

Weed control systems in LibertyLink soybean

Trial ID: SOY08-17 Study Dir.: Sprague, Powell, Stiles
 Conducted: Campus C-14 Investigator: Christy Sprague

Planting Date: May-9-2017 **Row Spacing:** 30 IN
Variety: CZ2312LL **No. of Reps:** 4
Population: 155000 seeds/A **% OM:** 2.2
Soil Type: SL sandy 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
4	SINAR	mustard, wild	Sinapis arvensis
Crop	Code	Common Name	
1	GLXMA	Soybean	

Application Description

	A	B
Application Timing:	PRE	POST
Date Treated:	May-9-2017	Jun-13-2017
Time Treated:	2:15 PM	12:15 PM
% Cloud Cover:	30	60
Air Temp., Unit:	60 F	85 F
% Relative Humidity:	24	52
Wind Speed/Unit/Dir:	3.3 mph SW	1.5 mph NW
Soil Temp, Unit:	55 F	75 F
Leaf Moist/Dew Presence (Y/N):	5	5
Soil Moist:	3	5

Crop Stage at Each Application

	A	B
Crop 1 Name:	GLXMA	GLXMA
Height:		7-8 " (7.5)
Stage:		V3

Weed Stage at Each Application

	A	B
Weed 1 Name:	ANGR	ANGR
Height:		6 "
Stage:		4L
Weed 2 Name:	CHEAL	CHEAL
Height:		2-4 " (3)
Stage:		10-12L
Weed 3 Name:	AMBEL	AMBEL
Height:		2-4 " (3)
Stage:		6-10L
Weed 4 Name:	SINAR	SINAR
Height:		8-12 " (10)
Stage:		flower

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	AIXR	11003	23 "	20 "	100 "	19 GPA	WATER	30 PSI

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

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Pest Code	GLXMA	ANGR	CHEAL	AMBEL	SINAR	GLXMA
Crop Code	May-30-2017	May-30-2017	May-30-2017	May-30-2017	May-30-2017	Jun-12-2017
Rating Date	injury	control	control	control	control	injury
Rating Type	percent	percent	percent	percent	percent	percent
Rating Unit	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	34 DA-A
Trt-Eval Interval	0	0	0	0	0	0
Number of Decimals						

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*	*
1	Liberty	2.34	L	29 fl oz/a	B	B	0	0	0	0	0	0
1	AMS		WG	2.5 lb/a	B	B						
2	Fierce	76	WG	3 oz/a	A	A	21	99	99	94	100	0
2	Liberty	2.34	L	29 fl oz/a	B	B						
2	AMS		WG	2.5 lb/a	B	B						
3	Fierce	76	WG	3.75 oz/a	A	A	25	100	100	98	100	3
3	Liberty	2.34	L	29 fl oz/a	B	B						
3	AMS		WG	2.5 lb/a	B	B						
4	Fierce MTZ	2.64	L	1 pt/a	A	A	24	100	100	100	100	0
4	Liberty	2.34	L	29 fl oz/a	B	B						
4	AMS		WG	2.5 lb/a	B	B						
5	Untreated						0	0	0	0	0	0
6	Boundary	6.5	L	2 pt/a	A	A	11	99	95	94	100	0
6	Liberty	2.34	L	29 fl oz/a	B	B						
6	AMS		WG	2.5 lb/a	B	B						
7	BroadAxe XC	7	L	25 fl oz/a	A	A	12	100	100	65	100	0
7	Liberty	2.34	L	29 fl oz/a	B	B						
7	AMS		WG	2.5 lb/a	B	B						
8	Zidua PRO	4.09	L	4.5 fl oz/a	A	A	2	100	100	85	100	1
8	Liberty	2.34	L	29 fl oz/a	B	B						
8	AMS		WG	2.5 lb/a	B	B						
9	V-10425 2002	1.52	L	12 fl oz/a	A	A	24	100	100	95	100	5
9	Liberty	2.34	L	29 fl oz/a	B	B						
9	AMS		WG	2.5 lb/a	B	B						
10	Valor EZ	4	L	2 fl oz/a	A	A	15	100	99	94	100	0
10	V-10463	0.45	L	23 fl oz/a	A	A						
10	Liberty	2.34	L	29 fl oz/a	B	B						
10	AMS		WG	2.5 lb/a	B	B						
LSD P=.05							7.6	1.0	3.2	8.5	.	3.7
Standard Deviation							5.3	0.7	2.2	5.9	0.0	2.5
CV							39.4	0.86	2.82	8.09	0.0	288.35

* Adjusted means

Could not calculate LSD (% mean diff) for columns 5,15,16,20,21,25,26,30,31,35 because error mean square = 0.

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Pest Code	ANGR	CHEAL	AMBEL	SINAR	GLXMA	ANGR
Crop Code						
Rating Date	Jun-12-2017	Jun-12-2017	Jun-12-2017	Jun-12-2017	Jun-20-2017	Jun-20-2017
Rating Type	control	control	control	control	injury	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	34 DA-A	34 DA-A	34 DA-A	34 DA-A	7 DA-B	7 DA-B
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*	*
1	Liberty	2.34	L	29 fl oz/a	B		0	0	0	0	0	58
1	AMS		WG	2.5 lb/a	B							
2	Fierce	76	WG	3 oz/a	A		91	98	78	100	1	99
2	Liberty	2.34	L	29 fl oz/a	B							
2	AMS		WG	2.5 lb/a	B							
3	Fierce	76	WG	3.75 oz/a	A		97	100	90	100	0	99
3	Liberty	2.34	L	29 fl oz/a	B							
3	AMS		WG	2.5 lb/a	B							
4	Fierce MTZ	2.64	L	1 pt/a	A		95	100	91	100	1	98
4	Liberty	2.34	L	29 fl oz/a	B							
4	AMS		WG	2.5 lb/a	B							
5	Untreated						0	0	0	0	0	0
6	Boundary	6.5	L	2 pt/a	A		97	95	81	100	3	99
6	Liberty	2.34	L	29 fl oz/a	B							
6	AMS		WG	2.5 lb/a	B							
7	BroadAxe XC	7	L	25 fl oz/a	A		96	100	58	100	2	98
7	Liberty	2.34	L	29 fl oz/a	B							
7	AMS		WG	2.5 lb/a	B							
8	Zidua PRO	4.09	L	4.5 fl oz/a	A		94	100	79	100	1	98
8	Liberty	2.34	L	29 fl oz/a	B							
8	AMS		WG	2.5 lb/a	B							
9	V-10425 2002	1.52	L	12 fl oz/a	A		94	100	83	100	2	99
9	Liberty	2.34	L	29 fl oz/a	B							
9	AMS		WG	2.5 lb/a	B							
10	Valor EZ	4	L	2 fl oz/a	A		93	98	82	100	2	99
10	V-10463	0.45	L	23 fl oz/a	A							
10	Liberty	2.34	L	29 fl oz/a	B							
10	AMS		WG	2.5 lb/a	B							
LSD P=.05							3.8	5.8	7.4	0.5	1.7	3.1
Standard Deviation							2.6	4.0	5.1	0.3	1.2	2.1
CV							3.43	5.05	7.93	0.4	117.85	2.54

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Study Director: Sprague, Powell, Stiles

Pest Code	CHEAL	AMBEL	SINAR	GLXMA	ANGR	CHEAL
Crop Code						
Rating Date	Jun-20-2017	Jun-20-2017	Jun-20-2017	Jun-27-2017	Jun-27-2017	Jun-27-2017
Rating Type	control	control	control	injury	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	7 DA-B	7 DA-B	7 DA-B	14 DA-B	14 DA-B	14 DA-B
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*	*
1	Liberty	2.34 L	L	29 fl oz/a	B	B	86	91	100	0	98	80
1	AMS	WG	WG	2.5 lb/a	B	B						
2	Fierce	76 WG	WG	3 oz/a	A	A	100	100	100	0	100	100
2	Liberty	2.34 L	L	29 fl oz/a	B	B						
2	AMS	WG	WG	2.5 lb/a	B	B						
3	Fierce	76 WG	WG	3.75 oz/a	A	A	100	100	100	0	100	100
3	Liberty	2.34 L	L	29 fl oz/a	B	B						
3	AMS	WG	WG	2.5 lb/a	B	B						
4	Fierce MTZ	2.64 L	L	1 pt/a	A	A	100	100	100	0	99	100
4	Liberty	2.34 L	L	29 fl oz/a	B	B						
4	AMS	WG	WG	2.5 lb/a	B	B						
5	Untreated						0	0	0	0	0	0
6	Boundary	6.5 L	L	2 pt/a	A	A	100	100	100	0	99	100
6	Liberty	2.34 L	L	29 fl oz/a	B	B						
6	AMS	WG	WG	2.5 lb/a	B	B						
7	BroadAxe XC	7 L	L	25 fl oz/a	A	A	100	100	100	0	99	100
7	Liberty	2.34 L	L	29 fl oz/a	B	B						
7	AMS	WG	WG	2.5 lb/a	B	B						
8	Zidua PRO	4.09 L	L	4.5 fl oz/a	A	A	100	100	100	0	100	100
8	Liberty	2.34 L	L	29 fl oz/a	B	B						
8	AMS	WG	WG	2.5 lb/a	B	B						
9	V-10425 2002	1.52 L	L	12 fl oz/a	A	A	100	100	100	0	100	100
9	Liberty	2.34 L	L	29 fl oz/a	B	B						
9	AMS	WG	WG	2.5 lb/a	B	B						
10	Valor EZ	4 L	L	2 fl oz/a	A	A	100	100	100	0	99	100
10	V-10463	0.45 L	L	23 fl oz/a	A	A						
10	Liberty	2.34 L	L	29 fl oz/a	B	B						
10	AMS	WG	WG	2.5 lb/a	B	B						
LSD P=.05							5.1	1.2	.	.	1.7	1.9
Standard Deviation							3.5	0.8	0.0	0.0	1.1	1.3
CV							3.96	0.94	0.0	0.0	1.28	1.53

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Pest Code	AMBEL	SINAR	GLXMA	ANGR	CHEAL	AMBEL
Crop Code						
Rating Date	Jun-27-2017	Jun-27-2017	Jul-11-2017	Jul-11-2017	Jul-11-2017	Jul-11-2017
Rating Type	control	control	injury	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	14 DA-B	14 DA-B	28 DA-B	28 DA-B	28 DA-B	28 DA-B
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*	*
1	Liberty	2.34 L	L	29 fl oz/a	B	B	92	100	0	78	78	86
1	AMS	WG	WG	2.5 lb/a	B	B						
2	Fierce	76 WG	WG	3 oz/a	A	A	100	100	0	100	100	100
2	Liberty	2.34 L	L	29 fl oz/a	B	B						
2	AMS	WG	WG	2.5 lb/a	B	B						
3	Fierce	76 WG	WG	3.75 oz/a	A	A	100	100	0	100	100	100
3	Liberty	2.34 L	L	29 fl oz/a	B	B						
3	AMS	WG	WG	2.5 lb/a	B	B						
4	Fierce MTZ	2.64 L	L	1 pt/a	A	A	100	100	0	97	100	100
4	Liberty	2.34 L	L	29 fl oz/a	B	B						
4	AMS	WG	WG	2.5 lb/a	B	B						
5	Untreated						0	0	0	0	0	0
6	Boundary	6.5 L	L	2 pt/a	A	A	99	100	0	100	100	99
6	Liberty	2.34 L	L	29 fl oz/a	B	B						
6	AMS	WG	WG	2.5 lb/a	B	B						
7	BroadAxe XC	7 L	L	25 fl oz/a	A	A	99	100	0	99	100	97
7	Liberty	2.34 L	L	29 fl oz/a	B	B						
7	AMS	WG	WG	2.5 lb/a	B	B						
8	Zidua PRO	4.09 L	L	4.5 fl oz/a	A	A	98	100	0	98	100	98
8	Liberty	2.34 L	L	29 fl oz/a	B	B						
8	AMS	WG	WG	2.5 lb/a	B	B						
9	V-10425 2002	1.52 L	L	12 fl oz/a	A	A	100	100	0	98	99	100
9	Liberty	2.34 L	L	29 fl oz/a	B	B						
9	AMS	WG	WG	2.5 lb/a	B	B						
10	Valor EZ	4 L	L	2 fl oz/a	A	A	100	100	0	94	100	100
10	V-10463	0.45 L	L	23 fl oz/a	A	A						
10	Liberty	2.34 L	L	29 fl oz/a	B	B						
10	AMS	WG	WG	2.5 lb/a	B	B						
LSD P=.05							2.4	.	.	2.6	1.5	3.3
Standard Deviation							1.7	0.0	0.0	1.8	1.1	2.3
CV							1.87	0.0	0.0	2.09	1.21	2.61

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Pest Code	SINAR	GLXMA	ANGR	CHEAL	AMBEL	SINAR
Crop Code	Jul-11-2017	Jul-25-2017	Jul-25-2017	Jul-25-2017	Jul-25-2017	Jul-25-2017
Rating Date	control	injury	control	control	control	control
Rating Type	percent	percent	percent	percent	percent	percent
Rating Unit	28 DA-B	42 DA-B	42 DA-B	42 DA-B	42 DA-B	42 DA-B
Trt-Eval Interval	0	0	0	0	0	0
Number of Decimals						

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*	*
1	Liberty	2.34 L	L	29 fl oz/a	B	B	100	0	75	72	84	100
1	AMS	WG	WG	2.5 lb/a	B	B						
2	Fierce	76 WG	WG	3 oz/a	A	A	100	0	99	100	100	100
2	Liberty	2.34 L	L	29 fl oz/a	B	B						
2	AMS	WG	WG	2.5 lb/a	B	B						
3	Fierce	76 WG	WG	3.75 oz/a	A	A	100	0	99	100	100	100
3	Liberty	2.34 L	L	29 fl oz/a	B	B						
3	AMS	WG	WG	2.5 lb/a	B	B						
4	Fierce MTZ	2.64 L	L	1 pt/a	A	A	100	0	99	100	99	100
4	Liberty	2.34 L	L	29 fl oz/a	B	B						
4	AMS	WG	WG	2.5 lb/a	B	B						
5	Untreated						0	0	0	0	0	0
6	Boundary	6.5 L	L	2 pt/a	A	A	100	0	100	100	98	100
6	Liberty	2.34 L	L	29 fl oz/a	B	B						
6	AMS	WG	WG	2.5 lb/a	B	B						
7	BroadAxe XC	7 L	L	25 fl oz/a	A	A	100	0	99	100	98	100
7	Liberty	2.34 L	L	29 fl oz/a	B	B						
7	AMS	WG	WG	2.5 lb/a	B	B						
8	Zidua PRO	4.09 L	L	4.5 fl oz/a	A	A	100	0	98	100	97	100
8	Liberty	2.34 L	L	29 fl oz/a	B	B						
8	AMS	WG	WG	2.5 lb/a	B	B						
9	V-10425 2002	1.52 L	L	12 fl oz/a	A	A	100	0	96	100	98	100
9	Liberty	2.34 L	L	29 fl oz/a	B	B						
9	AMS	WG	WG	2.5 lb/a	B	B						
10	Valor EZ	4 L	L	2 fl oz/a	A	A	100	0	95	100	100	100
10	V-10463	0.45 L	L	23 fl oz/a	A	A						
10	Liberty	2.34 L	L	29 fl oz/a	B	B						
10	AMS	WG	WG	2.5 lb/a	B	B						
LSD P=.05							.	.	2.9	2.6	4.3	.
Standard Deviation							0.0	0.0	2.0	1.8	3.0	0.0
CV							0.0	0.0	2.35	2.08	3.38	0.0

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

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
1	Liberty	2.34	L	29 fl oz/a	B		0	69	61	74	100
1	AMS		WG	2.5 lb/a	B						
2	Fierce	76	WG	3 oz/a	A		0	97	98	100	100
2	Liberty	2.34	L	29 fl oz/a	B						
2	AMS		WG	2.5 lb/a	B						
3	Fierce	76	WG	3.75 oz/a	A		0	97	100	100	100
3	Liberty	2.34	L	29 fl oz/a	B						
3	AMS		WG	2.5 lb/a	B						
4	Fierce MTZ	2.64	L	1 pt/a	A		0	96	100	100	100
4	Liberty	2.34	L	29 fl oz/a	B						
4	AMS		WG	2.5 lb/a	B						
5	Untreated						0	0	0	0	0
6	Boundary	6.5	L	2 pt/a	A		0	100	98	93	100
6	Liberty	2.34	L	29 fl oz/a	B						
6	AMS		WG	2.5 lb/a	B						
7	BroadAxe XC	7	L	25 fl oz/a	A		0	96	100	90	100
7	Liberty	2.34	L	29 fl oz/a	B						
7	AMS		WG	2.5 lb/a	B						
8	Zidua PRO	4.09	L	4.5 fl oz/a	A		0	95	100	96	100
8	Liberty	2.34	L	29 fl oz/a	B						
8	AMS		WG	2.5 lb/a	B						
9	V-10425 2002	1.52	L	12 fl oz/a	A		0	96	100	97	100
9	Liberty	2.34	L	29 fl oz/a	B						
9	AMS		WG	2.5 lb/a	B						
10	Valor EZ	4	L	2 fl oz/a	A		0	95	100	99	100
10	V-10463	0.45	L	23 fl oz/a	A						
10	Liberty	2.34	L	29 fl oz/a	B						
10	AMS		WG	2.5 lb/a	B						
LSD	P=.05						.	5.6	3.7	6.0	.
Standard Deviation							0.0	3.9	2.6	4.1	0.0
CV							0.0	4.59	2.99	4.87	0.0

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