

Purdue Weed Science

Evaluation of AMVAC herbicides in tank mixes for postemergence weed control in soybean

Trial ID: 21S-TPAC-SOY-03 Location: TPAC Trial Year: 2021
 Protocol ID: 21S-TPAC-SOY-03 Investigator (Creator): Dr. Bill Johnson
 Project ID: Study Director: Brent Mansfield
 Sponsor Contact:

General Trial Information

Study Director: Brent Mansfield **Title:** Research Associate
Investigator: Dr. Bill Johnson **Title:** Professor

Discipline: H herbicide
Trial Status: F one-year/final

Trial Reliability: 1 usable data

ARM Trial Created On: 9/14/2021

Initiation Date: 5/15/2021 **Planned Completion Date:** 9/1/2021

Trial Location

City: Lafayette **Country:** USA United States
State/Prov.: Indiana
Postal Code: 47907

Latitude of LL Corner °: 40.291785 N
Longitude of LL Corner °: -86.907372 W

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

Evaluate AMVAC herbicides Assure, Python, FirstRate, and Classic in tank mixes for postemergence weed control in soybean

Contacts

Role: STYDIR study director
Study Director: Brent Mansfield **Title:** Research Associate
Organization: Purdue University
Address 1: 915 W. State Street
Country: USA United States **E-mail:** brentmansfield@purdue.edu
City: West Lafayette **State/Prov:** IN **Postal Code:** 47907
Role: INVEST investigator
Investigator: Dr. Bill Johnson **Title:** Professor
Organization: Purdue University
Address 1: 915 W. State Street
Country: USA United States **E-mail:** wgj@purdue.edu
City: West Lafayette **State/Prov:** IN **Postal Code:** 47907

Crop Description

Crop 1: C GLXMA Glycine max Soybean **BBCH Scale:** BSOY
Entry Date: 9/14/2021 **Stage Scale:** BBCH
Variety: AG29XF1
Attributes: XtendFlex
Planting Date: 5/15/2021 **Planting Rate:** 140000 S/A
Depth: 1.5 IN
Rows per Plot: 7 **Planting Method:** PLANTD planted
Row Spacing: 15 IN **Planting Equipment:** PP plot planter
Soil Temperature: 60 f **Soil Moisture:** NORMAL normal, adequate
Emergence Date: 5/23/2021

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida **Entry Date:** 9/14/2021
Common Name: Giant ragweed **Stage Scale:** BBCH
Pest 2 Type: W **Code:** ECHCG Echinochloa crus-galli **Entry Date:** 9/14/2021
Common Name: common barnyardgrass **Stage Scale:** BBCH
Pest 3 Type: W **Code:** CHEAL Chenopodium album **Entry Date:** 9/14/2021
Common Name: common lambsquarters **Stage Scale:** BBCH

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT **Experimental Unit:** 1 PLOT plot
Treated Plot Area: 300.0 FT2 **Treatments:** 10 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Field Prep./Maintenance:

Conventional Tillage required. Maintain soybean crop using local practices for optimum soybean growth and yield

Soil Description

Description Name: TPAC- Field 4AW

% Sand: 17 % OM: 3.1 Texture: SIL silt loam
 % Silt: 56 pH: 6.2 Soil Name: Toronto-Millbrook
 % Clay: 27 CEC: 11.5 Fert. Level: G good

Weather Conditions

Closest Weather Station: TPAC Distance: 0.5 MI

No.	Date	Moisture Total	Unit	Min Temp	Max Temp	Temp Unit
1.	5/1/2021	0	IN	40	63	F
2.	5/2/2021	0	IN	49	74	F
3.	5/3/2021	0.26	IN	56	78	F
4.	5/4/2021	0.01	IN	55	66	F
5.	5/5/2021	0.04	IN	43	59	F
6.	5/6/2021	0	IN	42	61	F
7.	5/7/2021	0.25	IN	38	58	F
8.	5/8/2021	0	IN	32	63	F
9.	5/9/2021	1.43	IN	40	57	F
10.	5/10/2021	0.37	IN	37	47	F
11.	5/11/2021	0.09	IN	39	59	F
12.	5/12/2021	0	IN	36	61	F
13.	5/13/2021	0	IN	38	60	F
14.	5/14/2021	0	IN	41	66	F
15.	5/15/2021	0	IN	46	70	F
16.	5/16/2021	0	IN	53	71	F
17.	5/17/2021	0.35	IN	55	71	F
18.	5/18/2021	0.12	IN	58	63	F
19.	5/19/2021	0	IN	59	72	F
20.	5/20/2021	0	IN	64	75	F
21.	5/21/2021	0	IN	64	84	F
22.	5/22/2021	0	IN	63	83	F
23.	5/23/2021	0	IN	63	85	F
24.	5/24/2021	0	IN	68	85	F
25.	5/25/2021	0	IN	67	88	F
26.	5/26/2021	0.32	IN	66	87	F
27.	5/27/2021	0.19	IN	58	81	F
28.	5/28/2021	0.08	IN	60	80	F
29.	5/29/2021	0.47	IN	43	61	F
30.	5/30/2021	0	IN	41	63	F
31.	5/31/2021	0	IN	43	71	F
32.	6/1/2021	0	IN	57	71	F
33.	6/2/2021	0.04	IN	58	74	F
34.	6/3/2021	0.03	IN	59	87	F
35.	6/4/2021	0	IN	61	82	F
36.	6/5/2021	0	IN	63	88	F
37.	6/6/2021	0	IN	66	86	F
38.	6/7/2021	0.01	IN	69	83	F
39.	6/8/2021	0.1	IN	69	83	F
40.	6/9/2021	0	IN	70	85	F
41.	6/10/2021	0	IN	67	85	F
42.	6/11/2021	0	IN	69	85	F
43.	6/12/2021	0	IN	67	90	F
44.	6/13/2021	0	IN	69	93	F
45.	6/14/2021	0	IN	63	86	F
46.	6/15/2021	0	IN	57	83	F

47.	6/16/2021	0	IN	53	81	F
48.	6/17/2021	0	IN	53	82	F
49.	6/18/2021	0.01	IN	61	86	F
50.	6/19/2021	0.47	IN	67	93	F
51.	6/20/2021	0	IN	67	81	F
52.	6/21/2021	0.1	IN	70	86	F
53.	6/22/2021	0	IN	49	72	F
54.	6/23/2021	0	IN	54	74	F
55.	6/24/2021	0	IN	60	77	F
56.	6/25/2021	1.19	IN	63	79	F
57.	6/26/2021	0.83	IN	70	81	F
58.	6/27/2021	1.05	IN	69	85	F
59.	6/28/2021	0.11	IN	69	86	F
60.	6/29/2021	0	IN	72	88	F
61.	6/30/2021	0	IN	72	89	F
62.	7/1/2021	0.35	IN	70	78	F
63.	7/2/2021	0	IN	55	82	F
64.	7/3/2021	0	IN	53	75	F
65.	7/4/2021	0	IN	57	78	F
66.	7/5/2021	0	IN	67	85	F
67.	7/6/2021	0	IN	68	86	F
68.	7/7/2021	0	IN	71	86	F
69.	7/8/2021	1.29	IN	67	86	F
70.	7/9/2021	0.05	IN	59	80	F
71.	7/10/2021	0.03	IN	61	73	F
72.	7/11/2021	0.1	IN	65	76	F
73.	7/12/2021	1.3	IN	66	76	F
74.	7/13/2021	0.4	IN	67	82	F
75.	7/14/2021	0.08	IN	65	79	F
76.	7/15/2021	0	IN	66	82	F
77.	7/16/2021	0.16	IN	69	86	F
78.	7/17/2021	0.1	IN	66	78	F
79.	7/18/2021	0.01	IN	66	80	F
80.	7/19/2021	0	IN	61	83	F
81.	7/20/2021	0	IN	61	82	F
82.	7/21/2021	0	IN	64	83	F
83.	7/22/2021	0	IN	64	79	F
84.	7/23/2021	0	IN	67	83	F
85.	7/24/2021	0	IN	71	86	F
86.	7/25/2021	0	IN	69	87	F
87.	7/26/2021	0	IN	65	88	F
88.	7/27/2021	0	IN	62	87	F
89.	7/28/2021	0	IN	66	86	F
90.	7/29/2021	0	IN	70	87	F
91.	7/30/2021	0	IN	65	88	F
92.	7/31/2021	0	IN	62	78	F

Application Description		
	A	B
Application Date	5/15/2021	6/11/2021
Appl. Start Time	4:35 PM	1:20 PM
Appl. Stop Time	4:49 PM	1:50 PM
Application Method	SPRAY	SPRAY
Application Timing	PREPRE	POSPOS
Application Placement	BROSOL	BROFOL
Applied By	J. Haarmann	C. BLAND
Appl. Entry Date	9/14/2021	9/14/2021
Air Temperature Start, Stop	69, 69 F	90, 90 F
% Relative Humidity Start, Stop	32, 32	51, 51
Wind Velocity+Dir. Start	4.5 MPH, S	6.6 MPH, S
Wind Velocity+Dir. Stop	4.5 MPH, S	6.6 MPH, S
Wind Velocity+Dir. Max	4.5 MPH, S	6.6 MPH, S
Wet Leaves (Y/N)	N, no	N, no
Soil Temperature	60 F	97 F
Soil Moisture	NORMAL	DRY
% Cloud Cover	90	40

Comment:

Spray pH is located under "Appl. Equipment"

Nozzle information for B timing: XR 11002 @ 17 PSI used for treatments 2, 3, 4, 9, 10; TTI 110015 @ 30 PSI used for treatments 5, 6, 7, 8

Protocol Application Directions:

Application Timing:

PREPRE : Apply to bare ground before crop and weeds have emerged

POSPOS: Apply when weeds are 2-4" in height

Application water volume: 15 GPA

Nozzle types:

For PRE applications in all treatments, use a nozzles that produces medium to coarse spray droplets.

For POST applications in treatments 2, 3, 4, 9, and 10, use a nozzle that produces medium to coarse droplets. Avoid ultra coarse or extremely coarse droplet producing nozzles

For POST applications in treatments 5, 6, 7, and 8, use an Engenia approved nozzles (such as air-induction nozzle types), and include an Engenia- approved drift reduction agent (DRA) and pH buffering adjuvant

Please record following information in **SITE DESCRIPTION** sections: pH, CEC, OM%, texture

Application details: Date, time, sprayer type, water pH, GPA, PSI, nozzle type and orifice.

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale	GLXMA, BSOY	GLXMA, BSOY
Days after Emergence	-8	19
Stage Majority, Percent	00, -	12, -
Stage Minimum, Percent	00, -	12, -
Stage Maximum, Percent	00, -	12, -
Height Average		5 IN
Height Minimum, Maximum		4, 6

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	AMBTR, W, BBCH	AMBTR, W, BBCH
Stage Majority, Percent	00, -	18, -
Stage Minimum, Percent	00, -	16, -
Stage Maximum, Percent	00, -	19, -
Height Average		6 IN
Height Minimum, Maximum		4, 8
Density Average		5 FT2
Density Minimum, Maximum		1, 10
Pest 2 Code, Type, Scale	ECHCG, W, BBCH	ECHCG, W, BBCH
Stage Majority, Percent	00, -	14, -
Stage Minimum, Percent	00, -	13, -
Stage Maximum, Percent	00, -	15, -
Height Average		2 IN
Height Minimum, Maximum		2, 3
Density Average		2 FT2
Density Minimum, Maximum		1, 5
Pest 3 Code, Type, Scale	CHEAL, W, BBCH	CHEAL, W, BBCH
Stage Majority, Percent	00, -	17, -
Stage Minimum, Percent	00, -	16, -
Stage Maximum, Percent	00, -	18, -
Height Average		2 IN
Height Minimum, Maximum		1, 3
Density Average		2 FT2
Density Minimum, Maximum		1, 6

Application Equipment

	A	B
Appl. Equipment	CO2 BACKPACK	CO2 BACKPACK
Equipment Type	BACSPR	BACSPR
Operation Pressure	19 PSI	
Nozzle Model	XR	XR and TTI
Nozzle Type	FLAFXR	COMBIN
Nozzle TradeName	TEEJET	TEEJET
Nozzle Tip Size, Color	11002, yellow	-, yellow/green
Nozzle Spacing	15.0 IN	15.0 IN
Nozzles/Row	8.0	8.0
Boom Length	10.0 FT	10.0 FT
Boom Height	17.0 IN	23.0 IN
Ground Speed	3 MPH	3 MPH
Carrier	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC
Mix Overage	0.0 mL	0.0 mL
Mix Size	1.8 L	1.8 L
Spray pH	7.3	7.16
Propellant	COMCO2	COMCO2

Equipment Comment: Operating pressure was 17 PSI for XR 11002 and 30 PSI for TTI 110015

Treatment Appl. Comments**Trt No Treatment Application Comment**

- 5 Use an Engenia approved DRA and pH buffer
- 6 Use an Engenia approved DRA and pH buffer
- 7 Use an Engenia approved DRA and pH buffer
- 8 Use an Engenia approved DRA and pH buffer

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 Protocol ID: 21S-TPAC-SOY-03 Investigator (Creator): Dr. Bill Johnson
 Project ID: Study Director: Brent Mansfield
 Sponsor Contact:

Pest Type			W, Weed AMBTR	W, Weed ECHCG	W, Weed CHEAL	W, Weed AMBTR				
Pest Code			Giant ragweed	common barnyard>	common lambsqua>	Giant ragweed				
Pest Name										
Crop Type, Code	C, GLXMA	C, GLXMA								
Crop Name	Soybean	Soybean								
Rating Date	6/18/2021	6/25/2021	6/25/2021	6/25/2021	6/25/2021	7/9/2021				
Rating Type	PHYGEN	PHYGEN	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	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021				
Rating Timing	7 DAB	14 DAB	14 DAB	14 DAB	14 DAB	28 DAB				
Days After First/Last Applic.	34, 7	41, 14	41, 14	41, 14	41, 14	55, 28				
Trt-Eval Interval	7 DA-B	14 DA-B								
Days After Emergence	26 DE-1	33 DE-1	33 DE-1	33 DE-1	33 DE-1	47 DE-1				
Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4	5	6
1	NTC				0.0	0.0	0.0	0.0	0.0	0.0
2	Dual II Magnum	16 FL OZ/A	A		0.0 b	0.0 b	95.7 -	100.0 -	100.0 -	97.3 a
	Liberty	32 FL OZ/A	B							
	Dual II Magnum	16 FL OZ/A	B							
	Amsol	3 LB AI/A	B							
	XR 11002 @ 17 PSI		B							
3	Dual II Magnum	16 FL OZ/A	A		0.0 b	0.0 b	92.5 -	100.0 -	100.0 -	96.3 a
	Liberty	32 FL OZ/A	B							
	Classic	0.5 OZ WT/A	B							
	Dual II Magnum	16 FL OZ/A	B							
	Amsol	3 LB AI/A	B							
	XR 11002 @ 17 PSI		B							
4	Dual II Magnum	16 FL OZ/A	A		0.0 b	0.0 b	93.8 -	100.0 -	100.0 -	97.5 a
	Liberty	32 FL OZ/A	B							
	FirstRate	0.4 OZ WT/A	B							
	Dual II Magnum	16 FL OZ/A	B							
	Amsol	3 LB AI/A	B							
	XR 11002 @ 17 PSI		B							
5	Dual II Magnum	16 FL OZ/A	A		0.0 b	0.0 b	93.8 -	100.0 -	100.0 -	97.5 a
	Engenia	12.8 FL OZ/A	B							
	Roundup Powermax	32 FL OZ/A	B							
	Dual II Magnum	16 FL OZ/A	B							
	Sentris	8 FL OZ/A	B							
	Intact	0.5 % V/V	B							
	TTI 110015 @ 30 PSI		B							
6	Dual II Magnum	16 FL OZ/A	A		0.0 b	0.0 b	95.0 -	100.0 -	100.0 -	100.0 a
	Engenia	12.8 FL OZ/A	B							
	FirstRate	0.4 OZ WT/A	B							
	Roundup Powermax	32 FL OZ/A	B							
	Dual II Magnum	16 FL OZ/A	B							
	Sentris	8 FL OZ/A	B							
	Intact	0.5 % V/V	B							
	TTI 110015 @ 30 PSI		B							
7	Dual II Magnum	16 FL OZ/A	A		0.0 b	0.0 b	95.0 -	100.0 -	100.0 -	96.3 a
	Engenia	12.8 FL OZ/A	B							
	Classic	0.5 OZ WT/A	B							
	Roundup Powermax	32 FL OZ/A	B							
	Dual II Magnum	16 FL OZ/A	B							
	Sentris	8 FL OZ/A	B							
	Intact	0.5 % V/V	B							
	TTI 110015 @ 30 PSI		B							

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.
 Missing data estimates are included in columns: Average=3,6,9
 Could not calculate LSD (% mean diff) for columns 2,4,5,7,8,10,11 because error mean square = 0.
 ^Calculated from residual.

Pest Type			W, Weed AMBTR	W, Weed ECHCG	W, Weed CHEAL	W, Weed AMBTR				
Pest Code			Giant ragweed	common barnyard>	common lambsqua>	Giant ragweed				
Pest Name										
Crop Type, Code	C, GLXMA	C, GLXMA								
Crop Name	Soybean	Soybean								
Rating Date	6/18/2021	6/25/2021	6/25/2021	6/25/2021	6/25/2021	7/9/2021				
Rating Type	PHYGEN	PHYGEN	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	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021				
Rating Timing	7 DAB	14 DAB	14 DAB	14 DAB	14 DAB	28 DAB				
Days After First/Last Applic.	34, 7	41, 14	41, 14	41, 14	41, 14	55, 28				
Trt-Eval Interval	7 DA-B	14 DA-B								
Days After Emergence	26 DE-1	33 DE-1	33 DE-1	33 DE-1	33 DE-1	47 DE-1				
Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4	5	6
8	Dual II Magnum	16	FL OZ/A	A	0.0 b	0.0 b	95.0 -	100.0 -	100.0 -	98.8 a
	Engenia	12.8	FL OZ/A	B						
	Python	0.125	OZ WT/A	B						
	Roundup Powermax	32	FL OZ/A	B						
	Dual II Magnum	16	FL OZ/A	B						
	Sentris	8	FL OZ/A	B						
	Intact	0.5	% V/V	B						
	TTI 110015 @ 30 PSI			B						
9	Dual II Magnum	16	FL OZ/A	A	6.0 a	5.0 a	92.0 -	100.0 -	100.0 -	85.0 b
	Classic	0.5	OZ WT/A	B						
	Assure II	12	FL OZ/A	B						
	Reflex	16	FL OZ/A	B						
	Amsol	3	LB AI/A	B						
	Prime Oil	1	% V/V	B						
	XR 11002 @ 17 PSI			B						
10	Dual II Magnum	16	FL OZ/A	A	6.3 a	5.0 a	92.8 -	100.0 -	100.0 -	87.5 b
	FirstRate	0.4	OZ WT/A	B						
	Assure II	12	FL OZ/A	B						
	Reflex	16	FL OZ/A	B						
	Amsol	3	LB AI/A	B						
	Prime Oil	1	% V/V	B						
	XR 11002 @ 17 PSI			B						
LSD P=.05		1.38		.			2.84		.	4.46
Standard Deviation		0.94		0.00			1.94	0.00	0.00	3.05
CV		69.27		0.0			2.07	0.0	0.0	3.21
Grand Mean		1.36		1.11			93.94	100.00	100.00	95.12
Levene's F^		1.323		.			1.635	.	.	0.395
Levene's Prob(F)		0.275		.			0.163	.	.	0.913
Rank X2		.		.			.	.	.	.
P(Rank X2)		.		.			.	.	.	.
Skewness^		2.2662*		.			-0.2245	.	.	-0.3612
Kurtosis^		10.5804*		.			0.0613	.	.	-0.4889
Replicate F		0.531		0.000			0.813	0.000	0.000	1.066
Replicate Prob(F)		0.6652		1.0000			0.4999	1.0000	1.0000	0.3826
Treatment F		32.844		0.000			1.814	0.000	0.000	11.614
Treatment Prob(F)		0.0001		1.0000			0.1260	1.0000	1.0000	0.0001

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Missing data estimates are included in columns: Average=3,6,9
Could not calculate LSD (% mean diff) for columns 2,4,5,7,8,10,11 because error mean square = 0.
^Calculated from residual.

Pest Type	W, Weed	W, Weed	W, Weed	W, Weed	W, Weed
Pest Code	ECHCG	CHEAL	AMBTR	ECHCG	CHEAL
Pest Name	common barnyard>	common lambsqua>	Giant ragweed	common barnyard>	common lambsqua>
Crop Type, Code					
Crop Name					
Rating Date	7/9/2021	7/9/2021	7/23/2021	7/23/2021	7/23/2021
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	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021
Rating Timing	28 DAB	28 DAB	42 DAB	42 DAB	42 DAB
Days After First/Last Applic.	55, 28	55, 28	69, 42	69, 42	69, 42
Trt-Eval Interval					
Days After Emergence	47 DE-1	47 DE-1	61 DE-1	61 DE-1	61 DE-1
Trt No.	7	8	9	10	11
Treatment Name					
Rate					
Unit					
Appl Code					
1 NTC	0.0	0.0	0.0	0.0	0.0
2 Dual II Magnum	100.0 -	100.0 -	98.0 a	100.0 -	100.0 -
Liberty					
Dual II Magnum					
Amsol					
XR 11002 @ 17 PSI					
3 Dual II Magnum	100.0 -	100.0 -	97.8 a	100.0 -	100.0 -
Liberty					
Classic					
Dual II Magnum					
Amsol					
XR 11002 @ 17 PSI					
4 Dual II Magnum	100.0 -	100.0 -	98.5 a	100.0 -	100.0 -
Liberty					
FirstRate					
Dual II Magnum					
Amsol					
XR 11002 @ 17 PSI					
5 Dual II Magnum	100.0 -	100.0 -	98.8 a	100.0 -	100.0 -
Engenia					
Roundup Powermax					
Dual II Magnum					
Sentris					
Intact					
TTI 110015 @ 30 PSI					
6 Dual II Magnum	100.0 -	100.0 -	100.0 a	100.0 -	100.0 -
Engenia					
FirstRate					
Roundup Powermax					
Dual II Magnum					
Sentris					
Intact					
TTI 110015 @ 30 PSI					
7 Dual II Magnum	100.0 -	100.0 -	94.8 a	100.0 -	100.0 -
Engenia					
Classic					
Roundup Powermax					
Dual II Magnum					
Sentris					
Intact					
TTI 110015 @ 30 PSI					

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.
Missing data estimates are included in columns: Average=3,6,9
Could not calculate LSD (% mean diff) for columns 2,4,5,7,8,10,11 because error mean square = 0.
^Calculated from residual.

Pest Type	W, Weed	W, Weed	W, Weed	W, Weed	W, Weed
Pest Code	ECHCG	CHEAL	AMBTR	ECHCG	CHEAL
Pest Name	common barnyard>	common lambsqua>	Giant ragweed	common barnyard>	common lambsqua>
Crop Type, Code					
Crop Name					
Rating Date	7/9/2021	7/9/2021	7/23/2021	7/23/2021	7/23/2021
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	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021
Rating Timing	28 DAB	28 DAB	42 DAB	42 DAB	42 DAB
Days After First/Last Applic.	55, 28	55, 28	69, 42	69, 42	69, 42
Trt-Eval Interval					
Days After Emergence	47 DE-1	47 DE-1	61 DE-1	61 DE-1	61 DE-1
Trt Treatment	7	8	9	10	11
No. Name					
Rate					
Unit					
Appl Code					
8 Dual II Magnum	16 FL OZ/A	A	100.0 -	100.0 -	98.8 a
Engenia	12.8 FL OZ/A	B			
Python	0.125 OZ WT/A	B			
Roundup Powermax	32 FL OZ/A	B			
Dual II Magnum	16 FL OZ/A	B			
Sentris	8 FL OZ/A	B			
Intact	0.5 % V/V	B			
TTI 110015 @ 30 PSI		B			
9 Dual II Magnum	16 FL OZ/A	A	100.0 -	100.0 -	76.3 b
Classic	0.5 OZ WT/A	B			
Assure II	12 FL OZ/A	B			
Reflex	16 FL OZ/A	B			
Amsol	3 LB AI/A	B			
Prime Oil	1 % V/V	B			
XR 11002 @ 17 PSI		B			
10 Dual II Magnum	16 FL OZ/A	A	100.0 -	100.0 -	80.0 b
FirstRate	0.4 OZ WT/A	B			
Assure II	12 FL OZ/A	B			
Reflex	16 FL OZ/A	B			
Amsol	3 LB AI/A	B			
Prime Oil	1 % V/V	B			
XR 11002 @ 17 PSI		B			
LSD P=.05	.	.	6.11	.	.
Standard Deviation	0.00	0.00	4.17	0.00	0.00
CV	0.0	0.0	4.46	0.0	0.0
Grand Mean	100.00	100.00	93.64	100.00	100.00
Levene's F^	.	.	1.874	.	.
Levene's Prob(F)	.	.	0.108	.	.
Rank X2	.	.	.	.	.
P(Rank X2)	.	.	.	.	.
Skewness^	.	.	-0.3551	.	.
Kurtosis^	.	.	1.1492	.	.
Replicate F	0.000	0.000	0.193	0.000	0.000
Replicate Prob(F)	1.0000	1.0000	0.9001	1.0000	1.0000
Treatment F	0.000	0.000	18.424	0.000	0.000
Treatment Prob(F)	1.0000	1.0000	0.0001	1.0000	1.0000

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.
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^Calculated from residual.

Purdue Weed Science

Evaluation of AMVAC herbicides in tank mixes for postemergence weed control in soybean

Trial ID: 21S-TPAC-SOY-03 Location: TPAC Trial Year: 2021
Protocol ID: 21S-TPAC-SOY-03 Investigator (Creator): Dr. Bill Johnson
Project ID: Study Director: Brent Mansfield
Sponsor Contact:

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

AMBTR, Ambrosia trifida, Giant ragweed = US

ECHCG, Echinochloa crus-galli, common barnyardgrass = US

CHEAL, Chenopodium album, common lambsquarters = US

Crop Type, Code

C = EPPO species (Bayer) codes

GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

PHYGEN = phytotoxicity - general / injury

CONTRO = control / burndown or knockdown

Rating Unit/Min/Max

%, 0, 100 = percent