

Comparison of weed control systems in Roundup Ready 2 Yield soybean

Trial ID: SOY12-16 Study Dir.: Sprague, Powell, Stiles
 Conducted: Campus T-14 Investigator: Christy Sprague

Planting Date: May-18-2016 **Row Spacing:** 30 IN
Variety: AG2433 **No. of Reps:** 4
Population: 155000 seeds/A **% OM:** 3.0
Soil Type: SCL sandy clay loam **pH:** 6.4
Plot Size: 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall chisel plowed; spring soil finished 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	AMAPO	amaranth, Powell	Amaranthus powellii
4	AMBEL	ragweed, common	Ambrosia artemisiifolia
5	ABUTH	velvetleaf	Abutilon theophrasti
Crop	Code	Common Name	
1	GLXMA	Soybean	

Application Description

	A	B
Application Timing:	PRE	POST
Date Treated:	May-18-2016	Jun-13-2016
Time Treated:	9:30 AM	10:50 AM
% Cloud Cover:	0	60
Air Temp., Unit:	56 F	46 F
% Relative Humidity:	44	46
Wind Speed/Unit/Dir:	5 mph NE	4 mph S
Soil Temp, Unit:	51 F	68 F
Leaf Moist/Dew Presence (Y/N):	5	5
Soil Moist:	3	4

Crop Stage at Each Application

	A	B
Crop 1 Name:	GLXMA	GLXMA
Height:		7 "
Stage:		V2-V3

Weed Stage at Each Application

	A	B
Weed 1 Name:	ANGR	ANGR
Height:		5 "
Stage:		4-5L
Weed 2 Name:	CHEAL	CHEAL
Height:		1-2 " (1)
Stage:		6-11L
Weed 3 Name:	AMAPO	AMAPO
Height:		2-3 " (2)
Stage:		8-10L
Weed 4 Name:	AMBEL	AMBEL
Height:		1-4 " (2)
Stage:		4-6L
Weed 5 Name:	ABUTH	ABUTH
Height:		1-3 " (2)
Stage:		2-6L

Weed Density

	1	2	3	4	5
Date:	Jun-13-2016	Jun-13-2016	Jun-13-2016	Jun-13-2016	Jun-13-2016
Weed Name:	ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Density:	1 FT2	9 FT2	1 FT2	1 FT2	1 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 GAL/AC	WATER	30 PSI
B	CUB	3.8 mph	AIXR	11003	24 "	20 "	100 "	19 GAL/AC	WATER	30 PSI

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Comments:

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Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

Pest Code		CHEAL	AMAPO	AMBEL	ABUTH	
Crop Code	GLXMA					GLXMA
Rating Date	Jun-14-2016	Jun-14-2016	Jun-14-2016	Jun-14-2016	Jun-14-2016	Jul-11-2016
Rating Type	injury	control	control	control	control	injury
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A	28 DA-B
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Rate Unit	Appl Code						
1	Rowel	2.5 oz/a	A	0	61	100	64	65	5
1	Warrant Ultra	50 fl oz/a	B						
1	Roundup PowerMax	32 fl oz/a	B						
1	AMS	17 lb/100 gal	B						
2	Rowel FX	4 oz/a	A	0	75	100	75	61	5
2	Warrant Ultra	50 fl oz/a	B						
2	Roundup PowerMax	32 fl oz/a	B						
2	AMS	17 lb/100 gal	B						
3	Rowel	2 oz/a	A	0	79	100	85	55	6
3	Warrant	3 pt/a	A						
3	Warrant Ultra	50 fl oz/a	B						
3	Roundup PowerMax	32 fl oz/a	B						
3	AMS	17 lb/100 gal	B						
4	Warrant Ultra	50 fl oz/a	A	6	58	100	89	53	5
4	Cobra	10 fl oz/a	B						
4	Roundup PowerMax	32 fl oz/a	B						
4	AMS	17 lb/100 gal	B						
5	Warrant	3 pt/a	A	5	73	75	80	54	5
5	Metribuzin	6 oz/a	A						
5	Cobra	10 fl oz/a	B						
5	Warrant	3 pt/a	B						
5	Roundup PowerMax	32 fl oz/a	B						
5	AMS	17 lb/100 gal	B						
6	Untreated			0	0	0	0	0	0
7	Authority MTZ	16 oz/a	A	5	55	100	68	60	1
7	Marvel	7.25 fl oz/a	B						
7	Roundup PowerMax	32 fl oz/a	B						
7	AMS	17 lb/100 gal	B						
8	Authority MAXX	5 oz/a	A	5	74	95	70	50	0
8	Marvel	7.25 fl oz/a	B						
8	Roundup PowerMax	32 fl oz/a	B						
8	AMS	17 lb/100 gal	B						
9	Fierce XLT	4 oz/a	A	6	84	100	86	60	6
9	Cobra	10 fl oz/a	B						
9	Roundup PowerMax	32 fl oz/a	B						
9	AMS	17 lb/100 gal	B						

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Pest Code		CHEAL	AMAPO	AMBEL	ABUTH	
Crop Code	GLXMA					GLXMA
Rating Date	Jun-14-2016	Jun-14-2016	Jun-14-2016	Jun-14-2016	Jun-14-2016	Jul-11-2016
Rating Type	injury	control	control	control	control	injury
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A	28 DA-B
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Rate Unit	Appl Code						
10	Zidua SC	4.1 fl oz/a	A	3	33	75	55	53	1
10	Ultra Blazer	1 pt/a	B						
10	Roundup PowerMax	32 fl oz/a	B						
10	AMS	17 lb/100 gal	B						
11	Verdict	5 fl oz/a	A	6	26	65	43	50	5
11	Ultra Blazer	1 pt/a	B						
11	Roundup PowerMax	32 fl oz/a	B						
11	AMS	17 lb/100 gal	B						
12	BroadAxe XC	32 fl oz/a	A	6	78	100	71	89	3
12	Prefix	2 pt/a	B						
12	Roundup PowerMax	32 fl oz/a	B						
12	AMS	17 lb/100 gal	B						
13	Prefix	2 pt/a	A	0	30	100	63	50	0
13	Sequence	3 pt/a	B						
13	AMS	17 lb/100 gal	B						
14	Trivence	6 oz/a	A	5	63	100	78	59	6
14	Cobra	10 fl oz/a	B						
14	Warrant	3 pt/a	B						
14	Roundup PowerMax	32 fl oz/a	B						
14	AMS	17 lb/100 gal	B						
15	Rowel	2.5 oz/a	A	0	78	100	83	55	3
15	Metribuzin	6 oz/a	A						
15	Warrant Ultra	50 fl oz/a	B						
15	Roundup PowerMax	32 fl oz/a	B						
15	AMS	17 lb/100 gal	B						
LSD P=.05				1.1	15.1	19.7	22.4	12.4	3.2
Standard Deviation				0.8	10.5	13.8	15.7	8.7	2.2
CV				25.55	18.31	15.83	23.36	16.04	66.6

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Pest Code	ANGR	CHEAL	AMAPO	AMBEL		ANGR	CHEAL
Crop Code					GLXMA		
Rating Date	Jul-11-2016	Jul-11-2016	Jul-11-2016	Jul-11-2016	Aug-8-2016	Aug-8-2016	Aug-8-2016
Rating Type	control	control	control	control	injury	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	28 DA-B	28 DA-B	28 DA-B	28 DA-B	56 DA-B	56 DA-B	56 DA-B
Number of Decimals	0	0	0	0	0	0	0

Trt No.	Treatment Name	Rate Unit	Appl Code	ANGR	CHEAL	AMAPO	AMBEL	GLXMA	ANGR	CHEAL
1	Rowel	2.5 oz/a	A	100	84	100	99	0	100	76
1	Warrant Ultra	50 fl oz/a	B							
1	Roundup PowerMax	32 fl oz/a	B							
1	AMS	17 lb/100 gal	B							
2	Rowel FX	4 oz/a	A	100	92	100	100	0	100	86
2	Warrant Ultra	50 fl oz/a	B							
2	Roundup PowerMax	32 fl oz/a	B							
2	AMS	17 lb/100 gal	B							
3	Rowel	2 oz/a	A	100	91	100	99	0	100	84
3	Warrant	3 pt/a	A							
3	Warrant Ultra	50 fl oz/a	B							
3	Roundup PowerMax	32 fl oz/a	B							
3	AMS	17 lb/100 gal	B							
4	Warrant Ultra	50 fl oz/a	A	100	86	100	100	0	100	82
4	Cobra	10 fl oz/a	B							
4	Roundup PowerMax	32 fl oz/a	B							
4	AMS	17 lb/100 gal	B							
5	Warrant	3 pt/a	A	100	92	100	100	0	100	91
5	Metribuzin	6 oz/a	A							
5	Cobra	10 fl oz/a	B							
5	Warrant	3 pt/a	B							
5	Roundup PowerMax	32 fl oz/a	B							
5	AMS	17 lb/100 gal	B							
6	Untreated			0	0	0	0	0	0	0
7	Authority MTZ	16 oz/a	A	100	96	100	100	0	100	92
7	Marvel	7.25 fl oz/a	B							
7	Roundup PowerMax	32 fl oz/a	B							
7	AMS	17 lb/100 gal	B							
8	Authority MAXX	5 oz/a	A	100	94	100	96	0	100	92
8	Marvel	7.25 fl oz/a	B							
8	Roundup PowerMax	32 fl oz/a	B							
8	AMS	17 lb/100 gal	B							
9	Fierce XLT	4 oz/a	A	100	91	100	100	0	99	91
9	Cobra	10 fl oz/a	B							
9	Roundup PowerMax	32 fl oz/a	B							
9	AMS	17 lb/100 gal	B							

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Crop Code					GLXMA		
Rating Date	Jul-11-2016	Jul-11-2016	Jul-11-2016	Jul-11-2016	Aug-8-2016	Aug-8-2016	Aug-8-2016
Rating Type	control	control	control	control	injury	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	28 DA-B	28 DA-B	28 DA-B	28 DA-B	56 DA-B	56 DA-B	56 DA-B
Number of Decimals	0	0	0	0	0	0	0

Trt No.	Treatment Name	Rate Unit	Appl Code							
10	Zidua SC	4.1 fl oz/a	A	100	79	100	100	0	100	80
10	Ultra Blazer	1 pt/a	B							
10	Roundup PowerMax	32 fl oz/a	B							
10	AMS	17 lb/100 gal	B							
11	Verdict	5 fl oz/a	A	100	71	100	98	0	100	70
11	Ultra Blazer	1 pt/a	B							
11	Roundup PowerMax	32 fl oz/a	B							
11	AMS	17 lb/100 gal	B							
12	BroadAxe XC	32 fl oz/a	A	100	97	100	100	0	100	96
12	Prefix	2 pt/a	B							
12	Roundup PowerMax	32 fl oz/a	B							
12	AMS	17 lb/100 gal	B							
13	Prefix	2 pt/a	A	100	46	100	99	0	100	48
13	Sequence	3 pt/a	B							
13	AMS	17 lb/100 gal	B							
14	Trivence	6 oz/a	A	100	85	100	100	0	100	81
14	Cobra	10 fl oz/a	B							
14	Warrant	3 pt/a	B							
14	Roundup PowerMax	32 fl oz/a	B							
14	AMS	17 lb/100 gal	B							
15	Rowel	2.5 oz/a	A	100	89	100	100	0	100	86
15	Metribuzin	6 oz/a	A							
15	Warrant Ultra	50 fl oz/a	B							
15	Roundup PowerMax	32 fl oz/a	B							
15	AMS	17 lb/100 gal	B							
	LSD P=.05			0.7	7.7	.	2.8	.	0.9	8.6
	Standard Deviation			0.5	5.4	0.0	2.0	0.0	0.7	6.0
	CV			0.49	6.82	0.0	2.11	0.0	0.71	7.84

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Pest Code	AMAPO	AMBEL	ANGR	CHEAL	AMAPO	AMBEL
Crop Code						
Rating Date	Aug-8-2016	Aug-8-2016	Oct-10-2016	Oct-10-2016	Oct-10-2016	Oct-10-2016
Rating Type	control	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	56 DA-B	56 DA-B	119 DA-B	119 DA-B	119 DA-B	119 DA-B
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Rate Unit	Appl Code	AMAPO	AMBEL	ANGR	CHEAL	AMAPO	AMBEL
1	Rowel	2.5 oz/a	A	100	100	100	72	100	100
1	Warrant Ultra	50 fl oz/a	B						
1	Roundup PowerMax	32 fl oz/a	B						
1	AMS	17 lb/100 gal	B						
2	Rowel FX	4 oz/a	A	100	99	100	77	99	98
2	Warrant Ultra	50 fl oz/a	B						
2	Roundup PowerMax	32 fl oz/a	B						
2	AMS	17 lb/100 gal	B						
3	Rowel	2 oz/a	A	100	99	100	74	100	99
3	Warrant	3 pt/a	A						
3	Warrant Ultra	50 fl oz/a	B						
3	Roundup PowerMax	32 fl oz/a	B						
3	AMS	17 lb/100 gal	B						
4	Warrant Ultra	50 fl oz/a	A	100	100	100	71	100	96
4	Cobra	10 fl oz/a	B						
4	Roundup PowerMax	32 fl oz/a	B						
4	AMS	17 lb/100 gal	B						
5	Warrant	3 pt/a	A	100	100	100	81	100	100
5	Metribuzin	6 oz/a	A						
5	Cobra	10 fl oz/a	B						
5	Warrant	3 pt/a	B						
5	Roundup PowerMax	32 fl oz/a	B						
5	AMS	17 lb/100 gal	B						
6	Untreated			0	0	0	0	0	0
7	Authority MTZ	16 oz/a	A	100	98	100	88	99	100
7	Marvel	7.25 fl oz/a	B						
7	Roundup PowerMax	32 fl oz/a	B						
7	AMS	17 lb/100 gal	B						
8	Authority MAXX	5 oz/a	A	100	95	100	87	97	100
8	Marvel	7.25 fl oz/a	B						
8	Roundup PowerMax	32 fl oz/a	B						
8	AMS	17 lb/100 gal	B						
9	Fierce XLT	4 oz/a	A	100	100	100	81	100	100
9	Cobra	10 fl oz/a	B						
9	Roundup PowerMax	32 fl oz/a	B						
9	AMS	17 lb/100 gal	B						

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Pest Code	AMAPO	AMBEL	ANGR	CHEAL	AMAPO	AMBEL
Crop Code						
Rating Date	Aug-8-2016	Aug-8-2016	Oct-10-2016	Oct-10-2016	Oct-10-2016	Oct-10-2016
Rating Type	control	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	56 DA-B	56 DA-B	119 DA-B	119 DA-B	119 DA-B	119 DA-B
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Rate Unit	Appl Code	AMAPO	AMBEL	ANGR	CHEAL	AMAPO	AMBEL
10	Zidua SC	4.1 fl oz/a	A	100	100	100	67	100	99
10	Ultra Blazer	1 pt/a	B						
10	Roundup PowerMax	32 fl oz/a	B						
10	AMS	17 lb/100 gal	B						
11	Verdict	5 fl oz/a	A	100	98	97	58	100	97
11	Ultra Blazer	1 pt/a	B						
11	Roundup PowerMax	32 fl oz/a	B						
11	AMS	17 lb/100 gal	B						
12	BroadAxe XC	32 fl oz/a	A	100	100	100	92	100	99
12	Prefix	2 pt/a	B						
12	Roundup PowerMax	32 fl oz/a	B						
12	AMS	17 lb/100 gal	B						
13	Prefix	2 pt/a	A	100	100	100	43	100	100
13	Sequence	3 pt/a	B						
13	AMS	17 lb/100 gal	B						
14	Trivence	6 oz/a	A	100	100	100	75	100	99
14	Cobra	10 fl oz/a	B						
14	Warrant	3 pt/a	B						
14	Roundup PowerMax	32 fl oz/a	B						
14	AMS	17 lb/100 gal	B						
15	Rowel	2.5 oz/a	A	100	98	100	79	100	96
15	Metribuzin	6 oz/a	A						
15	Warrant Ultra	50 fl oz/a	B						
15	Roundup PowerMax	32 fl oz/a	B						
15	AMS	17 lb/100 gal	B						
	LSD P=.05			.	4.1	1.8	9.1	2.3	4.2
	Standard Deviation			0.0	2.9	1.2	6.4	1.6	2.9
	CV			0.0	3.09	1.32	9.14	1.77	3.19

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Pest Code		
Crop Code	GLXMA	GLXMA
Rating Date	Oct-23-2016	Oct-23-2016
Rating Type	moisture	yield
Rating Unit	percent	bu/acre
Trt-Eval Interval	132 DA-B	at 13% M
Number of Decimals	1	1

Trt No.	Treatment Name	Rate	Unit	Appl Code		
1	Rowel	2.5 oz/a		A	15.1	76.2
1	Warrant Ultra	50 fl oz/a		B		
1	Roundup PowerMax	32 fl oz/a		B		
1	AMS	17 lb/100 gal		B		
2	Rowel FX	4 oz/a		A	15.0	80.3
2	Warrant Ultra	50 fl oz/a		B		
2	Roundup PowerMax	32 fl oz/a		B		
2	AMS	17 lb/100 gal		B		
3	Rowel	2 oz/a		A	15.2	73.8
3	Warrant	3 pt/a		A		
3	Warrant Ultra	50 fl oz/a		B		
3	Roundup PowerMax	32 fl oz/a		B		
3	AMS	17 lb/100 gal		B		
4	Warrant Ultra	50 fl oz/a		A	15.1	78.5
4	Cobra	10 fl oz/a		B		
4	Roundup PowerMax	32 fl oz/a		B		
4	AMS	17 lb/100 gal		B		
5	Warrant	3 pt/a		A	15.1	75.8
5	Metribuzin	6 oz/a		A		
5	Cobra	10 fl oz/a		B		
5	Warrant	3 pt/a		B		
5	Roundup PowerMax	32 fl oz/a		B		
5	AMS	17 lb/100 gal		B		
6	Untreated				16.0	18.1
7	Authority MTZ	16 oz/a		A	15.1	78.4
7	Marvel	7.25 fl oz/a		B		
7	Roundup PowerMax	32 fl oz/a		B		
7	AMS	17 lb/100 gal		B		
8	Authority MAXX	5 oz/a		A	15.0	79.9
8	Marvel	7.25 fl oz/a		B		
8	Roundup PowerMax	32 fl oz/a		B		
8	AMS	17 lb/100 gal		B		
9	Fierce XLT	4 oz/a		A	15.0	77.9
9	Cobra	10 fl oz/a		B		
9	Roundup PowerMax	32 fl oz/a		B		
9	AMS	17 lb/100 gal		B		

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Pest Code			
Crop Code		GLXMA	GLXMA
Rating Date		Oct-23-2016	Oct-23-2016
Rating Type		moisture	yield
Rating Unit		percent	bu/acre
Trt-Eval Interval		132 DA-B	at 13% M
Number of Decimals		1	1

Trt No.	Treatment Name	Rate Unit	Appl Code		
10	Zidua SC	4.1 fl oz/a	A	15.2	74.7
10	Ultra Blazer	1 pt/a	B		
10	Roundup PowerMax	32 fl oz/a	B		
10	AMS	17 lb/100 gal	B		
11	Verdict	5 fl oz/a	A	15.0	65.9
11	Ultra Blazer	1 pt/a	B		
11	Roundup PowerMax	32 fl oz/a	B		
11	AMS	17 lb/100 gal	B		
12	BroadAxe XC	32 fl oz/a	A	15.8	76.7
12	Prefix	2 pt/a	B		
12	Roundup PowerMax	32 fl oz/a	B		
12	AMS	17 lb/100 gal	B		
13	Prefix	2 pt/a	A	15.2	49.9
13	Sequence	3 pt/a	B		
13	AMS	17 lb/100 gal	B		
14	Trivence	6 oz/a	A	15.0	76.3
14	Cobra	10 fl oz/a	B		
14	Warrant	3 pt/a	B		
14	Roundup PowerMax	32 fl oz/a	B		
14	AMS	17 lb/100 gal	B		
15	Rowel	2.5 oz/a	A	14.9	80.2
15	Metribuzin	6 oz/a	A		
15	Warrant Ultra	50 fl oz/a	B		
15	Roundup PowerMax	32 fl oz/a	B		
15	AMS	17 lb/100 gal	B		
	LSD P=.05			0.74	7.77
	Standard Deviation			0.52	5.45
	CV			3.41	7.69