

Weed control programs with Authority premixtures in soybean

Trial ID: SOY07-25 Study Dir.: Stiles, Sprague
 Conducted: Campus, C-14 Investigator: Christy Sprague

Planting Date: May-14-2025 **Row Spacing:** 30 "
Variety: AG24XF4 **No. of Reps:** 4
Population: 150000 S/A **% OM:** 1.8
Soil Type: CL clay loam **pH:** 6.4
Plot Size: 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall chisel plow and soil finish; spring soil finish twice.

Fertilizer:

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	ANGR	annual grass	mostly giant foxtail and barnyardgrass
2	CHEAL	common lambsquarters	Chenopodium album
3	AMBEL	common ragweed	Ambrosia artemisiifolia
Crop	Code	Common Name	
1	GLXMA	Soybean	

Application Description

	A	B	C
Application Timing:	PRE	EPOS	POST
Date Treated:	May-14-2025	Jun-9-2025	Jun-17-2025
Time Treated:	4:15 PM	11:00 AM	9:50 AM
% Cloud Cover:	77	20	0
Air Temp., Unit:	70 F	70 F	74 F
% Relative Humidity:	90	60	82
Wind Speed/Unit/Dir:	7 MPH SSE	8 MPH SSW	3 MPH S
Soil Temp, Unit:	78 F	71 F	75 F
Leaf Moist/Dew Presence (Y/N):	N	N	N
Soil Moist:	5	5	5

Crop Stage at Each Application

	A	B	C
Crop 1 Name:	GLXMA	GLXMA	GLXMA
Height:		2-3 " (2.5)	4-6 " (5)
Stage:		V1	V2

Weed Stage at Each Application

	A	B	C
Weed 1 Name:	ANGR	ANGR	ANGR
Height:		0.75-3 " (2)	1-7 " (4)
Stage:		1-5L	2-8L
Weed 2 Name:	CHEAL	CHEAL	CHEAL
Height:		0.75-2 " (1.5)	0.5-2 " (2)
Stage:		2-6L	4-16L
Weed 3 Name:	AMBEL	AMBEL	AMBEL
Height:		0.75-2 " (1.5)	0.5-3 " (3)
Stage:		2-4L	2-8L

Weed Density

	1	2	3
Date:	Jun-9-2025	Jun-9-2025	Jun-9-2025
Weed Name:	ANGR	CHEAL	AMBEL
Density:	3 FT2	1 FT2	3 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	18.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	30 PSI
B	CUB	3.8 MPH	AIXR	11003	26.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	30 PSI
C	CUB	3.8 MPH	AIXR	11003	24.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	30 PSI

Comments: Common ragweed at this location is Group 2 (ALS) resistant.

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Study Director: Stiles, Sprague Sponsor Contact:

Investigator: Christy Sprague

Rating Date					Jun-9-2025	Jun-9-2025	Jun-9-2025	Jun-9-2025	Jun-17-2025	Jun-17-2025	Jun-17-2025
Rating Type					injury	control	control	control	injury	control	control
Rating Unit					%	%	%	%	%	%	%
Crop Type, Code					C, GLXMA				C, GLXMA		
Pest Code						ANGR	CHEAL	AMBEL		ANGR	CHEAL
Treatment Appl. Interval					26 DA-A	26 DA-A	26 DA-A	26 DA-A	0 DA-C	0 DA-C	0 DA-C
Number of Decimals					0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing						
1	Untreated					0	0	0	0	0	0
2	Authority Supreme	8 fl oz/a	A	PRE		0	100	100	81	1	100
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
3	Authority Supreme	8 fl oz/a	A	PRE		0	100	100	95	4	99
	Metribuzin	8 oz/a	A	PRE							
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
4	Authority Supreme	6.5 fl oz/a	A	PRE		0	100	100	45	14	100
	Anthem Maxx	2.4 fl oz/a	B	EPOS							
	Liberty Ultra	24 fl oz/a	B	EPOS							
	Roundup PowerMax 3	30 fl oz/a	B	EPOS							
	AMS	17 lb/100 gal	B	EPOS							
5	Authority XL	4 oz/a	A	PRE		0	99	100	23	14	100
	Anthem Maxx	3 fl oz/a	B	EPOS							
	Liberty Ultra	24 fl oz/a	B	EPOS							
	Roundup PowerMax 3	30 fl oz/a	B	EPOS							
	AMS	17 lb/100 gal	B	EPOS							
6	Authority First	4 oz/a	A	PRE		0	100	100	71	0	95
	Metribuzin	4 oz/a	A	PRE							
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
7	Authority XL	4 oz/a	A	PRE		0	100	100	74	5	99
	Metribuzin	4 oz/a	A	PRE							
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
8	Boundary	2 pt/a	A	PRE		0	100	100	79	2	100
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
LSD P=.05						.	0.9	.	7.9	3.3	5.1
Standard Deviation						0.0	0.6	0.0	5.4	2.2	3.5
CV						0.0	0.68	0.0	9.24	46.14	3.98

Could not calculate LSD (% mean diff) or mean separation letters for columns 1,3,7,10,11,15,19,22 because error variance is 0.
Mean separation letters are 'na' (not applicable) when error variance is 0

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Study Director: Stiles, Sprague Sponsor Contact:

Investigator: Christy Sprague

Rating Date					Jun-17-2025	Jun-24-2025	Jun-24-2025	Jun-24-2025	Jun-24-2025	Jun-24-2025	Jul-1-2025
Rating Type					control	injury	control	control	control	control	injury
Rating Unit					%	%	%	%	%	%	%
Crop Type, Code						C, GLXMA					C, GLXMA
Pest Code					AMBEL		ANGR	CHEAL	AMBEL		
Treatment Appl. Interval					0 DA-C	7 DA-C	7 DA-C	7 DA-C	7 DAE1	14 DA-C	
Number of Decimals					0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing						
1	Untreated					0	0	0	0	0	0
2	Authority Supreme	8 fl oz/a	A	PRE		77	2	100	100	100	0
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
3	Authority Supreme	8 fl oz/a	A	PRE		90	0	100	100	100	0
	Metribuzin	8 oz/a	A	PRE							
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
4	Authority Supreme	6.5 fl oz/a	A	PRE		100	5	100	100	98	0
	Anthem Maxx	2.4 fl oz/a	B	EPOS							
	Liberty Ultra	24 fl oz/a	B	EPOS							
	Roundup PowerMax 3	30 fl oz/a	B	EPOS							
	AMS	17 lb/100 gal	B	EPOS							
5	Authority XL	4 oz/a	A	PRE		100	7	100	100	91	4
	Anthem Maxx	3 fl oz/a	B	EPOS							
	Liberty Ultra	24 fl oz/a	B	EPOS							
	Roundup PowerMax 3	30 fl oz/a	B	EPOS							
	AMS	17 lb/100 gal	B	EPOS							
6	Authority First	4 oz/a	A	PRE		76	0	100	100	100	0
	Metribuzin	4 oz/a	A	PRE							
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
7	Authority XL	4 oz/a	A	PRE		75	0	100	100	100	2
	Metribuzin	4 oz/a	A	PRE							
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
8	Boundary	2 pt/a	A	PRE		85	0	100	100	100	0
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
LSD P=.05						6.3	0.9	.	.	3.4	3.2
Standard Deviation						4.3	0.6	0.0	0.0	2.3	2.2
CV						5.71	36.29	0.0	0.0	2.71	315.62

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Study Director: Stiles, Sprague Sponsor Contact:

Investigator: Christy Sprague

Rating Date					Jul-1-2025	Jul-1-2025	Jul-1-2025	Jul-15-2025	Jul-15-2025	Jul-15-2025	Jul-15-2025
Rating Type					control	control	control	injury	control	control	control
Rating Unit					%	%	%	%	%	%	%
Crop Type, Code								C, GLXMA			
Pest Code					ANGR	CHEAL	AMBEL		ANGR	CHEAL	AMBEL
Treatment Appl. Interval					14 DA-C	14 DA-C	14 DA-C	28 DA-C	28 DA-C	28 DA-C	28 DA-C
Number of Decimals					0	0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing						
1	Untreated					0	0	0	0	0	0
2	Authority Supreme	8 fl oz/a	A	PRE		100	100	99	0	100	100
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
3	Authority Supreme	8 fl oz/a	A	PRE		100	100	98	0	99	100
	Metribuzin	8 oz/a	A	PRE							
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
4	Authority Supreme	6.5 fl oz/a	A	PRE		99	100	88	0	100	100
	Anthem Maxx	2.4 fl oz/a	B	EPOS							
	Liberty Ultra	24 fl oz/a	B	EPOS							
	Roundup PowerMax 3	30 fl oz/a	B	EPOS							
	AMS	17 lb/100 gal	B	EPOS							
5	Authority XL	4 oz/a	A	PRE		100	100	84	1	99	100
	Anthem Maxx	3 fl oz/a	B	EPOS							
	Liberty Ultra	24 fl oz/a	B	EPOS							
	Roundup PowerMax 3	30 fl oz/a	B	EPOS							
	AMS	17 lb/100 gal	B	EPOS							
6	Authority First	4 oz/a	A	PRE		100	100	95	0	96	100
	Metribuzin	4 oz/a	A	PRE							
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
7	Authority XL	4 oz/a	A	PRE		100	100	95	0	87	100
	Metribuzin	4 oz/a	A	PRE							
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
8	Boundary	2 pt/a	A	PRE		100	100	96	0	100	100
	Liberty Ultra	24 fl oz/a	C	POST							
	Roundup PowerMax 3	30 fl oz/a	C	POST							
	AMS	17 lb/100 gal	C	POST							
LSD P=.05						1.0	.	5.7	1.3	3.3	8.4
Standard Deviation						0.7	0.0	3.9	0.9	2.2	5.7
CV						0.77	0.0	4.73	565.69	2.63	7.45

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Investigator: Christy Sprague

Rating Date	Oct-3-2025	Oct-3-2025	Oct-3-2025	Oct-3-2025	Oct-3-2025
Rating Type	control	control	control	moisture	yield
Rating Unit	%	%	%	%	bu/A
Crop Type, Code	C, GLXMA C, GLXMA				
Pest Code	ANGR	CHEAL	AMBEL		
Treatment Appl. Interval	108 DA-C	108 DA-C	108 DA-C	108 DA-C	108 DA-C
Number of Decimals	0	0	0	1	1
Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing
1	Untreated				
2	Authority Supreme	8 fl oz/a	A	PRE	
	Liberty Ultra	24 fl oz/a	C	POST	
	Roundup PowerMax 3	30 fl oz/a	C	POST	
	AMS	17 lb/100 gal	C	POST	
3	Authority Supreme	8 fl oz/a	A	PRE	
	Metribuzin	8 oz/a	A	PRE	
	Liberty Ultra	24 fl oz/a	C	POST	
	Roundup PowerMax 3	30 fl oz/a	C	POST	
	AMS	17 lb/100 gal	C	POST	
4	Authority Supreme	6.5 fl oz/a	A	PRE	
	Anthem Maxx	2.4 fl oz/a	B	EPOS	
	Liberty Ultra	24 fl oz/a	B	EPOS	
	Roundup PowerMax 3	30 fl oz/a	B	EPOS	
	AMS	17 lb/100 gal	B	EPOS	
5	Authority XL	4 oz/a	A	PRE	
	Anthem Maxx	3 fl oz/a	B	EPOS	
	Liberty Ultra	24 fl oz/a	B	EPOS	
	Roundup PowerMax 3	30 fl oz/a	B	EPOS	
	AMS	17 lb/100 gal	B	EPOS	
6	Authority First	4 oz/a	A	PRE	
	Metribuzin	4 oz/a	A	PRE	
	Liberty Ultra	24 fl oz/a	C	POST	
	Roundup PowerMax 3	30 fl oz/a	C	POST	
	AMS	17 lb/100 gal	C	POST	
7	Authority XL	4 oz/a	A	PRE	
	Metribuzin	4 oz/a	A	PRE	
	Liberty Ultra	24 fl oz/a	C	POST	
	Roundup PowerMax 3	30 fl oz/a	C	POST	
	AMS	17 lb/100 gal	C	POST	
8	Boundary	2 pt/a	A	PRE	
	Liberty Ultra	24 fl oz/a	C	POST	
	Roundup PowerMax 3	30 fl oz/a	C	POST	
	AMS	17 lb/100 gal	C	POST	
LSD P=.05					
Standard Deviation					
CV					

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