

Additive effects on weed control with Liberty

Trial ID: SOY10-21 Study Dir.: Sprague, Stiles, Powell
 Conducted: Campus, C-18 Investigator: Christy Sprague

Planting Date: 5-11-21 **Row Spacing:** 30 "
Variety: P24T35E **No. of Reps:** 4
Population: 155000 seeds/A **% OM:** 2.5
Soil Type: CL clay loam **pH:** 7.4
Plot Size: 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall chisel plow; Spring soil finished twice
Fertilizer:

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	ANGR	annual grass	mainly foxtail species
2	CHEAL	common lambsquarters	Chenopodium album
3	AMAPO	Powell amaranth	Amaranthus powellii
4	AMBEL	common ragweed	Ambrosia artemisiifolia
5	ABUTH	velvetleaf	Abutilon theophrasti
Crop	Code	Common Name	
1	GLXMA	Soybean	

Application Description

Application Timing: A
Date Treated: POST
Time Treated: 6-24-21
 11:00 AM
% Cloud Cover: 40
Air Temp., Unit: 69 F
% Relative Humidity: 54
Wind Speed/Unit/Dir: 8 MPH S
Soil Temp, Unit: 68 F
Leaf Moist/Dew Presence (Y/N): N
Soil Moist: 2

Crop Stage at Each Application

Crop 1 Name: A
 GLXMA
Height: 9-11 " (10)
Stage: V3

Weed Stage at Each Application

Weed 1 Name: A
 ANGR
Height: 8-12 " (8)
Stage: 6L-10L (8L)
Weed 2 Name: CHEAL
Height: 3-7 " (5)
Stage: 8L-20L (10L)
Weed 3 Name: AMAPO
Height: 3-6 " (4)
Stage: 6L-10L (8L)
Weed 4 Name: AMBEL
Height: 3-6 " (4)
Stage: 6L-12L (8L)
Weed 5 Name: ABUTH
Height: 3-6 " (4)
Stage: 4L-6L (5L)

Weed Density

	1	2	3	4	5
Date:	6-24-21	6-24-21	6-24-21	6-24-21	6-24-21
Weed Name:	ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Density:	14 FT2	11 FT2	3 FT2	6 FT2	2 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		28.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	30 PSI

Comments: Common ragweed at this location is Group 2 (ALS) resistant. The soybean canopy was completely closed by the 42 DAT, so weed control was not evaluated.

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Pest Code	ANGR CHEAL AMAPO AMBEL ABUTH						C, GLXMA	ANGR CHEAL AMAPO AMBEL ABUTH					
	C, GLXMA	7-1-21	7-1-21	7-1-21	7-1-21	7-1-21		7-1-21	7-8-21	7-8-21	7-8-21	7-8-21	7-8-21
Crop Type, Code	injury %	control %	control %	control %	control %	control %	injury %	control %	control %	control %	control %	control %	control %
Rating Date	7-1-21	7-1-21	7-1-21	7-1-21	7-1-21	7-1-21	7-8-21	7-8-21	7-8-21	7-8-21	7-8-21	7-8-21	7-8-21
Rating Type	injury	control	control	control	control	control	injury	control	control	control	control	control	control
Rating Unit	%	%	%	%	%	%	%	%	%	%	%	%	%
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A

Trt No.	Treatment Name	Rate	Appl Unit	Code	2	3	4	5	6	7	8	9	10	11		
1	Liberty	32 fl oz/a	A		2	86	86	100	98	85	0	85	80	95	88	88
	Zidua SC	3 fl oz/a	A													
2	Liberty	32 fl oz/a	A		3	96	96	100	100	100	0	86	87	99	88	100
	Zidua SC	3 fl oz/a	A													
	Request	0.5 % v/v	A													
	Ele-Max Sulfur	1 qt/a	A													
3	Liberty	32 fl oz/a	A		4	98	98	100	99	100	0	93	93	100	89	98
	Zidua SC	3 fl oz/a	A													
	AMS	1.7 lb/a	A													
4	Liberty	32 fl oz/a	A		2	93	99	100	100	100	0	92	92	100	91	98
	Zidua SC	3 fl oz/a	A													
	Reduce	2.5 % v/v	A													
	Ele-Max Sulfur	1 qt/a	A													
5	Liberty	32 fl oz/a	A		4	92	95	100	99	97	0	90	88	100	86	90
	Zidua SC	3 fl oz/a	A													
	AMS	3 lb/a	A													
6	Untreated				0	0	0	0	0	0	0	0	0	0	0	0
7	Liberty	43 fl oz/a	A		4	95	96	100	99	95	0	93	93	100	91	91
	Zidua SC	3 fl oz/a	A													
8	Liberty	43 fl oz/a	A		5	93	95	99	99	99	1	92	92	100	89	98
	Zidua SC	3 fl oz/a	A													
	Request	0.5 % v/v	A													
	Ele-Max Sulfur	1 qt/a	A													
9	Liberty	43 fl oz/a	A		4	96	99	100	100	100	1	98	97	100	89	98
	Zidua SC	3 fl oz/a	A													
	AMS	1.7 lb/a	A													
10	Liberty	43 fl oz/a	A		3	97	99	100	100	100	2	95	96	100	91	99
	Zidua SC	3 fl oz/a	A													
	Reduce	2.5 % v/v	A													
	Ele-Max Sulfur	1 qt/a	A													
11	Liberty	43 fl oz/a	A		3	94	98	100	100	98	0	99	90	97	87	96
	Zidua SC	3 fl oz/a	A													
	AMS	3 lb/a	A													
LSD P=.05					1.8	5.1	7.0	0.7	2.2	5.7	1.9	7.5	10.3	3.8	7.5	6.5
Standard Deviation					1.3	3.5	4.8	0.5	1.5	3.9	1.3	5.2	7.1	2.6	5.2	4.5
CV					44.27	4.1	5.56	0.51	1.67	4.43	365.17	6.22	8.65	2.93	6.39	5.17

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Pest Code	ANGR CHEAL AMAPO AMBEL ABUTH						
Crop Type, Code	C, GLXMA						
Rating Date	7-22-21	7-22-21	7-22-21	7-22-21	7-22-21	7-22-21	7-22-21
Rating Type	injury	control	control	control	control	control	control
Rating Unit	%	%	%	%	%	%	%
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A

Trt No.	Treatment Name	Rate	Appl Unit	Code						
1	Liberty	32 fl oz/a	A		0	87	82	98	90	100
	1 Zidua SC	3 fl oz/a	A							
2	Liberty	32 fl oz/a	A		0	83	88	98	83	100
	2 Zidua SC	3 fl oz/a	A							
	2 Request	0.5 % v/v	A							
	2 Ele-Max Sulfur	1 qt/a	A							
3	Liberty	32 fl oz/a	A		0	92	93	100	88	99
	3 Zidua SC	3 fl oz/a	A							
	3 AMS	1.7 lb/a	A							
4	Liberty	32 fl oz/a	A		0	88	93	100	86	99
	4 Zidua SC	3 fl oz/a	A							
	4 Reduce	2.5 % v/v	A							
	4 Ele-Max Sulfur	1 qt/a	A							
5	Liberty	32 fl oz/a	A		0	88	92	100	87	95
	5 Zidua SC	3 fl oz/a	A							
	5 AMS	3 lb/a	A							
6	Untreated				0	0	0	0	0	0
7	Liberty	43 fl oz/a	A		0	89	93	100	83	93
	7 Zidua SC	3 fl oz/a	A							
8	Liberty	43 fl oz/a	A		0	92	96	100	89	99
	8 Zidua SC	3 fl oz/a	A							
	8 Request	0.5 % v/v	A							
	8 Ele-Max Sulfur	1 qt/a	A							
9	Liberty	43 fl oz/a	A		0	94	93	100	84	100
	9 Zidua SC	3 fl oz/a	A							
	9 AMS	1.7 lb/a	A							
10	Liberty	43 fl oz/a	A		0	92	95	100	87	99
	10 Zidua SC	3 fl oz/a	A							
	10 Reduce	2.5 % v/v	A							
	10 Ele-Max Sulfur	1 qt/a	A							
11	Liberty	43 fl oz/a	A		0	95	90	100	83	98
	11 Zidua SC	3 fl oz/a	A							
	11 AMS	3 lb/a	A							
LSD P=.05					.	8.2	9.6	3.2	8.8	4.4
Standard Deviation					0.0	5.7	6.6	2.2	6.1	3.0
CV					0.0	6.91	8.0	2.44	7.79	3.39