Weedmaster	32 fl oz/a	A	Fall Application				
2 Roundup PowerMax	32 fl oz/a	B	Spring Burndown				
2 Preview	19.7 fl oz/a	B	Spring Burndown				
2 N PAK AMS	6% v/v	B	Spring Burndown				
2 InterMoc	64 fl oz/a	C	V2-4				
2 N PAK AMS	6% v/v	C	V2-4				
2 Interline	32 fl oz/a	D	V4-6				
2 N PAK AMS	6% v/v	D	V4-6				
3 Roundup PowerMax	32 fl oz/a	A	Fall Application	23.7-	13.5-	91.2-	55.9-
3 Audit 1:1	0.75 oz/a	A	Fall Application				
3 Roundup PowerMax	32 fl oz/a	B	Spring Burndown				
3 Preview	19.7 fl oz/a	B	Spring Burndown				
3 N PAK AMS	6% v/v	B	Spring Burndown				
3 InterMoc	64 fl oz/a	C	V2-4				
3 N PAK AMS	6% v/v	C	V2-4				
3 Interline	32 fl oz/a	D	V4-6				
3 N PAK AMS	6% v/v	D	V4-6				
4 Roundup PowerMax	32 fl oz/a	A	Fall Application	20.3-	14.6-	77.0-	55.1-
4 Audit 1:1	0.75 oz/a	A	Fall Application				
4 InterMoc	64 fl oz/a	B	Spring Burndown				
4 Classic	0.5 oz/a	B	Spring Burndown				
4 NIS	0.25% v/v	B	Spring Burndown				
4 N PAK AMS	6% v/v	B	Spring Burndown				
4 Interline	32 fl oz/a	D	V4-6				
4 N PAK AMS	6% v/v	D	V4-6				

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Pest Type	C, GLXMA	C, GLXMA	C, GLXMA	C, GLXMA			
Pest Code	Soybean	Soybean	Soybean	Soybean			
Pest Scientific Name	Oct-12-2022	Oct-12-2022	Oct-12-2022	Oct-12-2022			
Pest Name	WEIGHT	MOICON	YIELD	WEITES			
Crop Type, Code	LBS, -, -	%, 0, 100	BU, -, -	LBS, -, -			
Crop Name	1	1	1	1			
Rating Date	Oct-13-2022	Oct-13-2022		Oct-13-2022			
Rating Type							
Rating Unit/Min/Max							
Number of Subsamples							
Data Entry Date							
Rating Timing							
Days After First/Last Applic.	338, 134	338, 134	338, 134	338, 134			
Trt-Eval Interval							
Plant-Eval Interval	168 DP-1	168 DP-1	168 DP-1	168 DP-1			
Days After Emergence	149 DE-1	149 DE-1	149 DE-1	149 DE-1			
ARM Action Codes			TY1				
Number of Decimals	1	1	1	1			
Trt Treatment No. Name	Rate	Appl Code	Appl Description	16*	17*	18*	19*
5 Roundup PowerMax	32 fl oz/a	A	Fall Application	20.5-	14.2-	78.2-	54.3-
5 Audit 1:1	0.75 oz/a	A	Fall Application				
5 InterMoc	64 fl oz/a	B	Spring Burndown				
5 NIS	0.25 % v/v	B	Spring Burndown				
5 N PAK AMS	6 % v/v	B	Spring Burndown				
5 Interline	32 fl oz/a	D	V4-6				
5 Classic	0.5 oz/a	D	V4-6				
5 NIS	0.25 % v/v	D	V4-6				
5 N PAK AMS	6 % v/v	D	V4-6				
6 Roundup PowerMax	32 fl oz/a	A	Fall Application	23.8-	15.1-	90.1-	55.1-
6 Tricor 75 DF / KFD-232-01	3 oz/a	A	Fall Application				
6 Harmony Extra SG / KFD-332-01	0.75 oz/a	A	Fall Application				
6 Roundup PowerMax	32 fl oz/a	B	Spring Burndown				
6 Preview	19.7 fl oz/a	B	Spring Burndown				
6 N PAK AMS	6 % v/v	B	Spring Burndown				
6 InterMoc	64 fl oz/a	C	V2-4				
6 N PAK AMS	6 % v/v	C	V2-4				
6 Interline	32 fl oz/a	D	V4-6				
6 N PAK AMS	6 % v/v	D	V4-6				
LSD P=.05				3.10	2.02	12.03	1.33
Standard Deviation				1.70	1.11	6.61	0.73
CV				7.58	7.69	7.73	1.33
Grand Mean				22.48	14.43	85.59	55.18
Levene's F^				0.753	0.175	0.651	0.128
Levene's Prob(F)				0.60	0.967	0.667	0.983
Rank X2			
P(Rank X2)			
Skewness^				-0.2117	-0.2432	-0.2595	-0.119
Kurtosis^				0.4199	-1.0183	0.6245	-1.1687
Replicate F				0.250	1.825	0.099	1.266
Replicate Prob(F)				0.7833	0.2111	0.9067	0.3235
Treatment F				3.111	1.201	3.126	1.931
Treatment Prob(F)				0.0597	0.3753	0.0590	0.1758

Crop Type, Code

C = EPPO species (Bayer) codes

GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

WEIGHT = weight

MOICON = moisture content

YIELD = yield

WEITES = weight - test

Rating Unit/Min/Max

%, 0, 100 = percent

BU, , = bushel

Plant-Eval Interval

168 DP-1 = 1 GLXMA Apr-27-2022

ARM Action Codes

TY1 = 3.872*[16]^(100-[17])/87