

The Ohio State University

Trial ID: 22RWBCOVER Cooperator Trial ID:
 Protocol ID: 21RWBCOVER Location: Western Branch F-9 E Trial Year: 2021
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator (Creator): Dr. Mark M. Loux

Status: E established
 ARM Trial Created On: Mar-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 °: 39.8587 N
 Longitude of LL Corner °: -83.67061 W
 Altitude of LL Corner: 1089.00 FT

Conducted Under GLP: No
 Conducted Under GEP: No
 None

Crop Description

Crop 1: C	HORVW Hordeum vulgare	Winter barley	BBCH Scale: BCER
	Entry Date: Mar-2-2022	Stage Scale: BBCH	
	Variety: saved		
	Planting Date: Oct-12-2021	Planting Rate: 90	LB/A
	Depth: 1.5 IN		
	Rows per Plot: 14	Planting Method: DRILLE	drilled
	Row Spacing: 7.5 IN	Planting Equipment: DD	disc drill
		Seed Bed: MEDTRA	medium/trashy
		Soil Moisture: GOOD	good
	Emergence Date: Oct-26-2021		
	% Standard Moisture: 13	Harvested Width: 6.25 FT	
		Harvested Length: 30 FT	
Crop 2: C	TRZAW Triticum aestivum	Winter wheat	BBCH Scale: BCER
	Entry Date: Mar-2-2022	Stage Scale: BBCH	
	Variety: saved		
	Planting Date: Oct-12-2021	Planting Rate: 90	LB/A
	Depth: 1.5 IN		
	Rows per Plot: 14	Planting Method: DRILLE	drilled
	Row Spacing: 7.5 IN	Planting Equipment: DD	disc drill
		Seed Bed: MEDTRA	medium/trashy
		Soil Moisture: GOOD	good
	Emergence Date: Oct-26-2021		
Crop 3: C	SECCW Secale cereale	Winter rye	BBCH Scale: BCER
	Entry Date: Mar-2-2022	Stage Scale: BBCH	
	Variety: saved		
	Planting Date: Oct-12-2021	Planting Rate: 90	LB/A
	Depth: 1.5 IN		
	Rows per Plot: 14	Planting Method: DRILLE	drilled
	Row Spacing: 7.5 IN	Planting Equipment: DD	disc drill
		Seed Bed: MEDTRA	medium/trashy
		Soil Moisture: GOOD	good
	Emergence Date: Oct-26-2021		
Crop 4: C	GLXMA Glycine max	Soybean	BBCH Scale: BSOY
	Entry Date: Mar-2-2022	Stage Scale: BBCH	
	Variety: Pioneer P35T15E		
	Attributes: 2,4-D Choline, Glyphosate, Glufosinate Tol		
	Planting Date: Apr-27-2022	Planting Rate: 165000	S/A
	Depth: 1.5 IN		
	Rows per Plot: 8	Planting Method: PLANTD	planted
	Row Spacing: 15 IN	Planting Equipment: PP	plot planter
		Seed Bed: MEDTRA	medium/trashy
	Soil Temperature: 50 F	Soil Moisture: NORMAL	normal, adequate
	Emergence Date: May-11-2022		
	Harvest Date: Oct-5-2022	Harvest Equipment: Kincaid 8XP	
	Moisture Meter: Harvest Master	Harvested Width: 6.25 FT	
	% Standard Moisture: 13.0	Harvested Length: 200 FT	
	Weighing Equipment: Harvest Master HM800		

Site and Design

Treated Plot Width: 10 FT
 Treated Plot Length: 30 FT
 Treated Plot Area: 300.0 FT²
 Replications: 3 Treatments: 24 Plots: 72 Study Design: SPLPLO Split-Plot

Previous
 No. Crop Year
 1. CORN 2021

The Ohio State University

Trial ID: 22RWBCOVER Cooperator Trial ID:
 Protocol ID: 21RWBCOVER Location: Western Branch F-9 E Trial Year: 2021
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator (Creator): Dr. Mark M. Loux

Soil Description

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

Application Description

	A	B	C	D
Application Date	Apr-26-2022	May-11-2022	May-23-2022	Jun-15-2022
Appl. Start Time	10:15 AM	8:00 AM	1:20 AM	8:00 AM
Appl. Stop Time	11:00 AM	8:30 AM	1:50 AM	8:30 AM
Application Method	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing	7 EPP	7 DAPL	21 DAPL	POST
Application Placement	BROFOL	BROFOL	BROFOL	BROFOL
Applied By	Dobbels	Dobbels	Dobbels	Dobbels
Appl. Entry Date	May-3-2022	Oct-26-2022	Oct-26-2022	Oct-26-2022
Air Temperature Start, Stop	42, 43 F	66, 66 F	62, 62 F	80, 80 F
% Relative Humidity Start, Stop	69, 69	52, 52	66, 66	82, 82
Wind Velocity+Dir. Start	10 MPH, E	4 MPH, E	8 MPH, N	7 MPH, W
Wind Velocity+Dir. Stop	10 MPH, E	4 MPH, E	8 MPH, N	7 MPH, W
Wind Velocity+Dir. Max	11 MPH, E	5 MPH, E	8 MPH, N	7 MPH, W
Wet Leaves (Y/N)	N, no	N, no	N, no	N, no
Soil Temperature	52 F	58 F	60 F	76 F
Soil Moisture	DRY	DRY	SLIDRY	NORMAL
Soil Surface Condition	MEDTRA	MEDTRA	MEDTRA	MEDTRA
% Cloud Cover	99	3	100	80
Next Moisture Occurred On	Apr-30-2022	May-14-2022	May-25-2022	
Time to Next Moisture	4.0 DAY	3.0 DAY	2.0 DAY	
Moisture 6 Hours after Appl.	0 IN	0 IN	0 IN	
Moisture 1 Week after Appl.	0.02 IN	0.84 IN	1.23 IN	

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale	HORVW, BCER	HORVW, BCER	HORVW, BCER	HORVW, BCER
Days after Emergence	182	197	209	232
Stage Majority, Percent	23, 80	50, 50	59, 100	
Stage Minimum, Percent	25, 10	45, 30		
Stage Maximum, Percent	25, 10	51, 20		
Height Average	8 IN	16 IN	26 IN	
Height Minimum, Maximum	6, 10	10, 20	24, 27	
Crop 2 Code, BBCH Scale	TRZAW, BCER	TRZAW, BCER	TRZAW, BCER	TRZAW, BCER
Days after Emergence	182	197	209	232
Stage Majority, Percent	25, 60	43, 75	59, 90	
Stage Minimum, Percent	26, 20	43, 10	59, 90	
Stage Maximum, Percent	26, 20	47, 25	61, 10	
Height Average	12 IN	22 IN	31 IN	
Height Minimum, Maximum	7, 15	16, 24	30, 32	
Crop 3 Code, BBCH Scale	SECCW, BCER	SECCW, BCER	SECCW, BCER	SECCW, BCER
Days after Emergence	182	197	209	232
Stage Majority, Percent	25, 80	51, 50	59, 80	
Stage Minimum, Percent	26, 10	47, 10	59, 80	
Stage Maximum, Percent	27, 10	51, 50	65, 20	
Height Average	12 IN	25 IN	47 IN	
Height Minimum, Maximum	7, 14	14, 28	28, 54	
Crop 4 Code, BBCH Scale	GLXMA, BSOY	GLXMA, BSOY	GLXMA, BSOY	GLXMA, BSOY
Days after Emergence	-15		12	35
Stage Majority, Percent		05, 100	11, 100	14, 100
Height Average		0.25 IN	2 IN	7 IN
Height Minimum, Maximum		0.25, 0.33	1.5, 2.5	6, 8

The Ohio State University

Trial ID: 22RWBCOVER Cooperator Trial ID:
 Protocol ID: 21RWBCOVER Location: Western Branch F-9 E Trial Year: 2021
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator (Creator): Dr. Mark M. Loux

Application Equipment

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

Notes

Context	Date	By	Notes
STATUS	Mar-2-2022	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	Mar-2-2022	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

Pest Type	Pest Code	Pest Name	Crop Type, Code	Crop Name	Rating Date	Rating Type	Rating Unit/Min/Max	Number of Subsamples	Data Entry Date	Days After First/Last Applic.	Trt-Eval Interval	Days After Emergence	ARM Action Codes	Number of Decimals
			C, GLXMA	Soybean	Oct-5-2022	WEIGHT	% , 0, 100	1	Oct-7-2022	162, 112	162 DA-A	147 DE-4	TY1	1
			C, GLXMA	Soybean	Oct-5-2022	MOICON		1	Oct-7-2022	162, 112	162 DA-A	147 DE-4		1
			C, GLXMA	Soybean	Oct-5-2022	YIELD	BU, -, -	1	Oct-7-2022	162, 112	162 DA-A	147 DE-4		1
			C, GLXMA	Soybean	Oct-5-2022	WEITES		1	Oct-7-2022	162, 112	162 DA-A	147 DE-4		1
Trt Treatment	Rate	Unit	19*	20*	21*	22*								

1 Rye			24.34507-	14.567-	92.6-	55.0923-								
17 EPP	1.96 lb ai/a													
1 Enlist Duo	1.96 lb ai/a													
1 AMSOL	2.5 % v/v													

2 Rye			24.14064-	15.727-	90.5-	56.4190-								
27 EPP	2.3 lb ai/a													
2 Sequence	2.3 lb ai/a													
2 Pursuit	0.0625 lb ai/a													
2 Enlist One	0.475 lb ai/a													
2 AMSOL	2.5 % v/v													

3 Rye			22.94074-	14.410-	87.3-	54.8700-								
37 DAPL	1.96 lb ai/a													
3 Enlist Duo	1.96 lb ai/a													
3 AMSOL	2.5 % v/v													

4 Rye			22.56300-	13.653-	86.7-	56.5287-								
47 DAPL	2.3 lb ai/a													
4 Sequence	2.3 lb ai/a													
4 Pursuit	0.0625 lb ai/a													
4 Enlist One	0.475 lb ai/a													
4 AMSOL	2.5 % v/v													

5 Rye			20.70660-	13.677-	79.3-	55.5420-								
514 DAPL	1.96 lb ai/a													
5 Enlist Duo	1.96 lb ai/a													
5 AMSOL	2.5 % v/v													

The Ohio State University

Trial ID: 22RWBCOVER Cooperator Trial ID:
 Protocol ID: 21RWBCOVER Location: Western Branch F-9 E Trial Year: 2021
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator (Creator): Dr. Mark M. Loux

Trt	Treatment	Rate	19*	20*	21*	22*
6	Rye		20.28764-	13.457-	78.1-	56.6170-
	6 14 DAPL	2.3lb ai/a				
	6 Sequence	2.3lb ai/a				
	6 Pursuit	0.0625lb ai/a				
	6 Enlist One	0.475lb ai/a				
	6 AMSOL	2.5% v/v				
7	Wheat		19.88210-	12.793-	77.0-	56.9243-
	7 7 EPP	1.96lb ai/a				
	7 Enlist Duo	1.96lb ai/a				
	7 AMSOL	2.5% v/v				
8	Wheat		21.04514-	13.130-	81.2-	54.4980-
	8 7 EPP	2.3lb ai/a				
	8 Sequence	2.3lb ai/a				
	8 Pursuit	0.0625lb ai/a				
	8 Enlist One	0.475lb ai/a				
	8 AMSOL	2.5% v/v				
9	Wheat		18.92337-	13.177-	72.9-	56.6230-
	9 7 DAPL	1.96lb ai/a				
	9 Enlist Duo	1.96lb ai/a				
	9 AMSOL	2.5% v/v				
10	Wheat		19.43940-	13.203-	75.0-	56.0617-
	10 7 DAPL	2.3lb ai/a				
	10 Sequence	2.3lb ai/a				
	10 Pursuit	0.0625lb ai/a				
	10 Enlist One	0.475lb ai/a				
	10 AMSOL	2.5% v/v				
11	Wheat		18.72704-	14.053-	71.5-	55.9563-
	11 14 DAPL	1.96lb ai/a				
	11 Enlist Duo	1.96lb ai/a				
	11 AMSOL	2.5% v/v				
12	Wheat		21.34290-	13.620-	81.6-	55.5640-
	12 14 DAPL	2.3lb ai/a				
	12 Sequence	2.3lb ai/a				
	12 Pursuit	0.0625lb ai/a				
	12 Enlist One	0.475lb ai/a				
	12 AMSOL	2.5% v/v				
13	Barley		24.81730-	15.680-	93.1-	55.8247-
	13 7 EPP	1.96lb ai/a				
	13 Enlist Duo	1.96lb ai/a				
	13 AMSOL	2.5% v/v				
14	Barley		21.96700-	15.653-	82.6-	55.8843-
	14 7 EPP	2.3lb ai/a				
	14 Sequence	2.3lb ai/a				
	14 Pursuit	0.0625lb ai/a				
	14 Enlist One	0.475lb ai/a				
	14 AMSOL	2.5% v/v				

The Ohio State University

Trial ID: 22RWBCOVER Cooperator Trial ID:
 Protocol ID: 21RWBCOVER Location: Western Branch F-9 E Trial Year: 2021
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator (Creator): Dr. Mark M. Loux

Pest Type	Pest Code	Pest Name	Crop Type, Code	C, GLXMA	C, GLXMA	C, GLXMA	C, GLXMA
Crop Name			Soybean	Soybean	Soybean	Soybean	Soybean
Rating Date			Oct-5-2022	Oct-5-2022	Oct-5-2022	Oct-5-2022	Oct-5-2022
Rating Type			WEIGHT	MOICON	YIELD	WEITES	
Rating Unit/Min/Max			%	0, 100	BU, -, -		
Number of Subsamples			1	1	1	1	1
Data Entry Date			Oct-7-2022	Oct-7-2022		Oct-7-2022	
Days After First/Last Applic.			162, 112	162, 112	162, 112	162, 112	
Trt-Eval Interval			162 DA-A	162 DA-A	162 DA-A	162 DA-A	
Days After Emergence			147 DE-4	147 DE-4	147 DE-4	147 DE-4	
ARM Action Codes					TY1		
Number of Decimals					1		
Trt Treatment	Rate	19*	20*	21*	22*		
No. Name	Rate Unit						
15 Barley		22.19084-	14.783-	84.0-	54.6780-		
157 DAPL	1.96 lb ai/a						
15 Enlist Duo	1.96 lb ai/a						
15 AMSOL	2.5% v/v						
16 Barley		21.58064-	14.100-	82.4-	56.3173-		
167 DAPL	2.3 lb ai/a						
16 Sequence	2.3 lb ai/a						
16 Pursuit	0.0625 lb ai/a						
16 Enlist One	0.475 lb ai/a						
16 AMSOL	2.5% v/v						
17 Barley		21.93944-	13.440-	84.5-	56.5370-		
17 14 DAPL	1.96 lb ai/a						
17 Enlist Duo	1.96 lb ai/a						
17 AMSOL	2.5% v/v						
18 Barley		22.30534-	13.023-	86.3-	57.0077-		
18 14 DAPL	2.3 lb ai/a						
18 Sequence	2.3 lb ai/a						
18 Pursuit	0.0625 lb ai/a						
18 Enlist One	0.475 lb ai/a						
18 AMSOL	2.5% v/v						
19 No Cover		21.11924-	14.800-	79.9-	55.7547-		
197 EPP	1.96 lb ai/a						
19 Enlist Duo	1.96 lb ai/a						
19 AMSOL	2.5% v/v						
20 No Cover		21.99290-	14.640-	83.4-	55.4907-		
207 EPP	2.3 lb ai/a						
20 Sequence	2.3 lb ai/a						
20 Pursuit	0.0625 lb ai/a						
20 Enlist One	0.475 lb ai/a						
20 AMSOL	2.5% v/v						
21 No Cover		22.83927-	14.437-	87.0-	54.2720-		
217 DAPL	1.96 lb ai/a						
21 Enlist Duo	1.96 lb ai/a						
21 AMSOL	2.5% v/v						
22 No Cover		22.67117-	13.337-	87.4-	55.3127-		
227 DAPL	2.3 lb ai/a						
22 Sequence	2.3 lb ai/a						
22 Pursuit	0.0625 lb ai/a						
22 Enlist One	0.475 lb ai/a						
22 AMSOL	2.5% v/v						
23 No Cover		20.17047-	12.713-	78.1-	56.7277-		
23 14 DAPL	1.96 lb ai/a						
23 Enlist Duo	1.96 lb ai/a						
23 AMSOL	2.5% v/v						

The Ohio State University

Trial ID: 22RWBCOVER Cooperator Trial ID:
 Protocol ID: 21RWBCOVER Location: Western Branch F-9 E Trial Year: 2021
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sponsor Contact:
 Investigator (Creator): Dr. Mark M. Loux

Trt	Treatment	Rate	19*	20*	21*	22*
No.	Name	Rate Unit				
24	No Cover		20.34690-	13.093-	78.5-	56.0480-
24	14 DAPL	2.3lb ai/a				
24	Sequence	2.3lb ai/a				
24	Pursuit	0.0625lb ai/a				
24	Enlist One	0.475lb ai/a				
24	AMSOL	2.5% v/v				
LSD P=.05			3.580516	3.0249	12.42	2.38894
Standard Deviation			2.178563	1.8405	7.56	1.45355
CV			10.09	13.18	9.15	2.6
Grand Mean			21.595172	13.9653	82.55	55.85630
Levene's F^			0.261	0.414	0.168	0.542
Levene's Prob(F)			1.00	0.988	1.00	0.944
Rank X2		
P(Rank X2)		
Skewness^			0.1418	0.2559	0.1356	-0.4472
Kurtosis^			-0.8397	-0.3927	-1.0139	0.0848
Analyzed as			RCB	RCB	RCB	RCB
Replicate F			18.368	6.292	19.261	0.579
Replicate Prob(F)			0.0001	0.0038	0.0001	0.5642
Treatment F			1.670	0.741	1.729	0.855
Treatment Prob(F)			0.0690	0.7791	0.0568	0.6502

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

ARM Action Codes

TY1 = $3.872 * [C19] * (100 - [C20]) / 87$