

Soybean tolerance to various tank-mixtures with Liberty Ultra at soybean growth stages

Trial ID: SOY13-25 Study Dir.: Stiles, Sprague
 Conducted: Campus, C-18 Investigator: Christy Sprague

Planting Date: May-14-2025 **Row Spacing:** 30 "
Variety: P23Z82E **No. of Reps:** 4
Population: 150000 S/A **% OM:** 2.3
Soil Type: CL clay loam **pH:** 6.8
Plot Size: 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall chisel plow; fall soil finish; spring soil finish (2- times).

Fertilizer:

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1			
Crop	Code	Common Name	
1	GLXMA	Soybean	

Application Description

	A	B
Application Timing:	V5-6	R2
Date Treated:	Jun-27-2025	Jul-14-2025
Time Treated:	9:30 AM	4:15 PM
% Cloud Cover:	1	75
Air Temp., Unit:	74 F	82 F
% Relative Humidity:	92	53
Wind Speed/Unit/Dir:	5 MPH S	6 MPH SW
Soil Temp, Unit:	77 F	81 F
Leaf Moist/Dew Presence (Y/N):	Y	N
Soil Moist:	1	5

Crop Stage at Each Application

	A	B
Crop 1 Name:	GLXMA	GLXMA
Height:	8-10 " (9)	20-24 " (22)
Stage:	V5-6	R2

Weed Stage at Each Application

	A	B
Weed 1 Name:		
Height:		
Stage:		

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	20.0 "	20.0 "	120.0 "	19 GAL/AC	WATER	30 PSI
B	CUB	3.8 MPH	AIXR	11003	40.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	30 PSI

Comments: 5-14-25 - Dual II Magnum (1.3 pt) + Sonic (5 oz) applied PRE 6-30-25 - Roundup PowerMax 3 (30 fl oz) + AMS applied POST 7-13-25 - # of nodes plant 1 = 7, plant 2 = 9, plant 3 = 9, plant 4 = 9, plant 5 = 8.

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Investigator: Christy Sprague

Rating Date					Jun-30-2025	Jul-4-2025	Jul-11-2025	Jul-17-2025	Jul-21-2025	Jul-28-2025	Aug-4-2025
Rating Type					injury	injury	injury	injury	injury	injury	injury
Rating Unit					%	%	%	%	%	%	%
Crop Type, Code					C, GLXMA	C, GLXMA	C, GLXMA	C, GLXMA	C, GLXMA	C, GLXMA	C, GLXMA
Treatment Appl. Interval					3 DA-A	7 DA-A	14 DA-A	3 DA-B	7 DA-B	14 DA-B	21 DA-B
Number of Decimals					0	0	0	0	0	0	0
Trt	Treatment	Rate	Appl	Appl							
No.	Name	Rate Unit	Code	Timing							
1	Liberty Ultra	24 fl oz/a	A	V5-6	0	0	0	0	0	0	0
	AMS	17 lb/100 gal	A	V5-6							
2	Liberty Ultra	24 fl oz/a	A	V5-6	0	0	0	0	0	0	0
	Roundup PowerMax 3	30 fl oz/a	A	V5-6							
	AMS	17 lb/100 gal	A	V5-6							
3	Enlist One	32 fl oz/a	A	V5-6	5	5	2	0	0	0	0
	Liberty Ultra	24 fl oz/a	A	V5-6							
	Roundup PowerMax 3	30 fl oz/a	A	V5-6							
	AMS	17 lb/100 gal	A	V5-6							
4	Enlist One	32 fl oz/a	A	V5-6	4	5	2	0	0	0	0
	Liberty Ultra	24 fl oz/a	A	V5-6							
	Roundup PowerMax 3	30 fl oz/a	A	V5-6							
	MSO	1 % v/v	A	V5-6							
	AMS	17 lb/100 gal	A	V5-6							
5	Dual II Magnum	2 pt/a	A	V5-6	15	15	10	1	1	0	0
	Enlist One	32 fl oz/a	A	V5-6							
	Liberty Ultra	24 fl oz/a	A	V5-6							
	Roundup PowerMax 3	30 fl oz/a	A	V5-6							
	MSO	1 % v/v	A	V5-6							
	AMS	17 lb/100 gal	A	V5-6							
6	Zidua SC	2.5 fl oz/a	A	V5-6	6	5	5	0	0	0	0
	Enlist One	32 fl oz/a	A	V5-6							
	Liberty Ultra	24 fl oz/a	A	V5-6							
	Roundup PowerMax 3	30 fl oz/a	A	V5-6							
	MSO	1 % v/v	A	V5-6							
	AMS	17 lb/100 gal	A	V5-6							
7	Warrant	3 pt/a	A	V5-6	5	4	4	0	0	0	0
	Enlist One	32 fl oz/a	A	V5-6							
	Liberty Ultra	24 fl oz/a	A	V5-6							
	Roundup PowerMax 3	30 fl oz/a	A	V5-6							
	MSO	1 % v/v	A	V5-6							
	AMS	17 lb/100 gal	A	V5-6							
8	SelectMax	12 fl oz/a	A	V5-6	14	15	12	0	0	0	0
	Dual II Magnum	2 pt/a	A	V5-6							
	Enlist One	32 fl oz/a	A	V5-6							
	Liberty Ultra	24 fl oz/a	A	V5-6							
	Roundup PowerMax 3	30 fl oz/a	A	V5-6							
	MSO	1 % v/v	A	V5-6							
	AMS	17 lb/100 gal	A	V5-6							
9	Untreated				0	0	0	0	0	0	0
10	Liberty Ultra	24 fl oz/a	B	R2	0	0	0	0	0	0	0
	AMS	17 lb/100 gal	B	R2							
11	Liberty Ultra	24 fl oz/a	B	R2	0	0	0	0	0	0	0
	Roundup PowerMax 3	30 fl oz/a	B	R2							
	AMS	17 lb/100 gal	B	R2							
12	Enlist One	32 fl oz/a	B	R2	0	0	0	2	1	0	0
	Liberty Ultra	24 fl oz/a	B	R2							
	Roundup PowerMax 3	30 fl oz/a	B	R2							
	AMS	17 lb/100 gal	B	R2							
13	Enlist One	32 fl oz/a	B	R2	0	0	0	6	5	0	0
	Liberty Ultra	24 fl oz/a	B	R2							
	Roundup PowerMax 3	30 fl oz/a	B	R2							
	MSO	1 % v/v	B	R2							
	AMS	17 lb/100 gal	B	R2							

Could not calculate LSD (% mean diff) or mean separation letters for columns 7,8 because error variance is 0.

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Rating Date					Jun-30-2025	Jul-4-2025	Jul-11-2025	Jul-17-2025	Jul-21-2025	Jul-28-2025	Aug-4-2025
Rating Type					injury	injury	injury	injury	injury	injury	injury
Rating Unit					%	%	%	%	%	%	%
Crop Type, Code					C, GLXMA	C, GLXMA	C, GLXMA	C, GLXMA	C, GLXMA	C, GLXMA	C, GLXMA
Treatment Appl. Interval					3 DA-A	7 DA-A	14 DA-A	3 DA-B	7 DA-B	14 DA-B	21 DA-B
Number of Decimals					0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Appl	Appl							
		Rate Unit	Code	Timing							
14	Dual II Magnum	2 pt/a	B	R2	0	0	0	11	10	7	0
	Enlist One	32 fl oz/a	B	R2							
	Liberty Ultra	24 fl oz/a	B	R2							
	Roundup PowerMax 3	30 fl oz/a	B	R2							
	MSO	1 % v/v	B	R2							
	AMS	17 lb/100 gal	B	R2							
15	Zidua SC	2.5 fl oz/a	B	R2	0	0	0	6	5	3	0
	Enlist One	32 fl oz/a	B	R2							
	Liberty Ultra	24 fl oz/a	B	R2							
	Roundup PowerMax 3	30 fl oz/a	B	R2							
	MSO	1 % v/v	B	R2							
	AMS	17 lb/100 gal	B	R2							
16	Warrant	3 pt/a	B	R2	0	0	0	5	4	4	0
	Enlist One	32 fl oz/a	B	R2							
	Liberty Ultra	24 fl oz/a	B	R2							
	Roundup PowerMax 3	30 fl oz/a	B	R2							
	MSO	1 % v/v	B	R2							
	AMS	17 lb/100 gal	B	R2							
17	SelectMax	12 fl oz/a	B	R2	0	0	0	10	11	9	0
	Dual II Magnum	2 pt/a	B	R2							
	Enlist One	32 fl oz/a	B	R2							
	Liberty Ultra	24 fl oz/a	B	R2							
	Roundup PowerMax 3	30 fl oz/a	B	R2							
	MSO	1 % v/v	B	R2							
	AMS	17 lb/100 gal	B	R2							
LSD P=.05					0.9	1.0	1.3	1.9	1.6	1.1	.
Standard Deviation					0.6	0.7	0.9	1.4	1.1	0.8	0.0
CV					22.95	26.1	47.27	59.64	52.16	58.12	0.0

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Study Director: Stiles, Sprague Sponsor Contact:

Investigator: Christy Sprague

Rating Date	Aug-11-2025	Oct-28-2025	Oct-28-2025
Rating Type	injury	moisture	yield
Rating Unit	%	%	bu/A
Crop Type, Code	C, GLXMA	C, GLXMA	C, GLXMA
Treatment Appl. Interval	28 DA-B		@13%M
Number of Decimals	0	1	1

Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing			
1	Liberty Ultra	24 fl oz/a	A	V5-6		0	13.3	44.1
	AMS	17 lb/100 gal	A	V5-6				
2	Liberty Ultra	24 fl oz/a	A	V5-6		0	13.5	49.1
	Roundup PowerMax 3	30 fl oz/a	A	V5-6				
	AMS	17 lb/100 gal	A	V5-6				
3	Enlist One	32 fl oz/a	A	V5-6		0	13.3	44.4
	Liberty Ultra	24 fl oz/a	A	V5-6				
	Roundup PowerMax 3	30 fl oz/a	A	V5-6				
	AMS	17 lb/100 gal	A	V5-6				
4	Enlist One	32 fl oz/a	A	V5-6		0	13.3	44.6
	Liberty Ultra	24 fl oz/a	A	V5-6				
	Roundup PowerMax 3	30 fl oz/a	A	V5-6				
	MSO	1 % v/v	A	V5-6				
	AMS	17 lb/100 gal	A	V5-6				
5	Dual II Magnum	2 pt/a	A	V5-6		0	13.3	47.5
	Enlist One	32 fl oz/a	A	V5-6				
	Liberty Ultra	24 fl oz/a	A	V5-6				
	Roundup PowerMax 3	30 fl oz/a	A	V5-6				
	MSO	1 % v/v	A	V5-6				
	AMS	17 lb/100 gal	A	V5-6				
6	Zidua SC	2.5 fl oz/a	A	V5-6		0	13.3	48.0
	Enlist One	32 fl oz/a	A	V5-6				
	Liberty Ultra	24 fl oz/a	A	V5-6				
	Roundup PowerMax 3	30 fl oz/a	A	V5-6				
	MSO	1 % v/v	A	V5-6				
	AMS	17 lb/100 gal	A	V5-6				
7	Warrant	3 pt/a	A	V5-6		0	13.4	43.4
	Enlist One	32 fl oz/a	A	V5-6				
	Liberty Ultra	24 fl oz/a	A	V5-6				
	Roundup PowerMax 3	30 fl oz/a	A	V5-6				
	MSO	1 % v/v	A	V5-6				
	AMS	17 lb/100 gal	A	V5-6				
8	SelectMax	12 fl oz/a	A	V5-6		0	13.2	48.3
	Dual II Magnum	2 pt/a	A	V5-6				
	Enlist One	32 fl oz/a	A	V5-6				
	Liberty Ultra	24 fl oz/a	A	V5-6				
	Roundup PowerMax 3	30 fl oz/a	A	V5-6				
	MSO	1 % v/v	A	V5-6				
	AMS	17 lb/100 gal	A	V5-6				
9	Untreated					0	13.6	45.0
10	Liberty Ultra	24 fl oz/a	B	R2		0	13.4	44.2
	AMS	17 lb/100 gal	B	R2				
11	Liberty Ultra	24 fl oz/a	B	R2		0	13.4	45.4
	Roundup PowerMax 3	30 fl oz/a	B	R2				
	AMS	17 lb/100 gal	B	R2				
12	Enlist One	32 fl oz/a	B	R2		0	13.4	45.0
	Liberty Ultra	24 fl oz/a	B	R2				
	Roundup PowerMax 3	30 fl oz/a	B	R2				
	AMS	17 lb/100 gal	B	R2				
13	Enlist One	32 fl oz/a	B	R2		0	13.3	51.8
	Liberty Ultra	24 fl oz/a	B	R2				
	Roundup PowerMax 3	30 fl oz/a	B	R2				
	MSO	1 % v/v	B	R2				
	AMS	17 lb/100 gal	B	R2				

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Rating Unit	%	%	bu/A
Crop Type, Code	C, GLXMA	C, GLXMA	C, GLXMA
Treatment Appl. Interval	28 DA-B		@13%M
Number of Decimals	0	1	1
Trt Treatment	Rate	Appl	Appl
No. Name	Rate Unit	Code	Timing
14 Dual II Magnum	2 pt/a	B	R2
Enlist One	32 fl oz/a	B	R2
Liberty Ultra	24 fl oz/a	B	R2
Roundup PowerMax 3	30 fl oz/a	B	R2
MSO	1 % v/v	B	R2
AMS	17 lb/100 gal	B	R2
15 Zidua SC	2.5 fl oz/a	B	R2
Enlist One	32 fl oz/a	B	R2
Liberty Ultra	24 fl oz/a	B	R2
Roundup PowerMax 3	30 fl oz/a	B	R2
MSO	1 % v/v	B	R2
AMS	17 lb/100 gal	B	R2
16 Warrant	3 pt/a	B	R2
Enlist One	32 fl oz/a	B	R2
Liberty Ultra	24 fl oz/a	B	R2
Roundup PowerMax 3	30 fl oz/a	B	R2
MSO	1 % v/v	B	R2
AMS	17 lb/100 gal	B	R2
17 SelectMax	12 fl oz/a	B	R2
Dual II Magnum	2 pt/a	B	R2
Enlist One	32 fl oz/a	B	R2
Liberty Ultra	24 fl oz/a	B	R2
Roundup PowerMax 3	30 fl oz/a	B	R2
MSO	1 % v/v	B	R2
AMS	17 lb/100 gal	B	R2
LSD P=.05	.	0.41	5.15
Standard Deviation	0.0	0.29	3.62
CV	0.0	2.17	7.96

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