

**Weed control with A21472 in RR2 Xtend soybean**

Trial ID: SOY05-17 Study Dir.: Sprague, Powell, Stiles  
 Conducted: Campus C-12 Investigator: Christy Sprague

**Planting Date:** May-9-2017 **Row Spacing:** 30 IN  
**Variety:** Asgrow 25X6 **No. of Reps:** 4  
**Population:** 155000 seeds/A **% OM:** 3.1  
**Soil Type:** L loam **pH:** 7.4  
**Plot Size:** 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

**Tillage/Previous Crops:** Fall chisel plow; spring soil finish twice  
**Fertilizer:**

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1	ANGR	mainly foxtail species	Annual grass
2	CHEAL	lambsquarters, common	Chenopodium album
3	AMBEL	ragweed, common	Ambrosia artemisiifolia

Crop	Code	Common Name
1	GLXMA	Soybean

**Application Description**

	A	B	C
<b>Application Timing:</b>	PRE	EPOS	POST
<b>Date Treated:</b>	May-9-2017	Jun-2-2017	Jun-13-2017
<b>Time Treated:</b>	4:30 PM	1:00 PM	12:30 PM
<b>% Cloud Cover:</b>	50	10	90
<b>Air Temp., Unit:</b>	64 F	78 F	84 F
<b>% Relative Humidity:</b>	20	29	56
<b>Wind Speed/Unit/Dir:</b>	0 mph	6 mph W	4 mph NW
<b>Soil Temp, Unit:</b>	60 F	73.8 F	80 F
<b>Leaf Moist/Dew Presence (Y/N):</b>	5	5	5
<b>Soil Moist:</b>	3	5	5

**Crop Stage at Each Application**

	A	B	C
<b>Crop 1 Name:</b>	GLXMA	GLXMA	GLXMA
<b>Height:</b>	4 "	7 "	
<b>Stage:</b>	V2	V3	

**Weed Stage at Each Application**

	A	B	C
<b>Weed 1 Name:</b>	ANGR	ANGR	ANGR
<b>Height:</b>		1-5 " (3)	1-2 " (1.5)
<b>Stage:</b>		5-6L	2-3L
<b>Weed 2 Name:</b>	CHEAL	CHEAL	CHEAL
<b>Height:</b>		2 "	2-4 " (3)
<b>Stage:</b>		4-6L	6-12L
<b>Weed 3 Name:</b>	AMBEL	AMBEL	AMBEL
<b>Height:</b>		1-4 " (2.5)	1-4 " (2.5)
<b>Stage:</b>		4-6L	6-8L

**Weed Density**

	1	2	3
<b>Date:</b>	Jun-13-2017	Jun-13-2017	Jun-13-2017
<b>Weed Name:</b>	ANGR	CHEAL	AMBEL
<b>Density:</b>	48 FT2	12 FT2	11 FT2

**Application Equipment**

Appl	Sprayer Type	Ground Speed	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	Spray Volume	Carrier	Operation Pressure
A	Cub	3.8 MPH	AIXR	11003	22 "	20 "	100 "	19 GPA	WATER	30 PSI
B	Cub	3.8 MPH	TTI	11003	26 "	20 "	100 "	19 GPA	WATER	25 PSI
C	Cub	3.8 MPH	TTI	11003	24 "	20 "	100 "	19 GPA	WATER	25 PSI

**Comments:** The common ragweed population at this location is resistant to ALS-inhibiting (Group 2) herbicides.

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**Investigator: Christy Sprague**  
**Study Director: Sprague, Powell, Stiles**

Pest Code	ANGR	CHEAL	AMBEL	ANGR
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
Rating Date	Jun-12-2017	Jun-12-2017	Jun-12-2017	Jun-12-2017
Rating Type	injury	control	control	control
Rating Unit	percent	percent	percent	percent
Trt-Eval Interval	10 DA-B	10 DA-B	10 DA-B	10 DA-B
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*	*
1	Boundary	6.5 L		1.8 pt/a		A	5	88	60	46	8	98
1	A21472	3.4 L		56.5 fl oz/a		C						
1	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
1	Class Act Ridion	L		1 % v/v		C						
2	BroadAxe XC	7 L		25 fl oz/a		A	5	82	88	15	13	97
2	A21472	3.4 L		56.5 fl oz/a		C						
2	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
2	Class Act Ridion	L		1 % v/v		C						
3	Prefix	5.29 L		2 pt/a		A	6	82	40	65	8	98
3	A21472	3.4 L		56.5 fl oz/a		C						
3	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
3	Class Act Ridion	L		1 % v/v		C						
4	Untreated						0	0	0	0	0	0
5	Boundary	6.5 L		1.8 pt/a		A	6	82	78	61	20	98
5	Flexstar	1.88 L		1 pt/a		C						
5	A21472	3.4 L		56.5 fl oz/a		C						
5	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
5	Class Act Ridion	L		1 % v/v		C						
6	BroadAxe XC	7 L		25 fl oz/a		A	6	89	86	16	24	98
6	Flexstar	1.88 L		1 pt/a		C						
6	A21472	3.4 L		56.5 fl oz/a		C						
6	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
6	Class Act Ridion	L		1 % v/v		C						
7	Valor XLT	40.3 WG		3 oz/a		A	4	52	83	23	1	83
7	XtendiMax	2.9 SL		22 fl oz/a		C						
7	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
7	Class Act Ridion	L		1 % v/v		C						
8	Zidua PRO	4.09 L		6 fl oz/a		A	1	71	80	53	0	95
8	XtendiMax	2.9 SL		22 fl oz/a		C						
8	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
8	Class Act Ridion	L		1 % v/v		C						
9	A21472	3.4 L		56.5 fl oz/a		B	12	92	95	100	0	73
9	Roundup PowerMax	4.5 SL		28.4 fl oz/a		B						
9	Class Act Ridion	L		1 % v/v		B						
10	XtendiMax	2.9 SL		22 fl oz/a		B	2	86	99	100	0	73
10	Roundup PowerMax	4.5 SL		28.4 fl oz/a		B						
10	Class Act Ridion	L		1 % v/v		B						
LSD P=.05							2.4	16.3	20.6	18.9	3.8	6.0
Standard Deviation							1.6	11.2	14.2	13.0	2.6	4.2
CV							37.24	15.56	20.06	27.2	35.68	5.12

\* Adjusted means  
 Could not calculate LSD (% mean diff) for columns 16,17,19,20,21,24 because error mean square = 0.

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Trial ID: SOY05-17

Location: Campus C-12

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code	CHEAL	AMBEL	GLXMA	ANGR	CHEAL	AMBEL			
Crop Code									
Rating Date	Jun-20-2017	Jun-20-2017	Jun-27-2017	Jun-27-2017	Jun-27-2017	Jun-27-2017			
Rating Type	control	control	injury	control	control	control			
Rating Unit	percent	percent	percent	percent	percent	percent			
Trt-Eval Interval	7 DA-C	7 DA-C	14 DA-C	14 DA-C	14 DA-C	14 DA-C			
Number of Decimals	0	0	0	0	0	0			
Trt Treatment	Form Form	Rate	Appl	*	*	*	*	*	*
No. Name	Conc Type	Rate Unit	Code						
1 Boundary	6.5 L	1.8 pt/a	A	95	76	9	99	100	100
1 A21472	3.4 L	56.5 fl oz/a	C						
1 Roundup PowerMax	4.5 SL	28.4 fl oz/a	C						
1 Class Act Ridion	L	1 % v/v	C						
2 BroadAxe XC	7 L	25 fl oz/a	A	99	79	8	100	100	100
2 A21472	3.4 L	56.5 fl oz/a	C						
2 Roundup PowerMax	4.5 SL	28.4 fl oz/a	C						
2 Class Act Ridion	L	1 % v/v	C						
3 Prefix	5.29 L	2 pt/a	A	91	91	6	100	100	100
3 A21472	3.4 L	56.5 fl oz/a	C						
3 Roundup PowerMax	4.5 SL	28.4 fl oz/a	C						
3 Class Act Ridion	L	1 % v/v	C						
4 Untreated				0	0	0	0	0	0
5 Boundary	6.5 L	1.8 pt/a	A	97	99	20	100	100	100
5 Flexstar	1.88 L	1 pt/a	C						
5 A21472	3.4 L	56.5 fl oz/a	C						
5 Roundup PowerMax	4.5 SL	28.4 fl oz/a	C						
5 Class Act Ridion	L	1 % v/v	C						
6 BroadAxe XC	7 L	25 fl oz/a	A	99	95	20	100	100	100
6 Flexstar	1.88 L	1 pt/a	C						
6 A21472	3.4 L	56.5 fl oz/a	C						
6 Roundup PowerMax	4.5 SL	28.4 fl oz/a	C						
6 Class Act Ridion	L	1 % v/v	C						
7 Valor XLT	40.3 WG	3 oz/a	A	98	81	2	99	100	100
7 XtendiMax	2.9 SL	22 fl oz/a	C						
7 Roundup PowerMax	4.5 SL	28.4 fl oz/a	C						
7 Class Act Ridion	L	1 % v/v	C						
8 Zidua PRO	4.09 L	6 fl oz/a	A	98	80	1	98	100	100
8 XtendiMax	2.9 SL	22 fl oz/a	C						
8 Roundup PowerMax	4.5 SL	28.4 fl oz/a	C						
8 Class Act Ridion	L	1 % v/v	C						
9 A21472	3.4 L	56.5 fl oz/a	B	93	100	1	78	88	100
9 Roundup PowerMax	4.5 SL	28.4 fl oz/a	B						
9 Class Act Ridion	L	1 % v/v	B						
10 XtendiMax	2.9 SL	22 fl oz/a	B	88	99	0	74	87	99
10 Roundup PowerMax	4.5 SL	28.4 fl oz/a	B						
10 Class Act Ridion	L	1 % v/v	B						
LSD P=.05				6.1	5.3	3.3	2.3	4.8	1.1
Standard Deviation				4.2	3.7	2.3	1.6	3.3	0.8
CV				4.95	4.6	35.44	1.85	3.77	0.88

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**Investigator: Christy Sprague**  
**Study Director: Sprague, Powell, Stiles**

Pest Code	ANGR	CHEAL	AMBEL	ANGR
Crop Code	GLXMA			GLXMA
Rating Date	Jul-11-2017	Jul-11-2017	Jul-11-2017	Jul-11-2017
Rating Type	injury	control	control	control
Rating Unit	percent	percent	percent	percent
Trt-Eval Interval	28 DA-C	28 DA-C	28 DA-C	28 DA-C
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*	*
1	Boundary	6.5 L		1.8 pt/a		A	2	98	100	100	0	99
	1 A21472	3.4 L		56.5 fl oz/a		C						
	1 Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
	1 Class Act Ridion	L		1 % v/v		C						
2	BroadAxe XC	7 L		25 fl oz/a		A	1	98	100	100	0	97
	2 A21472	3.4 L		56.5 fl oz/a		C						
	2 Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
	2 Class Act Ridion	L		1 % v/v		C						
3	Prefix	5.29 L		2 pt/a		A	1	100	100	100	0	100
	3 A21472	3.4 L		56.5 fl oz/a		C						
	3 Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
	3 Class Act Ridion	L		1 % v/v		C						
4	Untreated						0	0	0	0	0	0
5	Boundary	6.5 L		1.8 pt/a		A	1	99	100	100	0	99
	5 Flexstar	1.88 L		1 pt/a		C						
	5 A21472	3.4 L		56.5 fl oz/a		C						
	5 Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
	5 Class Act Ridion	L		1 % v/v		C						
6	BroadAxe XC	7 L		25 fl oz/a		A	2	100	100	100	0	100
	6 Flexstar	1.88 L		1 pt/a		C						
	6 A21472	3.4 L		56.5 fl oz/a		C						
	6 Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
	6 Class Act Ridion	L		1 % v/v		C						
7	Valor XLT	40.3 WG		3 oz/a		A	0	81	100	100	0	83
	7 XtendiMax	2.9 SL		22 fl oz/a		C						
	7 Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
	7 Class Act Ridion	L		1 % v/v		C						
8	Zidua PRO	4.09 L		6 fl oz/a		A	1	95	100	100	0	97
	8 XtendiMax	2.9 SL		22 fl oz/a		C						
	8 Roundup PowerMax	4.5 SL		28.4 fl oz/a		C						
	8 Class Act Ridion	L		1 % v/v		C						
9	A21472	3.4 L		56.5 fl oz/a		B	0	65	96	100	0	65
	9 Roundup PowerMax	4.5 SL		28.4 fl oz/a		B						
	9 Class Act Ridion	L		1 % v/v		B						
10	XtendiMax	2.9 SL		22 fl oz/a		B	0	50	98	100	0	55
	10 Roundup PowerMax	4.5 SL		28.4 fl oz/a		B						
	10 Class Act Ridion	L		1 % v/v		B						
LSD P=.05							1.0	5.7	2.5	.	.	3.7
Standard Deviation							0.7	3.9	1.7	0.0	0.0	2.5
CV							94.04	5.01	1.91	0.0	0.0	3.18

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Trial ID: SOY05-17

Location: Campus C-12

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

	CHEAL	AMBEL	GLXMA	ANGR	CHEAL	AMBEL
Pest Code						
Crop Code						
Rating Date	Aug-8-2017	Aug-8-2017	Sep-21-2017	Sep-21-2017	Sep-21-2017	Sep-21-2017
Rating Type	control	control	injury	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	56 DA-C	56 DA-C	100 DA-C	100 DA-C	100 DA-C	100 DA-C
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*	*	
1	Boundary	6.5 L		1.8 pt/a		A	100	100	0	97	100	100	
1	A21472	3.4 L		56.5 fl oz/a		C							
1	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C							
1	Class Act Ridion	L		1 % v/v		C							
2	BroadAxe XC	7 L		25 fl oz/a		A	100	100	0	97	100	100	
2	A21472	3.4 L		56.5 fl oz/a		C							
2	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C							
2	Class Act Ridion	L		1 % v/v		C							
3	Prefix	5.29 L		2 pt/a		A	100	100	0	99	100	100	
3	A21472	3.4 L		56.5 fl oz/a		C							
3	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C							
3	Class Act Ridion	L		1 % v/v		C							
4	Untreated						0	0	0	0	0	0	
5	Boundary	6.5 L		1.8 pt/a		A	100	100	0	99	100	100	
5	Flexstar	1.88 L		1 pt/a		C							
5	A21472	3.4 L		56.5 fl oz/a		C							
5	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C							
5	Class Act Ridion	L		1 % v/v		C							
6	BroadAxe XC	7 L		25 fl oz/a		A	100	100	0	98	100	100	
6	Flexstar	1.88 L		1 pt/a		C							
6	A21472	3.4 L		56.5 fl oz/a		C							
6	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C							
6	Class Act Ridion	L		1 % v/v		C							
7	Valor XLT	40.3 WG		3 oz/a		A	100	100	0	81	100	100	
7	XtendiMax	2.9 SL		22 fl oz/a		C							
7	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C							
7	Class Act Ridion	L		1 % v/v		C							
8	Zidua PRO	4.09 L		6 fl oz/a		A	100	100	0	98	100	100	
8	XtendiMax	2.9 SL		22 fl oz/a		C							
8	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C							
8	Class Act Ridion	L		1 % v/v		C							
9	A21472	3.4 L		56.5 fl oz/a		B	100	100	0	58	96	100	
9	Roundup PowerMax	4.5 SL		28.4 fl oz/a		B							
9	Class Act Ridion	L		1 % v/v		B							
10	XtendiMax	2.9 SL		22 fl oz/a		B	100	100	0	25	99	100	
10	Roundup PowerMax	4.5 SL		28.4 fl oz/a		B							
10	Class Act Ridion	L		1 % v/v		B							
LSD P=.05							.	.	.	5.0	2.8	.	
Standard Deviation							0.0	0.0	0.0	3.5	2.0	0.0	
CV							0.0	0.0	0.0	4.61	2.19	0.0	

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Trial ID: SOY05-17

Location: Campus C-12

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code			
Crop Code		GLXMA	GLXMA
Rating Date		Oct-18-2017	Oct-18-2017
Rating Type		moisture	yield
Rating Unit		percent	bu/acre
Trt-Eval Interval		127 DA-C	at 13% M
Number of Decimals		1	1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*
1	Boundary	6.5 L		1.8 pt/a		A	12.3	58.4
1	A21472	3.4 L		56.5 fl oz/a		C		
1	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C		
1	Class Act Ridion	L		1 % v/v		C		
2	BroadAxe XC	7 L		25 fl oz/a		A	12.7	56.3
2	A21472	3.4 L		56.5 fl oz/a		C		
2	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C		
2	Class Act Ridion	L		1 % v/v		C		
3	Prefix	5.29 L		2 pt/a		A	12.4	50.5
3	A21472	3.4 L		56.5 fl oz/a		C		
3	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C		
3	Class Act Ridion	L		1 % v/v		C		
4	Untreated						12.0	11.8
5	Boundary	6.5 L		1.8 pt/a		A	12.6	56.0
5	Flexstar	1.88 L		1 pt/a		C		
5	A21472	3.4 L		56.5 fl oz/a		C		
5	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C		
5	Class Act Ridion	L		1 % v/v		C		
6	BroadAxe XC	7 L		25 fl oz/a		A	12.8	54.3
6	Flexstar	1.88 L		1 pt/a		C		
6	A21472	3.4 L		56.5 fl oz/a		C		
6	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C		
6	Class Act Ridion	L		1 % v/v		C		
7	Valor XLT	40.3 WG		3 oz/a		A	12.6	58.5
7	XtendiMax	2.9 SL		22 fl oz/a		C		
7	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C		
7	Class Act Ridion	L		1 % v/v		C		
8	Zidua PRO	4.09 L		6 fl oz/a		A	12.3	62.2
8	XtendiMax	2.9 SL		22 fl oz/a		C		
8	Roundup PowerMax	4.5 SL		28.4 fl oz/a		C		
8	Class Act Ridion	L		1 % v/v		C		
9	A21472	3.4 L		56.5 fl oz/a		B	12.7	55.7
9	Roundup PowerMax	4.5 SL		28.4 fl oz/a		B		
9	Class Act Ridion	L		1 % v/v		B		
10	XtendiMax	2.9 SL		22 fl oz/a		B	12.6	57.8
10	Roundup PowerMax	4.5 SL		28.4 fl oz/a		B		
10	Class Act Ridion	L		1 % v/v		B		
	LSD P=.05						0.49	9.05
	Standard Deviation						0.34	6.24
	CV						2.7	11.96

\* Adjusted means

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