

The Ohio State University

Trial ID: 22RRXFNT Cooperator Trial ID:
 Protocol ID: 22RRXNT Location: Western Branch F-10 West Trial Year: 2022
 Project ID: 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

Discipline: H herbicide
 Status: E established Usage/Type: 0 Research and Development
 ARM Trial Created On: Mar-28-2022
 Initiation Date: Apr-27-2022

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 °: 39.8595 N
 Longitude of LL Corner °: -83.6754 W
 Altitude of LL Corner: 1086.00 FT

Conducted Under GLP: No
 Conducted Under GEP: No
 None

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 GLXMA Glycine max Soybean BBCH Scale: BSOY
 Entry Date: May-3-2022 Stage Scale: BBCH
 Variety: AG35FX1
 Attributes: DICAMBA, GLYPHOSATE, GLUFOSINATE TOL
 Seed Lot No: WN1SBT1WN1 Seed Source: Asgrow
 % Germination: 85 1000 Grain Weight: 0.388 LB
 Planting Date: Apr-27-2022 Planting Rate: 165000 S/A
 Depth: 1.5 IN
 Rows per Plot: 8
 Row Spacing: 15 IN
 Planting Method: PLANTD planted
 Planting Equipment: PP plot planter
 Seed Bed: MEDTRA medium/trashy
 Soil Moisture: NORMAL normal, adequate
 Soil Temperature: 52 F
 Emergence Date: May-16-2022
 Harvest Date: Oct-5-2022
 Moisture Meter: Harvest Master
 % Standard Moisture: 13
 Harvest Equipment: Kincaid 8XP
 Harvested Width: 6.25 FT
 Harvested Length: 30 FT
 Weighing Equipment: Harvest Master HM800

Pest Description

Pest 1 Type: W Code: ERICA Erigeron canadensis Entry Date: May-3-2022
 Common Name: mare's-tail Stage Scale: BBCH

Pest 2 Type: W Code: LAMPU Lamium purpureum Entry Date: May-3-2022
 Common Name: purple deadnettle Stage Scale: BBCH

Pest 3 Type: W Code: RANAB Ranunculus abortivus Entry Date: May-3-2022
 Common Name: Smallflower buttercup Stage Scale: BBCH

Pest 4 Type: W Code: ERYRE Erysimum repandum Entry Date: May-3-2022
 Common Name: spreading treacle mustard Stage Scale: BBCH

Pest 5 Type: W Code: TAROF Taraxacum officinale Entry Date: May-3-2022
 Common Name: dandelion Stage Scale: BBCH

Pest 6 Type: W Code: TRZAW Triticum aestivum Entry Date: May-3-2022
 Common Name: Winter wheat Stage Scale: BBCH

Pest 7 Type: W Code: SETFA Setaria faberi Entry Date: Jun-9-2022
 Common Name: Giant foxtail Stage Scale: BBCH

Pest 8 Type: W Code: AMBTR Ambrosia trifida Entry Date: Jun-9-2022
 Common Name: Giant ragweed Stage Scale: BBCH

Pest 9 Type: W Code: AMBEL Ambrosia artemisiifolia Entry Date: Jun-9-2022
 Common Name: Common ragweed Stage Scale: BBCH

The Ohio State University

Trial ID: 22RRXFNT Cooperator Trial ID:
 Protocol ID: 22RRXNT Location: Western Branch F-10 West Trial Year: 2022
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator (Creator): Dr. Mark M. Loux

Site and Design

Treated Plot Width: 6.67 FT Total Plot Width: 10 FT Site Type: FIELD field
 Treated Plot Length: 30 FT Total Plot Length: 30 FT Experimental Unit: 1 PLOT plot
 Treated Plot Area: 200.1 FT² Tillage Type: NOTILL no-till
 Replications: 3 Treatments: 10 Plots: 30 Study Design: RACOB L Randomized Complete Block (RCB)
 Untreated Arrangement: INCLUDED single control randomized in each block
 Block Arrangement: B2APSS block 2 above 1, 3 above 4, 2 beside 3, 1 beside 4, plots side by side
 Distance between Blocks: 5 FT

Previous
 No. Crop Year
 1. WHEAT 2021

Maintenance

No.	Date	Type	Maintenance Product Name	Rate	Unit
1.	Jul-12-2022	MAINT	Select Max	12	OZ.

Comment: start time: 11:32
 finish time: 11:38
 temperature: 81 F
 Relative Humidity: 62 F
 soil Temperature: 74 F
 wind speed: 11 mph
 wind direction: west
 cloud cover : 30%
 soybean stage: R1
 soybean hight: 15"-22" average: 19"

Soil Description

Description Name: F-10 West
 % Sand: 31 % OM: 1.6 Texture: L loam
 % Silt: 54 Soil Name: Crosby
 % Clay: 15 Fert. Level: G good
 pH: 6.5 CEC: 11

Application Description

	A	B
Application Date	Apr-28-2022	Jun-8-2022
Appl. Start Time	11:30 AM	9:00 AM
Appl. Stop Time	11:50 AM	9:30 AM
Application Method	NONINC	SPRAY
Application Timing	PREPLA	POST
Application Placement	BROFOL	BROFOL
Applied By	Essman	Loux
Appl. Entry Date	May-3-2022	Jun-9-2022
Air Temperature Start, Stop	42, 42 F	66, 66 F
% Relative Humidity Start, Stop	63, 63	70, 70
Wind Velocity+Dir. Start	5 MPH, E	3 MPH, E
Wind Velocity+Dir. Stop	5 MPH, E	3 MPH, E
Wind Velocity+Dir. Max	5 MPH, E	3 MPH, E
Wet Leaves (Y/N)	N, no	N, no
Soil Temperature	51 F	61 F
Soil Moisture	DRY	SLIDRY
Soil Surface Condition	MEDTRA	MEDTRA
% Cloud Cover	90	20
Next Moisture Occurred On	Apr-30-2022	Jun-8-2022
Time to Next Moisture	2.0 DAY	8.0 HR
Moisture 6 Hours after Appl.	0 IN	0 IN
Moisture 1 Week after Appl.	1.1 IN	1.92 IN

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	GLXMA, BSOY	GLXMA, BSOY
Days after Emergence	-18	23
Stage Majority, Percent		12, 80
Stage Minimum, Percent		12, 10
Stage Maximum, Percent		13, 10
Height Average		4 IN
Height Minimum, Maximum		3, 4

The Ohio State University

Trial ID: 22RRXFNT Cooperator Trial ID:
 Protocol ID: 22RRXNT Location: Western Branch F-10 West Trial Year: 2022
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator (Creator): Dr. Mark M. Loux

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	ERICA, W, BBCH	ERICA, W, BBCH
Stage Majority, Percent	16, 80	
Stage Minimum, Percent	16, 80	
Stage Maximum, Percent	18, 20	
Diameter Average	3 IN	
Diameter Minimum, Maximum	2, 3	
Height Average	3 IN	
Height Minimum, Maximum	2, 4	
Density Average	3 PLA/m2	
Density Minimum, Maximum	0, 5	
Pest 2 Code, Type, Scale	LAMPU, W, BBCH	LAMPU, W, BBCH
Stage Majority, Percent	65, 80	
Stage Minimum, Percent	60, 10	
Stage Maximum, Percent	65, 80	
Diameter Average	3 IN	
Diameter Minimum, Maximum	2, 3	
Height Average	3 IN	
Height Minimum, Maximum	2, 3	
Density Average	8 PLA/m2	
Density Minimum, Maximum	1, 11	
Pest 3 Code, Type, Scale	RANAB, W, BBCH	RANAB, W, BBCH
Stage Majority, Percent	65, 80	
Stage Minimum, Percent	60, 10	
Stage Maximum, Percent	65, 80	
Diameter Average	3 IN	
Diameter Minimum, Maximum	2, 3	
Height Average	8 IN	
Height Minimum, Maximum	6, 10	
Density Average	3 PLA/m2	
Density Minimum, Maximum	0, 5	
Pest 4 Code, Type, Scale	ERYRE, W, BBCH	ERYRE, W, BBCH
Stage Majority, Percent	60, 80	
Stage Minimum, Percent	60, 80	
Stage Maximum, Percent	65, 10	
Diameter Average	3 IN	
Diameter Minimum, Maximum	3, 4	
Height Average	4 ii	
Height Minimum, Maximum	4, 6	
Density Average	3 PLA/m2	
Density Minimum, Maximum	0, 6	
Pest 5 Code, Type, Scale	TAROF, W, BBCH	TAROF, W, BBCH
Stage Majority, Percent	65, 80	19, 100
Stage Minimum, Percent	65, 80	
Stage Maximum, Percent	69, 10	
Diameter Average	6 IN	
Diameter Minimum, Maximum	4, 6	
Height Average	3 IN	6 IN
Height Minimum, Maximum	1, 4	4, 8
Density Average	2 PLA/m2	
Density Minimum, Maximum	0, 4	
Pest 6 Code, Type, Scale	TRZAW, W, BBCH	TRZAW, W, BBCH
Stage Majority, Percent	25, 90	
Stage Minimum, Percent	23, 10	
Stage Maximum, Percent	25, 90	
Height Average	12 IN	
Height Minimum, Maximum	10, 15	
Density Average	25 PLA/m2	
Density Minimum, Maximum	10, 50	
Pest 7 Code, Type, Scale	SETFA, W, BBCH	SETFA, W, BBCH
Stage Majority, Percent		19, 60
Stage Minimum, Percent		11, 20
Stage Maximum, Percent		19, 20
Height Average		3 IN
Height Minimum, Maximum		1, 3
Pest 8 Code, Type, Scale	AMBTR, W, BBCH	AMBTR, W, BBCH
Stage Majority, Percent		19, 60
Stage Minimum, Percent		16, 20
Stage Maximum, Percent		19, 20
Height Average		6 IN
Height Minimum, Maximum		4, 8
Pest 9 Code, Type, Scale	AMBEL, W, BBCH	AMBEL, W, BBCH
Stage Majority, Percent		14, 60
Stage Minimum, Percent		14, 20
Stage Maximum, Percent		16, 20
Height Average		2 IN
Height Minimum, Maximum		2, 3

The Ohio State University

Trial ID: 22RRXFNT Cooperator Trial ID:
 Protocol ID: 22RRXNT Location: Western Branch F-10 West Trial Year: 2022
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator (Creator): Dr. Mark M. Loux

Application Equipment

	A	B
Appl. Equipment	6' TTI	10' TTI
Equipment Type	BACCAI	BACCAI
Operation Pressure	44 PSI	44 PSI
Nozzle Model	1110015	110015
Nozzle Type	TTI	TTI
Nozzle TradeName		Turbo Tee Injection
Nozzle Tip Size, Color		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	
Application Amount	15 GAL/AC	15 GAL/AC
Mix Size	1 L	2 L
Spray pH	7.8	
Propellant	COMCO2	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
Crop Name		Soybean	Soybean	Soybean
Rating Date		Oct-5-2022	Oct-5-2022	Oct-5-2022
Rating Type		WEIGHT	MOICON	YIELD
Rating Unit/Min/Max		LBS, -, -	%, 0, 100	BU, -, -
Number of Subsamples		1	1	1
Data Entry Date		Oct-7-2022	Oct-7-2022	Oct-7-2022
Days After First/Last Applic.		160, 119	160, 119	160, 119
Trt-Eval Interval				
Plant-Eval Interval		161 DP-1	161 DP-1	161 DP-1
Days After Emergence		142 DE-1	142 DE-1	142 DE-1
ARM Action Codes				TY1
Number of Decimals				1

Trt Treatment No. Name	Rate	Appl Unit	Code	22*	23*	24*	25*
1 Intact	0.5% v/v	A		15.62207-	11.350-	61.6-	56.4150-
1 Volt Edge	20oz/a	A					
1 Class Act Ridion	1% v/v	A					
1 Roundup Powermax	1.13lb ae/a	A					
1 Xtendimax	0.5lb ai/a	A					
1 Fierce EZ	0.143lb ai/a	A					
1 Intact	0.5% v/v	B					
1 Volt Edge	20oz/a	B					
1 Class Act Ridion	1% v/v	B					
1 Roundup Powermax	1.13lb ae/a	B					
1 Xtendimax	0.5lb ai/a	B					
1 Perpetuo	0.108lb ai/a	B					
1 Select Max	0.07lb ai/a	B					
2 Intact	0.5% v/v	A		17.86977-	10.910-	70.8-	55.6290-
2 Volt Edge	20oz/a	A					
2 Class Act Ridion	1% v/v	A					
2 Roundup Powermax	1.13lb ae/a	A					
2 Xtendimax	0.5lb ai/a	A					
2 Fierce MTZ	0.33lb ai/a	A					
2 Intact	0.5% v/v	B					
2 Volt Edge	20oz/a	B					
2 Class Act Ridion	1% v/v	B					
2 Roundup Powermax	1.13lb ae/a	B					
2 Xtendimax	0.5lb ai/a	B					
2 Perpetuo	0.108lb ai/a	B					
2 Select Max	0.07lb ai/a	B					

The Ohio State University

Trial ID: 22RRXFNT Cooperator Trial ID:
 Protocol ID: 22RRXNT Location: Western Branch F-10 West Trial Year: 2022
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator (Creator): Dr. Mark M. Loux

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-5-2022 Oct-5-2022 Oct-5-2022 Oct-5-2022
 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-7-2022 Oct-7-2022 Oct-7-2022
 Days After First/Last Applic. 160, 119 160, 119 160, 119 160, 119
 Trt-Eval Interval
 Plant-Eval Interval 161 DP-1 161 DP-1 161 DP-1 161 DP-1
 Days After Emergence 142 DE-1 142 DE-1 142 DE-1 142 DE-1
 ARM Action Codes TY1
 Number of Decimals 1

Trt Treatment No. Name	Rate	Rate Unit	Appl Code	22*	23*	24*	25*
3 Intact	0.5%	v/v	A	18.59260-	12.030-	72.8-	54.9187-
3 Volt Edge	20	oz/a	A				
3 Class Act Ridion	1%	v/v	A				
3 Roundup Powermax	1.13	lb ae/a	A				
3 Xtendimax	0.5	lb ai/a	A				
3 Fierce XLT	0.156	lb ai/a	A				
3 Intact	0.5%	v/v	B				
3 Volt Edge	20	oz/a	B				
3 Class Act Ridion	1%	v/v	B				
3 Roundup Powermax	1.13	lb ae/a	B				
3 Xtendimax	0.5	lb ai/a	B				
3 Perpetuo	0.108	lb ai/a	B				
3 Select Max	0.07	lb ai/a	B				
4 Intact	0.5%	v/v	A	18.42624-	11.370-	72.7-	55.9607-
4 Volt Edge	20	oz/a	A				
4 Class Act Ridion	1%	v/v	A				
4 Roundup Powermax	1.13	lb ae/a	A				
4 Xtendimax	0.5	lb ai/a	A				
4 Firstrate	0.0315	lb ai/a	A				
4 Intact	0.5%	v/v	B				
4 Volt Edge	20	oz/a	B				
4 Class Act Ridion	1%	v/v	B				
4 Roundup Powermax	1.13	lb ae/a	B				
4 Xtendimax	0.5	lb ai/a	B				
4 Assure II	0.0413	lb ai/a	B				
5 Intact	0.5%	v/v	A	18.61897-	11.493-	73.3-	55.2450-
5 Volt Edge	20	oz/a	A				
5 Class Act Ridion	1%	v/v	A				
5 Roundup Powermax	1.13	lb ae/a	A				
5 Xtendimax	0.5	lb ai/a	A				
5 Scepter	0.123	lb ai/a	A				
5 Intact	0.5%	v/v	B				
5 Volt Edge	20	oz/a	B				
5 Class Act Ridion	1%	v/v	B				
5 Roundup Powermax	1.13	lb ae/a	B				
5 Xtendimax	0.5	lb ai/a	B				
5 Assure II	0.0413	lb ai/a	B				
6 Intact	0.5%	v/v	A	16.16457-	11.497-	63.7-	56.4777-
6 Volt Edge	20	oz/a	A				
6 Class Act Ridion	1%	v/v	A				
6 Roundup Powermax	1.13	lb ae/a	A				
6 Xtendimax	0.5	lb ai/a	A				
6 Tendovo	1.83	lb ai/a	A				
6 Intact	0.5%	v/v	B				
6 Volt Edge	20	oz/a	B				
6 Class Act Ridion	1%	v/v	B				
6 Roundup Powermax	1.13	lb ae/a	B				
6 Xtendimax	0.5	lb ai/a	B				

The Ohio State University

Trial ID: 22RRXFNT Cooperator Trial ID:
 Protocol ID: 22RRXNT Location: Western Branch F-10 West Trial Year: 2022
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator (Creator): Dr. Mark M. Loux

Trt Treatment No. Name	Rate	Rate Unit	Appl Code	22*	23*	24*	25*
7 Intact	0.5%	v/v	A	17.24554-	13.940-	65.9-	55.6890-
7 Volt Edge	20	oz/a	A				
7 Class Act Ridion	1%	v/v	A				
7 Roundup Powermax	1.13	lb ae/a	A				
7 Xtendimax	0.5	lb ai/a	A				
7 Authority Supreme	0.195	lb ai/a	A				
7 Intact	0.5%	v/v	B				
7 Volt Edge	20	oz/a	B				
7 Class Act Ridion	1%	v/v	B				
7 Roundup Powermax	1.13	lb ae/a	B				
7 Xtendimax	0.5	lb ai/a	B				
8 Intact	0.5%	v/v	A	18.53540-	12.080-	72.5-	55.8403-
8 Volt Edge	20	oz/a	A				
8 Class Act Ridion	1%	v/v	A				
8 Roundup Powermax	1.13	lb ae/a	A				
8 Xtendimax	0.5	lb ai/a	A				
8 Zidua Pro	0.144	lb ai/a	A				
8 Intact	0.5%	v/v	B				
8 Volt Edge	20	oz/a	B				
8 Class Act Ridion	1%	v/v	B				
8 Roundup Powermax	1.13	lb ae/a	B				
8 Xtendimax	0.5	lb ai/a	B				
9 Intact	0.5%	v/v	A	17.63377-	11.433-	69.5-	55.7077-
9 Volt Edge	20	oz/a	A				
9 Class Act Ridion	1%	v/v	A				
9 Roundup Powermax	1.13	lb ae/a	A				
9 Xtendimax	0.5	lb ai/a	A				
9 Warrant	1.13	lb ai/a	A				
9 Mauler	0.375	lb ai/a	A				
9 Intact	0.5%	v/v	B				
9 Volt Edge	20	oz/a	B				
9 Class Act Ridion	1%	v/v	B				
9 Roundup Powermax	1.13	lb ae/a	B				
9 Xtendimax	0.5	lb ai/a	B				
10 UTC			B	17.94634-	11.813-	70.4-	55.7333-
LSD P=.05				2.637276	2.6272	10.02	1.29567
Standard Deviation				1.537416	1.5315	5.84	0.75532
CV				8.7	12.99	8.43	1.35
Grand Mean				17.665525	11.7917	69.33	55.76164
Levene's F^				0.544	0.888	0.526	0.621
Levene's Prob(F)				0.826	0.552	0.839	0.765
Rank X2			
P(Rank X2)			
Skewness^				0.0474	1.6071*	0.089	-0.3145
Kurtosis^				-0.3344	8.0274*	-0.3915	0.0195
Replicate F				1.357	0.400	1.435	0.285
Replicate Prob(F)				0.2825	0.6761	0.2641	0.7551
Treatment F				1.386	0.883	1.524	1.162
Treatment Prob(F)				0.2648	0.5580	0.2135	0.3735

Crop Type Code

C = EPPO species (Bayer) codes
 GLXMA, BSOY, Glycine max, Soybean = US

The Ohio State University

Trial ID: 22RRXFNT Cooperator Trial ID:
Protocol ID: 22RRXNT Location: Western Branch F-10 West Trial Year: 2022
Project ID: Project ID 2: Project ID 3:
Study Director: Sponsor Contact:
Investigator (Creator): Dr. Mark M. Loux

Rating Type

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

Rating Unit/Min/Max

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

Plant-Eval Interval

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

ARM Action Codes

TY1 = 3.872*[22]^(100-[23])/87