

Weed control programs in no-till LibertyLink soybean

Trial ID: NTS06-17 Study Dir.: Sprague, Powell, Stiles
 Conducted: Campus T-15 Investigator: Christy Sprague

Planting Date: May-15-2017 **Row Spacing:** 30 IN
Variety: CZ2412 **No. of Reps:** 4
Population: 155000 S/A **% OM:** 2.5
Soil Type: L loam **pH:** 6.4
Plot Size: 10 X 40 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: No-tilled into standing corn stalks
Fertilizer:

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	POAAN	bluegrass, annual	Poa annua
2	STEME	chickweed, common	Stellaria media
3	LAMAM	henbit	Lamium amplexicaule
4	ANGR	mainly foxtail species	Annual grass
5	CHEAL	lambsquarters, common	Chenopodium album
6	AMBEL	ragweed, common	Ambrosia artemisiifolia
7	ERICA	horseweed	Conyza canadensis
Crop	Code	Common Name	
1	GLXMA	Soybean	

Application Description

	A	B
Application Timing:	PRE	POST
Date Treated:	May-15-2017	Jun-27-2017
Time Treated:	2:00 PM	8:50 AM
% Cloud Cover:	5	5
Air Temp., Unit:	72 F	59 F
% Relative Humidity:	28	68
Wind Speed/Unit/Dir:	2.9 mph SW	2.6 mph NW
Soil Temp, Unit:	69 F	59.9 F
Leaf Moist/Dew Presence (Y/N):	5	5
Soil Moist:	4	3

Crop Stage at Each Application

	A	B
Crop 1 Name:	GLXMA	GLXMA
Height:		6-8 " (7)
Stage:		V5

Weed Stage at Each Application

	A	B
Weed 1 Name:	POAAN	POAAN
Height:	2 "	
Stage:	3L	
Weed 2 Name:	STEME	STEME
Height:	6 "	10 "
Stage:	flower	flower
Weed 3 Name:	LAMAM	LAMAM
Height:	6 "	
Stage:	flower	
Weed 4 Name:	ANGR	ANGR
Height:		4-8 " (6)
Stage:		5L
Weed 5 Name:	CHEAL	CHEAL
Height:	3 "	3 "
Stage:	8L	6L
Weed 6 Name:	AMBEL	AMBEL
Height:		3 "
Stage:		8L
Weed 7 Name:	ERICA	ERICA
Height:		10-15 " (12.5)
Stage:		many

Application Equipment

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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	23 "	20 "	100 "	19 GPA	WATER	30 PSI
B	Cub	3.8 MPH	AIXR	11003	26 "	20 "	100 "	19 GPA	WATER	30 PSI

Comments:

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Location: Campus T-15

Investigator: Christy Sprague

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Pest Code	POAAN	STEME	LAMAM	CHEAL	GLXMA
Crop Code					
Rating Date	May-30-2017	May-30-2017	May-30-2017	May-30-2017	Jun-27-2017
Rating Type	control	control	control	control	injury
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	15 DA-A	0 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	A	83	95	98	25	0
1	AMS		WG	8.5	lb/100 gal	A					
1	Liberty	2.34	L	29	fl oz/a	B					
1	AMS		WG	8.5	lb/100 gal	B					
2	Authority MAXX	66	WG	6	oz/a	A	84	94	100	100	0
2	Liberty	2.34	L	29	fl oz/a	A					
2	AMS		WG	8.5	lb/100 gal	A					
2	Liberty	2.34	L	29	fl oz/a	B					
2	AMS		WG	8.5	lb/100 gal	B					
3	Authority MTZ	45	WG	14	oz/a	A	99	100	100	99	0
3	Liberty	2.34	L	29	fl oz/a	A					
3	AMS		WG	8.5	lb/100 gal	A					
3	Liberty	2.34	L	29	fl oz/a	B					
3	AMS		WG	8.5	lb/100 gal	B					
4	Authority MAXX	66	WG	6	oz/a	A	94	91	100	95	0
4	Anthem MAXX	4.3	L	3	fl oz/a	A					
4	Liberty	2.34	L	29	fl oz/a	A					
4	AMS		WG	8.5	lb/100 gal	A					
4	Liberty	2.34	L	29	fl oz/a	B					
4	AMS		WG	8.5	lb/100 gal	B					
5	Authority MTZ	45	WG	14	oz/a	A	100	100	100	100	0
5	Anthem MAXX	4.3	L	3	fl oz/a	A					
5	Liberty	2.34	L	29	fl oz/a	A					
5	AMS		WG	8.5	lb/100 gal	A					
5	Liberty	2.34	L	29	fl oz/a	B					
5	AMS		WG	8.5	lb/100 gal	B					
6	Untreated						0	0	0	0	0
7	Authority MAXX	66	WG	6	oz/a	A	89	96	100	100	0
7	Anthem MAXX	4.3	L	3	fl oz/a	A					
7	Liberty	2.34	L	29	fl oz/a	A					
7	AMS		WG	8.5	lb/100 gal	A					
7	Anthem MAXX	4.3	L	3	fl oz/a	B					
7	Liberty	2.34	L	29	fl oz/a	B					
7	AMS		WG	8.5	lb/100 gal	B					
8	Authority MTZ	45	WG	14	oz/a	A	99	100	100	90	0
8	Anthem MAXX	4.3	L	3	fl oz/a	A					
8	Liberty	2.34	L	29	fl oz/a	A					
8	AMS		WG	8.5	lb/100 gal	A					
8	Anthem MAXX	4.3	L	3	fl oz/a	B					
8	Liberty	2.34	L	29	fl oz/a	B					
8	AMS		WG	8.5	lb/100 gal	B					

* Adjusted means

Could not calculate LSD (% mean diff) for columns 5,14,16,19 because error mean square = 0.

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Pest Code	POAAN	STEME	LAMAM	CHEAL	GLXMA
Crop Code					
Rating Date	May-30-2017	May-30-2017	May-30-2017	May-30-2017	Jun-27-2017
Rating Type	control	control	control	control	injury
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	15 DA-A	0 DA-B
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
9	Boundary	6.5	L	1.5	pt/a	A	99	100	100	100	0
9	Liberty	2.34	L		29 fl oz/a	A					
9	AMS		WG	8.5	lb/100 gal	A					
9	Liberty	2.34	L		29 fl oz/a	B					
9	AMS		WG	8.5	lb/100 gal	B					
LSD P=.05							7.2	8.0	2.4	9.3	.
Standard Deviation							4.9	5.5	1.7	6.4	0.0
CV							5.93	6.37	1.88	8.13	0.0

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

Trt	Treatment	Form	Form	Rate	Appl						
No.	Name	Conc	Type	Rate	Code	*	*	*	*	*	*
1	Liberty	2.34	L	29 fl oz/a	A	66	15	5	15	96	0
1	AMS		WG	8.5 lb/100 gal	A						
1	Liberty	2.34	L	29 fl oz/a	B						
1	AMS		WG	8.5 lb/100 gal	B						
2	Authority MAXX	66	WG	6 oz/a	A	76	95	82	100	86	0
2	Liberty	2.34	L	29 fl oz/a	A						
2	AMS		WG	8.5 lb/100 gal	A						
2	Liberty	2.34	L	29 fl oz/a	B						
2	AMS		WG	8.5 lb/100 gal	B						
3	Authority MTZ	45	WG	14 oz/a	A	87	100	85	100	100	0
3	Liberty	2.34	L	29 fl oz/a	A						
3	AMS		WG	8.5 lb/100 gal	A						
3	Liberty	2.34	L	29 fl oz/a	B						
3	AMS		WG	8.5 lb/100 gal	B						
4	Authority MAXX	66	WG	6 oz/a	A	74	99	90	100	95	0
4	Anthem MAXX	4.3	L	3 fl oz/a	A						
4	Liberty	2.34	L	29 fl oz/a	A						
4	AMS		WG	8.5 lb/100 gal	A						
4	Liberty	2.34	L	29 fl oz/a	B						
4	AMS		WG	8.5 lb/100 gal	B						
5	Authority MTZ	45	WG	14 oz/a	A	86	93	96	100	96	0
5	Anthem MAXX	4.3	L	3 fl oz/a	A						
5	Liberty	2.34	L	29 fl oz/a	A						
5	AMS		WG	8.5 lb/100 gal	A						
5	Liberty	2.34	L	29 fl oz/a	B						
5	AMS		WG	8.5 lb/100 gal	B						
6	Untreated					0	0	0	0	0	0
7	Authority MAXX	66	WG	6 oz/a	A	79	98	98	100	95	16
7	Anthem MAXX	4.3	L	3 fl oz/a	A						
7	Liberty	2.34	L	29 fl oz/a	A						
7	AMS		WG	8.5 lb/100 gal	A						
7	Anthem MAXX	4.3	L	3 fl oz/a	B						
7	Liberty	2.34	L	29 fl oz/a	B						
7	AMS		WG	8.5 lb/100 gal	B						
8	Authority MTZ	45	WG	14 oz/a	A	94	92	87	100	96	11
8	Anthem MAXX	4.3	L	3 fl oz/a	A						
8	Liberty	2.34	L	29 fl oz/a	A						
8	AMS		WG	8.5 lb/100 gal	A						
8	Anthem MAXX	4.3	L	3 fl oz/a	B						
8	Liberty	2.34	L	29 fl oz/a	B						
8	AMS		WG	8.5 lb/100 gal	B						

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Pest Code	POAAN	ANGR	CHEAL	AMBEL	ERICA	GLXMA
Crop Code						
Rating Date	Jun-27-2017	Jun-27-2017	Jun-27-2017	Jun-27-2017	Jun-27-2017	Jul-11-2017
Rating Type	control	control	control	control	control	injury
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	0 DA-B	0 DA-B	0 DA-B	0 DA-B	0 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	*	*	*	*	*	*
9	Boundary	6.5	L	1.5	pt/a	A	92	95	88	100	100	0
9	Liberty	2.34	L	29	fl oz/a	A						
9	AMS		WG	8.5	lb/100 gal	A						
9	Liberty	2.34	L	29	fl oz/a	B						
9	AMS		WG	8.5	lb/100 gal	B						
LSD P=.05							15.6	10.9	15.9	4.9	10.2	2.7
Standard Deviation							10.7	7.4	10.9	3.3	7.0	1.8
CV							14.71	9.77	15.59	4.2	8.26	59.44

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Pest Code	ANGR	CHEAL	AMBEL	ERICA	GLXMA	ANGR
Crop Code						
Rating Date	Jul-11-2017	Jul-11-2017	Jul-11-2017	Jul-11-2017	Jul-25-2017	Jul-25-2017
Rating Type	control	control	control	control	injury	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	14 DA-B	14 DA-B	14 DA-B	14 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	29	fl oz/a	A	99	70	100	100	0	100
1	AMS		WG	8.5	lb/100 gal	A						
1	Liberty	2.34	L	29	fl oz/a	B						
1	AMS		WG	8.5	lb/100 gal	B						
2	Authority MAXX	66	WG	6	oz/a	A	100	100	100	98	0	100
2	Liberty	2.34	L	29	fl oz/a	A						
2	AMS		WG	8.5	lb/100 gal	A						
2	Liberty	2.34	L	29	fl oz/a	B						
2	AMS		WG	8.5	lb/100 gal	B						
3	Authority MTZ	45	WG	14	oz/a	A	99	94	100	100	0	99
3	Liberty	2.34	L	29	fl oz/a	A						
3	AMS		WG	8.5	lb/100 gal	A						
3	Liberty	2.34	L	29	fl oz/a	B						
3	AMS		WG	8.5	lb/100 gal	B						
4	Authority MAXX	66	WG	6	oz/a	A	99	98	100	100	0	96
4	Anthem MAXX	4.3	L	3	fl oz/a	A						
4	Liberty	2.34	L	29	fl oz/a	A						
4	AMS		WG	8.5	lb/100 gal	A						
4	Liberty	2.34	L	29	fl oz/a	B						
4	AMS		WG	8.5	lb/100 gal	B						
5	Authority MTZ	45	WG	14	oz/a	A	100	100	100	100	0	100
5	Anthem MAXX	4.3	L	3	fl oz/a	A						
5	Liberty	2.34	L	29	fl oz/a	A						
5	AMS		WG	8.5	lb/100 gal	A						
5	Liberty	2.34	L	29	fl oz/a	B						
5	AMS		WG	8.5	lb/100 gal	B						
6	Untreated						0	0	0	0	0	0
7	Authority MAXX	66	WG	6	oz/a	A	100	100	100	100	0	99
7	Anthem MAXX	4.3	L	3	fl oz/a	A						
7	Liberty	2.34	L	29	fl oz/a	A						
7	AMS		WG	8.5	lb/100 gal	A						
7	Anthem MAXX	4.3	L	3	fl oz/a	B						
7	Liberty	2.34	L	29	fl oz/a	B						
7	AMS		WG	8.5	lb/100 gal	B						
8	Authority MTZ	45	WG	14	oz/a	A	100	94	100	99	0	100
8	Anthem MAXX	4.3	L	3	fl oz/a	A						
8	Liberty	2.34	L	29	fl oz/a	A						
8	AMS		WG	8.5	lb/100 gal	A						
8	Anthem MAXX	4.3	L	3	fl oz/a	B						
8	Liberty	2.34	L	29	fl oz/a	B						
8	AMS		WG	8.5	lb/100 gal	B						

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Pest Code	ANGR	CHEAL	AMBEL	ERICA	GLXMA	ANGR
Crop Code						
Rating Date	Jul-11-2017	Jul-11-2017	Jul-11-2017	Jul-11-2017	Jul-25-2017	Jul-25-2017
Rating Type	control	control	control	control	injury	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	14 DA-B	14 DA-B	14 DA-B	14 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	*	*	*	*	*	*
9	Boundary	6.5	L	1.5	pt/a	A	100	98	100	100	0	93
9	Liberty	2.34	L		29 fl oz/a	A						
9	AMS		WG	8.5	lb/100 gal	A						
9	Liberty	2.34	L		29 fl oz/a	B						
9	AMS		WG	8.5	lb/100 gal	B						
LSD P=.05							0.8	8.9	.	2.8	.	7.9
Standard Deviation							0.6	6.1	0.0	1.9	0.0	5.4
CV							0.63	7.33	0.0	2.2	0.0	6.24

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Pest Code	CHEAL	AMBEL	ERICA	GLXMA	GLXMA
Crop Code					
Rating Date	Jul-25-2017	Jul-25-2017	Jul-25-2017	Oct-17-2017	Oct-17-2017
Rating Type	control	control	control	moisture	yield
Rating Unit	percent	percent	percent	percent	bu/acre
Trt-Eval Interval	28 DA-B	28 DA-B	28 DA-B	112 DA-B	at 13% M
Number of Decimals	0	0	0	1	1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
1	Liberty	2.34	L	29	fl oz/a	A	56	100	100	20.9	50.0
1	AMS		WG	8.5	lb/100 gal	A					
1	Liberty	2.34	L	29	fl oz/a	B					
1	AMS		WG	8.5	lb/100 gal	B					
2	Authority MAXX	66	WG	6	oz/a	A	90	100	99	20.5	60.5
2	Liberty	2.34	L	29	fl oz/a	A					
2	AMS		WG	8.5	lb/100 gal	A					
2	Liberty	2.34	L	29	fl oz/a	B					
2	AMS		WG	8.5	lb/100 gal	B					
3	Authority MTZ	45	WG	14	oz/a	A	91	100	100	20.6	59.2
3	Liberty	2.34	L	29	fl oz/a	A					
3	AMS		WG	8.5	lb/100 gal	A					
3	Liberty	2.34	L	29	fl oz/a	B					
3	AMS		WG	8.5	lb/100 gal	B					
4	Authority MAXX	66	WG	6	oz/a	A	98	100	100	20.2	54.4
4	Anthem MAXX	4.3	L	3	fl oz/a	A					
4	Liberty	2.34	L	29	fl oz/a	A					
4	AMS		WG	8.5	lb/100 gal	A					
4	Liberty	2.34	L	29	fl oz/a	B					
4	AMS		WG	8.5	lb/100 gal	B					
5	Authority MTZ	45	WG	14	oz/a	A	100	100	100	20.7	51.2
5	Anthem MAXX	4.3	L	3	fl oz/a	A					
5	Liberty	2.34	L	29	fl oz/a	A					
5	AMS		WG	8.5	lb/100 gal	A					
5	Liberty	2.34	L	29	fl oz/a	B					
5	AMS		WG	8.5	lb/100 gal	B					
6	Untreated						0	0	0	18.6	19.9
7	Authority MAXX	66	WG	6	oz/a	A	100	100	100	20.5	53.8
7	Anthem MAXX	4.3	L	3	fl oz/a	A					
7	Liberty	2.34	L	29	fl oz/a	A					
7	AMS		WG	8.5	lb/100 gal	A					
7	Anthem MAXX	4.3	L	3	fl oz/a	B					
7	Liberty	2.34	L	29	fl oz/a	B					
7	AMS		WG	8.5	lb/100 gal	B					
8	Authority MTZ	45	WG	14	oz/a	A	94	100	100	20.6	51.9
8	Anthem MAXX	4.3	L	3	fl oz/a	A					
8	Liberty	2.34	L	29	fl oz/a	A					
8	AMS		WG	8.5	lb/100 gal	A					
8	Anthem MAXX	4.3	L	3	fl oz/a	B					
8	Liberty	2.34	L	29	fl oz/a	B					
8	AMS		WG	8.5	lb/100 gal	B					

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Pest Code	CHEAL	AMBEL	ERICA	GLXMA	GLXMA
Crop Code					
Rating Date	Jul-25-2017	Jul-25-2017	Jul-25-2017	Oct-17-2017	Oct-17-2017
Rating Type	control	control	control	moisture	yield
Rating Unit	percent	percent	percent	percent	bu/acre
Trt-Eval Interval	28 DA-B	28 DA-B	28 DA-B	112 DA-B	at 13% M
Number of Decimals	0	0	0	1	1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*
9	Boundary	6.5	L	1.5	pt/a	A	95	100	100	20.9	46.2
9	Liberty	2.34	L		29 fl oz/a	A					
9	AMS		WG	8.5	lb/100 gal	A					
9	Liberty	2.34	L		29 fl oz/a	B					
9	AMS		WG	8.5	lb/100 gal	B					
LSD P=.05							12.8	.	1.3	2.40	15.02
Standard Deviation							8.7	0.0	0.9	1.64	8.67
CV							10.87	0.0	1.03	8.06	17.46

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