

Effect of application timing on giant ragweed control in soybean. Dekalb, Illinois, 2003. Hasty, Ryan F., Dawn E. Nordby, and William F. Simmons. The objective of this research was to evaluate application timing on giant ragweed control in soybean. The study was established at the Northern Illinois Research and Education Center, Dekalb. The soil was a Drummer silty-clay loam with a pH of 6.0 and 6.0% organic matter. Asgrow 2703 soybean was planted 1.5 inches deep on May 18 in 30 inch rows. Treatments were arranged in randomized complete blocks with three replications of plots 10 by 33 feet. Herbicides were applied with a CO₂ backpack sprayer delivering 20 gpa and equipped with 8003 flat fan nozzles. Application information is listed below:

Date	May 20	June 16	June 23	July 2
Application	pre	epost	post	lpost
Temperature (F)				
Air	60	81	89	88
Soil	57	77	82	84
Soil Moisture	moist	moist	moist	dry
Wind (mph)	11W	6SW	9SW	3W
Sky Cover (%)	0	50	0	50
Precip. after application				
Week 1 (inch)	0.13	0.30	0.24	2.58
Week 2 (inch)	0.61	0.42	1.93	0.52
Relative humidity (%)	61	36	31	47
Soybean				
Leaf no.	-	1tri	2tri	5tri
Height (inch)	-	4	6	8
Giant Ragweed				
Leaf no.	-	4	6	10
Height (inch)	-	3	6	14

Preemergence herbicide treatments provided < 75% control of giant ragweed 30 days after treatment (DAT). Two pass approaches provided more consistent control of giant ragweed, however, control was dependent on timing and herbicide. Single applications of glyphosate and cloransulam+imazamox at the late post timing provided >95% of giant ragweed 30 DAT. The only lactofen treatment that provided >90% control of giant ragweed was an early post application followed by a late post application of lactofen at 0.188 lbs/A. (Dept. of Crop Sciences, University of Illinois, Urbana).

Table. Effect of application timing on giant ragweed control in soybean. Dekalb, Illinois, 2003. (Hasty, Nordby, and Simmons).

Treatment	Appl Rate (lb/A)	Time	Ambtr		
			6-23	7-16	8-4
Cloransulam+S-metolachlor&metribuzin	0.032+1.77+0.42	pre	65	0	0
Cloransulam+Clomazone	0.032+0.75	pre	67	0	0
Glyphosate+N-PaK AMS ¹	0.75+2.5%	epost	-	71	67
Lactofen+clethodim	0.188+0.125	epost	-	50	7
+Herbimax ² +28% N	1.0%+2.5%				
Cloransulam+imazamox	0.016+0.039	epost	-	79	70
+MSO ³ +28% N	1.0%+2.5%				
Check	-	-	0	0	0
Glyphosate+N-PaK AMS	0.75+2.5%	post	-	90	83
Lactofen+clethodim	0.188+0.125	post	-	68	58
+Herbimax+28% N	1.0%+2.5%				
Cloransulam+imazamox	0.016+0.039	post	-	93	80
+MSO+28% N	1.0%+2.5%				
Glyphosate+N-PaK AMS	0.75+2.5%	lpost	-	82	90
Lactofen+clethodim	0.188+0.125	lpost	-	67	55
+Herbimax+28% N	1.0%+2.5%				
Cloransulam+imazamox	0.016+0.039	lpost	-	88	96
+MSO+28% N	1.0%+2.5%				
Cloransulam	0.032	pre	72	94	96
+glyphosate+N-PaK AMS	0.75+2.5%	post			
Cloransulam	0.032	pre	70	77	67
+lactofen+clethodim	0.188+0.125	post			
Cloransulam	0.032	pre	70	89	98
+glyphosate+N-PaK AMS	0.75+2.5%	lpost			
Cloransulam	0.032	pre	73	72	65
+lactofen+clethodim	0.188+0.125	lpost			
Glyphosate+N-PaK AMS	0.75+2.5%	epost	-	98	98
+glyphosate+N-PaK AMS	0.75+2.5%	lpost			
Lactofen+clethodim	0.188+0.125	epost	-	96	94
+Herbimax+28% N	1.0%+2.5%				
+lactofen+Herbimax+28% N	0.188+1.0%+2.5%	lpost			
LSD (0.05)			5	6	8

¹ N-PaK AMS is an ammonium sulfate solution from Agrilience LLC; ² Herbimax is a paraffinic oil and surfactant blend from Loveland Indus.;

³ MSO is a methylated seed oil and non-ionic surfactant blend from Loveland Indus.