

Weed control in no-till glyphosate resistant soybean. Spotanski, Jess J., and Alex R. Martin. A field study was conducted to evaluate herbicide programs in no-till soybeans. A randomized complete block design with three replications per treatment was utilized. The study was conducted on a Sharpsburg silty clay loam with 2.4% organic matter and a pH of 6.9. Individual plots consisted of six 30-inch rows, each 30 feet long. 'Asgrow 3003RR' soybeans was planted May 22 at a population of 150,000 seeds per acre. Treatments were applied with a tractor-mounted sprayer traveling 3.0 mph. Application, crop, weed, and weather data are presented:

Date	April 30	May 14	June 20
Treatment	22 DPP	8 DPP	POST
Sprayer			
gpa	15	15	15
psi	30	30	30
Temperature (°F)			
Air	70	80	73
Soil (4 inch)	63	61	77
Soil Moisture	Moist	Moist	Dry
Wind (mph)	5	9	5
Sky (% cloudy)	0	95	100
Relative Humidity (%)	33	23	69
Precip. after appl.			
Week 1 (inch)	0.75	0.83	0.0
Week 2 (inch)	1.45	1.70	0.0
Henbit			
Stage	flowering	flowering	--
Height (cm)	8-10	8-10	--
Infestation (m ²)	1000	1000	--
Tansy mustard			
Stage	flowering	flowering	--
Height (cm)	22-28	22-28	--
Infestation (m ²)	0-10	0-10	--
Common sunflower			
Height (cm)	--	--	17.5-25
Infestation (m ²)	--	--	4
Annual grasses			
Height (cm)	--	--	7.5-12.5
Infestation (m ²)	--	--	100

Summary comments: Precipitation was good until early June, and then conditions were very dry. Winter annual weed control was good with the exception of a couple of treatments. Applications that were applied 22 days before planting had better control of the winter annual weeds than those applied 8 days before planting. Green foxtail control was poor for most treatments. Foxtail emergence was shortly after May 14. Thus, treatments applied 8 DPP may have had poor grass control due to the emergence timing in relation to the herbicide application. Treatments with imazethapyr applied 22 DPP provided good residual control of foxtail. All treatments with a POST application had excellent control despite the dry conditions. Results of the study are summarized in the following table. (Dept. of Agronomy and Horticulture, University of Nebraska-Lincoln)

Table. Weed control in no-till glyphosate resistant soybean (Spotanski and Martin).

Treatment	Application		--LAMAM--		--DESPI--		--GGGAN ¹ --		--HELAN--	
	Rate (lb/A)	Timing	5/8	5/22	5/8	5/22	6/18	7/3	6/18	7/3
-----% weed control-----										
Sulfentrazone+	0.15	22 DPP/	53	93	50	83	37	100	91	100
cloransulam/	0.02									
glyphosate ² +	1.0	POST								
AMS ³	2.55									
Chlorimuron+	0.024	22 DPP/	50	78	57	97	27	100	90	100
sulfentrazone+	0.117									
2,4-D+	0.5									
COC ⁴ /	1 qt									
glyphosate ² +	1.0	POST								
AMS	2.55									
Glyphosate ² +	0.75	22 DPP/	43	95	53	98	0	100	75	100
AMS/	2.55									
glyphosate ² +	1.0	POST								
AMS	2.55									
Glyphosate ² +	0.75	22 DPP/	57	98	73	100	0	100	57	100
carfentrazone+	0.008									
AMS/	2.55									
glyphosate ² +	1.0	POST								
AMS	2.55									
Glyphosate ² +	0.5	22 DPP/	50	80	67	100	0	100	57	100
carfentrazone+	0.5									
2,4-D+	0.25									
AMS/	2.55									
glyphosate ² +	1.0	POST								
AMS	2.55									
Metribuzin&	0.42	22 DPP/	70	100	73	95	55	100	70	100
s-metolachlor+	1.77									
carfentrazone+	0.008									
COC/	1 qt									
glyphosate ² +	1.0	POST								
AMS	2.55									
Metribuzin&	0.315	22 DPP/	63	98	67	98	33	100	48	100
flufenacet+	0.21									
carfentrazone+	0.008									
COC/	1 qt									
glyphosate ² +	1.0	POST								
AMS	2.55									
Sulfentrazone+	0.25	22 DPP/	67	97	72	100	53	100	92	100
cloransulam+	0.032									
carfentrazone+	0.008									
COC/	1 qt									
glyphosate ² +	1.0	POST								
AMS	2.55									
Metribuzin&	0.225	8 DPP/	0	53	0	7	30	100	87	100
flufenacet+	0.15									
2,4-D/	0.5									
glyphosate ⁵ +	1.0	POST								
AMS	2.55									
Metribuzin&	0.27	8 DPP/	0	53	0	10	30	100	90	100
flufenacet+	0.18									
2,4-D/	0.5									
glyphosate ⁵ +	1.0	POST								
AMS	2.55									

(continued)

Table. Weed control in no-till glyphosate resistant soybean (Spotanski and Martin) continued.

Treatment	Application		--LAMAM--		--DESPI--		--GGGAN ¹ --		--HELAN--	
	Rate (lb/a)	Timing	5/8	5/22	5/8	5/22	6/18	7/3	6/18	7/3
-----% weed control-----										
Metribuzin& flufenacet+ 2,4-D/ glyphosate ⁵ + AMS	0.085 0.338 0.5 1.0 2.55	8 DPP/ POST	0	40	0	13	23	100	78	100
Glyphosate ² + AMS	1.0 2.55	22 DPP	50	100	30	100	0	0	33	0
Glyphosate& imazethapyr+ NIS ⁶ + AMS/ glyphosate ⁵ + AMS	0.75 0.064 0.13% 2.55 0.75 2.55	22 DPP/ POST	57	100	40	100	77	100	72	100
Pendimethalin ⁵ + glyphosate& imazethapyr+ NIS+ AMS/ glyphosate ⁵ + AMS	2.6 0.75 0.064 0.13% 2.55 0.77 2.55	22 DPP/ POST	57	100	30	100	92	100	88	100
Pendimethalin& imazethapyr+ 2,4-D+ COC+ AMS/ glyphosate ⁵ + AMS	0.844 0.063 0.15 1% 2.55 1.0 2.55	22 DPP/ POST	50	72	30	60	90	100	83	100
Glyphosate ⁵ + AMS/ glyphosate ⁵ + AMS	1.1 2.55 1.1 2.55	22 DPP/ POST	60	100	40	100	0	100	17	100
Clomazone+ sulfentrazone+ 2,4-D/ glyphosate ² + AMS	0.563 0.28 0.5 1.0 2.55	22 DPP/ POST	63	100	63	100	82	100	37	100
Glyphosate ² + AMS/ cloransulam+ glyphosate ² + AMS	1.0 2.55 0.016 1.0 2.55	22 DPP/ POST	53	100	50	100	0	100	60	100
Glyphosate ² + flumetsulam+ AMS/ glyphosate ² + AMS	1.0 2.55 0.04 1.0 2.55	22 DPP/ POST	50	100	50	100	0	100	80	100
Sulfentrazone+ COC+ AMS/ glyphosate ² + AMS	0.188 1% 2.0 1.0 2.55	22 DPP/ POST	70	33	63	75	60	100	77	97
LSD			9	15	18	14	15	0	28	2

¹GGGAN = Annual grasses primarily green and giant foxtail with some large crabgrass

²glyphosate = 'Glyphomax Plus'

³AMS = 'N Pa K' by Agrilliance

⁴COC = 'Prime Oil' by Agrilliance

⁵glyphosate = 'Roundup UltraMax'

⁶NIS = 'Preference' by Agrilliance