

Horseweed burndown in no-till soybean. Young, Bryan G., R. F. Krausz, H. J. Mager and J. L. Matthews. This study was designed to evaluate various treatments for control of horseweed in no-till soybean. The study was conducted on a silt loam soil with 2.0% organic matter and pH 6.8 at the Belleville Research Center. Fertilizer applied in 2003 was 50 and 200 lb/A P₂O₅ and K₂O, respectively, to an area that had been cropped to field corn in 2002. Asgrow brand 'AG 4403' glyphosate-resistant soybean was planted 1.0 inch deep at 75 lb/A into a no-till seedbed on June 23. Plots consisted of four rows with 30 inch row spacing, 21 ft long arranged in a randomized complete block design with three replications. Application timing was early preplant, 14 days before planned planting date (14EPP). The herbicides were broadcast applied with a CO₂ pressurized sprayer using 8002 flat fan tips at 40 PSI in 15 GPA water. Monthly rainfall in inches was 2.8, 4.8, 8.3, 1.9 and 4.2 in April, May, June, July and August, respectively. Weed population per 0.25 m² in the nontreated plots, mid-season, was 2 horseweed and 1 common ragweed.

Application information is listed below.

Date	6-9-03
Treatment	14EPP
Air temperature (F)	84
Relative humidity (%)	34
Soil moisture	normal

horseweed	
leaf no.	10-30
height (inch)	6-14

common ragweed	
leaf no.	6-14
height (inch)	6-14

Control of horseweed was at least 99% at 14 days after treatment (DAT) with glyphosate or paraquat applied alone. Adding another herbicide to glyphosate or paraquat did not decrease control of horseweed compared with glyphosate alone. Flumioxazin plus 2,4-De and flumioxazin plus cloransulam controlled only 37 to 40% of horseweed at 14 DAT. However, control of horseweed was increased to 77% when flumioxazin was combined with 2,4-De and cloransulam. (Dept. of Plant, Soil and General Agriculture, Southern Illinois University, Carbondale).

Table. Horseweed burndown in no-till soybean. (Young, Krausz, Mager and Matthews)

Treatment ^a	Application rate (lb/A)	Control, days after treatment ^b						Soybean injury 28 DAT ^c %
		ERICA			AMBEL			
		7 %	14 %	28 %	7 %	14 %	28 %	
Nontreated		0	0	0	0	0	0	0
Glyphosate(WM)	0.75	88	99	98	37	87	90	0
Glyphosate(WM)+2,4-De	0.75+0.71	92	99	99	70	95	99	0
Glyphosate(WM)+cloransulam	0.75+0.0315	85	99	99	47	92	92	0
Glyphosate(WM)+flumioxazin	0.75+0.064	95	99	99	96	93	90	0
Glyphosate(WM)+metribuzin	0.75+0.25	53	96	99	53	83	87	0
Paraquat+NIS	0.75+0.25%	99	99	99	99	99	99	0
Paraquat+2,4-De+NIS	0.75+0.71+0.25%	99	99	99	99	99	99	0
Imazaquin&glyphosate+2,4-De+NIS	0.156&0.784+0.71+0.25%	87	99	99	50	73	93	0
Imazethapyr&glyphosate+2,4-De+NIS	0.058&0.75+0.71+0.25%	60	90	99	53	67	83	0
Pendimethalin+imazaquin&glyphosate+2,4-De+NIS	1.19+0.156&0.784+0.71+0.25%	67	90	99	53	80	99	0
Pendimethalin+imazethapyr&glyphosate+2,4-De+NIS	1.19+0.058&0.75+0.71+0.25%	53	90	93	50	80	96	0
Flumioxazin+2,4-De+COC	0.064+0.475+1.0pt	50	37	23	99	99	99	0
Flumioxazin+cloransulam+COC	0.048+0.0157+1.0pt	40	40	53	83	85	96	0
Flumioxazin+cloransulam+2,4-De+COC	0.048+0.0157+0.237+1.0pt	57	77	82	98	99	99	0
Carfentrazone+glyphosate(WM)	0.0078+0.75	75	93	99	67	82	73	0
Carfentrazone+2,4-De+glyphosate(WM)	0.0078+0.237+0.75	92	98	98	96	98	96	0
LSD		16	11	8	10	11	9	0
P		0.01	0.01	0.01	0.01	0.01	0.01	1.0

^aAll glyphosate applications included AMS at 2.5 lb/A.

AMS = spray grade ammonium sulfate.

Glyphosate(WM) was Roundup WeatherMax from Monsanto Co.

NIS = Activator 90, a nonionic surfactant from Loveland Industries, Inc.

COC = Prime Oil crop oil concentrate, a petroleum based additive with 17% emulsifier from Agrilience, LLC.

All applications were made 14 days prior to planned planting date.

^bRating dates:

7, 14 and 28 days after treatment was on Jun-16-03, Jun-23-03 and Jul-7-03, respectively.

^cRatings at 28 days after treatment were also 14 days after planting.