

# Purdue University Weed Science

Trial ID: 22S-MGS-SOY-04		<b>UPL and AMVAC Showcase Treatments</b>	
Protocol ID: 22S-MGS-SOY-04		Cooperator Trial ID:	
Location: MEIGS		Trial Year: 2022	
Project ID: H22US-003-JAK-003		Project ID 2: Project ID 3:	
Study Director: Brent Mansfield		Sponsor Contact: UPL and AMVAC	
Investigator (Creator): Dr. Bill Johnson			

<b>General Trial Information</b>			
<b>Study Director:</b> Brent Mansfield		<b>Title:</b> Research Associate	
<b>Investigator:</b> Dr. Bill Johnson		<b>Title:</b> Professor	
<b>Discipline:</b> H herbicide			
<b>Status:</b> E established			
<b>ARM Trial Created On:</b> Apr-11-2022		<b>Reliability:</b> 1 usable data	
<b>Initiation Date:</b> May-11-2022			
<b>Trial Location</b>			
<b>City:</b> Lafayette		<b>Country:</b> USA United States	
<b>State/Prov.:</b> Indiana			
<b>Postal Code:</b> 47907			
<b>Latitude of LL Corner</b> °: 40.27248 N			
<b>Longitude of LL Corner</b> °: -86.88142 W			

<b>Conducted Under GLP:</b> No
<b>Conducted Under GEP:</b> No

<b>Contacts</b>			
<b>Role:</b> STYDIR study director		<b>Title:</b> Research Associate	
<b>Study Director:</b> Brent Mansfield			
<b>Organization:</b> Purdue University			
<b>Address 1:</b> 915 W. State Street			
<b>Country:</b> USA United States		<b>E-mail:</b> brentmansfield@purdue.edu	
<b>City:</b> West Lafayette		<b>State/Prov:</b> IN <b>Postal Code:</b> 47907	
<b>Role:</b> INVEST investigator		<b>Title:</b> Professor	
<b>Investigator:</b> Dr. Bill Johnson			
<b>Organization:</b> Purdue University			
<b>Address 1:</b> 915 W. State Street			
<b>Country:</b> USA United States		<b>E-mail:</b> wgj@purdue.edu	
<b>City:</b> West Lafayette		<b>State/Prov:</b> IN <b>Postal Code:</b> 47907	
<b>Role:</b> SPONSR sponsor			
<b>Sponsor:</b> UPL and AMVAC			
<b>Role:</b> COOPER cooperator		<b>Title:</b> Superintendent	
<b>Cooperator:</b> Jay Young			
<b>Organization:</b> Purdue University			
<b>Address 1:</b> 8343 US 231 S			
<b>Phone No.:</b> 765-538-3422		<b>Fax No.:</b> 765-538-3423	
<b>Country:</b> USA United States		<b>E-mail:</b> jayyoung@purdue.edu	
<b>City:</b> Lafayette		<b>State/Prov:</b> IN <b>Postal Code:</b> 47909	

<b>Crop Description</b>			
<b>Crop 1:</b> C GLXMA Glycine max		<b>Soybean</b>	
<b>Entry Date:</b> Jun-22-2022		<b>Stage Scale:</b> BBCH	
<b>Variety:</b> AG29XF1		<b>BBCH Scale:</b> BSOY	
<b>Attributes:</b> Glyphosate-R, Glufosinate-R, dicamba-R			
<b>Planting Date:</b> May-11-2022		<b>Planting Rate:</b> 140000 S/A	
<b>Depth:</b> 1.75 IN		<b>Planting Method:</b> PLANTD planted	
<b>Rows per Plot:</b> 4		<b>Planting Equipment:</b> PP plot planter	
<b>Row Spacing:</b> 30 IN		<b>Soil Moisture:</b> NORMAL normal, adequate	
<b>Soil Temperature:</b> 83 F		<b>Harvested Width:</b> 5 FT	
<b>Emergence Date:</b> May-17-2022		<b>Harvested Length:</b> 24 FT	
<b>% Standard Moisture:</b> 13			

<b>Pest Description</b>			
<b>Pest 1 Type:</b> W		<b>Code:</b> AMATA <i>Amaranthus x tamariscinus</i>	
<b>Common Name:</b> common water hemp		<b>Entry Date:</b> Jun-22-2022	
<b>Attributes:</b> Glyphosate-R and PPO-R		<b>Stage Scale:</b> BBCH	
<b>Pest 2 Type:</b> W		<b>Code:</b> ABUTH <i>Abutilon theophrasti</i>	
<b>Common Name:</b> velvetleaf		<b>Entry Date:</b> Jun-22-2022	
		<b>Stage Scale:</b> BBCH	
<b>Pest 3 Type:</b> W		<b>Code:</b> SETFA <i>Setaria faberi</i>	
<b>Common Name:</b> Giant foxtail		<b>Entry Date:</b> Jun-22-2022	
		<b>Stage Scale:</b> BBCH	

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Project ID: H22US-003-JAK-003	Project ID 2: Project ID 3:
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<b>Site and Design</b>	
Treated Plot Width: 6.67 FT	Site Type: FIELD field
Treated Plot Length: 25 FT	Experimental Unit: 1 PLOT plot
Treated Plot Area: 166.75 FT <sup>2</sup>	Tillage Type: NOTILL no-till
Replications: 4	Treatments: 12 Plots: 48
	Study Design: RACOB L Randomized Complete Block (RCB)

<b>Field Prep./Maintenance:</b>
Nontreated checks were sprayed with glyphosate to control giant ragweed

<b>Soil Description</b>	
Description Name: MEIGS-S3	
% Sand: 21	% OM: 2.2
% Silt: 54	Texture: SIL silt loam
% Clay: 25	Soil Name: Starks-Fincastle complex
pH: 6.8	CEC: 8.3

No.	Date	Moisture Total	Unit	Min Temp	Max Temp	Temp Unit
1.	May-1-2022	0	IN	51.1	63.7	F
2.	May-2-2022	0	IN	43.2	66	F
3.	May-3-2022	0.71	IN	46	67.8	F
4.	May-4-2022	0	IN	46	61.5	F
5.	May-5-2022	0.66	IN	53.6	56.7	F
6.	May-6-2022	0.07	IN	51.8	57.2	F
7.	May-7-2022	0	IN	48.7	68.2	F
8.	May-8-2022	0	IN	44.6	68.7	F
9.	May-9-2022	0	IN	52.9	81	F
10.	May-10-2022	0	IN	66.6	88.9	F
11.	May-11-2022	0	IN	73	92.3	F
12.	May-12-2022	0	IN	67.8	90	F
13.	May-13-2022	0	IN	61.9	89.6	F
14.	May-14-2022	0.74	IN	59.7	88.2	F
15.	May-15-2022	1.02	IN	57	86.2	F
16.	May-16-2022	0.01	IN	52.7	76.8	F
17.	May-17-2022	0	IN	53.4	77.7	F
18.	May-18-2022	0.1	IN	57.9	66.9	F
19.	May-19-2022	0	IN	59.7	82.2	F
20.	May-20-2022	0	IN	66.4	86.9	F
21.	May-21-2022	0.1	IN	58.3	77.7	F
22.	May-22-2022	0	IN	53.2	64.6	F
23.	May-23-2022	0	IN	48.4	68.7	F
24.	May-24-2022	0	IN	50.2	75.6	F
25.	May-25-2022	0.05	IN	61.7	85.6	F
26.	May-26-2022	1.68	IN	60.8	75.4	F
27.	May-27-2022	0.03	IN	53.4	67.8	F
28.	May-28-2022	0	IN	51.6	73.2	F
29.	May-29-2022	0	IN	59.5	82.9	F
30.	May-30-2022	0	IN	67.1	88.5	F
31.	May-31-2022	0	IN	71.6	89.4	F
32.	Jun-1-2022	0	IN	66	81	F
33.	Jun-2-2022	0.01	IN	61.3	79.9	F
34.	Jun-3-2022	0	IN	54.1	84.2	F
35.	Jun-4-2022	0	IN	51.4	84.2	F
36.	Jun-5-2022	0	IN	56.8	85.3	F
37.	Jun-6-2022	0	IN	64	85.8	F
38.	Jun-7-2022	0	IN	62.2	77.9	F

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39.	Jun-8-2022	0.02	IN	55.2	77.5	F
40.	Jun-9-2022	0	IN	56.7	78.8	F
41.	Jun-10-2022	0.1	IN	54	79.7	F
42.	Jun-11-2022	0.23	IN	58.5	79.7	F
43.	Jun-12-2022	0.02	IN	65.8	84	F
44.	Jun-13-2022	0	IN	68.7	91	F
45.	Jun-14-2022	0	IN	74.8	95.5	F
46.	Jun-15-2022	0	IN	75	94.6	F
47.	Jun-16-2022	0	IN	76.6	97.3	F
48.	Jun-17-2022	0	IN	69.1	88.2	F
49.	Jun-18-2022	0	IN	60.8	82.2	F
50.	Jun-19-2022	0	IN	52.2	83.8	F
51.	Jun-20-2022	0	IN	57.4	90.1	F
52.	Jun-21-2022	0	IN	63.9	96.3	F
53.	Jun-22-2022	0	IN	72	90.3	F
54.	Jun-23-2022	0	IN	62.4	89.1	F
55.	Jun-24-2022	0	IN	59	93	F
56.	Jun-25-2022	0.01	IN	63.9	82.6	F
57.	Jun-26-2022	0.22	IN	64.2	81.5	F
58.	Jun-27-2022	0	IN	54.7	79.3	F
59.	Jun-28-2022	0	IN	55.2	82.9	F
60.	Jun-29-2022	0	IN	57.6	87.3	F
61.	Jun-30-2022	0	IN	61	90.5	F
62.	Jul-1-2022	0	IN	68.5	90.7	F
63.	Jul-2-2022	0	IN	66.6	86.4	F
64.	Jul-3-2022	0	IN	57.6	89.8	F
65.	Jul-4-2022	0.01	IN	64.6	91.4	F
66.	Jul-5-2022	0	IN	77.2	98.2	F
67.	Jul-6-2022	0	IN	74.3	90	F
68.	Jul-7-2022	0.05	IN	70.3	84.7	F
69.	Jul-8-2022	0.23	IN	70	76.3	F
70.	Jul-9-2022	0	IN	67.5	84.6	F
71.	Jul-10-2022	0	IN	57.9	90.7	F
72.	Jul-11-2022	0	IN	59.5	88	F
73.	Jul-12-2022	0	IN	67.6	83.8	F
74.	Jul-13-2022	0	IN	62.8	86.5	F
75.	Jul-14-2022	0	IN	57.4	84.9	F
76.	Jul-15-2022	0.1	IN	58.1	77.4	F
77.	Jul-16-2022	0.49	IN	69.6	89.4	F
78.	Jul-17-2022	0.47	IN	68.9	76.3	F
79.	Jul-18-2022	0	IN	68.9	87.6	F
80.	Jul-19-2022	0	IN	64.2	87.4	F
81.	Jul-20-2022	0	IN	72	90	F
82.	Jul-21-2022	0	IN	66.4	88.7	F
83.	Jul-22-2022	0	IN	68.4	89.6	F
84.	Jul-23-2022	0	IN	69.8	77.4	F
85.	Jul-24-2022	0.18	IN	73.6	84.6	F
86.	Jul-25-2022	0	IN	64.9	83.8	F
87.	Jul-26-2022	0	IN	65.5	75.4	F
88.	Jul-27-2022	0.22	IN	69.3	83.1	F
89.	Jul-28-2022	0.09	IN	65.3	85.6	F
90.	Jul-29-2022	0	IN	57.9	80.1	F
91.	Jul-30-2022	0	IN	57	86.4	F

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92.	Jul-31-2022	0	IN	59.7	84.6	F
93.	Aug-1-2022	0.53	IN	67.5	86.5	F
94.	Aug-2-2022	0	IN	65.8	85.1	F
95.	Aug-3-2022	0.58	IN	68.9	90.5	F
96.	Aug-4-2022	0.01	IN	70	85.5	F
97.	Aug-5-2022	0	IN	69.1	89.2	F
98.	Aug-6-2022	0	IN	70.2	89.8	F
99.	Aug-7-2022	0	IN	73.4	88.7	F
100.	Aug-8-2022	0.24	IN	69.8	86.9	F
101.	Aug-9-2022	0.39	IN	64.8	80.1	F
102.	Aug-10-2022	0	IN	62.2	83.1	F
103.	Aug-11-2022	0	IN	59	84	F
104.	Aug-12-2022	0	IN	57.4	77.5	F
105.	Aug-13-2022	0	IN	55.2	78.4	F
106.	Aug-14-2022	0.07	IN	66.2	76.8	F
107.	Aug-15-2022	0	IN	64.9	79.5	F
108.	Aug-16-2022	0	IN	59	82.9	F
109.	Aug-17-2022	0	IN	56.1	83.8	F
110.	Aug-18-2022	0	IN	55.8	86.2	F
111.	Aug-19-2022	0	IN	58.8	85.3	F
112.	Aug-20-2022	0.29	IN	65.1	82.4	F
113.	Aug-21-2022	0.58	IN	63.3	81.1	F
114.	Aug-22-2022	0	IN	60.3	84.7	F
115.	Aug-23-2022	0	IN	55.8	85.3	F
116.	Aug-24-2022	0	IN	56.3	87.1	F
117.	Aug-25-2022	0.25	IN	66.2	80.8	F
118.	Aug-26-2022	0	IN	62.2	83.1	F
119.	Aug-27-2022	0	IN	59.2	85.6	F
120.	Aug-28-2022	0.14	IN	67.5	89.6	F
121.	Aug-29-2022	2.2	IN	65.8	87.4	F
122.	Aug-30-2022	0.3	IN	60.8	79.9	F
123.	Aug-31-2022	0	IN	53.4	81.1	F
124.	Sep-1-2022	0	IN	59	84	F
125.	Sep-2-2022	0	IN	64.2	83.3	F
126.	Sep-3-2022	0	IN	66.9	81.7	F
127.	Sep-4-2022	0	IN	66.6	82	F
128.	Sep-5-2022	0	IN	66.9	74.1	F
129.	Sep-6-2022	0	IN	63.7	82.9	F
130.	Sep-7-2022	0	IN	59.4	82.4	F
131.	Sep-8-2022	0	IN	52.9	82.4	F
132.	Sep-9-2022	0	IN	54.1	84.2	F
133.	Sep-10-2022	0.05	IN	60.8	88.9	F
134.	Sep-11-2022	0.2	IN	59.4	74.1	F
135.	Sep-12-2022	0.14	IN	51.6	62.8	F
136.	Sep-13-2022	0	IN	53.1	75	F
137.	Sep-14-2022	0	IN	52	86.5	F
138.	Sep-15-2022	0	IN	54.7	86.9	F
139.	Sep-16-2022	0	IN	57.4	84.6	F
140.	Sep-17-2022	0	IN	63.3	85.3	F
141.	Sep-18-2022	0	IN	63.3	86.9	F
142.	Sep-19-2022	0.24	IN	62.4	87.4	F
143.	Sep-20-2022	0	IN	59.2	92.3	F
144.	Sep-21-2022	0	IN	68.9	91.9	F

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145.	Sep-22-2022	0	IN	46.6	69.6	F
146.	Sep-23-2022	0	IN	40.5	63.3	F
147.	Sep-24-2022	0.09	IN	51.6	78.4	F
148.	Sep-25-2022	0	IN	54.3	71.1	F
149.	Sep-26-2022	0	IN	44.1	68.4	F
150.	Sep-27-2022	0	IN	39.6	64.9	F
151.	Sep-28-2022	0	IN	37.4	66	F
152.	Sep-29-2022	0	IN	38.7	69.3	F
153.	Sep-30-2022	0	IN	39.2	70.2	F
154.	Oct-1-2022	0	IN	43.9	75.4	F
155.	Oct-2-2022	0	IN	48.6	74.3	F
156.	Oct-3-2022	0	IN	41.7	72.5	F
157.	Oct-4-2022	0	IN	34.2	77.5	F
158.	Oct-5-2022	0	IN	38.1	79.9	F
159.	Oct-6-2022	0.01	IN	53.4	77.5	F
160.	Oct-7-2022	0	IN	36.9	61.2	F
161.	Oct-8-2022	0	IN	30.2	58.8	F
162.	Oct-9-2022	0	IN	34.5	70.3	F
163.	Oct-10-2022	0	IN	40.5	77.5	F
164.	Oct-11-2022	0.1	IN	54.3	69.8	F
165.	Oct-12-2022	0.07	IN	43.5	68	F
166.	Oct-13-2022	0.07	IN	32.9	59.9	F
167.	Oct-14-2022	0.22	IN	33.3	65.1	F

#### Application Description

	A	B
Application Date	May-12-2022	Jun-16-2022
Appl. Start Time	12:01 PM	9:45 AM
Appl. Stop Time	12:22 PM	10:10 AM
Interval to Prev. Appl.		35 DAYS
Application Method	SPRAY	SPRAY
Application Timing	PRE	3" WEEDS
Application Placement	BROSOI	BROFOL
Applied By	J. HAARMANN	B. MANSFIELD
Appl. Entry Date	Jun-22-2022	Jun-22-2022
Air Temperature Start, Stop	83, 83 F	84, 84 F
% Relative Humidity Start, Stop	32, 32	74, 74
Wind Velocity+Dir. Start	4 MPH, SE	2 MPH, SSE
Wind Velocity+Dir. Stop		3 MPH, SSE
Wind Velocity+Dir. Max		6 MPH, SSE
Wet Leaves (Y/N)	N, no	N, no
Soil Temperature	70 F	78 F
Soil Moisture	NORMAL	DRY
% Cloud Cover	20	20

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#### Crop Stage At Each Application

	A	B
<b>Crop 1 Code, BBCH Scale</b>	GLXMA, BSOY	GLXMA, BSOY
<b>Days after Emergence</b>	-5	30
<b>Stage Majority, Percent</b>	00, -	V3, -
<b>Stage Minimum, Percent</b>	00, -	V2, -
<b>Stage Maximum, Percent</b>	00, -	V3, -
<b>Height Average</b>	0 IN	8 IN
<b>Height Minimum, Maximum</b>		7, 9

#### Pest Stage At Each Application

	A	B
<b>Pest 1 Code, Type, Scale</b>	AMATA, W, BBCH	AMATA, W, BBCH
<b>Height Average</b>	0 IN	5 IN
<b>Height Minimum, Maximum</b>		2, 5
<b>Density Average</b>	0 FT2	3 FT2
<b>Density Minimum, Maximum</b>		1, 5
<b>Pest 2 Code, Type, Scale</b>	ABUTH, W, BBCH	ABUTH, W, BBCH
<b>Height Average</b>	0 IN	4 IN
<b>Height Minimum, Maximum</b>		3, 6
<b>Density Average</b>	0 FT2	1 FT2
<b>Density Minimum, Maximum</b>		1, 1
<b>Pest 3 Code, Type, Scale</b>	SETFA, W, BBCH	SETFA, W, BBCH
<b>Height Average</b>	0 IN	4 IN
<b>Height Minimum, Maximum</b>		2, 6
<b>Density Average</b>	0 FT2	1 FT2
<b>Density Minimum, Maximum</b>		1, 5

#### Application Equipment

	A	B
<b>Appl. Equipment</b>	CO2 BACKPACK	CO2 BACKPACK
<b>Equipment Type</b>	BACSPR	BACSPR
<b>Operation Pressure</b>	30 PSI	38 PSI
<b>Nozzle Model</b>	XR	TT
<b>Nozzle Type</b>	FLAFXR	TEEJTU
<b>Nozzle TradeName</b>	TEEJET	TEEJET
<b>Nozzle Tip Size, Color</b>	80015, GREEN	110015, GREEN
<b>Nozzle Spacing</b>	20 IN	20 IN
<b>Nozzles/Row</b>	4	4
<b>Boom Length</b>	6.67 FT	6.67 FT
<b>Ground Speed</b>	3 MPH	3 MPH
<b>Carrier</b>	WATER	WATER
<b>Application Amount</b>	15 GAL/AC	15 GAL/AC
<b>Mix Size</b>	945 mL	945 mL
<b>Propellant</b>	COMCO2	COMCO2

#### Notes

Context	Date	By	Notes
STATUS	Apr-11-2022	Dr. Bill Johnson	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	Jun-22-2022	Dr. Bill Johnson	Automatically added by ARM: Trial Status changed to: E: changed by (EINJOW).
STATUS	Jun-22-2022	Dr. Bill Johnson	Automatically added by ARM: Trial Status updated to 'E' when Initiation Date entered.

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Pest Type				W, Weed AMATA Amaranthus x ta> common water he>	W, Weed ABUTH Abutilon theoph> velvetleaf	W, Weed AMBTR Ambrosia trifida Giant ragweed			
Pest Code									
Pest Scientific Name									
Pest Name									
Crop Type, Code	C, GLXMA	C, GLXMA	C, GLXMA						
BBCH Scale	BSOY	BSOY	BSOY						
Crop Scientific Name	Glycine max	Glycine max	Glycine max						
Crop Name	Soybean	Soybean	Soybean						
Rating Date	May-26-2022	Jun-2-2022	Jun-9-2022	May-26-2022	May-26-2022	May-26-2022			
Part Rated	PLOT, C	PLOT, C	PLOT, C	PLOT, P	PLOT, P	PLOT, P			
Rating Type	PHYGEN	PHYGEN	PHYGEN	CONTRO	CONTRO	CONTRO			
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100			
Sample Size									
Number of Subsamples	1	1	1	1	1	1			
Assessed By									
Data Entry Date	Jul-22-2022	Jul-22-2022	Jul-22-2022	Jul-22-2022	Jul-22-2022	Jul-22-2022			
Rating Timing	9 DAE	16 DAE	23 DAE	14 DAT	14 DAT	14 DAT			
Days After First/Last Applic.	14, 14	21, 21	28, 28	14, 14	14, 14	14, 14			
Plant-Eval Interval	15 DP-1	22 DP-1	29 DP-1	15 DP-1	15 DP-1	15 DP-1			
Days After Emergence	9 DE-1	16 DE-1	23 DE-1	9 DE-1	9 DE-1	9 DE-1			
ARM Action Codes	EC	EC	EC	EC	EC	EC			
Number of Decimals									
Trt No.	Treatment Name	Rate	Appl Code	1	2	3	4	5	6
1	NONTREATED			0.0	0.0	0.0	0.0	0.0	0.0
2	UPL PREVIEW 2.1 SC AMSOL INTERLINE	21 fl oz/a A 5 % v/v B 32 fl oz/a B		3.8 ab	5.0 ab	1.3 -	100.0 -	96.3 b	92.5 -
3	UPL PREVIEW 2.1 SC MOCCASIN AMSOL INTERLINE	21 fl oz/a A 1.25 pt/a A 5 % v/v B 32 fl oz/a B		7.5 a	8.8 a	2.0 -	100.0 -	100.0 a	98.8 -
4	UPL PREVIEW 2.1 SC AMSOL INTERMOC	21 fl oz/a A 5 % v/v B 64 fl oz/a B		7.5 a	6.8 ab	3.3 -	100.0 -	100.0 a	96.3 -
5	UPL PREVIEW 2.1 SC MOCCASIN AMSOL INTERMOC	21 fl oz/a A 1.25 pt/a A 5 % v/v B 64 fl oz/a B		6.3 a	5.8 ab	2.3 -	100.0 -	100.0 a	92.5 -
6	UPL PREVIEW 2.1 SC FIRSTRATE AMSOL INTERMOC	21 fl oz/a A 0.6 oz/a A 5 % v/v B 64 fl oz/a B		6.3 a	4.5 ab	1.3 -	100.0 -	100.0 a	98.8 -
7	UPL TRIPZIN ZC AMSOL INTERMOC	43 fl oz/a A 5 % v/v B 64 fl oz/a B		0.0 b	0.0 c	0.0 -	100.0 -	100.0 a	96.3 -
8	UPL MOCCASIN MTZ AMSOL INTERMOC	42 fl oz/a A 5 % v/v B 64 fl oz/a B		0.0 b	0.0 c	0.0 -	100.0 -	100.0 a	96.3 -
9	UPL ZIDUA PRO AMSOL LIBERTY DUAL MAGNUM	6 fl oz/a A 5 % v/v B 29 fl oz/a B 1.33 pt/a B		4.3 ab	3.8 bc	1.5 -	100.0 -	100.0 a	98.8 -

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
 Untreated treatment(s) 1 excluded from analysis.  
 Could not calculate LSD (% mean diff) for columns 4 because error mean square = 0.  
 ^Calculated from residual.

# Purdue University Weed Science

**UPL and AMVAC Showcase Treatments**

Trial ID: 22S-MGS-SOY-04      Cooperator Trial ID:  
 Protocol ID: 22S-MGS-SOY-04      Location: MEIGS      Trial Year: 2022  
 Project ID: H22US-003-JAK-003      Project ID 2:      Project ID 3:  
 Study Director: Brent Mansfield      Sponsor Contact: UPL and AMVAC  
 Investigator (Creator): Dr. Bill Johnson

Pest Type				W, Weed AMATA Amaranthus x ta> common water he>	W, Weed ABUTH Abutilon theoph> velvetleaf	W, Weed AMBTR Ambrosia trifida Giant ragweed			
Pest Code									
Pest Scientific Name									
Pest Name									
Crop Type, Code	C, GLXMA	C, GLXMA	C, GLXMA						
BBCH Scale	BSOY	BSOY	BSOY						
Crop Scientific Name	Glycine max	Glycine max	Glycine max						
Crop Name	Soybean	Soybean	Soybean						
Rating Date	May-26-2022	Jun-2-2022	Jun-9-2022	May-26-2022	May-26-2022	May-26-2022			
Part Rated	PLOT, C	PLOT, C	PLOT, C	PLOT, P	PLOT, P	PLOT, P			
Rating Type	PHYGEN	PHYGEN	PHYGEN	CONTRO	CONTRO	CONTRO			
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100			
Sample Size									
Number of Subsamples	1	1	1	1	1	1			
Assessed By									
Data Entry Date	Jul-22-2022	Jul-22-2022	Jul-22-2022	Jul-22-2022	Jul-22-2022	Jul-22-2022			
Rating Timing	9 DAE	16 DAE	23 DAE	14 DAT	14 DAT	14 DAT			
Days After First/Last Applic.	14, 14	21, 21	28, 28	14, 14	14, 14	14, 14			
Plant-Eval Interval	15 DP-1	22 DP-1	29 DP-1	15 DP-1	15 DP-1	15 DP-1			
Days After Emergence	9 DE-1	16 DE-1	23 DE-1	9 DE-1	9 DE-1	9 DE-1			
ARM Action Codes	EC	EC	EC	EC	EC	EC			
Number of Decimals									
Trt No.	Treatment Name	Rate	Appl Code	1	2	3	4	5	6
10	UPL BOUNDARY	32 fl oz/a	A	0.0 b	0.0 c	0.0 -	100.0 -	100.0 a	98.8 -
	AMSOL	5 % v/v	B						
	LIBERTY	29 fl oz/a	B						
	DUAL MAGNUM	1.33 pt/a	B						
11	AMVAC FIRSTRATE	0.5 oz/a	A	0.0 b	0.0 c	0.0 -	100.0 -	100.0 a	96.3 -
	PREFIX	2.25 pt/a	A						
	AMSOL	2.5 % v/v	B						
	LIBERTY	32 fl oz/a	B						
	WARRANT	48 fl oz/a	B						
	ASSURE II	12 fl oz/a	B						
12	AMVAC CLASSIC	0.5 oz/a	A	0.0 b	0.0 c	0.0 -	100.0 -	100.0 a	98.8 -
	TRICOR	8 oz/a	A						
	DUAL II MAGNUM	1.33 pt/a	A						
	AMSOL	2.5 % v/v	B						
	REFLEX	16 fl oz/a	B						
	DUAL II MAGNUM	1.33 pt/a	B						
	ASSURE II	12 fl oz/a	B						
	PRIME OIL	1 % v/v	B						
	LSD P=.05			5.10	4.47	2.39	.	1.09	6.28
	Standard Deviation			3.53	3.10	1.66	0.00	0.75	4.35
	CV			109.35	98.74	158.58	0.0	0.76	4.5
	Levene's F^			1.109	0.479	0.867	.	0.736	2.185*
	Levene's Prob(F)			0.384	0.892	0.572	.	0.686	0.045*
	Shapiro-Wilk^			0.9611	0.9603	0.9605	.	0.5098*	0.966
	P(Shapiro-Wilk)^			0.1431	0.1341	0.1363	.	0.0*	0.218
	Skewness^			0.3288	0.1474	0.6276	.	3.4035*	-0.5877
	P(Skewness)^			0.3785	0.6919	0.0967	.	0.0*	0.1191
	Kurtosis^			0.2844	-0.0152	0.4974	.	20.6385*	0.7374
	P(Kurtosis)^			0.6969	0.9834	0.4965	.	0.0*	0.315
	Replicate F			4.265	5.084	2.613	0.000	1.000	0.912
	Replicate Prob(F)			0.0127	0.0058	0.0695	1.0000	0.4064	0.4470
	Treatment F			3.474	4.433	1.889	0.000	9.000	1.208
	Treatment Prob(F)			0.0039	0.0007	0.0871	1.0000	0.0001	0.3250

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 ^Calculated from residual.



## Purdue University Weed Science

### UPL and AMVAC Showcase Treatments

Trial ID: 22S-MGS-SOY-04      Cooperator Trial ID:  
 Protocol ID: 22S-MGS-SOY-04      Location: MEIGS      Trial Year: 2022  
 Project ID: H22US-003-JAK-003      Project ID 2:      Project ID 3:  
 Study Director: Brent Mansfield      Sponsor Contact: UPL and AMVAC  
 Investigator (Creator): Dr. Bill Johnson

Pest Type	W, Weed	W, Weed	W, Weed	W, Weed	W, Weed		
Pest Code	SETFA	AMATA	ABUTH	AMBTR	SETFA		
Pest Scientific Name	Setaria faberi	Amaranthus x ta>	Abutilon theoph>	Ambrosia trifida	Setaria faberi		
Pest Name	Giant foxtail	common water he>	velvetleaf	Giant ragweed	Giant foxtail		
Crop Type, Code							
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	May-26-2022	Jun-9-2022	Jun-9-2022	Jun-9-2022	Jun-9-2022		
Part Rated	PLOT, P	PLOT, P	PLOT, P	PLOT, P	PLOT, P		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Assessed By							
Data Entry Date	Jul-22-2022	Jul-22-2022	Jul-22-2022	Jul-22-2022	Jul-22-2022		
Rating Timing	14 DAT	28 DAT	28 DAT	28 DAT	28 DAT		
Days After First/Last Applic.	14, 14	28, 28	28, 28	28, 28	28, 28		
Plant-Eval Interval	15 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	9 DE-1	23 DE-1	23 DE-1	23 DE-1	23 DE-1		
ARM Action Codes	EC	EC	EC	EC	EC		
Number of Decimals							
Trt Treatment	Rate	Appl	7	8	9	10	11
No. Name	Rate Unit	Code					
10 UPL			100.0 -	77.5 c	91.3 -	92.5 -	92.5 ab
BOUNDARY	32 fl oz/a	A					
AMSOL	5 % v/v	B					
LIBERTY	29 fl oz/a	B					
DUAL MAGNUM	1.33 pt/a	B					
11 AMVAC			100.0 -	93.8 a	92.5 -	91.3 -	91.3 ab
FIRSTRATE	0.5 oz/a	A					
PREFIX	2.25 pt/a	A					
AMSOL	2.5 % v/v	B					
LIBERTY	32 fl oz/a	B					
WARRANT	48 fl oz/a	B					
ASSURE II	12 fl oz/a	B					
12 AMVAC			98.8 -	87.5 b	91.3 -	95.0 -	93.8 a
CLASSIC	0.5 oz/a	A					
TRICOR	8 oz/a	A					
DUAL II MAGNUM	1.33 pt/a	A					
AMSOL	2.5 % v/v	B					
REFLEX	16 fl oz/a	B					
DUAL II MAGNUM	1.33 pt/a	B					
ASSURE II	12 fl oz/a	B					
PRIME OIL	1 % v/v	B					
LSD P=.05			4.05	6.20	4.03	16.57	5.88
Standard Deviation			2.81	4.29	2.79	11.47	4.07
CV			2.85	4.78	3.03	13.21	4.95
Levene's F^			2.067	1.673	1.126	1.099	0.972
Levene's Prob(F)			0.057	0.129	0.373	0.392	0.485
Shapiro-Wilk^			0.9018*	0.984	0.9841	0.7664*	0.9624
P(Shapiro-Wilk)^			0.0012*	0.7911	0.7977	0.0*	0.1602
Skewness^			-0.6518	-0.0617	-0.1219	-2.4107*	0.3333
P(Skewness)^			0.0849	0.8681	0.7432	0.0*	0.3721
Kurtosis^			2.0912*	-0.1547	-0.4626	13.0221*	0.6991
P(Kurtosis)^			0.0061*	0.8321	0.527	0.0*	0.3405
Replicate F			0.577	2.423	2.816	0.449	5.858
Replicate Prob(F)			0.6347	0.0853	0.0560	0.7198	0.0028
Treatment F			2.135	8.187	2.126	1.542	52.469
Treatment Prob(F)			0.0531	0.0001	0.0540	0.1731	0.0001

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 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
 Untreated treatment(s) 1 excluded from analysis.  
 Could not calculate LSD (% mean diff) for columns 4 because error mean square = 0.  
 ^Calculated from residual.

# Purdue University Weed Science

**UPL and AMVAC Showcase Treatments**  
 Trial ID: 22S-MGS-SOY-04      Cooperator Trial ID:  
 Protocol ID: 22S-MGS-SOY-04      Location: MEIGS      Trial Year: 2022  
 Project ID: H22US-003-JAK-003      Project ID 2:      Project ID 3:  
 Study Director: Brent Mansfield      Sponsor Contact: UPL and AMVAC  
 Investigator (Creator): Dr. Bill Johnson

Pest Type	W, Weed AMATA	W, Weed ABUTH	W, Weed AMBTR	W, Weed SETFA		
Pest Code	Amaranthus x ta>	Abutilon theoph>	Ambrosia trifida	Setaria faberi		
Pest Scientific Name	common water he>	velvetleaf	Giant ragweed	Giant foxtail		
Pest Name						
Crop Type, Code					C, GLXMA	C, GLXMA
BBCH Scale					BSOY	BSOY
Crop Scientific Name					Glycine max	Glycine max
Crop Name					Soybean	Soybean
Rating Date	Jun-23-2022	Jun-23-2022	Jun-23-2022	Jun-23-2022	Oct-21-2022	Oct-21-2022
Part Rated	PLOT, P	PLOT, P	PLOT, P	PLOT, P	PLOT, C	PLOT, C
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	YIELD	MOICON
Rating Unit/Min/Max	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	lb/plot, -, -	% , 0, 100
Sample Size					1 PLOT	
Number of Subsamples	1	1	1	1	1	1
Assessed By					J. HAARMANN	J. HAARMANN
Data Entry Date	Jul-22-2022	Jul-22-2022	Jul-22-2022	Jul-22-2022	Oct-24-2022	Oct-24-2022
Rating Timing	42 DAT	42 DAT	42 DAT	42 DAT		
Days After First/Last Applic.	42, 7	42, 7	42, 7	42, 7	162, 127	162, 127
Plant-Eval Interval	43 DP-1	43 DP-1	43 DP-1	43 DP-1	163 DP-1	163 DP-1
Days After Emergence	37 DE-1	37 DE-1	37 DE-1	37 DE-1	157 DE-1	157 DE-1
ARM Action Codes	EC	EC	EC	EC		
Number of Decimals						
Trt Treatment	12	13	14	15	16	17
No. Name						
1 NONTREATED	0.0	0.0	0.0	0.0	5.455	8.403
2 UPL PREVIEW 2.1 SC      21 fl oz/a A AMSOL                      5 % v/v B INTERLINE                32 fl oz/a B	92.5 -	92.5 ab	93.8 ab	88.8 cd	6.840 -	8.498 -
3 UPL PREVIEW 2.1 SC      21 fl oz/a A MOCCASIN            1.25 pt/a A AMSOL                      5 % v/v B INTERLINE                32 fl oz/a B	92.5 -	88.8 c	93.8 ab	93.8 ab	6.828 -	8.618 -
4 UPL PREVIEW 2.1 SC      21 fl oz/a A AMSOL                      5 % v/v B INTERMOC                64 fl oz/a B	92.5 -	90.0 bc	95.5 a	86.3 d	6.318 -	8.633 -
5 UPL PREVIEW 2.1 SC      21 fl oz/a A MOCCASIN            1.25 pt/a A AMSOL                      5 % v/v B INTERMOC                64 fl oz/a B	92.5 -	90.0 bc	95.5 a	91.3 bc	6.348 -	8.738 -
6 UPL PREVIEW 2.1 SC      21 fl oz/a A FIRSTRATE              0.6 oz/a A AMSOL                      5 % v/v B INTERMOC                64 fl oz/a B	95.0 -	90.0 bc	95.0 ab	91.3 bc	6.223 -	8.435 -
7 UPL TRIPZIN ZC            43 fl oz/a A AMSOL                      5 % v/v B INTERMOC                64 fl oz/a B	93.8 -	93.8 a	95.0 ab	95.0 a	6.385 -	8.325 -
8 UPL MOCCASIN MTZ      42 fl oz/a A AMSOL                      5 % v/v B INTERMOC                64 fl oz/a B	95.0 -	95.0 a	95.5 a	95.0 a	6.585 -	8.405 -
9 UPL ZIDUA PRO            6 fl oz/a A AMSOL                      5 % v/v B LIBERTY                29 fl oz/a B DUAL MAGNUM        1.33 pt/a B	92.5 -	94.3 a	95.0 ab	92.5 ab	6.840 -	8.535 -

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
 Untreated treatment(s) 1 excluded from analysis.  
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 ^Calculated from residual.

## Purdue University Weed Science

UPL and AMVAC Showcase Treatments							
Trial ID: 22S-MGS-SOY-04		Cooperator Trial ID:		Location: MEIGS		Trial Year: 2022	
Protocol ID: 22S-MGS-SOY-04		Project ID 2:		Project ID 3:		Project ID 4:	
Study Director: Brent Mansfield		Investigator (Creator): Dr. Bill Johnson		Sponsor Contact: UPL and AMVAC			
Pest Type	W, Weed	W, Weed	W, Weed	W, Weed			
Pest Code	AMATA	ABUTH	AMBTR	SETFA			
Pest Scientific Name	Amaranthus x ta>	Abutilon theoph>	Ambrosia trifida	Setaria faberi			
Pest Name	common water he>	velvetleaf	Giant ragweed	Giant foxtail			
Crop Type, Code					C, GLXMA	C, GLXMA	
BBCH Scale					BSOY	BSOY	
Crop Scientific Name					Glycine max	Glycine max	
Crop Name					Soybean	Soybean	
Rating Date	Jun-23-2022	Jun-23-2022	Jun-23-2022	Jun-23-2022	Oct-21-2022	Oct-21-2022	
Part Rated	PLOT, P	PLOT, P	PLOT, P	PLOT, P	PLOT, C	PLOT, C	
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	YIELD	MOICON	
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	lb/plot, -, -	%, 0, 100	
Sample Size					1 PLOT		
Number of Subsamples	1	1	1	1	1	1	
Assessed By					J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-22-2022	Jul-22-2022	Jul-22-2022	Jul-22-2022	Oct-24-2022	Oct-24-2022	
Rating Timing	42 DAT	42 DAT	42 DAT	42 DAT			
Days After First/Last Applic.	42, 7	42, 7	42, 7	42, 7	162, 127	162, 127	
Plant-Eval Interval	43 DP-1	43 DP-1	43 DP-1	43 DP-1	163 DP-1	163 DP-1	
Days After Emergence	37 DE-1	37 DE-1	37 DE-1	37 DE-1	157 DE-1	157 DE-1	
ARM Action Codes	EC	EC	EC	EC			
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	12	13	14	15	16
10 UPL			93.8 -	95.0 a	90.0 c	92.5 ab	7.460 -
BOUNDARY	32 fl oz/a	A					
AMSOL	5 % v/v	B					
LIBERTY	29 fl oz/a	B					
DUAL MAGNUM	1.33 pt/a	B					
11 AMVAC			93.8 -	92.5 ab	93.8 ab	95.0 a	7.448 -
FIRSTRATE	0.5 oz/a	A					
PREFIX	2.25 pt/a	A					
AMSOL	2.5 % v/v	B					
LIBERTY	32 fl oz/a	B					
WARRANT	48 fl oz/a	B					
ASSURE II	12 fl oz/a	B					
12 AMVAC			92.5 -	93.8 a	92.5 bc	95.0 a	7.638 -
CLASSIC	0.5 oz/a	A					
TRICOR	8 oz/a	A					
DUAL II MAGNUM	1.33 pt/a	A					
AMSOL	2.5 % v/v	B					
REFLEX	16 fl oz/a	B					
DUAL II MAGNUM	1.33 pt/a	B					
ASSURE II	12 fl oz/a	B					
PRIME OIL	1 % v/v	B					
LSD P=.05			3.77	2.95	2.80	2.99	1.2702
Standard Deviation			2.61	2.04	1.94	2.07	0.8796
CV			2.8	2.22	2.06	2.24	12.92
Levene's F^			2.56*	1.655	1.093	1.347	1.546
Levene's Prob(F)			0.021*	0.134	0.395	0.248	0.167
Shapiro-Wilk^			0.8747*	0.9247*	0.9724	0.9662	0.9926
P(Shapiro-Wilk)^			0.0002*	0.0069*	0.3654	0.2208	0.993
Skewness^			-0.2984	-0.7898*	-0.4072	-0.2524	0.2048
P(Skewness)^			0.4239	0.0383*	0.2766	0.4983	0.5823
Kurtosis^			-1.4252	0.6129	0.683	-0.3011	0.0828
P(Kurtosis)^			0.0559	0.4028	0.3517	0.6801	0.9096
Replicate F			0.083	0.601	2.462	5.088	2.804
Replicate Prob(F)			0.9686	0.6191	0.0818	0.0058	0.0567
Treatment F			0.600	4.891	2.990	7.726	1.318
Treatment Prob(F)			0.8011	0.0003	0.0098	0.0001	0.2659

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
 Untreated treatment(s) 1 excluded from analysis.  
 Could not calculate LSD (% mean diff) for columns 4 because error mean square = 0.  
 ^Calculated from residual.

## Purdue University Weed Science

### UPL and AMVAC Showcase Treatments

Trial ID: 22S-MGS-SOY-04      Cooperator Trial ID:  
 Protocol ID: 22S-MGS-SOY-04      Location: MEIGS      Trial Year: 2022  
 Project ID: H22US-003-JAK-003      Project ID 2:      Project ID 3:  
 Study Director: Brent Mansfield      Sponsor Contact: UPL and AMVAC  
 Investigator (Creator): Dr. Bill Johnson

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code		C, GLXMA	
BBCH Scale		BSOY	
Crop Scientific Name		Glycine max	
Crop Name		Soybean	
Rating Date		Oct-21-2022	
Part Rated		PLOT, C	
Rating Type		YIELD	
Rating Unit/Min/Max		bu/ac, -, -	
Sample Size		1 A	
Number of Subsamples		1	
Assessed By		J. HAARMANN	
Data Entry Date			
Rating Timing			
Days After First/Last Applic.		162, 127	
Plant-Eval Interval		163 DP-1	
Days After Emergence		157 DE-1	
ARM Action Codes		TY1	
Number of Decimals		1	
Trt No.	Treatment Name	Rate Unit	Appl Code
			18
1	NONTREATED		34.8
2	UPL PREVIEW 2.1 SC AMSOL INTERLINE	21 fl oz/a A 5 % v/v B 32 fl oz/a B	43.5 -
3	UPL PREVIEW 2.1 SC MOCCASIN AMSOL INTERLINE	21 fl oz/a A 1.25 pt/a A 5 % v/v B 32 fl oz/a B	43.4 -
4	UPL PREVIEW 2.1 SC AMSOL INTERMOC	21 fl oz/a A 5 % v/v B 64 fl oz/a B	40.2 -
5	UPL PREVIEW 2.1 SC MOCCASIN AMSOL INTERMOC	21 fl oz/a A 1.25 pt/a A 5 % v/v B 64 fl oz/a B	40.3 -
6	UPL PREVIEW 2.1 SC FIRSTRATE AMSOL INTERMOC	21 fl oz/a A 0.6 oz/a A 5 % v/v B 64 fl oz/a B	39.6 -
7	UPL TRIPZIN ZC AMSOL INTERMOC	43 fl oz/a A 5 % v/v B 64 fl oz/a B	40.7 -
8	UPL MOCCASIN MTZ AMSOL INTERMOC	42 fl oz/a A 5 % v/v B 64 fl oz/a B	42.0 -
9	UPL ZIDUA PRO AMSOL LIBERTY DUAL MAGNUM	6 fl oz/a A 5 % v/v B 29 fl oz/a B 1.33 pt/a B	43.5 -

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
 Untreated treatment(s) 1 excluded from analysis.  
 Could not calculate LSD (% mean diff) for columns 4 because error mean square = 0.  
 ^Calculated from residual.

## Purdue University Weed Science

Trial ID: 22S-MGS-SOY-04 Protocol ID: 22S-MGS-SOY-04 Location: MEIGS Project ID: H22US-003-JAK-003 Project ID 2: Project ID 3: Study Director: Brent Mansfield Sponsor Contact: UPL and AMVAC Investigator (Creator): Dr. Bill Johnson	<b>UPL and AMVAC Showcase Treatments</b> Cooperator Trial ID: Trial Year: 2022
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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code		C, GLXMA	
BBCH Scale		BSOY	
Crop Scientific Name		Glycine max	
Crop Name		Soybean	
Rating Date		Oct-21-2022	
Part Rated		PLOT, C	
Rating Type		YIELD	
Rating Unit/Min/Max		bu/ac, -, -	
Sample Size		1 A	
Number of Subsamples		1	
Assessed By		J. HAARMANN	
Data Entry Date			
Rating Timing			
Days After First/Last Applic.		162, 127	
Plant-Eval Interval		163 DP-1	
Days After Emergence		157 DE-1	
ARM Action Codes		TY1	
Number of Decimals		1	
Trt No.	Treatment Name	Rate	Appl Code
		Rate Unit	
			18
10	UPL BOUNDARY	32 fl oz/a A	
	AMSOL	5 % v/v B	
	LIBERTY	29 fl oz/a B	
	DUAL MAGNUM	1.33 pt/a B	
			47.3 -
11	AMVAC FIRSTRATE	0.5 oz/a A	
	PREFIX	2.25 pt/a A	
	AMSOL	2.5 % v/v B	
	LIBERTY	32 fl oz/a B	
	WARRANT	48 fl oz/a B	
	ASSURE II	12 fl oz/a B	
			47.5 -
12	AMVAC CLASSIC	0.5 oz/a A	
	TRICOR	8 oz/a A	
	DUAL II MAGNUM	1.33 pt/a A	
	AMSOL	2.5 % v/v B	
	REFLEX	16 fl oz/a B	
	DUAL II MAGNUM	1.33 pt/a B	
	ASSURE II	12 fl oz/a B	
	PRIME OIL	1 % v/v B	
			48.5 -
	LSD P=.05		8.09
	Standard Deviation		5.60
	CV		12.94
	Levene's F^		1.63
	Levene's Prob(F)		0.141
	Shapiro-Wilk^		0.9936
	P(Shapiro-Wilk)^		0.9971
	Skewness^		0.1776
	P(Skewness)^		0.6333
	Kurtosis^		0.0154
	P(Kurtosis)^		0.9832
	Replicate F		2.940
	Replicate Prob(F)		0.0491
	Treatment F		1.299
	Treatment Prob(F)		0.2753

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).  
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 Untreated treatment(s) 1 excluded from analysis.  
 Could not calculate LSD (% mean diff) for columns 4 because error mean square = 0.  
 ^Calculated from residual.

# Purdue University Weed Science

**UPL and AMVAC Showcase Treatments**

Trial ID: 22S-MGS-SOY-04      Cooperator Trial ID:  
 Protocol ID: 22S-MGS-SOY-04      Location: MEIGS      Trial Year: 2022  
 Project ID: H22US-003-JAK-003      Project ID 2:      Project ID 3:  
 Study Director: Brent Mansfield      Sponsor Contact: UPL and AMVAC  
 Investigator (Creator): Dr. Bill Johnson

**Pest Type**  
 W, Weed = Weed or volunteer crop

**Pest Code**  
 AMATA, Amaranthus x tamariscinus, common water hemp = US  
 ABUTH, Abutilon theophrasti, velvetleaf = US  
 AMBTR, Ambrosia trifida, Giant ragweed = US  
 SETFA, Setaria faberi, Giant foxtail = US

**Crop Type Code**  
 C = EPPO species (Bayer) codes  
 GLXMA, BSOY, Glycine max, Soybean = US

**Part Rated**  
 PLOT = plot  
 C = Crop is Part Rated  
 P = Pest is Part Rated

**Rating Type**  
 PHYGEN = phytotoxicity - general / injury  
 CONTRO = control / burndown or knockdown  
 YIELD = yield  
 MOICON = moisture content

**Rating Unit/Min/Max**  
 %, 0, 100 = percent  
 lb/plot, , = pounds per plot  
 bu/ac, , = bushels per acre

PLOT = total plot  
 A = acre

**Plant-Eval Interval**  
 15 DP-1 = 1 GLXMA May-11-2022  
 22 DP-1 = 1 GLXMA May-11-2022  
 29 DP-1 = 1 GLXMA May-11-2022  
 43 DP-1 = 1 GLXMA May-11-2022  
 163 DP-1 = 1 GLXMA May-11-2022

**ARM Action Codes**  
 EC = Do not analyze untreated check, while still reporting treatment mean on AOV Means Table  
 TY1 = 6.05\*[16]\*(100-@MVAVGREP([17]))/87

Trt No.	Treatment Type Name	Form Conc	Form Unit	Form Type	Rate Rate	Rate Unit	Appl Code	Rep 1	2	3	4	Notes
1	CHK NONTREATED							101	402	503	803	
2	UPL HERB PREVIEW 2.1 SC ADJ AMSOL HERB INTERLINE	3.35 3.4 2.34	LBA/GAL LBA/GAL LBA/GAL	SC L SL	21 fl oz/a 5 % v/v 32 fl oz/a	A B B		102	405	601	701	
3	UPL HERB PREVIEW 2.1 SC HERB MOCCASIN ADJ AMSOL HERB INTERLINE	3.35 8 3.4 2.34	LBA/GAL LBA/GAL LBA/GAL LBA/GAL	SC EC L SL	21 fl oz/a 1.25 pt/a 5 % v/v 32 fl oz/a	A A B B		103	403	504	805	
4	UPL HERB PREVIEW 2.1 SC ADJ AMSOL HERB INTERMOC	3.35 3.4 3.57	LBA/GAL LBA/GAL LBA/GAL	SC L L	21 fl oz/a 5 % v/v 64 fl oz/a	A B B		104	404	505	804	
5	UPL HERB PREVIEW 2.1 SC HERB MOCCASIN ADJ AMSOL HERB INTERMOC	3.35 8 3.4 3.57	LBA/GAL LBA/GAL LBA/GAL LBA/GAL	SC EC L L	21 fl oz/a 1.25 pt/a 5 % v/v 64 fl oz/a	A A B B		105	301	604	703	
12	AMVAC HERB CLASSIC HERB TRICOR HERB DUAL II MAGNUM ADJ AMSOL HERB REFLEX HERB DUAL II MAGNUM HERB ASSURE II ADJ PRIME OIL	25 % 75 % 7.64 3.4 2 7.64 0.88 100 %	% % LBA/GAL LBA/GAL LBA/GAL LBA/GAL LBA/GAL LBA/GAL %	DF DF EC L EC EC EC L	0.5 oz/a 8 oz/a 1.33 pt/a 2.5 % v/v 16 fl oz/a 1.33 pt/a 12 fl oz/a 1 % v/v	A A A B B B B B		106	306	506	706	
6	UPL HERB PREVIEW 2.1 SC HERB FIRSTRATE ADJ AMSOL HERB INTERMOC	3.35 84 % 3.4 3.57	LBA/GAL WG LBA/GAL LBA/GAL	SC WG L L	21 fl oz/a 0.6 oz/a 5 % v/v 64 fl oz/a	A A B B		201	302	603	704	

## Purdue University Weed Science

UPL and AMVAC Showcase Treatments												
Trial ID: 22S-MGS-SOY-04      Cooperator Trial ID: Protocol ID: 22S-MGS-SOY-04      Location: MEIGS      Trial Year: 2022 Project ID: H22US-003-JAK-003      Project ID 2:      Project ID 3: Study Director: Brent Mansfield      Sponsor Contact: UPL and AMVAC Investigator (Creator): Dr. Bill Johnson												
Trt No.	Treatment Type	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Appl Code	Rep 1	2	3	4	Notes
7	UPL							202	303	602	702	
	HERB TRIPZIN ZC	4	LBA/GAL	ZC	43 fl oz/a	A						
	ADJ AMSOL	3.4	LBA/GAL	L	5 % v/v	B						
	HERB INTERMOC	3.57	LBA/GAL	L	64 fl oz/a	B						
8	UPL							203	304	605	705	
	HERB MOCCASIN MTZ	4.466	LB/GAL	EC	42 fl oz/a	A						
	ADJ AMSOL	3.4	LBA/GAL	L	5 % v/v	B						
	HERB INTERMOC	3.57	LBA/GAL	L	64 fl oz/a	B						
9	UPL							204	305	501	801	
	HERB ZIDUA PRO	4.09	LBA/GAL	SC	6 fl oz/a	A						
	ADJ AMSOL	3.4	LBA/GAL	L	5 % v/v	B						
	HERB LIBERTY	2.34	LBA/GAL	SL	29 fl oz/a	B						
	HERB DUAL MAGNUM	7.62	LBA/GAL	EC	1.33 pt/a	B						
10	UPL							205	401	502	802	
	HERB BOUNDARY	6.5	LBA/GAL	EC	32 fl oz/a	A						
	ADJ AMSOL	3.4	LBA/GAL	L	5 % v/v	B						
	HERB LIBERTY	2.34	LBA/GAL	SL	29 fl oz/a	B						
	HERB DUAL MAGNUM	7.62	LBA/GAL	EC	1.33 pt/a	B						
11	AMVAC							206	406	606	806	
	HERB FIRSTRATE	84 %		WG	0.5 oz/a	A						
	HERB PREFIX	5.29	LBA/GAL	EC	2.25 pt/a	A						
	ADJ AMSOL	3.4	LBA/GAL	L	2.5 % v/v	B						
	HERB LIBERTY	2.34	LBA/GAL	SL	32 fl oz/a	B						
	HERB WARRANT	3	LBA/GAL	CS	48 fl oz/a	B						
	HERB ASSURE II	0.88	LBA/GAL	EC	12 fl oz/a	B						

Sort Order: Replicate 1