

No-till weed control in soybeans. Horky, Kevin T. 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 2703RR' was planted on June 4 at a population of 131,600 seeds per acre. Treatments were applied with a tractor-mounted sprayer traveling 3.0 mph. EPP (early preplant) treatments were applied 14 days before planting, and PREPLA (preplant) treatments were applied 7 days before planting. EPOST treatments were applied 21 days after planting, and POST treatments were applied 28 days after planting. Application, crop, weed and weather data are presented below:

Date	May 21	May 28	June 25	July 2
Treatment	EPP	PREPLA	EPOST	POST
Sprayer				
gpa	15	15	15	15
psi	30	30	30	30
Temperature (°F)				
Air	70	84	67	85
Soil (4 inch)	61	72	75	82
Soil Moisture				
Wind (mph)	Moist	Moist	Moist	Moist
Sky (% cloudy)	70	5	100	0
Relative Humidity (%)	28	32	77	52
Precip. after appl.				
Week 1	0.08	0.8	0.36	0.12
Week 2	0.8	2.99	0.04	0
Horseweed				
Height (cm)	15	20	25	32
Infestation (m ²)	4	4	4	5
Common Lambsquarters				
Height (cm)	6	7	10	25
Infestation (m ²)	3	4	4	4
Common sunflower				
Height (cm)	--	--	6	14
Infestation (m ²)	--	--	3	4
Velvetleaf				
Height (cm)	--	--	4	9
Infestation (m ²)	--	--	3	5

Summary comments: Precipitation was good until late June, then conditions were very dry. Control of velvetleaf and common sunflower was excellent in all treatments. A postemergent application was needed to achieve control of horseweed and common lambsquarters. The best treatment appeared to be an early application of glyphosate, combined with a postemergent application of glyphosate. There was no crop injury seen following any of the applications. Results of the study are summarized in the following table. (Dept. of Agronomy and Horticulture, University of Nebraska-Lincoln)

Table. No-till weed control in soybeans (Horky and Martin).

Treatment	Application		-----ERICA-----		-----CHEAL-----		-----HELAN-----		-----ABUTH-----	
	Rate	Timing	6/9	7/15	6/9	6/16	7/15	7/21	7/15	7/21
	(lb/A)		-----% weed control-----							
Chlorimuron+	0.024	EPP/	92	99	90	90	99	99	96	95
sulfentrazone+	0.12									
2,4-D ¹ +	0.5									
COC ² /	1qt									
glyphosate ³ +	0.78	POST								
AMS ⁴	2.55									
Glyphosate ³ +	0.585	EPP/	98	99	98	96	99	99	99	99
AMS/	2.55									
glyphosate ³ +	0.78	POST								
AMS	2.55									
Glyphosate ³ +	0.585	EPP/	98	99	98	97	99	99	99	99
2,4-D+	0.25									
AMS/	2.55									
glyphosate ³ +	0.78	POST								
AMS	2.55									
Glyphosate ³ +	0.39	EPP/	95	99	96	95	99	99	99	99
carfentrazone+	0.013									
2,4-D+	0.25									
AMS/	2.55									
glyphosate ³ +	0.78	POST								
AMS	2.55									
S-metolachlor&	3.54	EPP/	63	83	65	82	99	99	99	99
metribuzin+	0.84									
carfentrazone+	0.013									
COC/	1qt									
glyphosate ³ +	0.78	POST								
AMS	2.55									
Flufenacet&	0.21	EPP/	47	83	55	87	99	99	99	99
metribuzin+	0.315									
carfentrazone+	0.013									
COC/	1qt									
glyphosate ³ +	0.78	POST								
AMS	2.55									
Flufenacet&	0.15	PREPLA/	78	99	90	88	99	99	99	99
metribuzin+	0.23									
2,4-D+	0.5									
COC/	1qt									
glyphosate ⁵ +	0.78	POST								
AMS	2.55									
Flufenacet&	0.18	PREPLA/	87	96	88	89	99	99	99	99
metribuzin+	0.27									
2,4-D+	0.5									
COC/	1qt									
glyphosate ⁶ +	0.78	POST								
AMS	2.55									

(continued)

Table. No-till weed control in soybeans (Horky and Martin), continued.

Treatment	Application		-----ERICA-----		-----CHEAL-----		-----HELAN-----		-----ABUTH-----	
	Rate	Timing	6/9	7/15	6/9	6/16	7/15	7/21	7/15	7/21
	(lb/A)		-----% weed control-----							
Glyphosate ³ +	0.78	POST	0	80	0	0	99	99	99	99
AMS	2.55									
Imazethapyr&	0.064	EPP/	96	99	99	99	99	99	99	99
glyphosate+	0.75									
NIS ⁶ +	0.13%									
AMS/	2.55									
glyphosate ⁵ +	0.78	POST								
AMS	2.55									
Pendimethalin+	1.3	EPP/	99	99	99	99	99	99	99	99
imazethapyr&	0.128									
glyphosate+	0.78									
NIS+	0.13%									
AMS/	2.55									
glyphosate ⁵ +	0.78	POST								
AMS	2.55									
Imazethapyr&	0.125	EPP/	75	96	85	88	99	99	99	99
pendimethalin+	1.69									
2,4-D+	0.15									
COC+	1%									
AMS/	2.55									
glyphosate ⁵ +	0.78	POST								
AMS	2.55									
Glyphosate ⁵ +	0.78	EPP/	99	99	99	99	99	99	99	99
AMS/	2.55									
glyphosate ⁵ +	0.78	POST								
AMS	2.55									
Sulfentrazone+	0.188	EPP/	40	82	53	78	99	98	98	98
COC+	1%									
AMS/	2.55									
glyphosate ⁵ +	0.78	POST								
AMS	2.55									
Glyphosate ⁵ +	0.78	PREPLA/	95	99	95	94	99	99	99	99
AMS/	2.55									
Imazethapyr&	0.128	EPOST								
glyphosate+	0.585									
AMS	2.55									
Glyphosate ⁵ +	0.78	PREPLA/	92	99	95	96	99	99	99	99
AMS/	2.55									
glyphosate ⁵ +	0.78	POST								
AMS	2.55									
LSD (P=0.05)			8	4	16	16	0	1	21	2

¹2,4-D = 2,4-D Ester²COC = 'Prime Oil' by Agrilience³glyphosate = 'Glyphomax Plus'⁴AMS = 'N PA-K' by Agrilience⁵glyphosate = 'Roundup Weathermax'⁶NIS = 'Preference' by Agrilience