

**Liberty Ultra formulation comparison for weed control**

Trial ID: SOY04-24 Study Dir.: Sprague, Stiles  
 Conducted: Campus, T-10 Investigator: Christy Sprague

**Planting Date:** May-7-2024 **Row Spacing:** 30 IN  
**Variety:** AG24XF4 **No. of Reps:** 4  
**Population:** 150000 S/A **% OM:** 2.5  
**Soil Type:** CL clay loam **pH:** 6.8  
**Plot Size:** 10 X 35 FT **Study Design:** Randomized Complete Block (RCB)

**Tillage/Previous Crops:** Fall chisel plow; spring soil finish (3-times)  
**Fertilizer:**

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1	ANGR	annual grasses	mostly giant foxtail and barnyardgrass
2	CHEAL	common lambsquarters	Chenopodium album
3	AMBEL	common ragweed	Ambrosia artemisiifolia
4	STEME	common chickweed	Stellaria media
Crop	Code	Common Name	
1	GLXMA	Soybean	

**Application Description**

**Application Timing:** POST  
**Date Treated:** Jun-11-2024  
**Time Treated:** 9:30 AM  
**% Cloud Cover:** 15  
**Air Temp., Unit:** 56 F  
**% Relative Humidity:** 66  
**Wind Speed/Unit/Dir:** 4 MPH SE  
**Soil Temp, Unit:** 63 F  
**Leaf Moist/Dew Presence (Y/N):** N  
**Soil Moist:** 5

**Crop Stage at Each Application**

**A**  
**Crop 1 Name:** GLXMA  
**Height:** 4-6 " (5)  
**Stage:** V2-V3

**Weed Stage at Each Application**

**A**  
**Weed 1 Name:** ANGR  
**Height:** 2-5 " (4)  
**Stage:** 4-6L  
**Weed 2 Name:** CHEAL  
**Height:** 5-7 " (6)  
**Stage:** 10-16L  
**Weed 3 Name:** AMBEL  
**Height:** 6-10 " (8)  
**Stage:** 6-10L  
**Weed 4 Name:** STEME  
**Height:** 2 "  
**Stage:** mat

**Weed Density**

Date:	1	2	3	4
	Jun-11-2024	Jun-11-2024	Jun-11-2024	Jun-11-2024
<b>Weed Name:</b>	ANGR	CHEAL	AMBEL	STEME
<b>Density:</b>	2 FT2	2 FT2	3 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	24.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	30 PSI

**Comments:** Common ragweed is Group 2 (ALS) resistant.

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Trial ID: SOY04-24

Protocol ID: SOY04-24 Location: Campus, T-10 Trial Year: 2024

Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

Rating Date	Jun-18-2024	Jun-18-2024	Jun-18-2024	Jun-18-2024	Jun-18-2024	Jun-25-2024
Rating Type	injury	control	control	control	control	injury
Rating Unit	%	%	%	%	%	%
Crop Type, Code	C, GLXMA					C, GLXMA
Pest Code		ANGR	CHEAL	AMBEL	STEME	
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	14 DA-A
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Appl Unit	Appl Code	Appl Timing	Jun-18-2024 injury %	Jun-18-2024 control %	Jun-18-2024 control %	Jun-18-2024 control %	Jun-18-2024 control %	Jun-25-2024 injury %
1	Untreated					0	0	0	0	0	0
2	Technical glufosinate	14.9 fl oz/a	A		POST	0	48	0	93	48	0
3	Liberty Ultra	24 fl oz/a	A		POST	2	91	79	98	99	0
4	Surmise 5	16.4 fl oz/a	A		POST	0	55	18	88	85	0
5	Surmise 5 Surfactant	16.4 fl oz/a	A		POST	0	50	10	95	96	0
6	Liberty	32 fl oz/a	A		POST	3	90	77	95	100	0
	LSD P=.05					1.1	5.9	6.9	7.3	4.7	.
	Standard Deviation					0.7	3.9	4.5	4.8	3.1	0.0
	CV					94.28	7.07	14.87	6.18	4.36	0.0

Could not calculate LSD (% mean diff) or mean separation letters for columns 6,11 because error variance is 0. Mean separation letters are 'na' (not applicable) when error variance is 0

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Investigator: Christy Sprague

Rating Date	Jun-25-2024	Jun-25-2024	Jun-25-2024	Jun-25-2024	Jul-2-2024	Jul-2-2024	Jul-2-2024					
Rating Type	control	control	control	control	injury	control	control					
Rating Unit	%	%	%	%	%	%	%					
Crop Type, Code	C, GLXMA											
Pest Code	ANGR	CHEAL	AMBEL	STEME		ANGR	CHEAL					
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	14 DA-A	21 DA-A	21 DA-A	21 DA-A					
Number of Decimals	0	0	0	0	0	0	0					
Trt No.	Treatment Name	Rate	Appl Unit	Appl Code	Appl Timing							
1	Untreated					0	0	0	0	0		
2	Technical glufosinate	14.9 fl oz/a	A	POST		50	8	86	15	0	66	15
3	Liberty Ultra	24 fl oz/a	A	POST		82	81	90	100	0	85	81
4	Surmise 5	16.4 fl oz/a	A	POST		69	43	83	99	0	73	66
5	Surmise 5 Surfactant	16.4 fl oz/a	A	POST		61	33	96	100	0	67	25
6	Liberty	32 fl oz/a	A	POST		83	82	86	100	0	83	82
	LSD P=.05					6.6	6.4	10.1	3.7	.	4.8	7.0
	Standard Deviation					4.4	4.3	6.7	2.5	0.0	3.2	4.6
	CV					7.59	10.46	9.15	3.56	0.0	5.07	10.33

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Protocol ID: SOY04-24 Location: Campus, T-10 Trial Year: 2024

Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

Rating Date	Jul-2-2024
Rating Type	control
Rating Unit	%
Crop Type, Code	
Pest Code	AMBEL
Trt-Eval Interval	21 DA-A
Number of Decimals	0

Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing	
1	Untreated					0
2	Technical glufosinate	14.9 fl oz/a	A		POST	91
3	Liberty Ultra	24 fl oz/a	A		POST	94
4	Surmise 5	16.4 fl oz/a	A		POST	90
5	Surmise 5	16.4 fl oz/a	A		POST	94
	Surfactant	0.25 % v/v	A		POST	
6	Liberty	32 fl oz/a	A		POST	94
	LSD P=.05					7.0
	Standard Deviation					4.7
	CV					6.04