

# The Ohio State University

Trial ID: 20 Broadcast Mix W      Location: WARS      Trial Year: 2020  
Protocol ID:      Investigator: Alyssa Lamb  
Project ID:      Study Director:  
Sponsor Contact:

## General Trial Information

**Study Director:** Alyssa Essman  
**Investigator:** Dr. Mark M. Loux

**Trial Status:** E      established

**ARM Trial Created On:** Oct-14-2019  
**Initiation Date:** Sep-20-2019

## Trial Location

**City:** South Charleston      **Country:** USA United States  
**State/Prov.:** Ohio  
**Postal Code:** 45368      **Climate Zone:** USWARM US Warm Continental

**Latitude of LL Corner °:** 39.85682      N  
**Longitude of LL Corner °:** -83.67015      W  
**Altitude of LL Corner:** 1094.00 FT

**Conducted Under GLP:** No  
**Conducted Under GEP:** No

## Contacts

**Study Director:** Alyssa Essman  
**Organization:** The Ohio State University  
**Address:** 2021 Coffey Road  
**City+State/Prov:** Columbus, Ohio  
**Postal Code:** 43210      **E-mail:** essman.42@osu.edu  
**Country:** USA      United States

**Investigator:** Dr. Mark M. Loux

# The Ohio State University

Trial ID: 20 Broadcast Mix W      Location: WARS      Trial Year: 2020  
 Protocol ID:      Investigator: Alyssa Lamb  
 Project ID:      Study Director:  
                          Sponsor Contact:

## Crop Description

**Crop 1: C**      SECCW Secale cereale      Winter rye      **BBCH Scale: BCER**  
**Entry Date:** Mar-31-2020      **Stage Scale:** BBCH  
**Variety:** VNS  
**Attributes:** Description  
**Planting Date:** Sep-20-2019  
**Planting Method:** BROADCAST broadcast  
**Harvested Width:** 6.25 FT

**% Standard Moisture:** 13

**Crop 2: C**      RAPSN Raphanus sativus var. niger Tillage radish      **BBCH Scale: BVRT**  
**Entry Date:** Mar-31-2020      **Stage Scale:** BBCH  
**Variety:** Daikon  
**Planting Date:** Sep-20-2019  
**Planting Method:** BROADCAST broadcast

**Crop 3: C**      AVESW Avena sativa      Oat, winter      **BBCH Scale: BCER**  
**Entry Date:** Mar-31-2020      **Stage Scale:** BBCH  
**Variety:** Armor  
**Planting Date:** Sep-20-2019  
**Planting Method:** BROADCAST broadcast

**Crop 4: C**      SECCW Secale cereale      Winter rye      **BBCH Scale: BCER**  
**Entry Date:** Apr-20-2020      **Stage Scale:** BBCH  
**Variety:** VNS  
**Attributes:** Description  
**% Germination:** 0  
**Planting Date:** Oct-11-2019  
**Depth:** 1      IN  
**Planting Method:** DRILLE      drilled

**Crop 5: C**      RAPSN Raphanus sativus var. niger Tillage radish      **BBCH Scale: BVRT**  
**Entry Date:** Apr-20-2020      **Stage Scale:** BBCH  
**Variety:** Daikon  
**% Germination:** 0  
**Planting Date:** Oct-11-2019  
**Planting Method:** DRILLE      drilled

**Crop 6: C**      AVESW Avena sativa      Oat, winter      **BBCH Scale: BCER**  
**Entry Date:** Apr-20-2020      **Stage Scale:** BBCH  
**Variety:** Armor  
**% Germination:** 0  
**Planting Date:** Oct-11-2019  
**Planting Method:** DRILLE      drilled

## Site and Design

**Treated Plot Width:** 10 FT  
**Treated Plot Length:** 30 FT  
**Treated Plot Area:** 300 FT<sup>2</sup>      **Treatments:** 18  
**Replications:** 4      **Study Design:** SPLPLO Split-Plot

## Soil Description

**Description Name:** Big E

# The Ohio State University

Trial ID: 20 Broadcast Mix W      Location: WARS      Trial Year: 2020  
 Protocol ID:      Investigator: Alyssa Lamb  
 Project ID:      Study Director:  
 Sponsor Contact:

## Application Description

**B**

Application Date Jun-29-2020  
 Appl. Start Time 9:30 AM  
 Appl. Stop Time 1:00 AM  
 Interval to Prev. Appl. 33 DAYS  
 Application Method SPRAY  
 Application Timing POST  
 Application Placement BROFOL  
 Applied By Dobbels  
 Appl. Entry Date Jun-30-2020  
 Air Temperature Start, Stop 77 80 F  
 % Relative Humidity Start, Stop 81 75  
 Wind Velocity+Dir. Start 3 MPH ESE  
 Wind Velocity+Dir. Stop 3 MPH SE  
 Wind Velocity+Dir. Max 3 MPH SE  
 Wet Leaves (Y/N) N no  
 Soil Temperature 75 F  
 Soil Moisture dry  
 Soil Surface Condition MEDTRA  
 % Cloud Cover 50

## Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	SECCW BCER	SECCW BCER
Crop 2 Code, BBCH Scale	RAPSN BVRT	RAPSN BVRT
Crop 3 Code, BBCH Scale	AVESW BCER	AVESW BCER
Crop 4 Code, BBCH Scale	SECCW BCER	SECCW BCER
Crop 5 Code, BBCH Scale	RAPSN BVRT	RAPSN BVRT
Crop 6 Code, BBCH Scale	AVESW BCER	AVESW BCER

Context	Date	By	Notes
STATUS	Sep-17-2019	Alyssa Lamb	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	Mar-31-2020	Alyssa Lamb	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

## Instructions:

- Hand seed spreader settings for broadcast cover crop treatments (red hand spreader)
- 60 lbs rye: bottom of 4, top of 3
  - 45 lbs rye: 3.6
  - 25 rye + 4 radish: 3.5
  - Oat mix: 4.8

Crop Type, Code	C	GLXMA	C	GLXMA	C	GLXMA
Crop Name	Soybean		Soybean		Soybean	
Rating Date	Oct-9-2020		Oct-9-2020		Oct-9-2020	
Rating Type	WEIGHT		MOICON		YIELD	
Rating Unit	LBS		%		BU	
Number of Subsamples	1		1		1	
Data Entry Date	Oct-12-202		Oct-12-202			
Days After First/Last Applic.	- 102		- 102		- 102	
Trt-Eval Interval	102 DA-B		102 DA-B		102 DA-B	
ARM Action Codes					TY1	
Number of Decimals	1		1			
Trt Treatment	Rate					
No. Name	Rate Unit	2*	3*			4*
1 No cover		21.8 -	12.0 -			85.4 -
No spring residual	32 oz/a					
2 No cover		23.5 -	12.0 -			84.7 -
Spring residual	5 oz/a					
Spring residual	32 oz/a					
3 45 lbs rye broadcast early		23.3 -	11.8 -			84.6 -
No spring residual	32 oz/a					
4 45 lbs rye broadcast early		20.3 -	12.0 -			79.5 -
Spring residual	5 oz/a					
Spring residual	32 oz/a					

# The Ohio State University

Trial ID: 20 Broadcast Mix W      Location: WARS      Trial Year: 2020  
 Protocol ID:      Investigator: Alyssa Lamb  
 Project ID:      Study Director:  
 Sponsor Contact:

Crop Type, Code	C	GLXMA	C	GLXMA	C	GLXMA
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Rating Date	Oct-9-2020	Oct-9-2020	Oct-9-2020	Oct-9-2020	Oct-9-2020	Oct-9-2020
Rating Type	WEIGHT	MOICON	WEIGHT	MOICON	WEIGHT	MOICON
Rating Unit	LBS	%	LBS	%	LBS	%
Number of Subsamples	1	1	1	1	1	1
Data Entry Date	Oct-12-202	Oct-12-202	Oct-12-202	Oct-12-202	Oct-12-202	Oct-12-202
Days After First/Last Applic.	- 102	- 102	- 102	- 102	- 102	- 102
Trt-Eval Interval	102 DA-B	102 DA-B	102 DA-B	102 DA-B	102 DA-B	102 DA-B
ARM Action Codes						TY1
Number of Decimals	1	1	1	1	1	1

Trt No.	Treatment Name	Rate Unit	2*	3*	4*
5	60 lbs rye broadcast early No spring residual	32 oz/a	21.6 -	11.8 -	84.6 -
6	60 lbs rye broadcast early Spring residual	5 oz/a	22.2 -	11.9 -	80.1 -
	Spring residual	32 oz/a			
7	30 lbs rye planted late No spring residual	32 oz/a	23.4 -	11.8 -	85.0 -
8	30 lbs rye planted late Spring residual	5 oz/a	22.2 -	11.9 -	87.1 -
	Spring residual	32 oz/a			
9	50 lbs rye planted late No spring residual	32 oz/a	23.8 -	11.9 -	86.0 -
10	50 lbs rye planted late Spring residual	5 oz/a	21.2 -	11.7 -	83.3 -
	Spring residual	32 oz/a			
11	30 lbs rye + 6 lbs radish bc E No spring residual	32 oz/a	24.9 -	11.6 -	90.7 -
12	30 lbs rye + 6 lbs radish bc E Spring residual	5 oz/a	22.4 -	11.5 -	88.1 -
	Spring residual	32 oz/a			
13	25 lbs rye + 4 lbs radish pl L No spring residual	32 oz/a	21.4 -	11.7 -	84.0 -
14	25 lbs rye + 4 lbs radish pl L Spring residual	5 oz/a	24.6 -	11.9 -	89.2 -
	Spring residual	32 oz/a			
15	21 rye + 5 rad + 17 oat bc E No spring residual	32 oz/a	21.5 -	11.7 -	84.6 -
16	21 rye + 5 rad + 17 oat bc E Spring residual	5 oz/a	23.4 -	11.7 -	84.6 -
	Spring residual	32 oz/a			
17	17 rye + 3 rad + 14 oat pl L No spring residual	32 oz/a	21.7 -	12.1 -	84.9 -
18	17 rye + 3 rad + 14 oat pl L Spring residual	5 oz/a	22.6 -	12.0 -	82.2 -
	Spring residual	32 oz/a			
	LSD P=.05		3.71	0.45	9.63
	Standard Deviation		2.61	0.32	6.78
	CV		11.59	2.69	7.98
	Grand Mean		22.54	11.82	84.93
	Levene's F		0.80	1.39	1.14
	Levene's Prob(F)		0.686	0.178	0.343
	Rank X2		.	.	.
	P(Rank X2)		.	.	.
	Skewness		0.9483*	1.0003*	-0.7809*
	Kurtosis		1.289*	1.1572*	0.463
	Analyzed as		RCB	RCB	RCB
	Replicate F		8.107	1.527	2.610
	Replicate Prob(F)		0.0002	0.2188	0.0614
	Treatment F		0.894	0.966	0.671
	Treatment Prob(F)		0.5839	0.5082	0.8159

### Crop Type, Code

C = EPP0 species (Bayer) codes  
 GLXMA, BSOY, Glycine max, Soybean = US

### Rating Type

WEIGHT = weight  
 MOICON = moisture content

# The Ohio State University

Trial ID: 20 Broadcast Mix W      Location: WARS      Trial Year: 2020  
Protocol ID:                              Investigator: Alyssa Lamb  
Project ID:                                Study Director:  
Sponsor Contact:

YIELD = yield

Rating Unit

% = percent

BU = bushel

ARM Action Codes

$TY1 = (726 / (6.25 * [1])) * [2] * (100 - [3]) / 87$