

Purdue University Weed Science

Valent Actives in a Roundup Xtend System - Conventional Tillage

Trial ID: 22S-TPAC-SOY-09 Cooperator Trial ID:
 Protocol ID: 22S-TPAC-SOY-09 Location: TPAC Trial Year: 2022
 Project ID: VUSA2022FIERCMD64.05 Project ID 2: Project ID 3:
 Study Director: Brent Mansfield Sponsor Contact: Eric Ott - Valent
 Investigator (Creator): Dr. Bill Johnson

General Trial Information

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

Status: E established

ARM Trial Created On: May-23-2022

Initiation Date: May-23-2022

Trial Location

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

Latitude of LL Corner °: 40.2917667 N

Longitude of LL Corner °: -86.9089667 W

Conducted Under GLP: No

Conducted Under GEP: No

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
Role: SPONSR sponsor
Sponsor: Eric Ott - Valent
Role: COOPER cooperator
Cooperator: Jay Young **Title:** Superintendent
Organization: Purdue University
Address 1: 8343 US 231 S **Phone No.:** 765-538-3422
Country: USA United States **Fax No.:** 765-538-3423
City: Lafayette **E-mail:** jayyoung@purdue.edu
State/Prov: IN **Postal Code:** 47909

Crop Description

Crop 1: C GLXMA Glycine max Soybean **BBCH Scale:** BSOY
Entry Date: Jun-21-2022 **Stage Scale:** BBCH
Variety: AG29XF1
Attributes: Glyphosate-R, Glufosinate-R, Dicamba-R
Planting Date: May-23-2022 **Planting Rate:** 140000 S/A
Depth: 1.75 IN
Rows per Plot: 4 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** PP plot planter
Soil Temperature: 55 F **Soil Moisture:** NORMAL normal, adequate
Emergence Date: May-29-2022
Harvested Width: 10 FT
% Standard Moisture: 13 **Harvested Length:** 27 FT

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida **Entry Date:** Jun-21-2022
Common Name: Giant ragweed **Stage Scale:** BBCH
Attributes: ALS-R
Pest 2 Type: W **Code:** CHEAL Chenopodium album **Entry Date:** Jun-21-2022
Common Name: common lambsquarters **Stage Scale:** BBCH
Pest 3 Type: W **Code:** GRASS barnyardgrass/giant foxtail **Entry Date:** Jun-21-2022
Common Name: Grass spp. **Stage Scale:** BBCH
Attributes: ALS-R giant foxtail

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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 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Treatments:** 7 **Plots:** 28 **Study Design:** RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: TPAC - Field 4BE
% Sand: 21 **% OM:** 3.4 **Texture:** SIL silt loam
% Silt: 54 **Soil Name:** Toronto-Millbrook complex
% Clay: 25 **Fert. Level:** G good
pH: 5.8 **CEC:** 13.5

No.	Date	Moisture Total	Unit	Min Temp	Max Temp	Avg Temp	Temp Unit
1.	May-1-2022	0	IN	51.1	63.7	55.8	F
2.	May-2-2022	0	IN	43.2	66	55.4	F
3.	May-3-2022	0.71	IN	46	67.8	57.4	F
4.	May-4-2022	0	IN	46	61.5	53.6	F
5.	May-5-2022	0.66	IN	53.6	56.7	54.7	F
6.	May-6-2022	0.07	IN	51.8	57.2	55.2	F
7.	May-7-2022	0	IN	48.7	68.2	58.1	F
8.	May-8-2022	0	IN	44.6	68.7	58.5	F
9.	May-9-2022	0	IN	52.9	81	67.5	F
10.	May-10-2022	0	IN	66.6	88.9	76.6	F
11.	May-11-2022	0	IN	73	92.3	81.5	F
12.	May-12-2022	0	IN	67.8	90	78.1	F
13.	May-13-2022	0	IN	61.9	89.6	76.8	F
14.	May-14-2022	0.74	IN	59.7	88.2	70.7	F
15.	May-15-2022	1.02	IN	57	86.2	67.6	F
16.	May-16-2022	0.01	IN	52.7	76.8	64.6	F
17.	May-17-2022	0	IN	53.4	77.7	66	F
18.	May-18-2022	0.1	IN	57.9	66.9	62.8	F
19.	May-19-2022	0	IN	59.7	82.2	69.6	F
20.	May-20-2022	0	IN	66.4	86.9	77.2	F
21.	May-21-2022	0.1	IN	58.3	77.7	66.7	F
22.	May-22-2022	0	IN	53.2	64.6	58.3	F
23.	May-23-2022	0	IN	48.4	68.7	58.3	F
24.	May-24-2022	0	IN	50.2	75.6	63.7	F
25.	May-25-2022	0.05	IN	61.7	85.6	70.7	F
26.	May-26-2022	1.68	IN	60.8	75.4	67.5	F
27.	May-27-2022	0.03	IN	53.4	67.8	59.9	F
28.	May-28-2022	0	IN	51.6	73.2	63	F
29.	May-29-2022	0	IN	59.5	82.9	71.4	F
30.	May-30-2022	0	IN	67.1	88.5	77.7	F
31.	May-31-2022	0	IN	71.6	89.4	79.7	F
32.	Jun-1-2022	0	IN	66	81	74.7	F
33.	Jun-2-2022	0.01	IN	61.3	79.9	69.8	F
34.	Jun-3-2022	0	IN	54.1	84.2	70.5	F
35.	Jun-4-2022	0	IN	51.4	84.2	70.3	F
36.	Jun-5-2022	0	IN	56.8	85.3	73	F
37.	Jun-6-2022	0	IN	64	85.8	73.8	F
38.	Jun-7-2022	0	IN	62.2	77.9	70	F
39.	Jun-8-2022	0.02	IN	55.2	77.5	64.6	F
40.	Jun-9-2022	0	IN	56.7	78.8	66.7	F
41.	Jun-10-2022	0.1	IN	54	79.7	66	F

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42.	Jun-11-2022	0.23	IN	58.5	79.7	68.2	F
43.	Jun-12-2022	0.02	IN	65.8	84	73.8	F
44.	Jun-13-2022	0	IN	68.7	91	79.3	F
45.	Jun-14-2022	0	IN	74.8	95.5	85.8	F
46.	Jun-15-2022	0	IN	75	94.6	85.5	F
47.	Jun-16-2022	0	IN	76.6	97.3	86	F
48.	Jun-17-2022	0	IN	69.1	88.2	79.2	F
49.	Jun-18-2022	0	IN	60.8	82.2	70.3	F
50.	Jun-19-2022	0	IN	52.2	83.8	70.3	F
51.	Jun-20-2022	0	IN	57.4	90.1	75.4	F
52.	Jun-21-2022	0	IN	63.9	96.3	81.7	F
53.	Jun-22-2022	0	IN	72	90.3	81.5	F
54.	Jun-23-2022	0	IN	62.4	89.1	76.6	F
55.	Jun-24-2022	0	IN	59	93	76.6	F
56.	Jun-25-2022	0.01	IN	63.9	82.6	74.3	F
57.	Jun-26-2022	0.22	IN	64.2	81.5	74.1	F
58.	Jun-27-2022	0	IN	54.7	79.3	68.4	F
59.	Jun-28-2022	0	IN	55.2	82.9	69.8	F
60.	Jun-29-2022	0	IN	57.6	87.3	73.9	F
61.	Jun-30-2022	0	IN	61	90.5	77.4	F
62.	Jul-1-2022	0	IN	68.5	90.7	77.5	F
63.	Jul-2-2022	0	IN	66.6	86.4	76.3	F
64.	Jul-3-2022	0	IN	57.6	89.8	75.9	F
65.	Jul-4-2022	0.01	IN	64.6	91.4	79	F
66.	Jul-5-2022	0	IN	77.2	98.2	87.3	F
67.	Jul-6-2022	0	IN	74.3	90	81.9	F
68.	Jul-7-2022	0.05	IN	70.3	84.7	77	F
69.	Jul-8-2022	0.23	IN	70	76.3	72.5	F
70.	Jul-9-2022	0	IN	67.5	84.6	74.1	F
71.	Jul-10-2022	0	IN	57.9	90.7	73.4	F
72.	Jul-11-2022	0	IN	59.5	88	75.9	F
73.	Jul-12-2022	0	IN	67.6	83.8	76.1	F
74.	Jul-13-2022	0	IN	62.8	86.5	75	F
75.	Jul-14-2022	0	IN	57.4	84.9	72.5	F
76.	Jul-15-2022	0.1	IN	58.1	77.4	68.2	F
77.	Jul-16-2022	0.49	IN	69.6	89.4	79	F
78.	Jul-17-2022	0.47	IN	68.9	76.3	72.7	F
79.	Jul-18-2022	0	IN	68.9	87.6	75.6	F
80.	Jul-19-2022	0	IN	64.2	87.4	77	F
81.	Jul-20-2022	0	IN	72	90	80.1	F
82.	Jul-21-2022	0	IN	66.4	88.7	77.7	F
83.	Jul-22-2022	0	IN	68.4	89.6	78.8	F
84.	Jul-23-2022	0	IN	69.8	77.4	73.4	F
85.	Jul-24-2022	0.18	IN	73.6	84.6	78.3	F
86.	Jul-25-2022	0	IN	64.9	83.8	73.9	F
87.	Jul-26-2022	0	IN	65.5	75.4	70	F
88.	Jul-27-2022	0.22	IN	69.3	83.1	74.7	F
89.	Jul-28-2022	0.09	IN	65.3	85.6	75	F
90.	Jul-29-2022	0	IN	57.9	80.1	69.6	F
91.	Jul-30-2022	0	IN	57	86.4	71.8	F
92.	Jul-31-2022	0	IN	59.7	84.6	73.8	F
93.	Aug-1-2022	0.53	IN	67.5	86.5	76.1	F
94.	Aug-2-2022	0	IN	65.8	85.1	73.8	F

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95.	Aug-3-2022	0.58	IN	68.9	90.5	76.8	F
96.	Aug-4-2022	0.01	IN	70	85.5	75.9	F
97.	Aug-5-2022	0	IN	69.1	89.2	77.2	F
98.	Aug-6-2022	0	IN	70.2	89.8	79.5	F
99.	Aug-7-2022	0	IN	73.4	88.7	80.1	F
100.	Aug-8-2022	0.24	IN	69.8	86.9	79.3	F
101.	Aug-9-2022	0.39	IN	64.8	80.1	70.3	F
102.	Aug-10-2022	0	IN	62.2	83.1	72	F
103.	Aug-11-2022	0	IN	59	84	71.2	F
104.	Aug-12-2022	0	IN	57.4	77.5	67.6	F
105.	Aug-13-2022	0	IN	55.2	78.4	68.2	F
106.	Aug-14-2022	0.07	IN	66.2	76.8	70.5	F
107.	Aug-15-2022	0	IN	64.9	79.5	70.5	F
108.	Aug-16-2022	0	IN	59	82.9	71.6	F
109.	Aug-17-2022	0	IN	56.1	83.8	70.3	F
110.	Aug-18-2022	0	IN	55.8	86.2	70.5	F
111.	Aug-19-2022	0	IN	58.8	85.3	72.3	F
112.	Aug-20-2022	0.29	IN	65.1	82.4	71.6	F
113.	Aug-21-2022	0.58	IN	63.3	81.1	70.9	F
114.	Aug-22-2022	0	IN	60.3	84.7	70.2	F
115.	Aug-23-2022	0	IN	55.8	85.3	70	F
116.	Aug-24-2022	0	IN	56.3	87.1	71.4	F
117.	Aug-25-2022	0.25	IN	66.2	80.8	73.6	F
118.	Aug-26-2022	0	IN	62.2	83.1	72.5	F
119.	Aug-27-2022	0	IN	59.2	85.6	72.1	F
120.	Aug-28-2022	0.14	IN	67.5	89.6	77.7	F
121.	Aug-29-2022	2.2	IN	65.8	87.4	74.5	F
122.	Aug-30-2022	0.3	IN	60.8	79.9	71.1	F
123.	Aug-31-2022	0	IN	53.4	81.1	68	F
124.	Sep-1-2022	0	IN	59	84	71.8	F
125.	Sep-2-2022	0	IN	64.2	83.3	73	F
126.	Sep-3-2022	0	IN	66.9	81.7	73.6	F
127.	Sep-4-2022	0	IN	66.6	82	73.2	F
128.	Sep-5-2022	0	IN	66.9	74.1	70	F
129.	Sep-6-2022	0	IN	63.7	82.9	71.2	F
130.	Sep-7-2022	0	IN	59.4	82.4	69.6	F
131.	Sep-8-2022	0	IN	52.9	82.4	68.2	F
132.	Sep-9-2022	0	IN	54.1	84.2	69.1	F
133.	Sep-10-2022	0.05	IN	60.8	88.9	73	F
134.	Sep-11-2022	0.2	IN	59.4	74.1	67.6	F
135.	Sep-12-2022	0.14	IN	51.6	62.8	57.4	F
136.	Sep-13-2022	0	IN	53.1	75	62.2	F
137.	Sep-14-2022	0	IN	52	86.5	67.6	F
138.	Sep-15-2022	0	IN	54.7	86.9	69.3	F
139.	Sep-16-2022	0	IN	57.4	84.6	70.2	F
140.	Sep-17-2022	0	IN	63.3	85.3	72.9	F
141.	Sep-18-2022	0	IN	63.3	86.9	74.3	F
142.	Sep-19-2022	0.24	IN	62.4	87.4	73.9	F
143.	Sep-20-2022	0	IN	59.2	92.3	75.2	F
144.	Sep-21-2022	0	IN	68.9	91.9	79.5	F
145.	Sep-22-2022	0	IN	46.6	69.6	60.1	F
146.	Sep-23-2022	0	IN	40.5	63.3	53.4	F
147.	Sep-24-2022	0.09	IN	51.6	78.4	63.9	F

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148.	Sep-25-2022	0	IN	54.3	71.1	62.4	F
149.	Sep-26-2022	0	IN	44.1	68.4	56.8	F
150.	Sep-27-2022	0	IN	39.6	64.9	50.9	F
151.	Sep-28-2022	0	IN	37.4	66	51.8	F
152.	Sep-29-2022	0	IN	38.7	69.3	53.4	F
153.	Sep-30-2022	0	IN	39.2	70.2	54.9	F
154.	Oct-1-2022	0	IN	43.9	75.4	59.4	F
155.	Oct-2-2022	0	IN	48.6	74.3	59.4	F
156.	Oct-3-2022	0	IN	41.7	72.5	54.5	F
157.	Oct-4-2022	0	IN	34.2	77.5	54.1	F
158.	Oct-5-2022	0	IN	38.1	79.9	58.3	F
159.	Oct-6-2022	0.01	IN	53.4	77.5	63.7	F
160.	Oct-7-2022	0	IN	36.9	61.2	51.4	F
161.	Oct-8-2022	0	IN	30.2	58.8	43.9	F
162.	Oct-9-2022	0	IN	34.5	70.3	52.2	F
163.	Oct-10-2022	0	IN	40.5	77.5	59	F
164.	Oct-11-2022	0.1	IN	54.3	69.8	61.7	F
165.	Oct-12-2022	0.07	IN	43.5	68	59	F
166.	Oct-13-2022	0.07	IN	32.9	59.9	47.7	F
167.	Oct-14-2022	0.22	IN	33.3	65.1	50	F

Application Description

	A	B	C
Application Date	May-24-2022	Jun-23-2022	Jun-23-2022
Appl. Start Time	9:16 AM	11:30 AM	11:30 AM
Appl. Stop Time	9:26 AM	12:00 PM	12:00 PM
Interval to Prev. Appl.		30 DAYS	30 DAYS
Application Method	SPRAY	SPRAY	SPRAY
Application Timing	PRE	POSPOS	POSPOS
Application Placement	BROSOI	BROFOL	BROFOL
Applied By	M. ZIMMER	J.HAARMANN	J.HAARMANN
Appl. Entry Date	Jun-21-2022	Jul-21-2022	Jul-21-2022
Air Temperature Start, Stop	57, 57 F	97, 97 F	97, 97 F
% Relative Humidity Start, Stop	59, 59	30, 30	30, 30
Wind Velocity+Dir. Start	1.2 MPH, NE	2 MPH, NE	2 MPH, NE
Wind Velocity+Dir. Stop	5 MPH, NE	2 MPH, NE	2 MPH, NE
Wind Velocity+Dir. Max	8.4 MPH, NE	3.7 MPH, NE	3.7 MPH, NE
Wet Leaves (Y/N)	N, no	N, no	N, no
Soil Temperature	58 F	100 F	100 F
Soil Moisture	NORMAL	DRY	DRY
% Cloud Cover	0	5	5
Next Moisture Occurred On	May-26-2022	Jun-26-2022	Jun-26-2022
Time to Next Moisture	2.0 DAY	3.0 DAY	3.0 DAY
Moisture 6 Hours after Appl.	0 IN	0 IN	0 IN
Moisture 1 Week after Appl.	1.76 IN	0.23 IN	0.23 IN

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Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale	GLXMA, BSOY	GLXMA, BSOY	GLXMA, BSOY
Days after Emergence	-5	25	25
Stage Majority, Percent	00, -	14, -	14, -
Stage Minimum, Percent	00, -	13, -	13, -
Stage Maximum, Percent	00, -	14, -	14, -
Height Average	0 IN	8 IN	8 IN
Height Minimum, Maximum		5, 10	5, 10

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale	AMBTR, W, BBCH	AMBTR, W, BBCH	AMBTR, W, BBCH
Stage Majority, Percent	00, -	18, -	18, -
Stage Minimum, Percent	00, -	14, -	14, -
Stage Maximum, Percent	00, -	19, -	19, -
Height Average	0 IN	9 IN	9 IN
Density Average	0 FT2	1 FT2	1 FT2
Pest 2 Code, Type, Scale	CHEAL, W, BBCH	CHEAL, W, BBCH	CHEAL, W, BBCH
Stage Majority, Percent	00, -	00, -	00, -
Stage Minimum, Percent	00, -	00, -	00, -
Stage Maximum, Percent	00, -	00, -	00, -
Height Average	0 IN	0 IN	0 IN
Density Average	0 FT2	0 FT2	0 FT2
Pest 3 Code, Type, Scale	GRASS, W, BBCH	GRASS, W, BBCH	GRASS, W, BBCH
Stage Majority, Percent	19, -	19, -	19, -
Stage Minimum, Percent	13, -	13, -	13, -
Stage Maximum, Percent	19, -	19, -	19, -
Height Average	0 IN	5 IN	5 IN
Density Average	0 FT2	6 FT2	6 FT2

Application Equipment

	A	B	C
Appl. Equipment	CO2 BACKPACK	CO2 BACKPACK	CO2 BACKPACK
Equipment Type	BACSPR	BACSPR	BACSPR
Operation Pressure	20 PSI	20 PSI	20 PSI
Nozzle Model	XR	TTI	TT
Nozzle Type	FLAFXR	TEEJAI	TEEJTU
Nozzle TradeName	TEEJET	TEEJET	TEEJET
Nozzle Tip Size, Color	110015, GREEN	110015, GREEN	110015, GREEN
Nozzle Spacing	15 IN	15 IN	15 IN
Nozzles/Row	8	8	8
Boom Length	10 FT	10 FT	10 FT
Ground Speed	3 MPH	3 MPH	3 MPH
Carrier	WATER	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size	1.8 L	1.8 L	1.8 L
Propellant	COMCO2	COMCO2	COMCO2

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Notes

Context	Date	By	Notes
STATUS	May-23-2022	Dr. Bill Johnson	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	Jun-21-2022	Dr. Bill Johnson	Automatically added by ARM: Trial Status changed to: E: changed by (EINJOW).
STATUS	Jun-21-2022	Dr. Bill Johnson	Automatically added by ARM: Trial Status updated to 'E' when Initiation Date entered.

Pest Type	W, Weed	W, Weed	W, Weed	W, Weed		
Pest Code	AMBTR	ECHCG	CHEAL	AMBTR		
Pest Scientific Name	Ambrosia trifida	Echinochloa cru>	Chenopodium alb>	Ambrosia trifida		
Pest Name	Giant ragweed	common barnyard>	common lambsqua>	Giant ragweed		
Crop Type, Code						
BBCH Scale						
Crop Scientific Name						
Crop Name						
Rating Date	Jun-14-2022	Jun-14-2022	Jun-14-2022	Jul-5-2022		
Part Rated	PLANT, P	PLANT, P	PLANT, P	PLANT, P		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100		
Sample Size						
Number of Subsamples	1	1	1	1		
Assessed By	C. BLAND	C. BLAND	C. BLAND	C. BLAND		
Data Entry Date	Jul-21-2022	Jul-21-2022	Jul-21-2022	Jul-21-2022		
Days After First/Last Applic.	21, 21	21, 21	21, 21	42, 12		
Trt-Eval Interval	21 DA-A	21 DA-A	21 DA-A	42 DA-A		
Plant-Eval Interval	22 DP-1	22 DP-1	22 DP-1	43 DP-1		
Days After Emergence	16 DE-1	16 DE-1	16 DE-1	37 DE-1		
ARM Action Codes						
Number of Decimals	0	0	0	0		
Trt Treatment	Rate	Appl	1	2	3	4
No. Name	Rate Unit	Code				
1 NONTREATED			0	0	0	0
2 FIERCE EZ	6 fl oz/a	A	78 -	68 -	100 -	89 b
ROUNDUP POWERMAX 3	30 fl oz/a	B				
XTENDIMAX	22 fl oz/a	B				
PERPETUO	6 fl oz/a	B				
SELECT MAX	9 fl oz/a	B				
ACTIVATOR 90	0.25 % v/v	B				
INTACT	0.5 % v/v	B				
VOLIMINATE	20 fl oz/a	B				
3 FIERCE MTZ	1 pt/a	A	79 -	81 -	100 -	91 b
ROUNDUP POWERMAX 3	30 fl oz/a	B				
XTENDIMAX	22 fl oz/a	B				
PERPETUO	6 fl oz/a	B				
SELECT MAX	9 fl oz/a	B				
ACTIVATOR 90	0.25 % v/v	B				
INTACT	0.5 % v/v	B				
VOLIMINATE	20 fl oz/a	B				
4 FIERCE XLT	4 oz/a	A	84 -	89 -	100 -	89 b
ROUNDUP POWERMAX 3	30 fl oz/a	B				
XTENDIMAX	22 fl oz/a	B				
PERPETUO	6 fl oz/a	B				
SELECT MAX	9 fl oz/a	B				
ACTIVATOR 90	0.25 % v/v	B				
INTACT	0.5 % v/v	B				
VOLIMINATE	20 fl oz/a	B				
5 ZIDUA PRO	6 fl oz/a	A	70 -	89 -	100 -	91 b
ROUNDUP POWERMAX 3	30 fl oz/a	B				
XTENDIMAX	22 fl oz/a	B				
INTACT	0.5 % v/v	B				
VOLIMINATE	20 fl oz/a	B				
6 ZIDUA PRO	6 fl oz/a	A	63 -	65 -	100 -	91 b
LIBERTY	32 fl oz/a	B				
XTENDIMAX	22 fl oz/a	B				
INTACT	0.5 % v/v	B				
VOLIMINATE	20 fl oz/a	B				

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Valent Actives in a Roundup Xtend System - Conventional Tillage

Trial ID: 22S-TPAC-SOY-09 Cooperator Trial ID:
 Protocol ID: 22S-TPAC-SOY-09 Location: TPAC Trial Year: 2022
 Project ID: VUSA2022FIERCMD64.05 Project ID 2: Project ID 3:
 Study Director: Brent Mansfield Sponsor Contact: Eric Ott - Valent
 Investigator (Creator): Dr. Bill Johnson

Pest Type	W, Weed AMBTR	W, Weed ECHCG	W, Weed CHEAL	W, Weed AMBTR
Pest Code	Ambrosia trifida	Echinochloa cru>	Chenopodium alb>	Ambrosia trifida
Pest Scientific Name	Giant ragweed	common barnyard>	common lambsqua>	Giant ragweed
Pest Name				
Crop Type, Code				
BBCH Scale				
Crop Scientific Name				
Crop Name				
Rating Date	Jun-14-2022	Jun-14-2022	Jun-14-2022	Jul-5-2022
Part Rated	PLANT, P	PLANT, P	PLANT, P	PLANT, P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100
Sample Size				
Number of Subsamples	1	1	1	1
Assessed By	C. BLAND	C. BLAND	C. BLAND	C. BLAND
Data Entry Date	Jul-21-2022	Jul-21-2022	Jul-21-2022	Jul-21-2022
Days After First/Last Applic.	21, 21	21, 21	21, 21	42, 12
Trt-Eval Interval	21 DA-A	21 DA-A	21 DA-A	42 DA-A
Plant-Eval Interval	22 DP-1	22 DP-1	22 DP-1	43 DP-1
Days After Emergence	16 DE-1	16 DE-1	16 DE-1	37 DE-1
ARM Action Codes				
Number of Decimals	0	0	0	0
Trt Treatment	1	2	3	4
No. Name				
Rate				
Appl				
Rate Unit				
Code				
7 ZIDUA PRO	6 fl oz/a A			
AMSOL	2.5 % v/v C			
ROUNDUP POWERMAX 3	30 fl oz/a C			
LIBERTY	32 fl oz/a C			
LSD P=.05	17.5	19.8	.	4.2
Standard Deviation	11.6	13.1	0.0	2.8
CV	15.55	16.81	0.0	3.04
Levene's F^	0.791	3.497*	.	0.758
Levene's Prob(F)	0.57	0.022*	.	0.592
Shapiro-Wilk^	0.9536	0.9586	.	0.8916*
P(Shapiro-Wilk)^	0.3232	0.4111	.	0.0144*
Skewness^	-0.7474	0.1852	.	-0.7022
P(Skewness)^	0.1495	0.7152	.	0.1746
Kurtosis^	0.2806	-0.9879	.	0.0339
P(Kurtosis)^	0.7759	0.3211	.	0.9726
Replicate F	1.043	0.135	0.000	1.995
Replicate Prob(F)	0.4020	0.9377	1.0000	0.1581
Treatment F	1.649	2.418	0.000	4.719
Treatment Prob(F)	0.2076	0.0849	1.0000	0.0087

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Valent Actives in a Roundup Xtend System - Conventional Tillage

Trial ID: 22S-TPAC-SOY-09 Cooperator Trial ID:
 Protocol ID: 22S-TPAC-SOY-09 Location: TPAC Trial Year: 2022
 Project ID: VUSA2022FIERCMD64.05 Project ID 2: Project ID 3:
 Study Director: Brent Mansfield Sponsor Contact: Eric Ott - Valent
 Investigator (Creator): Dr. Bill Johnson

Pest Type	W, Weed ECHCG	W, Weed CHEAL	W, Weed AMBTR	W, Weed ECHCG
Pest Code	Echinochloa cru>	Chenopodium alb>	Ambrosia trifida	Echinochloa cru>
Pest Scientific Name	common barnyard>	common lambsqua>	Giant ragweed	common barnyard>
Pest Name				
Crop Type, Code				
BBCH Scale				
Crop Scientific Name				
Crop Name				
Rating Date	Jul-5-2022	Jul-5-2022	Jul-19-2022	Jul-19-2022
Part Rated	PLANT, P	PLANT, P	PLANT, P	PLANT, P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit/Min/Max	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100
Sample Size				
Number of Subsamples	1	1	1	1
Assessed By	C. BLAND	C. BLAND	C. BLAND	C. BLAND
Data Entry Date	Jul-21-2022	Jul-21-2022	Jul-21-2022	Jul-21-2022
Days After First/Last Applic.	42, 12	42, 12	56, 26	56, 26
Trt-Eval Interval	42 DA-A	42 DA-A	56 DA-A	56 DA-A
Plant-Eval Interval	43 DP-1	43 DP-1	57 DP-1	57 DP-1
Days After Emergence	37 DE-1	37 DE-1	51 DE-1	51 DE-1
ARM Action Codes				
Number of Decimals	0	0	0	0
Trt Treatment	5	6	7	8
No. Name				
Rate				
Appl				
Rate Unit				
Code				
1 NONTREATED	0	0	0	0
2 FIERCE EZ 6 fl oz/a A	97 a	100 -	100 a	90 -
ROUNDUP POWERMAX 3 30 fl oz/a B				
XTENDIMAX 22 fl oz/a B				
PERPETUO 6 fl oz/a B				
SELECT MAX 9 fl oz/a B				
ACTIVATOR 90 0.25 % v/v B				
INTACT 0.5 % v/v B				
VOLIMINATE 20 fl oz/a B				
3 FIERCE MTZ 1 pt/a A	99 a	100 -	100 a	95 -
ROUNDUP POWERMAX 3 30 fl oz/a B				
XTENDIMAX 22 fl oz/a B				
PERPETUO 6 fl oz/a B				
SELECT MAX 9 fl oz/a B				
ACTIVATOR 90 0.25 % v/v B				
INTACT 0.5 % v/v B				
VOLIMINATE 20 fl oz/a B				
4 FIERCE XLT 4 oz/a A	98 a	100 -	100 a	97 -
ROUNDUP POWERMAX 3 30 fl oz/a B				
XTENDIMAX 22 fl oz/a B				
PERPETUO 6 fl oz/a B				
SELECT MAX 9 fl oz/a B				
ACTIVATOR 90 0.25 % v/v B				
INTACT 0.5 % v/v B				
VOLIMINATE 20 fl oz/a B				
5 ZIDUA PRO 6 fl oz/a A	98 a	100 -	99 ab	97 -
ROUNDUP POWERMAX 3 30 fl oz/a B				
XTENDIMAX 22 fl oz/a B				
INTACT 0.5 % v/v B				
VOLIMINATE 20 fl oz/a B				
6 ZIDUA PRO 6 fl oz/a A	91 b	100 -	95 bc	90 -
LIBERTY 32 fl oz/a B				
XTENDIMAX 22 fl oz/a B				
INTACT 0.5 % v/v B				
VOLIMINATE 20 fl oz/a B				

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Valent Actives in a Roundup Xtend System - Conventional Tillage

Trial ID: 22S-TPAC-SOY-09 Cooperator Trial ID:
 Protocol ID: 22S-TPAC-SOY-09 Location: TPAC Trial Year: 2022
 Project ID: VUSA2022FIERCMD64.05 Project ID 2: Project ID 3:
 Study Director: Brent Mansfield Sponsor Contact: Eric Ott - Valent
 Investigator (Creator): Dr. Bill Johnson

Pest Type	W, Weed ECHCG	W, Weed CHEAL	W, Weed AMBTR	W, Weed ECHCG
Pest Code	Echinochloa cru>	Chenopodium alb>	Ambrosia trifida	Echinochloa cru>
Pest Scientific Name	common barnyard>	common lambsqua>	Giant ragweed	common barnyard>
Pest Name				
Crop Type, Code				
BBCH Scale				
Crop Scientific Name				
Crop Name				
Rating Date	Jul-5-2022	Jul-5-2022	Jul-19-2022	Jul-19-2022
Part Rated	PLANT, P	PLANT, P	PLANT, P	PLANT, P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100
Sample Size				
Number of Subsamples	1	1	1	1
Assessed By	C. BLAND	C. BLAND	C. BLAND	C. BLAND
Data Entry Date	Jul-21-2022	Jul-21-2022	Jul-21-2022	Jul-21-2022
Days After First/Last Applic.	42, 12	42, 12	56, 26	56, 26
Trt-Eval Interval	42 DA-A	42 DA-A	56 DA-A	56 DA-A
Plant-Eval Interval	43 DP-1	43 DP-1	57 DP-1	57 DP-1
Days After Emergence	37 DE-1	37 DE-1	51 DE-1	51 DE-1
ARM Action Codes				
Number of Decimals	0	0	0	0
Trt Treatment	5	6	7	8
No. Name				
Rate				
Appl				
Rate Unit				
Code				
7 ZIDUA PRO	6 fl oz/a A			
AMSOL	2.5 % v/v C			
ROUNDUP POWERMAX 3	30 fl oz/a C			
LIBERTY	32 fl oz/a C			
LSD P=.05	4.2	.	4.0	6.2
Standard Deviation	2.8	0.0	2.6	4.1
CV	2.92	0.0	2.7	4.38
Levene's F^	0.975	.	1.536	1.528
Levene's Prob(F)	0.459	.	0.228	0.231
Shapiro-Wilk^	0.9462	.	0.956	0.9417
P(Shapiro-Wilk)^	0.2243	.	0.3633	0.1779
Skewness^	0.5942	.	-0.3076	-0.2163
P(Skewness)^	0.248	.	0.5455	0.6702
Kurtosis^	0.8865	.	-0.0597	-0.9304
P(Kurtosis)^	0.3722	.	0.9516	0.3495
Replicate F	3.538	0.000	1.600	0.125
Replicate Prob(F)	0.0406	1.0000	0.2312	0.9440
Treatment F	3.772	0.000	7.560	2.286
Treatment Prob(F)	0.0207	1.0000	0.0010	0.0985

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Valent Actives in a Roundup Xtend System - Conventional Tillage

Trial ID: 22S-TPAC-SOY-09 Cooperator Trial ID:
 Protocol ID: 22S-TPAC-SOY-09 Location: TPAC Trial Year: 2022
 Project ID: VUSA2022FIERCCEMD64.05 Project ID 2: Project ID 3:
 Study Director: Brent Mansfield Sponsor Contact: Eric Ott - Valent
 Investigator (Creator): Dr. Bill Johnson

Trt No.	Treatment Name	Rate	Appl Unit	Code	9	10	11	12
1	NONTREATED				0	6.873	13.18	18.4
2	FIERCE EZ 6 fl oz/a A ROUNDUP POWERMAX 3 30 fl oz/a B XTENDIMAX 22 fl oz/a B PERPETUO 6 fl oz/a B SELECT MAX 9 fl oz/a B ACTIVATOR 90 0.25 % v/v B INTACT 0.5 % v/v B VOLIMINATE 20 fl oz/a B				100 -	23.675 bc	13.63 -	63.2 bc
3	FIERCE MTZ 1 pt/a A ROUNDUP POWERMAX 3 30 fl oz/a B XTENDIMAX 22 fl oz/a B PERPETUO 6 fl oz/a B SELECT MAX 9 fl oz/a B ACTIVATOR 90 0.25 % v/v B INTACT 0.5 % v/v B VOLIMINATE 20 fl oz/a B				100 -	25.985 a	13.65 -	69.4 a
4	FIERCE XLT 4 oz/a A ROUNDUP POWERMAX 3 30 fl oz/a B XTENDIMAX 22 fl oz/a B PERPETUO 6 fl oz/a B SELECT MAX 9 fl oz/a B ACTIVATOR 90 0.25 % v/v B INTACT 0.5 % v/v B VOLIMINATE 20 fl oz/a B				100 -	26.333 a	13.60 -	70.3 a
5	ZIDUA PRO 6 fl oz/a A ROUNDUP POWERMAX 3 30 fl oz/a B XTENDIMAX 22 fl oz/a B INTACT 0.5 % v/v B VOLIMINATE 20 fl oz/a B				100 -	24.625 ab	13.73 -	65.6 ab
6	ZIDUA PRO 6 fl oz/a A LIBERTY 32 fl oz/a B XTENDIMAX 22 fl oz/a B INTACT 0.5 % v/v B VOLIMINATE 20 fl oz/a B				100 -	22.063 c	13.93 -	58.7 c

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Valent Actives in a Roundup Xtend System - Conventional Tillage

Trial ID: 22S-TPAC-SOY-09 Cooperator Trial ID:
 Protocol ID: 22S-TPAC-SOY-09 Location: TPAC Trial Year: 2022
 Project ID: VUSA2022FIERCCEMD64.05 Project ID 2: Project ID 3:
 Study Director: Brent Mansfield Sponsor Contact: Eric Ott - Valent
 Investigator (Creator): Dr. Bill Johnson

Pest Type	W, Weed			
Pest Code	CHEAL			
Pest Scientific Name	Chenopodium alb>			
Pest Name	common lambsqua>			
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	Jul-19-2022	Oct-14-2022	Oct-14-2022	Oct-14-2022
Part Rated	PLANT, P	PLOT, C	PLOT, C	PLOT, C
Rating Type	CONTRO	YIELD	MOICON	YIELD
Rating Unit/Min/Max	%, 0, 100	lb/plot, -, -	%, 0, 100	BU, -, -
Sample Size		1 PLOT		1 A
Number of Subsamples	1	1	1	1
Assessed By	C. BLAND	J. HAARMANN	J. HAARMANN	J. HAARMANN
Data Entry Date	Jul-21-2022	Oct-22-2022	Oct-22-2022	
Days After First/Last Applic.	56, 26	143, 113	143, 113	143, 113
Trt-Eval Interval	56 DA-A			
Plant-Eval Interval	57 DP-1	144 DP-1	144 DP-1	144 DP-1
Days After Emergence	51 DE-1	138 DE-1	138 DE-1	138 DE-1
ARM Action Codes				TY1
Number of Decimals	0			1
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	9	10
7 ZIDUA PRO	6 fl oz/a A		100 -	23.225 bc
AMSOL	2.5 % v/v C			13.80 -
ROUNDUP POWERMAX 3	30 fl oz/a C			61.9 bc
LIBERTY	32 fl oz/a C			
LSD P=.05			1.8883	0.892
Standard Deviation	0.0		1.2529	0.592
CV	0.0		5.15	4.31
Levene's F^			1.056	0.222
Levene's Prob(F)			0.416	0.948
Shapiro-Wilk^			0.9486	0.9585
P(Shapiro-Wilk)^			0.253	0.4088
Skewness^			0.8438	0.0665
P(Skewness)^			0.1058	0.8956
Kurtosis^			1.6023	-0.939
P(Kurtosis)^			0.1136	0.3451
Replicate F	0.000		6.136	0.356
Replicate Prob(F)	1.0000		0.0062	0.7854
Treatment F	0.000		6.944	0.175
Treatment Prob(F)	1.0000		0.0015	0.9678

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Valent Actives in a Roundup Xtend System - Conventional Tillage

Trial ID: 22S-TPAC-SOY-09 Cooperator Trial ID:
 Protocol ID: 22S-TPAC-SOY-09 Location: TPAC Trial Year: 2022
 Project ID: VUSA2022FIERCEMD64.05 Project ID 2: Project ID 3:
 Study Director: Brent Mansfield Sponsor Contact: Eric Ott - Valent
 Investigator (Creator): Dr. Bill Johnson

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
Part Rated
 PLANT = plant
 PLOT = plot
 P = Pest is Part Rated
 C = Crop is Part Rated
Rating Type
 CONTRO = control / burndown or knockdown
 YIELD = yield
 MOICON = moisture content
Rating Unit/Min/Max
 %, 0, 100 = percent
 lb/plot, , = pounds per plot
 BU, , = bushel

 PLOT = total plot
 A = acre
Plant-Eval Interval
 22 DP-1 = 1 GLXMA May-23-2022
 43 DP-1 = 1 GLXMA May-23-2022
 57 DP-1 = 1 GLXMA May-23-2022
 144 DP-1 = 1 GLXMA May-23-2022
ARM Action Codes
 TY1 = 2.68888889*[10]*(100-[11])/87

Trt No.	Treatment Name	Form Form		Form Type	Rate	Rate Unit	Appl Code	Rep 1	2	3	4	Notes
		Conc	Unit									
1	CHK NONTREATED							101	302	503	704	
2	HERB FIERCE EZ	3.04	LBA/GAL	SC	6 fl oz/a	A		102	402	504	801	
	HERB ROUNDUP POWERMAX 3	4.8	LBAE/GAL	SL	30 fl oz/a	B						
	HERB XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B						
	HERB PERPETUO	2.3	LBA/GAL	SC	6 fl oz/a	B						
	HERB SELECT MAX	1	LBA/GAL	EC	9 fl oz/a	B						
	ADJ ACTIVATOR 90	100 %		L	0.25 % v/v	B						
	ADJ INTACT	100 %		L	0.5 % v/v	B						
ADJ VOLIMINATE	100 %		L	20 fl oz/a	B							
3	HERB FIERCE MTZ	2.64	LBA/GAL	SC	1 pt/a	A		103	304	602	701	
	HERB ROUNDUP POWERMAX 3	4.8	LBAE/GAL	SL	30 fl oz/a	B						
	HERB XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B						
	HERB PERPETUO	2.3	LBA/GAL	SC	6 fl oz/a	B						
	HERB SELECT MAX	1	LBA/GAL	EC	9 fl oz/a	B						
	ADJ ACTIVATOR 90	100 %		L	0.25 % v/v	B						
	ADJ INTACT	100 %		L	0.5 % v/v	B						
ADJ VOLIMINATE	100 %		L	20 fl oz/a	B							
4	HERB FIERCE XLT	62.41 %		WG	4 oz/a	A		104	401	603	802	
	HERB ROUNDUP POWERMAX 3	4.8	LBAE/GAL	SL	30 fl oz/a	B						
	HERB XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B						
	HERB PERPETUO	2.3	LBA/GAL	SC	6 fl oz/a	B						
	HERB SELECT MAX	1	LBA/GAL	EC	9 fl oz/a	B						
	ADJ ACTIVATOR 90	100 %		L	0.25 % v/v	B						
	ADJ INTACT	100 %		L	0.5 % v/v	B						
ADJ VOLIMINATE	100 %		L	20 fl oz/a	B							
5	HERB ZIDUA PRO	4.09	LBA/GAL	SC	6 fl oz/a	A		201	303	601	803	
	HERB ROUNDUP POWERMAX 3	4.8	LBAE/GAL	SL	30 fl oz/a	B						
	HERB XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B						
	ADJ INTACT	100 %		L	0.5 % v/v	B						
	ADJ VOLIMINATE	100 %		L	20 fl oz/a	B						
6	HERB ZIDUA PRO	4.09	LBA/GAL	SC	6 fl oz/a	A		202	301	502	703	
	HERB LIBERTY	2.34	LBA/GAL	SL	32 fl oz/a	B						
	HERB XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B						
	ADJ INTACT	100 %		L	0.5 % v/v	B						
	ADJ VOLIMINATE	100 %		L	20 fl oz/a	B						

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Valent Actives in a Roundup Xtend System - Conventional Tillage

Trial ID: 22S-TPAC-SOY-09 Cooperator Trial ID:
 Protocol ID: 22S-TPAC-SOY-09 Location: TPAC Trial Year: 2022
 Project ID: VUSA2022FIERCMD64.05 Project ID 2: Project ID 3:
 Study Director: Brent Mansfield Sponsor Contact: Eric Ott - Valent
 Investigator (Creator): Dr. Bill Johnson

Trt No.	Treatment Type Name	Form Conc Unit	Form Type	Rate Rate Unit	Appl Code	Rep 1	2	3	4	Notes
7	HERB ZIDUA PRO	4.09 LBA/GAL	SC	6 fl oz/a A		203	403	501	702	
	ADJ AMSOL	3.4 LBA/GAL	L	2.5 % v/v C						
	HERB ROUNDUP POWERMAX 3	4.8 LBAE/GAL	SL	30 fl oz/a C						
	HERB LIBERTY	2.34 LBA/GAL	SL	32 fl oz/a C						

Sort Order: Replicate 1