

**Weed control systems comparisons in Roundup Ready 2 Xtend and LibertyLink soybean**

Trial ID: SOY16-18 Study Dir.: Sprague, Powell, Stiles  
 Conducted: Campus, T-18 Investigator: Christy Sprague

**Planting Date:** May-29-2018 **Row Spacing:** 30 IN  
**Variety:** 8 different varieties **No. of Reps:** 1  
**Population:** 155000 seeds/A **% OM:** 3.4  
**Soil Type:** L loam **pH:** 6.0  
**Plot Size:** 20 X 320 FT **Study Design:** Randomized Complete Block (RCB)

**Tillage/Previous Crops:** Spring soil finished twice  
**Fertilizer:**

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1	ANGR	mainly foxtail species	Annual grass
2	ABUTH	velvetleaf	Abutilon theophrasti
3	AMBEL	ragweed, common	Ambrosia artemisiifolia

Crop	Code	Common Name
1	GLXMA	Soybean

**Application Description**

	A	B
<b>Application Timing:</b>	PRE	POST
<b>Date Treated:</b>	May-29-2018	Jul-2-2018
<b>Time Treated:</b>	7:30 PM	10:20 AM
<b>% Cloud Cover:</b>	20	20
<b>Air Temp., Unit:</b>	85 F	87 F
<b>% Relative Humidity:</b>	40	48
<b>Wind Speed/Unit/Dir:</b>	6 mph ?	1 mph W
<b>Soil Temp, Unit:</b>	80 F	72 F
<b>Leaf Moist/Dew Presence (Y/N):</b>	5	4
<b>Soil Moist:</b>	4	4

**Crop Stage at Each Application**

	A	B
<b>Crop 1 Name:</b>	GLXMA	GLXMA
<b>Height:</b>		12 "
<b>Stage:</b>		V5

**Weed Stage at Each Application**

	A	B
<b>Weed 1 Name:</b>	ANGR	ANGR
<b>Height:</b>		8-12 " (10)
<b>Stage:</b>		12-18L
<b>Weed 2 Name:</b>	ABUTH	ABUTH
<b>Height:</b>		2-8 " (5)
<b>Stage:</b>		4-8L
<b>Weed 3 Name:</b>	AMBEL	AMBEL
<b>Height:</b>		6-8 " (7)
<b>Stage:</b>		8-10L

**Application Equipment**

Appl	Sprayer	Ground Speed	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	Spray Volume	Carrier	Operation Pressure
A	CUB	3.8 mph	AIXR	11003	24 "	20 "	120 "	19 GAL/AC	WATER	30 PSI
B	CUB	3.8 mph	AIXR	11003	24 "	20 "	120 "	19 GAL/AC	WATER	30 PSI

**Comments:**

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Pest Code		ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Crop Code	GLXMA					
Rating Date	Jul-2-2018	Jul-2-2018	Jul-2-2018	Jul-2-2018	Jul-2-2018	Jul-2-2018
Rating Type	injury	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	34 DA-A	34 DA-A	34 DA-A	34 DA-A	34 DA-A	34 DA-A
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code						
1	'Asgrow 21X7' RR2 Xtend						0	95	98	98	98	80
1	Warrant	3 L		3 pt/a		A						
1	Metribuzin	75 WG		5.33 oz/a		A						
1	Warrant	3 L		3 pt/a		B						
1	XtendiMax	2.9 SL		22 fl oz/a		B						
1	Roundup PowerMax	4.5 SL		32 fl oz/a		B						
1	Intact	L		0.5 % v/v		B						
1	Class Act Ridion	L		1 % v/v		B						
2	'Asgrow 23X8' RR2 Xtend						0	95	98	98	98	80
2	Warrant	3 L		3 pt/a		A						
2	Metribuzin	75 WG		5.33 oz/a		A						
2	Warrant	3 L		3 pt/a		B						
2	XtendiMax	2.9 SL		22 fl oz/a		B						
2	Roundup PowerMax	4.5 SL		32 fl oz/a		B						
2	Intact	L		0.5 % v/v		B						
2	Class Act Ridion	L		1 % v/v		B						
3	'Asgrow 26X8' RR2 Xtend						0	95	98	98	98	80
3	Warrant	3 L		3 pt/a		A						
3	Metribuzin	75 WG		5.33 oz/a		A						
3	Warrant	3 L		3 pt/a		B						
3	XtendiMax	2.9 SL		22 fl oz/a		B						
3	Roundup PowerMax	4.5 SL		32 fl oz/a		B						
3	Intact	L		0.5 % v/v		B						
3	Class Act Ridion	L		1 % v/v		B						
4	'Asgrow 30X8' RR2 Xtend						0	95	98	98	98	80
4	Warrant	3 L		3 pt/a		A						
4	Metribuzin	75 WG		5.33 oz/a		A						
4	Warrant	3 L		3 pt/a		B						
4	XtendiMax	2.9 SL		22 fl oz/a		B						
4	Roundup PowerMax	4.5 SL		32 fl oz/a		B						
4	Intact	L		0.5 % v/v		B						
4	Class Act Ridion	L		1 % v/v		B						
5	'MCIA 2314' LibertyLink						0	70	98	98	98	98
5	Authority MAXX	66 WG		5 oz/a		A						
5	Anthem MAXX	4.3 L		3 fl oz/a		B						
5	Liberty	2.34 L		32 fl oz/a		B						
5	AMS	WG		8.5 lb/100 gal		B						
6	'CZ 2312' LibertyLink						0	70	98	98	98	98
6	Authority MAXX	66 WG		5 oz/a		A						
6	Anthem MAXX	4.3 L		3 fl oz/a		B						
6	Liberty	2.34 L		32 fl oz/a		B						
6	AMS	WG		8.5 lb/100 gal		B						

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Crop Code	GLXMA					
Rating Date	Jul-2-2018	Jul-2-2018	Jul-2-2018	Jul-2-2018	Jul-2-2018	Jul-2-2018
Rating Type	injury	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	34 DA-A	34 DA-A	34 DA-A	34 DA-A	34 DA-A	34 DA-A
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code						
7	'DF 9263' LibertyLink						0	70	98	98	98	98
	7 Authority MAXX	66	WG	5 oz/a		A						
	7 Anthem MAXX	4.3	L	3 fl oz/a		B						
	7 Liberty	2.34	L	32 fl oz/a		B						
	7 AMS		WG	8.5 lb/100 gal		B						
8	'MCIA 2917' LibertyLink						0	70	98	98	98	98
	8 Authority MAXX	66	WG	5 oz/a		A						
	8 Anthem MAXX	4.3	L	3 fl oz/a		B						
	8 Liberty	2.34	L	32 fl oz/a		B						
	8 AMS		WG	8.5 lb/100 gal		B						
	LSD P=.05						.	.	.	.	.	.
	Standard Deviation						.	.	.	.	.	.
	CV						.	.	.	.	.	.

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Crop Code	GLXMA				
Rating Date	Jul-17-2018	Jul-17-2018	Jul-17-2018	Jul-17-2018	Jul-17-2018
Rating Type	injury	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	15 DA-B	15 DA-B	15 DA-B	15 DA-B	15 DA-B
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code					
1	'Asgrow 21X7' RR2 Xtend						0	100	100	100	100
1	Warrant	3 L		3 pt/a		A					
1	Metribuzin	75 WG		5.33 oz/a		A					
1	Warrant	3 L		3 pt/a		B					
1	XtendiMax	2.9 SL		22 fl oz/a		B					
1	Roundup PowerMax	4.5 SL		32 fl oz/a		B					
1	Intact	L		0.5 % v/v		B					
1	Class Act Ridion	L		1 % v/v		B					
2	'Asgrow 23X8' RR2 Xtend						0	100	100	100	100
2	Warrant	3 L		3 pt/a		A					
2	Metribuzin	75 WG		5.33 oz/a		A					
2	Warrant	3 L		3 pt/a		B					
2	XtendiMax	2.9 SL		22 fl oz/a		B					
2	Roundup PowerMax	4.5 SL		32 fl oz/a		B					
2	Intact	L		0.5 % v/v		B					
2	Class Act Ridion	L		1 % v/v		B					
3	'Asgrow 26X8' RR2 Xtend						0	100	100	100	100
3	Warrant	3 L		3 pt/a		A					
3	Metribuzin	75 WG		5.33 oz/a		A					
3	Warrant	3 L		3 pt/a		B					
3	XtendiMax	2.9 SL		22 fl oz/a		B					
3	Roundup PowerMax	4.5 SL		32 fl oz/a		B					
3	Intact	L		0.5 % v/v		B					
3	Class Act Ridion	L		1 % v/v		B					
4	'Asgrow 30X8' RR2 Xtend						0	100	100	100	100
4	Warrant	3 L		3 pt/a		A					
4	Metribuzin	75 WG		5.33 oz/a		A					
4	Warrant	3 L		3 pt/a		B					
4	XtendiMax	2.9 SL		22 fl oz/a		B					
4	Roundup PowerMax	4.5 SL		32 fl oz/a		B					
4	Intact	L		0.5 % v/v		B					
4	Class Act Ridion	L		1 % v/v		B					
5	'MCIA 2314' LibertyLink						0	100	100	100	100
5	Authority MAXX	66 WG		5 oz/a		A					
5	Anthem MAXX	4.3 L		3 fl oz/a		B					
5	Liberty	2.34 L		32 fl oz/a		B					
5	AMS	WG		8.5 lb/100 gal		B					
6	'CZ 2312' LibertyLink						0	100	100	100	100
6	Authority MAXX	66 WG		5 oz/a		A					
6	Anthem MAXX	4.3 L		3 fl oz/a		B					
6	Liberty	2.34 L		32 fl oz/a		B					
6	AMS	WG		8.5 lb/100 gal		B					

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Crop Code	GLXMA				
Rating Date	Jul-17-2018	Jul-17-2018	Jul-17-2018	Jul-17-2018	Jul-17-2018
Rating Type	injury	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	15 DA-B	15 DA-B	15 DA-B	15 DA-B	15 DA-B
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code					
7	'DF 9263' LibertyLink						0	100	100	100	100
	7 Authority MAXX	66	WG	5 oz/a		A					
	7 Anthem MAXX	4.3	L	3 fl oz/a		B					
	7 Liberty	2.34	L	32 fl oz/a		B					
	7 AMS		WG	8.5 lb/100 gal		B					
8	'MCIA 2917' LibertyLink						0	100	100	100	100
	8 Authority MAXX	66	WG	5 oz/a		A					
	8 Anthem MAXX	4.3	L	3 fl oz/a		B					
	8 Liberty	2.34	L	32 fl oz/a		B					
	8 AMS		WG	8.5 lb/100 gal		B					
	LSD P=.05						.	.	.	.	.
	Standard Deviation						.	.	.	.	.
	CV						.	.	.	.	.

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Pest Code	ABUTH	GLXMA	ANGR	CHEAL	AMAPO
Crop Code	Jul-17-2018	Jul-30-2018	Jul-30-2018	Jul-30-2018	Jul-30-2018
Rating Date	control	injury	control	control	control
Rating Type	percent	percent	percent	percent	percent
Rating Unit	15 DA-B	28 DA-B	28 DA-B	28 DA-B	28 DA-B
Trt-Eval Interval	0	0	0	0	0
Number of Decimals					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code					
1	'Asgrow 21X7' RR2 Xtend						100	0	100	100	100
1	Warrant	3 L		3 pt/a		A					
1	Metribuzin	75 WG		5.33 oz/a		A					
1	Warrant	3 L		3 pt/a		B					
1	XtendiMax	2.9 SL		22 fl oz/a		B					
1	Roundup PowerMax	4.5 SL		32 fl oz/a		B					
1	Intact	L		0.5 % v/v		B					
1	Class Act Ridion	L		1 % v/v		B					
2	'Asgrow 23X8' RR2 Xtend						100	0	100	100	100
2	Warrant	3 L		3 pt/a		A					
2	Metribuzin	75 WG		5.33 oz/a		A					
2	Warrant	3 L		3 pt/a		B					
2	XtendiMax	2.9 SL		22 fl oz/a		B					
2	Roundup PowerMax	4.5 SL		32 fl oz/a		B					
2	Intact	L		0.5 % v/v		B					
2	Class Act Ridion	L		1 % v/v		B					
3	'Asgrow 26X8' RR2 Xtend						100	0	100	100	100
3	Warrant	3 L		3 pt/a		A					
3	Metribuzin	75 WG		5.33 oz/a		A					
3	Warrant	3 L		3 pt/a		B					
3	XtendiMax	2.9 SL		22 fl oz/a		B					
3	Roundup PowerMax	4.5 SL		32 fl oz/a		B					
3	Intact	L		0.5 % v/v		B					
3	Class Act Ridion	L		1 % v/v		B					
4	'Asgrow 30X8' RR2 Xtend						100	0	100	100	100
4	Warrant	3 L		3 pt/a		A					
4	Metribuzin	75 WG		5.33 oz/a		A					
4	Warrant	3 L		3 pt/a		B					
4	XtendiMax	2.9 SL		22 fl oz/a		B					
4	Roundup PowerMax	4.5 SL		32 fl oz/a		B					
4	Intact	L		0.5 % v/v		B					
4	Class Act Ridion	L		1 % v/v		B					
5	'MCIA 2314' LibertyLink						100	0	100	100	100
5	Authority MAXX	66 WG		5 oz/a		A					
5	Anthem MAXX	4.3 L		3 fl oz/a		B					
5	Liberty	2.34 L		32 fl oz/a		B					
5	AMS	WG		8.5 lb/100 gal		B					
6	'CZ 2312' LibertyLink						100	0	100	100	100
6	Authority MAXX	66 WG		5 oz/a		A					
6	Anthem MAXX	4.3 L		3 fl oz/a		B					
6	Liberty	2.34 L		32 fl oz/a		B					
6	AMS	WG		8.5 lb/100 gal		B					

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Pest Code	ABUTH	GLXMA	ANGR	CHEAL	AMAPO
Crop Code					
Rating Date	Jul-17-2018	Jul-30-2018	Jul-30-2018	Jul-30-2018	Jul-30-2018
Rating Type	control	injury	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	15 DA-B	28 DA-B	28 DA-B	28 DA-B	28 DA-B
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code					
7	'DF 9263' LibertyLink						100	0	100	100	100
	7 Authority MAXX	66	WG	5 oz/a		A					
	7 Anthem MAXX	4.3	L	3 fl oz/a		B					
	7 Liberty	2.34	L	32 fl oz/a		B					
	7 AMS		WG	8.5 lb/100 gal		B					
8	'MCIA 2917' LibertyLink						100	0	100	100	100
	8 Authority MAXX	66	WG	5 oz/a		A					
	8 Anthem MAXX	4.3	L	3 fl oz/a		B					
	8 Liberty	2.34	L	32 fl oz/a		B					
	8 AMS		WG	8.5 lb/100 gal		B					
	LSD P=.05						.	.	.	.	.
	Standard Deviation						.	.	.	.	.
	CV						.	.	.	.	.

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Pest Code	AMBEL	ABUTH	GLXMA	GLXMA
Crop Code				
Rating Date	Jul-30-2018	Jul-30-2018	Oct-24-2018	Oct-24-2018
Rating Type	control	control	moisture	yield
Rating Unit	percent	percent	percent	bu/acre
Trt-Eval Interval	28 DA-B	28 DA-B	114 DA-B	at 13% M
Number of Decimals	0	0	1	1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code				
1	'Asgrow 21X7' RR2 Xtend						100	100	11.7	77.3
	1 Warrant	3 L		3 pt/a		A				
	1 Metribuzin	75 WG		5.33 oz/a		A				
	1 Warrant	3 L		3 pt/a		B				
	1 XtendiMax	2.9 SL		22 fl oz/a		B				
	1 Roundup PowerMax	4.5 SL		32 fl oz/a		B				
	1 Intact	L		0.5 % v/v		B				
	1 Class Act Ridion	L		1 % v/v		B				
2	'Asgrow 23X8' RR2 Xtend						100	100	11.4	77.1
	2 Warrant	3 L		3 pt/a		A				
	2 Metribuzin	75 WG		5.33 oz/a		A				
	2 Warrant	3 L		3 pt/a		B				
	2 XtendiMax	2.9 SL		22 fl oz/a		B				
	2 Roundup PowerMax	4.5 SL		32 fl oz/a		B				
	2 Intact	L		0.5 % v/v		B				
	2 Class Act Ridion	L		1 % v/v		B				
3	'Asgrow 26X8' RR2 Xtend						100	100	11.4	79.0
	3 Warrant	3 L		3 pt/a		A				
	3 Metribuzin	75 WG		5.33 oz/a		A				
	3 Warrant	3 L		3 pt/a		B				
	3 XtendiMax	2.9 SL		22 fl oz/a		B				
	3 Roundup PowerMax	4.5 SL		32 fl oz/a		B				
	3 Intact	L		0.5 % v/v		B				
	3 Class Act Ridion	L		1 % v/v		B				
4	'Asgrow 30X8' RR2 Xtend						100	100	15.2	71.5
	4 Warrant	3 L		3 pt/a		A				
	4 Metribuzin	75 WG		5.33 oz/a		A				
	4 Warrant	3 L		3 pt/a		B				
	4 XtendiMax	2.9 SL		22 fl oz/a		B				
	4 Roundup PowerMax	4.5 SL		32 fl oz/a		B				
	4 Intact	L		0.5 % v/v		B				
	4 Class Act Ridion	L		1 % v/v		B				
5	'MCIA 2314' LibertyLink						100	100	11.4	77.1
	5 Authority MAXX	66 WG		5 oz/a		A				
	5 Anthem MAXX	4.3 L		3 fl oz/a		B				
	5 Liberty	2.34 L		32 fl oz/a		B				
	5 AMS	WG		8.5 lb/100 gal		B				
6	'CZ 2312' LibertyLink						100	100	11.3	77.4
	6 Authority MAXX	66 WG		5 oz/a		A				
	6 Anthem MAXX	4.3 L		3 fl oz/a		B				
	6 Liberty	2.34 L		32 fl oz/a		B				
	6 AMS	WG		8.5 lb/100 gal		B				



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Pest Code	AMBEL	ABUTH	GLXMA	GLXMA
Crop Code				
Rating Date	Jul-30-2018	Jul-30-2018	Oct-24-2018	Oct-24-2018
Rating Type	control	control	moisture	yield
Rating Unit	percent	percent	percent	bu/acre
Trt-Eval Interval	28 DA-B	28 DA-B	114 DA-B	at 13% M
Number of Decimals	0	0	1	1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code				
7	'DF 9263' LibertyLink						100	100	11.7	75.0
	7 Authority MAXX	66	WG	5 oz/a		A				
	7 Anthem MAXX	4.3	L	3 fl oz/a		B				
	7 Liberty	2.34	L	32 fl oz/a		B				
	7 AMS		WG	8.5 lb/100 gal		B				
8	'MCIA 2917' LibertyLink						100	100	9.6	81.5
	8 Authority MAXX	66	WG	5 oz/a		A				
	8 Anthem MAXX	4.3	L	3 fl oz/a		B				
	8 Liberty	2.34	L	32 fl oz/a		B				
	8 AMS		WG	8.5 lb/100 gal		B				
	LSD P=.05						.	.	.	.
	Standard Deviation						.	.	.	.
	CV						.	.	.	.