

# The Ohio State University

## UPL FALL Soybean

Trial ID: 21FALLSOY2A      Location: Western Branch F-9 West      Trial Year: 2021  
 Protocol ID: 21FALLSOY2      Investigator (Creator): Dr. Mark M. Loux  
 Project ID:      Study Director:  
    Sponsor Contact: Joe Reed

### General Trial Information

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

**Discipline:** H      herbicide  
**Trial Status:** E      established

**ARM Trial Created On:** Apr-29-2021  
**Initiation Date:** Nov-6-2020

### 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 °:** 39.85888      N  
**Longitude of LL Corner °:** -83.67348      W  
**Altitude of LL Corner:** 1088.00 FT

**Conducted Under GLP:** No  
**Conducted Under GEP:** No  
**Role:** INVEST investigator  
**Investigator:** Dr. Mark M. Loux  
**Role:** SPONSR sponsor  
**Sponsor:** Joe Reed  
**Organization:** UPL

### Crop Description

**Crop 1:** C      GLXMA Glycine max  
**Entry Date:** May-17-2021  
**Variety:** Asgrow AG38XF1  
**Attributes:** DICAMBA, GLYPHOSATE, GLUFOSINATE TOL  
**% Germination:** 90  
**Planting Date:** May-14-2021  
**Depth:** 1.5      IN  
**Rows per Plot:** 8  
**Row Spacing:** 15      IN  
**Soil Temperature:** 60      F  
**Emergence Date:** Jun-1-2021  
**Harvest Date:** Oct-13-2021  
**Moisture Meter:** Harvest Master  
**% Standard Moisture:** 13  
**Weighing Equipment:** Harvest Master HM800

**Soybean**      **BBCH Scale:** BSOY  
**Stage Scale:** BBCH  
**1000 Grain Weight:** 0.375 LB  
**Planting Rate:** 175000      S/A  
**Planting Method:** PLANT  
**Planting Equipment:** FE      field equipment  
**Seed Bed:** MEDIUM      medium  
**Soil Moisture:** NORMAL      normal, adequate  
**Harvest Equipment:** Kincaid 8XP  
**Harvested Width:** 6.25      FT  
**Harvested Length:** 30      FT

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## Pest Description

<b>Pest 1 Type:</b> W	<b>Code:</b> TAROF Taraxacum officinale	<b>Entry Date:</b> Nov-6-2020
	<b>Common Name:</b> Dandelion	<b>Stage Scale:</b> BBCH
<b>Pest 2 Type:</b> W	<b>Code:</b> STEME Stellaria media	<b>Entry Date:</b> Nov-6-2020
	<b>Common Name:</b> Common chickweed	<b>Stage Scale:</b> BBCH
<b>Pest 3 Type:</b> W	<b>Code:</b> LAMPU Lamium purpureum	<b>Entry Date:</b> Nov-6-2020
	<b>Common Name:</b> Purple deadnettle	<b>Stage Scale:</b> BBCH
<b>Pest 4 Type:</b> W	<b>Code:</b> ERICA Erigeron canadensis	<b>Entry Date:</b> Nov-6-2020
	<b>Common Name:</b> Marestail	<b>Stage Scale:</b> BBCH
	<b>Attributes:</b> gly-R	
<b>Pest 5 Type:</b> W	<b>Code:</b> THLAR Thlaspi arvense	<b>Entry Date:</b> May-18-2021
	<b>Common Name:</b> Fanweed	<b>Stage Scale:</b> BBCH
<b>Pest 6 Type:</b> W	<b>Code:</b> AMBEL Ambrosia artemisiifolia	<b>Entry Date:</b> May-18-2021
	<b>Common Name:</b> Common ragweed	<b>Stage Scale:</b> BBCH
<b>Pest 7 Type:</b> W	<b>Code:</b> AMBTR Ambrosia trifida	<b>Entry Date:</b> May-18-2021
	<b>Common Name:</b> Giant ragweed	<b>Stage Scale:</b> BBCH
<b>Pest 8 Type:</b> W	<b>Code:</b> BROTE Bromus tectorum	<b>Entry Date:</b> May-18-2021
	<b>Common Name:</b> Downy brome	<b>Stage Scale:</b> BBCH
<b>Pest 9 Type:</b> W	<b>Code:</b> RANAB Ranunculus abortivus	<b>Entry Date:</b> May-18-2021
	<b>Common Name:</b> Smallflower buttercup	<b>Stage Scale:</b> BBCH
<b>Pest10 Type:</b> W	<b>Code:</b> VERAG Veronica agrestis	<b>Entry Date:</b> May-18-2021
	<b>Common Name:</b> Field speedwell	<b>Stage Scale:</b> BBCH
<b>Pest11 Type:</b> W	<b>Code:</b> SETFA Setaria faberi	<b>Entry Date:</b> Jun-7-2021
	<b>Common Name:</b> Giant foxtail	<b>Stage Scale:</b> BBCH
<b>Pest12 Type:</b> W	<b>Code:</b> CHEAL Chenopodium album	<b>Entry Date:</b> Jun-7-2021
	<b>Common Name:</b> common lambsquarters	<b>Stage Scale:</b> BBCH
<b>Pest13 Type:</b> W	<b>Code:</b> AMARE Amaranthus retroflexus	<b>Entry Date:</b> Jun-14-2021
	<b>Common Name:</b> Redroot pigweed	<b>Stage Scale:</b> BBCH
<b>Pest14 Type:</b> W	<b>Code:</b> POLPY Persicaria pensylvanica	<b>Entry Date:</b> Jun-14-2021
	<b>Common Name:</b> annual smartweed	<b>Stage Scale:</b> BBCH

## Site and Design

<b>Treated Plot Width:</b> 6.67 FT	<b>Site Type:</b> FIELD field
<b>Treated Plot Length:</b> 30 FT	<b>Experimental Unit:</b> 1 PLOT plot
<b>Treated Plot Area:</b> 200.1 FT <sup>2</sup>	<b>Treatments:</b> 6
<b>Replications:</b> 3	<b>Tillage Type:</b> NOTILL no-till
	<b>Study Design:</b> RACOBL Randomized Complete Block (RCB)

## Previous

No.	Crop	Year
1.	WHEAT	2020

## Soil Description

<b>Description Name:</b> F-9 West		
<b>% Sand:</b> 33	<b>% OM:</b> 1.6	<b>Texture:</b> SIL silt loam
<b>% Silt:</b> 53	<b>pH:</b> 6	<b>Soil Name:</b> Crosby
<b>% Clay:</b> 15	<b>CEC:</b> 8.6	<b>Fert. Level:</b> G good

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 Project ID: Study Director:  
 Sponsor Contact: Joe Reed

### Application Description

	A	B	C	D
Application Date	Nov-6-2020	May-14-2021	Jun-6-2021	Jun-11-2021
Appl. Start Time	9:30 AM	5:00 PM	9:45 AM	1:45 PM
Appl. Stop Time	10:00 AM	5:30 PM	9:50 AM	1:55 PM
Interval to Prev. Appl.		189 DAYS	23 DAYS	5 DAYS
Application Method	SPRAY	SPRAY	spray	spray
Application Timing	FALL	PREPRE	epo	post
Application Placement	BROFOL	BROFOL	brofol	BROFOL
Applied By	Dobbels	Lamb	Dobbels	Dobbels
Appl. Entry Date	Nov-6-2020	May-17-2021	Jun-7-2021	Jun-14-2021
Air Temperature Start, Stop	53 57 F	68 68 F	81 81 F	81 81 F
% Relative Humidity Start, Stop	74 75	22 22	60 60	70 70
Wind Velocity+Dir. Start	5 MPH SW	5 MPH NW	4 MPH S	6 MPH N
Wind Velocity+Dir. Stop	7 MPH WSW	5 MPH NW	4 MPH S	6 MPH N
Wind Velocity+Dir. Max	7 MPH WSW	5 MPH NW	4 MPH S	6 MPH N
Wet Leaves (Y/N)	N no	N no	N no	N no
Soil Temperature	44 F	60 F	67 F	78 F
Soil Moisture	dry	normal	dry	sliwet
Soil Surface Condition	MEDTRA	MED	MEDIUM	MEDIUM
% Cloud Cover	0	30	60	60
Next Moisture Occurred On	Nov-10-2020	May-17-2021	Jun-7-2021	Jun-18-2021
Time to Next Moisture	4.0 DAY	3.0 DAY	22.0 HR	7.0 DAY
Moisture 6 Hours after Appl.	0 IN	0 IN	0 IN	0 IN
Moisture 1 Week after Appl.	0.73 IN	0.29 IN	0.48 IN	0.34 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	-207		-18		5		10	
Stage Majority, Percent			00	100	12	100	14	100
Height Average					3	IN	6	IN
Height Minimum, Maximum					2.5	3	5	7

### Pest Stage At Each Application

	A				B				C				D			
Pest 1 Code, Type, Scale	TAROF	W	BBCH	TAROF	W	BBCH	TAROF	W	BBCH	TAROF	W	BBCH	TAROF	W	BBCH	
Stage Majority, Percent	19	100		89	90											
Stage Minimum, Percent				65	10											
Diameter Average	6	in		9	IN											
Diameter Minimum, Maximum				8.5	10											
Height Average	1	in		6.5	IN											
Height Minimum, Maximum	0.5	1		4.5	10											
Density Average	12	PLA/m2		17	PLA/m2											
Pest 2 Code, Type, Scale	STEME	W	BBCH	STEME	W	BBCH	STEME	W	BBCH	STEME	W	BBCH	STEME	W	BBCH	
Stage Majority, Percent	19	80														
Stage Minimum, Percent	12	10														
Stage Maximum, Percent	19	80														
Diameter Average	4	in														
Height Average	0.5	in														
Height Minimum, Maximum	0.5	1														
Density Average	15	PLA/m2														
Pest 3 Code, Type, Scale	LAMPU	W	BBCH	LAMPU	W	BBCH	LAMPU	W	BBCH	LAMPU	W	BBCH	LAMPU	W	BBCH	
Stage Majority, Percent	16	80		65	100											
Stage Minimum, Percent	12	10														
Stage Maximum, Percent	19	10														
Diameter Average	3	in		3	IN											
Diameter Minimum, Maximum				1	3.5											
Height Average	1	in		5	IN											
Height Minimum, Maximum	0.5	2		3	6											
Density Average	5	PLA/m2		16	m2											
Pest 4 Code, Type, Scale	ERICA	W	BBCH	ERICA	W	BBCH	ERICA	W	BBCH	ERICA	W	BBCH	ERICA	W	BBCH	
Stage Majority, Percent	14	60		16	85		19	100		19	100					
Stage Minimum, Percent	11	40														
Stage Maximum, Percent	14	60		19	15											
Diameter Average	0.125	in		4	IN											
Height Average	0.125	in		4.5	IN		6	IN		4	IN					
Height Minimum, Maximum	0.125	0.15					3	8		3	4					
Density Average				8	PLA/m2											
Pest 5 Code, Type, Scale	THLAR	W	BBCH	THLAR	W	BBCH	THLAR	W	BBCH	THLAR	W	BBCH	THLAR	W	BBCH	
Stage Majority, Percent				89	100											
Diameter Average				4	IN											
Height Average				20	IN											
Density Average				2	PLA/m2											
Pest 6 Code, Type, Scale	AMBEL	W	BBCH	AMBEL	W	BBCH	AMBEL	W	BBCH	AMBEL	W	BBCH	AMBEL	W	BBCH	

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Stage Majority, Percent	15	75	19	100	19	100
Stage Minimum, Percent	12	20				
Stage Maximum, Percent	16	5				
Diameter Average	2.5	IN				
Height Average	2.5	IN	6	IN	8	IN
Height Minimum, Maximum			4	8	6	8
Density Average	20	PLA/m2				
Pest 7 Code, Type, Scale	AMBTR W BBCH	AMBTR W BBCH	AMBTR W BBCH	AMBTR W BBCH	AMBTR W BBCH	AMBTR W BBCH
Stage Majority, Percent	17	80	19	100	19	100
Stage Minimum, Percent	12	10				
Stage Maximum, Percent	19	10				
Diameter Average	4	IN				
Diameter Minimum, Maximum	3	5				
Height Average	6	IN	12	IN	8	IN
Height Minimum, Maximum	3.5	6.5	8	16	6	8
Density Average	9	PLA/m2				
Pest 8 Code, Type, Scale	BROTE W BBCH	BROTE W BBCH	BROTE W BBCH	BROTE W BBCH	BROTE W BBCH	BROTE W BBCH
Stage Majority, Percent	89	100				
Diameter Average	10	IN				
Height Average	18	IN				
Height Minimum, Maximum	11	20				
Density Average	13	PLA/m2				
Pest 9 Code, Type, Scale	RANAB W BBCH	RANAB W BBCH	RANAB W BBCH	RANAB W BBCH	RANAB W BBCH	RANAB W BBCH
Stage Majority, Percent	61	85				
Stage Minimum, Percent	60	5				
Stage Maximum, Percent	63	10				
Diameter Average	9	IN				
Height Average	12	IN				
Height Minimum, Maximum	11	15				
Density Average	3	PLA/m2				
Pest10 Code, Type, Scale	VERAG W BBCH	VERAG W BBCH	VERAG W BBCH	VERAG W BBCH	VERAG W BBCH	VERAG W BBCH
Stage Majority, Percent	55	80				
Stage Minimum, Percent	51	10				
Stage Maximum, Percent	61	10				
Diameter Average	5	IN				
Diameter Minimum, Maximum	4	7				
Height Average	7	IN				
Height Minimum, Maximum	6	9				
Density Average	15	PLA/m2				
Pest11 Code, Type, Scale	SETFA W BBCH	SETFA W BBCH	SETFA W BBCH	SETFA W BBCH	SETFA W BBCH	SETFA W BBCH
Stage Majority, Percent			13	80	13	100
Stage Minimum, Percent			12	10		
Stage Maximum, Percent			14	10		
Height Average			12	IN	6	IN
Height Minimum, Maximum			6	12	5	6
Density Average			124	PLA/m2	62	PLA/m2
Pest12 Code, Type, Scale	CHEAL W BBCH	CHEAL W BBCH	CHEAL W BBCH	CHEAL W BBCH	CHEAL W BBCH	CHEAL W BBCH
Stage Majority, Percent			18	100	19	100
Height Average			6	IN	6	IN
Height Minimum, Maximum			4	8	4	6
Density Average			4	PLA/m2		
Pest13 Code, Type, Scale	AMARE W BBCH	AMARE W BBCH	AMARE W BBCH	AMARE W BBCH	AMARE W BBCH	AMARE W BBCH
Stage Majority, Percent					14	100
Height Average					2	IN
Height Minimum, Maximum					1	3
Density Average					2	PLA/m2
Pest14 Code, Type, Scale	POLPY W BBCH	POLPY W BBCH	POLPY W BBCH	POLPY W BBCH	POLPY W BBCH	POLPY W BBCH
Stage Majority, Percent					19	100
Height Average					5	IN
Height Minimum, Maximum					3	6
Density Average					1	PLA/m2

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**Application Equipment**

	A		B		C		D	
Appl. Equipment	6 FT		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		AIXR		AI XR		AI XR	
Nozzle TradeName					TeeJet		TeeJet	
Nozzle Tip Size, Color					015 green		015 green	
Nozzle Spacing	18 IN		18 IN		18 IN		18 IN	
Boom Length	6.67 FT		10.0 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 Coverage					25 mL		25 mL	
Mix Size	1	L	2.0	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	

**Notes**

Context	Date	By	Notes					
STATUS	Oct-28-2020	Dr. Mark M. Loux	Automatically added by ARM:	Trial Status updated to 'S' during trial creation.				
STATUS	Oct-19-2020	Dr. Mark M. Loux	Automatically added by ARM:	Trial Status updated to 'S' during trial creation.				
STATUS	Mar-24-2021	Dr. Mark M. Loux	Automatically added by ARM:	Trial Status updated to 'E' when Initiation Date entered.				
Pest Type			W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code			TAROF	LAMPU	CARPE	VERAG	TAROF	TAROF
Pest Scientific Name			Taraxacum offic>	Lamium purpureum	Cardamine pensy>	Veronica agrest>	Taraxacum offic>	Taraxacum offic>
Pest Name			dandelion	purple archangel	Pennsylvania bi>	Procumbent spee>	dandelion	dandelion
Crop Type, Code								
Crop Name								
Rating Date			Apr-16-2021	Apr-16-2021	Apr-16-2021	Apr-16-2021	Apr-16-2021	Apr-30-2021
Part Rated								
Rating Type			CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit/Min/Max			% 0 100	% 0 100	% 0 100	% 0 100	% 0 100	% 0 100
Number of Subsamples			1	1	1	1	1	1
Data Entry Date			Apr-19-2021	Apr-19-2021	Apr-19-2021	Apr-19-2021	Apr-19-2021	May-3-2021
Rating Timing								
Days After First/Last Applic.			161 161	161 161	161 161	161 161	161 161	175 175
Trt-Eval Interval			161 DA-A	161 DA-A	161 DA-A	161 DA-A	161 DA-A	175 DA-A
Plant-Eval Interval			-28 DP-1	-28 DP-1	-28 DP-1	-28 DP-1	-28 DP-1	-14 DP-1
Days After Emergence			-46 DE-1	-46 DE-1	-46 DE-1	-46 DE-1	-46 DE-1	-32 DE-1
ARM Action Codes			EC	AS				EC
Number of Decimals			0	0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	1*	2* dAS	3*	4*	5*
1	UTC			A	0	0 b	0 -	0 b	0
2	Roundup Powermax	32 oz/a		A	93 -	100 a	100 -	87 a	87 -
	Weedmaster	32 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Roundup Powermax	32 oz/a		B					
	Preview	19.7 oz/a		B					
	N Pak AMS	2.5 % v/v		B					
	Intermoc	64 oz/a		C					
	N Pak AMS	2.5 % v/v		C					
	Interline	32 oz/a		D					
	N Pak AMS	2.5 % v/v		D					
3	Roundup Powermax	32 oz/a		A	92 -	98 a	100 -	100 a	90 -
	Audit 1:1	0.75 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Intermoc	64 oz/a		B					
	N Pak AMS	2.5 % v/v		B					
	Interline	32 oz/a		D					
	N Pak AMS	2.5 % v/v		D					

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	TAROF	LAMPU	CARPE	VERAG	TAROF
Pest Scientific Name	Taraxacum offic>	Lamium purpureum	Cardamine pensy>	Veronica agrest>	Taraxacum offic>
Pest Name	dandelion	purple archangel	Pennsylvania bi>	Procumbent spee>	dandelion
Crop Type, Code					
Crop Name					
Rating Date	Apr-16-2021	Apr-16-2021	Apr-16-2021	Apr-16-2021	Apr-30-2021
Part Rated					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit/Min/Max	% 0 100	% 0 100	% 0 100	% 0 100	% 0 100
Number of Subsamples	1	1	1	1	1
Data Entry Date	Apr-19-2021	Apr-19-2021	Apr-19-2021	Apr-19-2021	May-3-2021
Rating Timing					
Days After First/Last Applic.	161 161	161 161	161 161	161 161	175 175
Trt-Eval Interval	161 DA-A	161 DA-A	161 DA-A	161 DA-A	175 DA-A
Plant-Eval Interval	-28 DP-1	-28 DP-1	-28 DP-1	-28 DP-1	-14 DP-1
Days After Emergence	-46 DE-1	-46 DE-1	-46 DE-1	-46 DE-1	-32 DE-1
ARM Action Codes	EC	AS			EC
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	1*	2* dAS	3*	4*	5*
4	Roundup Powermax	32 oz/a		A	90 -	100 a	100 -	100 a	88 -
	Audit 1:1	0.75 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Intermoc	64 oz/a		B					
	Classic	1 oz/a		B					
	NIS	4.8 oz/a		B					
	N Pak AMS	2.5 % v/v		B					
	Interline	32 oz/a		D					
	N Pak AMS	2.5 % v/v		D					
5	Roundup Powermax	32 oz/a		A	88 -	100 a	100 -	97 a	86 -
	Audit 1:1	1 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Intermoc	64 oz/a		B					
	N Pak AMS	2.5 % v/v		B					
	Interline	32 oz/a		D					
	Classic	0.75 oz/a		D					
	N Pak AMS	2.5 % v/v		D					
6	Roundup Powermax	32 oz/a		A	97 -	100 a	100 -	100 a	95 -
	Audit 1:1	1 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Interline	32 oz/a		C					
	Classic	0.75 oz/a		C					
	N Pak AMS	2.5 % v/v		C					
LSD P=.05					14.5	2.2 - 2.2	.	18.1	18.6
Standard Deviation					7.7	0.1t	0.0	9.9	9.9
CV					8.39	0.7t	0.0	12.34	11.1
Levene's F^					0.943	0.533	.	0.651	0.132
Levene's Prob(F)					0.478	0.747	.	0.666	0.967
Skewness^					0.083	-1.3829*	.	-1.3075*	0.3644
Kurtosis^					0.2746	4.8663*	.	4.1029*	-1.3056
Replicate F					0.755	1.000	0.000	0.730	0.639
Replicate Prob(F)					0.5007	0.4019	1.0000	0.5058	0.5529
Treatment F					0.517	12207.134	0.000	48.056	0.396
Treatment Prob(F)					0.7259	0.0001	1.0000	0.0001	0.8068

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Pest Code	LAMPU	CARPE	VERAG	AMBTR	TAROF			
Pest Scientific Name	Lamium purpureum	Cardamine pensy>	Veronica agrest>	Ambrosia trifida	Taraxacum offic>			
Pest Name	purple archangel	Pennsylvania bi>	Procumbent spee>	Giant ragweed	dandelion			
Crop Type, Code								
Crop Name								
Rating Date	Apr-30-2021	Apr-30-2021	Apr-30-2021	Apr-30-2021	May-14-2021			
Part Rated								
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit/Min/Max	% 0 100	% 0 100	% 0 100	% 0 100	% 0 100			
Number of Subsamples	1	1	1	1	1			
Data Entry Date	May-3-2021	May-3-2021	May-3-2021	May-3-2021	May-17-2021			
Rating Timing					AT PLANT			
Days After First/Last Applic.	175 175	175 175	175 175	175 175	189 189			
Trt-Eval Interval	175 DA-A	175 DA-A	175 DA-A	175 DA-A	189 DA-A			
Plant-Eval Interval	-14 DP-1	-14 DP-1	-14 DP-1	-14 DP-1	0 DP-1			
Days After Emergence	-32 DE-1	-32 DE-1	-32 DE-1	-32 DE-1	-18 DE-1			
ARM Action Codes		ET6		AS				
Number of Decimals	0	0	0	0	0			
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	6*	7*	8*	9* dAS	10*
1 UTC				0 b	0 c	0 -	0 -	0 b
2 Roundup Powermax	32 oz/a		A	90 a	67 b	9 -	0 -	93 a
Weedmaster	32 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Roundup Powermax	32 oz/a		B					
Preview	19.7 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Intermoc	64 oz/a		C					
N Pak AMS	2.5 % v/v		C					
Interline	32 oz/a		D					
N Pak AMS	2.5 % v/v		D					
3 Roundup Powermax	32 oz/a		A	97 a	87 ab	24 -	0 -	100 a
Audit 1:1	0.75 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Intermoc	64 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Interline	32 oz/a		D					
N Pak AMS	2.5 % v/v		D					

# The Ohio State University

## UPL FALL Soybean

Trial ID: 21FALLSOY2A Location: Western Branch F-9 West Trial Year: 2021  
 Protocol ID: 21FALLSOY2 Investigator (Creator): Dr. Mark M. Loux  
 Project ID: Study Director:  
 Sponsor Contact: Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	LAMPU	CARPE	VERAG	AMBTR	TAROF
Pest Scientific Name	Lamium purpureum	Cardamine pensy>	Veronica agrest>	Ambrosia trifida	Taraxacum offic>
Pest Name	purple archangel	Pennsylvania bi>	Procumbent spee>	Giant ragweed	dandelion
Crop Type, Code					
Crop Name					
Rating Date	Apr-30-2021	Apr-30-2021	Apr-30-2021	Apr-30-2021	May-14-2021
Part Rated					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit/Min/Max	% 0 100	% 0 100	% 0 100	% 0 100	% 0 100
Number of Subsamples	1	1	1	1	1
Data Entry Date	May-3-2021	May-3-2021	May-3-2021	May-3-2021	May-17-2021
Rating Timing					AT PLANT
Days After First/Last Applic.	175 175	175 175	175 175	175 175	189 189
Trt-Eval Interval	175 DA-A	175 DA-A	175 DA-A	175 DA-A	189 DA-A
Plant-Eval Interval	-14 DP-1	-14 DP-1	-14 DP-1	-14 DP-1	0 DP-1
Days After Emergence	-32 DE-1	-32 DE-1	-32 DE-1	-32 DE-1	-18 DE-1
ARM Action Codes		ET6		AS	
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	6*	7*	8*	9* dAS	10*
4	Roundup Powermax	32 oz/a		A	100 a	87 ab	67 -	5 -	92 a
	Audit 1:1	0.75 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Intermoc	64 oz/a		B					
	Classic	1 oz/a		B					
	NIS	4.8 oz/a		B					
	N Pak AMS	2.5 % v/v		B					
	Interline	32 oz/a		D					
	N Pak AMS	2.5 % v/v		D					
5	Roundup Powermax	32 oz/a		A	100 a	100 a	48 -	0 -	100 a
	Audit 1:1	1 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Intermoc	64 oz/a		B					
	N Pak AMS	2.5 % v/v		B					
	Interline	32 oz/a		D					
	Classic	0.75 oz/a		D					
	N Pak AMS	2.5 % v/v		D					
6	Roundup Powermax	32 oz/a		A	100 a	100	43 -	0 -	100 a
	Audit 1:1	1 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Interline	32 oz/a		C					
	Classic	0.75 oz/a		C					
	N Pak AMS	2.5 % v/v		C					
LSD P=.05					8.6	22.3	72.1	4.8 - 13.8	12.3
Standard Deviation					4.7	11.8	38.3	1.1t	6.8
CV					5.81	17.4	121.28	116.46t	8.38
Levene's F^					1.20	0.173	0.403	0.533	0.153
Levene's Prob(F)					0.366	0.947	0.836	0.747	0.975
Skewness^					-0.484	-0.5652	-0.3193	1.3829*	-0.5909
Kurtosis^					1.9593	-0.5604	-0.8462	4.8663*	-0.259
Replicate F					1.000	1.714	0.914	1.000	2.455
Replicate Prob(F)					0.4019	0.2401	0.4391	0.4019	0.1358
Treatment F					215.200	34.000	1.431	1.000	103.545
Treatment Prob(F)					0.0001	0.0001	0.3101	0.4651	0.0001



# The Ohio State University

## UPL FALL Soybean

Trial ID: 21FALLSOY2A Location: Western Branch F-9 West Trial Year: 2021  
 Protocol ID: 21FALLSOY2 Investigator (Creator): Dr. Mark M. Loux  
 Project ID: Study Director:  
 Sponsor Contact: Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	LAMPU	CARPE	VERAG	AMBTR	CHEAL				
Pest Scientific Name	Lamium purpureum	Cardamine pensy>	Veronica agrest>	Ambrosia trifida	Chenopodium alb>				
Pest Name	purple archangel	Pennsylvania bi>	Procumbent spee>	Giant ragweed	common lambsqua>				
Crop Type, Code									
Crop Name									
Rating Date	May-14-2021	May-14-2021	May-14-2021	May-14-2021	May-14-2021				
Part Rated									
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit/Min/Max	% 0 100	% 0 100	% 0 100	% 0 100	% 0 100				
Number of Subsamples	1	1	1	1	1				
Data Entry Date	May-17-2021	May-17-2021	May-17-2021	May-17-2021	May-17-2021				
Rating Timing	AT PLANT	AT PLANT	AT PLANT	AT PLANT	AT PLANT				
Days After First/Last Applic.	189 189	189 189	189 189	189 189	189 189				
Trt-Eval Interval	189 DA-A	189 DA-A	189 DA-A	189 DA-A	189 DA-A				
Plant-Eval Interval	0 DP-1	0 DP-1	0 DP-1	0 DP-1	0 DP-1				
Days After Emergence	-18 DE-1	-18 DE-1	-18 DE-1	-18 DE-1	-18 DE-1				
ARM Action Codes		AA		AS					
Number of Decimals	0	0	0	0	0				
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	11*	12* dAA	13*	14* dAS	15*
1	UTC				0 b	0 c	0 b	0 -	0 -
2	Roundup Powermax	32 oz/a		A	92 a	60 b	43 a	0 -	0 -
	Weedmaster	32 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Roundup Powermax	32 oz/a		B					
	Preview	19.7 oz/a		B					
	N Pak AMS	2.5 % v/v		B					
	Intermoc	64 oz/a		C					
	N Pak AMS	2.5 % v/v		C					
	Interline	32 oz/a		D					
	N Pak AMS	2.5 % v/v		D					
3	Roundup Powermax	32 oz/a		A	93 a	86 ab	57 a	0 -	0 -
	Audit 1:1	0.75 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Intermoc	64 oz/a		B					
	N Pak AMS	2.5 % v/v		B					
	Interline	32 oz/a		D					
	N Pak AMS	2.5 % v/v		D					

# The Ohio State University

## UPL FALL Soybean

Trial ID: 21FALLSOY2A Location: Western Branch F-9 West Trial Year: 2021  
 Protocol ID: 21FALLSOY2 Investigator (Creator): Dr. Mark M. Loux  
 Project ID: Study Director:  
 Sponsor Contact: Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	LAMPU	CARPE	VERAG	AMBTR	CHEAL
Pest Scientific Name	Lamium purpureum	Cardamine pensy>	Veronica agrest>	Ambrosia trifida	Chenopodium alb>
Pest Name	purple archangel	Pennsylvania bi>	Procumbent spee>	Giant ragweed	common lambsqua>
Crop Type, Code					
Crop Name					
Rating Date	May-14-2021	May-14-2021	May-14-2021	May-14-2021	May-14-2021
Part Rated					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit/Min/Max	% 0 100	% 0 100	% 0 100	% 0 100	% 0 100
Number of Subsamples	1	1	1	1	1
Data Entry Date	May-17-2021	May-17-2021	May-17-2021	May-17-2021	May-17-2021
Rating Timing	AT PLANT	AT PLANT	AT PLANT	AT PLANT	AT PLANT
Days After First/Last Applic.	189 189	189 189	189 189	189 189	189 189
Trt-Eval Interval	189 DA-A	189 DA-A	189 DA-A	189 DA-A	189 DA-A
Plant-Eval Interval	0 DP-1	0 DP-1	0 DP-1	0 DP-1	0 DP-1
Days After Emergence	-18 DE-1	-18 DE-1	-18 DE-1	-18 DE-1	-18 DE-1
ARM Action Codes		AA		AS	
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	11*	12* dAA	13*	14* dAS	15*
4	Roundup Powermax	32 oz/a		A	98 a	96 a	70 a	0 -	0 -
	Audit 1:1	0.75 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Intermoc	64 oz/a		B					
	Classic	1 oz/a		B					
	NIS	4.8 oz/a		B					
	N Pak AMS	2.5 % v/v		B					
	Interline	32 oz/a		D					
	N Pak AMS	2.5 % v/v		D					
5	Roundup Powermax	32 oz/a		A	100 a	81 ab	73 a	0 -	0 -
	Audit 1:1	1 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Intermoc	64 oz/a		B					
	N Pak AMS	2.5 % v/v		B					
	Interline	32 oz/a		D					
	Classic	0.75 oz/a		D					
	N Pak AMS	2.5 % v/v		D					
6	Roundup Powermax	32 oz/a		A	100 a	100 a	93 a	6 -	0 -
	Audit 1:1	1 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Interline	32 oz/a		C					
	Classic	0.75 oz/a		C					
	N Pak AMS	2.5 % v/v		C					
	LSD P=.05				9.9	11.2 - 28.7	36.2	6.2 - 18.5	.
	Standard Deviation				5.5	10.8t	19.6	1.3t	0.0
	CV				6.77	18.33t	34.69	130.54t	0.0
	Levene's F^				0.294	0.365	0.675	0.533	.
	Levene's Prob(F)				0.907	0.863	0.651	0.747	.
	Skewness^				-0.366	0.0406	-0.1841	1.3829*	.
	Kurtosis^				-0.5344	-0.3608	-0.0502	4.8663*	.
	Replicate F				3.411	1.892	0.973	1.000	0.000
	Replicate Prob(F)				0.0742	0.2009	0.4144	0.4019	1.0000
	Treatment F				158.430	26.037	8.125	1.000	0.000
	Treatment Prob(F)				0.0001	0.0001	0.0037	0.4651	1.0000

# The Ohio State University

## UPL FALL Soybean

Trial ID: 21FALLSOY2A Location: Western Branch F-9 West Trial Year: 2021  
 Protocol ID: 21FALLSOY2 Investigator (Creator): Dr. Mark M. Loux  
 Project ID: Study Director:  
 Sponsor Contact: Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBEL	ERICA	AMBTR	ERICA	CHEAL
Pest Scientific Name	Ambrosia artemi>	Erigeron canad>	Ambrosia trifida	Erigeron canad>	Chenopodium alb>
Pest Name	Common ragweed	Horseweed	Giant ragweed	Horseweed	common lambsqua>
Crop Type, Code					
Crop Name					
Rating Date	May-14-2021	May-14-2021	Jun-1-2021	Jun-1-2021	Jun-1-2021
Part Rated					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit/Min/Max	% 0 100	% 0 100	% 0 100	% 0 100	% 0 100
Number of Subsamples	1	1	1	1	1
Data Entry Date	May-17-2021	May-17-2021	Jun-22-2021	Jun-22-2021	Jun-22-2021
Rating Timing	AT PLANT	AT PLANT			
Days After First/Last Applic.	189 189	189 189	207 18	207 18	207 18
Trt-Eval Interval	189 DA-A	189 DA-A	18 DA-B	18 DA-B	18 DA-B
Plant-Eval Interval	0 DP-1	0 DP-1	18 DP-1	18 DP-1	18 DP-1
Days After Emergence	-18 DE-1	-18 DE-1	0 DE-1	0 DE-1	0 DE-1
ARM Action Codes		ER1			EC
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	16*	17*	18*	19*	20*
1	UTC				0 -	0 -	0 c	0 c	0
2	Roundup Powermax	32 oz/a		A	0 -	0 -	72 a	85 a	93 a
	Weedmaster	32 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Roundup Powermax	32 oz/a		B					
	Preview	19.7 oz/a		B					
	N Pak AMS	2.5 % v/v		B					
	Intermoc	64 oz/a		C					
	N Pak AMS	2.5 % v/v		C					
	Interline	32 oz/a		D					
	N Pak AMS	2.5 % v/v		D					
3	Roundup Powermax	32 oz/a		A	0 -	0 -	70 a	75 a	78 b
	Audit 1:1	0.75 oz/a		A					
	N Pak AMS	2.5 % v/v		A					
	Intermoc	64 oz/a		B					
	N Pak AMS	2.5 % v/v		B					
	Interline	32 oz/a		D					
	N Pak AMS	2.5 % v/v		D					

# The Ohio State University

## UPL FALL Soybean

Trial ID: 21FALLSOY2A Location: Western Branch F-9 West Trial Year: 2021  
 Protocol ID: 21FALLSOY2 Investigator (Creator): Dr. Mark M. Loux  
 Project ID: Study Director:  
 Sponsor Contact: Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	AMBEL	ERICA	AMBTR	ERICA	CHEAL			
Pest Scientific Name	Ambrosia artemi>	Erigeron canade>	Ambrosia trifida	Erigeron canade>	Chenopodium alb>			
Pest Name	Common ragweed	Horseweed	Giant ragweed	Horseweed	common lambsqua>			
Crop Type, Code								
Crop Name								
Rating Date	May-14-2021	May-14-2021	Jun-1-2021	Jun-1-2021	Jun-1-2021			
Part Rated								
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit/Min/Max	% 0 100	% 0 100	% 0 100	% 0 100	% 0 100			
Number of Subsamples	1	1	1	1	1			
Data Entry Date	May-17-2021	May-17-2021	Jun-22-2021	Jun-22-2021	Jun-22-2021			
Rating Timing	AT PLANT	AT PLANT						
Days After First/Last Applic.	189 189	189 189	207 18	207 18	207 18			
Trt-Eval Interval	189 DA-A	189 DA-A	18 DA-B	18 DA-B	18 DA-B			
Plant-Eval Interval	0 DP-1	0 DP-1	18 DP-1	18 DP-1	18 DP-1			
Days After Emergence	-18 DE-1	-18 DE-1	0 DE-1	0 DE-1	0 DE-1			
ARM Action Codes		ER1			EC			
Number of Decimals	0	0	0	0	0			
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	16*	17*	18*	19*	20*
4 Roundup Powermax	32 oz/a		A	0 -	0 -	73 a	80 a	75 b
Audit 1:1	0.75 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Intermoc	64 oz/a		B					
Classic	1 oz/a		B					
NIS	4.8 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Interline	32 oz/a		D					
N Pak AMS	2.5 % v/v		D					
5 Roundup Powermax	32 oz/a		A	0 -	0 -	65 a	70 a	70 b
Audit 1:1	1 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Intermoc	64 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Interline	32 oz/a		D					
Classic	0.75 oz/a		D					
N Pak AMS	2.5 % v/v		D					
6 Roundup Powermax	32 oz/a		A	0 -	0 -	27 b	38 b	57 c
Audit 1:1	1 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Interline	32 oz/a		C					
Classic	0.75 oz/a		C					
N Pak AMS	2.5 % v/v		C					
LSD P=.05						8.1	27.3	12.0
Standard Deviation				0.0	0.0	4.4	15.0	6.4
CV				0.0	0.0	8.69	25.82	8.56
Levene's F^				.	0.268	0.409	0.386	0.395
Levene's Prob(F)				.	0.917	0.833	0.849	0.808
Skewness^				.	0.3381	-0.5091	0.8097	0.0
Kurtosis^				.	-1.2758	-0.4132	0.5703	-0.8677
Replicate F				0.000	0.000	0.070	1.601	4.571
Replicate Prob(F)				1.0000	1.0000	0.9325	0.2494	0.0474
Treatment F				0.000	0.000	142.254	14.409	13.000
Treatment Prob(F)				1.0000	1.0000	0.0001	0.0003	0.0014

# The Ohio State University

UPL FALL Soybean

Trial ID: 21FALLSOY2A Location: Western Branch F-9 West Trial Year: 2021  
 Protocol ID: 21FALLSOY2 Investigator (Creator): Dr. Mark M. Loux  
 Project ID: Study Director:  
 Sponsor Contact: Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed				
Pest Code	AMBEL	TAROF	SETFA	AMBTR				
Pest Scientific Name	Ambrosia artemi>	Taraxacum offic>	Setaria faberi	Ambrosia trifida				
Pest Name	Common ragweed	Blowball	Giant foxtail	Giant ragweed				
Crop Type, Code			C GLXMA					
Crop Name			Soybean					
Rating Date	Jun-1-2021	Jun-1-2021	Jun-11-2021	Jun-11-2021				
Part Rated			PLANT -					
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO				
Rating Unit/Min/Max	% 0 100	% 0 100 %	0 100	% 0 % 0 100				
Number of Subsamples	1	1	1	1				
Data Entry Date	Jun-22-2021	Jun-22-2021	Jun-21-2021	Jun-21-2021				
Rating Timing								
Days After First/Last Applic.	207 18	207 18	217 5	217 5				
Trt-Eval Interval	18 DA-B	18 DA-B	28 DA-B	28 DA-B				
Plant-Eval Interval	18 DP-1	18 DP-1	28 DP-1	28 DP-1				
Days After Emergence	0 DE-1	0 DE-1	10 DE-1	10 DE-1				
ARM Action Codes		EC						
Number of Decimals	0	0	0	0				
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	21*	22*	23*	24*	25*
1 UTC				0 c	0	0 -	0 c	0 c
2 Roundup Powermax	32 oz/a		A	82 a	87 -	10 -	98 a	82 a
Weedmaster	32 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Roundup Powermax	32 oz/a		B					
Preview	19.7 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Intermoc	64 oz/a		C					
N Pak AMS	2.5 % v/v		C					
Interline	32 oz/a		D					
N Pak AMS	2.5 % v/v		D					
3 Roundup Powermax	32 oz/a		A	63 a	77 -	0 -	100 a	37 b
Audit 1:1	0.75 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Intermoc	64 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Interline	32 oz/a		D					
N Pak AMS	2.5 % v/v		D					

# The Ohio State University

## UPL FALL Soybean

Trial ID: 21FALLSOY2A Location: Western Branch F-9 West Trial Year: 2021  
 Protocol ID: 21FALLSOY2 Investigator (Creator): Dr. Mark M. Loux  
 Project ID: Study Director:  
 Sponsor Contact: Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBEL	TAROF	SETFA	AMBTR
Pest Scientific Name	Ambrosia artemi>	Taraxacum offic>	Setaria faberi	Ambrosia trifida
Pest Name	Common ragweed	Blowball	Giant foxtail	Giant ragweed
Crop Type, Code			C GLXMA	
Crop Name			Soybean	
Rating Date	Jun-1-2021	Jun-1-2021	Jun-11-2021	Jun-11-2021
Part Rated			PLANT -	
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO
Rating Unit/Min/Max	% 0 100	% 0 100 %	0 100	% 0 % 0 100
Number of Subsamples	1	1	1	1
Data Entry Date	Jun-22-2021	Jun-22-2021	Jun-21-2021	Jun-21-2021
Rating Timing				
Days After First/Last Applic.	207 18	207 18	217 5	217 5
Trt-Eval Interval	18 DA-B	18 DA-B	28 DA-B	28 DA-B
Plant-Eval Interval	18 DP-1	18 DP-1	28 DP-1	28 DP-1
Days After Emergence	0 DE-1	0 DE-1	10 DE-1	10 DE-1
ARM Action Codes		EC		
Number of Decimals	0	0	0	0

Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	21*	22*	23*	24*	25*
4 Roundup Powermax	32 oz/a		A	77 a	93 -	0 -	77 b	63 ab
Audit 1:1	0.75 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Intermoc	64 oz/a		B					
Classic	1 oz/a		B					
NIS	4.8 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Interline	32 oz/a		D					
N Pak AMS	2.5 % v/v		D					
5 Roundup Powermax	32 oz/a		A	72 a	80 -	0 -	87 ab	35 b
Audit 1:1	1 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Intermoc	64 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Interline	32 oz/a		D					
Classic	0.75 oz/a		D					
N Pak AMS	2.5 % v/v		D					
6 Roundup Powermax	32 oz/a		A	40 b	77 -	15 -	92 a	85 a
Audit 1:1	1 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Interline	32 oz/a		C					
Classic	0.75 oz/a		C					
N Pak AMS	2.5 % v/v		C					
LSD P=.05				18.3	19.4	.	10.8	23.3
Standard Deviation				10.1	10.3	0.0	6.0	12.8
CV				18.12	12.49	0.0	7.89	25.53
Levene's F^				0.29	0.387	.	0.496	0.24
Levene's Prob(F)				0.91	0.814	.	0.774	0.937
Skewness^				0.1055	-0.0277	.	0.662	0.5166
Kurtosis^				-1.0241	-0.6835	.	2.0771*	-0.2661
Replicate F				5.192	3.109	0.000	0.156	1.830
Replicate Prob(F)				0.0284	0.1002	1.0000	0.8574	0.2103
Treatment F				28.263	1.469	0.000	121.656	19.334
Treatment Prob(F)				0.0001	0.2977	1.0000	0.0001	0.0001

# The Ohio State University

UPL FALL Soybean

Trial ID: 21FALLSOY2A Location: Western Branch F-9 West Trial Year: 2021  
 Protocol ID: 21FALLSOY2 Investigator (Creator): Dr. Mark M. Loux  
 Project ID: Study Director:  
 Sponsor Contact: Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed				
Pest Code	ERICA	CHEAL	AMBEL	TAROF				
Pest Scientific Name	Erigeron canad>	Chenopodium alb>	Ambrosia artemi>	Taraxacum offic>				
Pest Name	Horseweed	common lambsqua>	Common ragweed	Blowball				
Crop Type, Code					C GLXMA			
Crop Name					Soybean			
Rating Date	Jun-11-2021	Jun-11-2021	Jun-11-2021	Jun-11-2021	Jul-12-2021			
Part Rated					PLANT -			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN			
Rating Unit/Min/Max	% 0 100	% 0 100	% 0 100	% 0 100	% 0 100			
Number of Subsamples	1	1	1	1	1			
Data Entry Date	Jun-21-2021	Jun-21-2021	Jun-21-2021	Jun-21-2021	Jul-14-2021			
Rating Timing								
Days After First/Last Applic.	217 5	217 5	217 5	217 5	248 31			
Trt-Eval Interval	28 DA-B	28 DA-B	28 DA-B	28 DA-B	31 DA-D			
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1	28 DP-1	59 DP-1			
Days After Emergence	10 DE-1	10 DE-1	10 DE-1	10 DE-1	41 DE-1			
ARM Action Codes								
Number of Decimals	0	0	0	0	0			
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	26*	27*	28*	29*	30*
1 UTC				0 d	0 d	0 c	0 c	0 -
2 Roundup Powermax	32 oz/a		A	100 a	93 a	100 a	95 a	0 -
Weedmaster	32 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Roundup Powermax	32 oz/a		B					
Preview	19.7 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Intermoc	64 oz/a		C					
N Pak AMS	2.5 % v/v		C					
Interline	32 oz/a		D					
N Pak AMS	2.5 % v/v		D					
3 Roundup Powermax	32 oz/a		A	57 bc	60 bc	33 b	40 b	0 -
Audit 1:1	0.75 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Intermoc	64 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Interline	32 oz/a		D					
N Pak AMS	2.5 % v/v		D					

# The Ohio State University

## UPL FALL Soybean

Trial ID: 21FALLSOY2A Location: Western Branch F-9 West Trial Year: 2021  
 Protocol ID: 21FALLSOY2 Investigator (Creator): Dr. Mark M. Loux  
 Project ID: Study Director:  
 Sponsor Contact: Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed				
Pest Code	ERICA	CHEAL	AMBEL	TAROF				
Pest Scientific Name	Erigeron canad>	Chenopodium alb>	Ambrosia artemi>	Taraxacum offic>				
Pest Name	Horseweed	common lambsqua>	Common ragweed	Blowball				
Crop Type, Code					C GLXMA			
Crop Name					Soybean			
Rating Date	Jun-11-2021	Jun-11-2021	Jun-11-2021	Jun-11-2021	Jul-12-2021			
Part Rated					PLANT -			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN			
Rating Unit/Min/Max	% 0 100	% 0 100	% 0 100	% 0 100	% 0 100			
Number of Subsamples	1	1	1	1	1			
Data Entry Date	Jun-21-2021	Jun-21-2021	Jun-21-2021	Jun-21-2021	Jul-14-2021			
Rating Timing								
Days After First/Last Applic.	217 5	217 5	217 5	217 5	248 31			
Trt-Eval Interval	28 DA-B	28 DA-B	28 DA-B	28 DA-B	31 DA-D			
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1	28 DP-1	59 DP-1			
Days After Emergence	10 DE-1	10 DE-1	10 DE-1	10 DE-1	41 DE-1			
ARM Action Codes								
Number of Decimals	0	0	0	0	0			
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	26*	27*	28*	29*	30*
4 Roundup Powermax	32 oz/a		A	77 ab	70 abc	73 a	78 a	0-
Audit 1:1	0.75 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Intermoc	64 oz/a		B					
Classic	1 oz/a		B					
NIS	4.8 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Interline	32 oz/a		D					
N Pak AMS	2.5 % v/v		D					
5 Roundup Powermax	32 oz/a		A	43 c	47 c	73 a	43 b	0-
Audit 1:1	1 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Intermoc	64 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Interline	32 oz/a		D					
Classic	0.75 oz/a		D					
N Pak AMS	2.5 % v/v		D					
6 Roundup Powermax	32 oz/a		A	87 a	80 ab	95 a	92 a	0-
Audit 1:1	1 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Interline	32 oz/a		C					
Classic	0.75 oz/a		C					
N Pak AMS	2.5 % v/v		C					
LSD P=.05				20.9	20.1	22.5	22.8	.
Standard Deviation				11.5	11.1	12.3	12.5	0.0
CV				18.93	18.97	19.76	21.6	0.0
Levene's F^				0.512	0.629	0.006	0.394	.
Levene's Prob(F)				0.763	0.682	1.00	0.844	.
Skewness^				0.453	-0.9286	0.0454	-0.7555	.
Kurtosis^				-0.0195	1.463	-1.5503	0.0673	.
Replicate F				1.913	1.054	5.984	0.565	0.000
Replicate Prob(F)				0.1979	0.3841	0.0195	0.5853	1.0000
Treatment F				29.573	26.313	29.328	26.023	0.000
Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001	1.0000



# The Ohio State University

UPL FALL Soybean

Trial ID: 21FALLSOY2A Location: Western Branch F-9 West Trial Year: 2021  
 Protocol ID: 21FALLSOY2 Investigator (Creator): Dr. Mark M. Loux  
 Project ID: Study Director:  
 Sponsor Contact: Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	SETFA	AMBTR	ERICA	CHEAL	AMBEL			
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Erigeron canadensis	Chenopodium album	Ambrosia artemisiifolia			
Pest Name	Giant foxtail	Giant ragweed	Horseweed	common lambsquarters	Common ragweed			
Crop Type, Code								
Crop Name								
Rating Date	Jul-12-2021	Jul-12-2021	Jul-12-2021	Jul-12-2021	Jul-12-2021			
Part Rated								
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit/Min/Max	% 0 %	0 100	% 0 100	% 0 100	% 0 100			
Number of Subsamples	100	1	1	1	1			
Data Entry Date	Jul-14-2021	Jul-14-2021	Jul-14-2021	Jul-14-2021	Jul-14-2021			
Rating Timing								
Days After First/Last Applic.	248 31	248 31	248 31	248 31	248 31			
Trt-Eval Interval	31 DA-D	31 DA-D	31 DA-D	31 DA-D	31 DA-D			
Plant-Eval Interval	59 DP-1	59 DP-1	59 DP-1	59 DP-1	59 DP-1			
Days After Emergence	41 DE-1	41 DE-1	41 DE-1	41 DE-1	41 DE-1			
ARM Action Codes	EC	EC			AA			
Number of Decimals	0	0	0	0	0			
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	31*	32*	33*	34*	35* dAA
1 UTC				0	0	0 b	0 c	0 c
2 Roundup Powermax	32 oz/a		A	95 a	53 b	83 a	85 a	86 ab
Weedmaster	32 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Roundup Powermax	32 oz/a		B					
Preview	19.7 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Intermoc	64 oz/a		C					
N Pak AMS	2.5 % v/v		C					
Interline	32 oz/a		D					
N Pak AMS	2.5 % v/v		D					
3 Roundup Powermax	32 oz/a		A	94 a	68 a	92 a	70 ab	70 b
Audit 1:1	0.75 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Intermoc	64 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Interline	32 oz/a		D					
N Pak AMS	2.5 % v/v		D					

# The Ohio State University

## UPL FALL Soybean

Trial ID: 21FALLSOY2A Location: Western Branch F-9 West Trial Year: 2021  
 Protocol ID: 21FALLSOY2 Investigator (Creator): Dr. Mark M. Loux  
 Project ID: Study Director:  
 Sponsor Contact: Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	ERICA	CHEAL	AMBEL
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Erigeron canadese	Chenopodium alb>	Ambrosia artemi>
Pest Name	Giant foxtail	Giant ragweed	Horseweed	common lambsqua>	Common ragweed
Crop Type, Code					
Crop Name					
Rating Date	Jul-12-2021	Jul-12-2021	Jul-12-2021	Jul-12-2021	Jul-12-2021
Part Rated					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit/Min/Max	% 0 %	0 100 %	% 0 100 %	% 0 100 %	% 0 100 %
Number of Subsamples	100	1	1	1	1
Data Entry Date	Jul-14-2021	Jul-14-2021	Jul-14-2021	Jul-14-2021	Jul-14-2021
Rating Timing					
Days After First/Last Applic.	248 31	248 31	248 31	248 31	248 31
Trt-Eval Interval	31 DA-D	31 DA-D	31 DA-D	31 DA-D	31 DA-D
Plant-Eval Interval	59 DP-1	59 DP-1	59 DP-1	59 DP-1	59 DP-1
Days After Emergence	41 DE-1	41 DE-1	41 DE-1	41 DE-1	41 DE-1
ARM Action Codes	EC	EC			AA
Number of Decimals	0	0	0	0	0

Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	31*	32*	33*	34*	35* dAA
4 Roundup Powermax	32 oz/a		A	85 a	72 a	82 a	73 ab	90 ab
Audit 1:1	0.75 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Intermoc	64 oz/a		B					
Classic	1 oz/a		B					
NIS	4.8 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Interline	32 oz/a		D					
N Pak AMS	2.5 % v/v		D					
5 Roundup Powermax	32 oz/a		A	77 b	67 a	72 a	53 ab	100 a
Audit 1:1	1 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Intermoc	64 oz/a		B					
N Pak AMS	2.5 % v/v		B					
Interline	32 oz/a		D					
Classic	0.75 oz/a		D					
N Pak AMS	2.5 % v/v		D					
6 Roundup Powermax	32 oz/a		A	72 b	62 a	42 a	43 b	68 b
Audit 1:1	1 oz/a		A					
N Pak AMS	2.5 % v/v		A					
Interline	32 oz/a		C					
Classic	0.75 oz/a		C					
N Pak AMS	2.5 % v/v		C					
LSD P=.05				8.3	7.6	37.8	25.7	10.5 - 24.7
Standard Deviation				4.4	4.0	20.8	14.1	10.4t
CV				5.21	6.27	33.72	26.11	18.27t
Levene's F^				0.52	0.641	0.535	0.318	0.696
Levene's Prob(F)				0.724	0.645	0.746	0.893	0.637
Skewness^				-0.8052	0.1068	-0.0095	0.0648	1.0352
Kurtosis^				-0.3268	-0.5873	0.3455	-0.539	1.2535
Replicate F				2.844	3.179	0.010	3.250	1.306
Replicate Prob(F)				0.1167	0.0964	0.9904	0.0818	0.3135
Treatment F				16.720	9.385	8.424	13.863	25.809
Treatment Prob(F)				0.0006	0.0041	0.0023	0.0003	0.0001



# The Ohio State University

UPL FALL Soybean

Trial ID: 21FALLSOY2A      Location: Western Branch F-9 West      Trial Year: 2021  
 Protocol ID: 21FALLSOY2      Investigator (Creator): Dr. Mark M. Loux  
 Project ID:      Study Director:  
    Sponsor Contact: Joe Reed

Pest Type      W Weed  
 Pest Code      AMARE  
 Pest Scientific Name      Amaranthus  
    retr>  
 Pest Name      Redroot pigweed  
 Crop Type, Code  
 Crop Name  
 Rating Date      Jul-12-2021  
 Part Rated  
 Rating Type      CONTRO  
 Rating Unit/Min/Max      %    0    100  
 Number of Subsamples      1  
 Data Entry Date      Jul-14-2021  
 Rating Timing  
 Days After First/Last Applic.      248 31  
 Trt-Eval Interval      31 DA-D  
 Plant-Eval Interval      59 DP-1  
 Days After Emergence      41 DE-1  
 ARM Action Codes      EC  
 Number of Decimals      0

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	36*
4	Roundup Powermax	32 oz/a		A	85 ab
	Audit 1:1	0.75 oz/a		A	
	N Pak AMS	2.5 % v/v		A	
	Intermoc	64 oz/a		B	
	Classic	1 oz/a		B	
	NIS	4.8 oz/a		B	
	N Pak AMS	2.5 % v/v		B	
	Interline	32 oz/a		D	
	N Pak AMS	2.5 % v/v		D	
5	Roundup Powermax	32 oz/a		A	93 a
	Audit 1:1	1 oz/a		A	
	N Pak AMS	2.5 % v/v		A	
	Intermoc	64 oz/a		B	
	N Pak AMS	2.5 % v/v		B	
	Interline	32 oz/a		D	
	Classic	0.75 oz/a		D	
	N Pak AMS	2.5 % v/v		D	
6	Roundup Powermax	32 oz/a		A	92 a
	Audit 1:1	1 oz/a		A	
	N Pak AMS	2.5 % v/v		A	
	Interline	32 oz/a		C	
	Classic	0.75 oz/a		C	
	N Pak AMS	2.5 % v/v		C	
	LSD P=.05				15.4
	Standard Deviation				8.2
	CV				9.83
	Levene's F^				0.208
	Levene's Prob(F)				0.928
	Skewness^				-0.4132
	Kurtosis^				-0.9958
	Replicate F				1.963
	Replicate Prob(F)				0.2025
	Treatment F				5.155
	Treatment Prob(F)				0.0237

# The Ohio State University

UPL FALL Soybean

Trial ID: 21FALLSOY2A      Location: Western Branch F-9 West      Trial Year: 2021  
 Protocol ID: 21FALLSOY2      Investigator (Creator): Dr. Mark M. Loux  
 Project ID:      Study Director:  
    Sponsor Contact: Joe Reed

## Pest Type

W, Weed = Weed or volunteer crop

## Pest Code

TAROF, Taraxacum officinale, dandelion = US  
 LAMPU, Lamium purpureum, purple archangel = US  
 CARPE, Cardamine pensylvanica, Pennsylvania bittercress = US  
 VERAG, Veronica agrestis, Procumbent speedwell = US  
 AMBTR, Ambrosia trifida, Giant ragweed = US  
 CHEAL, Chenopodium album, common lambsquarters = US  
 AMBEL, Ambrosia artemisiifolia, Common ragweed = US  
 ERICA, Erigeron canadensis, Horseweed = US  
 TAROF, Taraxacum officinale, Blowball = US  
 SETFA, Setaria faberi, Giant foxtail = US  
 AMARE, Amaranthus retroflexus, Redroot pigweed = US

## Crop Type Code

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

## Part Rated

PLANT = plant

## Rating Type

CONTRO = control / burndown or knockdown  
 PHYGEN = phytotoxicity - general / injury

## Rating Unit/Min/Max

%, 0, 100 = percent

## Plant-Eval Interval

-28 DP-1 = 1 GLXMA May-14-2021  
 -14 DP-1 = 1 GLXMA May-14-2021  
 0 DP-1 = 1 GLXMA May-14-2021  
 18 DP-1 = 1 GLXMA May-14-2021  
 28 DP-1 = 1 GLXMA May-14-2021  
 59 DP-1 = 1 GLXMA May-14-2021

## ARM Action Codes

EC = Do not analyze untreated check, while still reporting treatment mean on AOV Means Table  
 AS = Automatic square root transformation of X+0.5  
 ET6 = Excluded treatment 6  
 AA = Automatic arcsine square root % transformation  
 ER1 = Excluded replicate 1