

Control of volunteer glyphosate resistant corn in glyphosate resistant soybean. Urbana, Illinois, 2003.

Nordby, Dawn E., Aaron G. Hager, and Douglas J. Maxwell. The objective of this research was to evaluate control of volunteer glyphosate resistant corn in glyphosate resistant soybean. The study was established at the Crop Sciences Research and Education Center, Urbana. The soil was an Elburn silt loam with a pH of 6.6 and 4.7% organic matter. Asgrow 3201 soybean was planted 1.5 inches deep on May 14 in 30 inch rows. Treatments were arranged in randomized complete blocks with three replications of plots 10 by 30 feet. Herbicides were applied with a CO<sub>2</sub> backpack sprayer delivering 20 gpa and equipped with 8003 flat fan nozzles. Application information is listed below:

Date	May 14	June 20
Application	pre	post
Temperature (F)		
Air	72	70
Soil	68	69
Soil Moisture	moist	moist
Wind (mph)	3-SW	4-NE
Sky Cover (%)	100	0
Precip. after application		
Week 1 (inch)	0.36	0.05
Week 2 (inch)	0.00	0.25
Relative humidity (%)	35	40
Soybean		
Leaf no.	-	3tri
Height (inch)	-	6
Volunteer Corn		
Leaf no.	-	5
Height (inch)	-	20

There was no crop injury observed from any of the treatments. Preemergence applications did not provide adequate control regardless of treatment. Fluazifop-P and fenoxaprop, V-10137, and V-10139 tank mixed with glyphosate and AMS provided excellent control of volunteer corn. The addition of Activator 90 to V-10117, V-10137, and V-10139 did not have any affect on control. Full rates of clethodim, fluazifop-P and fenoxaprop, and quizaflop-P, provided 10% better control than the reduced rates at mid-season. Clethodim as Arrow, at the lowest rate of 0.031 lb/A, provided only partial control at mid-season. (Dept. of Crop Sciences, University of Illinois, Urbana).

Table. Control of volunteer glyphosate resistant corn in glyphosate resistant soybean. Urbana, Illinois, 2003. (Nordby, Hager, and Maxwell).

Treatment	Appl Rate (lb/A)	Time	Glxma	Zeamd	Glxma	Zeamd	Glxma	Zeamd
			6-15 % inj	6-15 % cont	6-30 % inj	6-30 % cont	7-12 % inj	7-12 % cont
Chlorimuron&sulfentrazone	0.04+0.20	pre	0	53	0	23	0	0
Clomazone	0.75	pre	0	27	0	0	0	0
Chlorimuron&cloransulam	0.248+0.031	pre	0	20	0	0	0	0
Sulfentrazone+clomazone	0.3+0.6	pre	0	27	0	0	0	0
Flufenacet&metribuzin	0.18+0.27	pre	0	23	0	0	0	0
Imazethapyr&pendimethalin	0.063+0.847	pre	0	47	0	0	0	0
Imazethapyr&glyphosate	0.058+0.752	post	-	-	0	52	0	77
+Activator 90 <sup>5</sup> +N-PaK AMS <sup>6</sup>	0.25%+5.0%							
Imazamox	0.031	post	-	-	0	84	0	96
+MSO <sup>7</sup> +28% N	1.0%+2.5%							
Quizalofop-P+glyphosate <sup>1</sup>	0.034+0.75	post	-	-	0	92	0	96
+N-PaK AMS	5.0%							
Quizalofop-P+glyphosate <sup>1</sup>	0.028+0.75	post	-	-	0	88	0	94
+N-PaK AMS	5.0%							
Quizalofop-P+glyphosate <sup>1</sup>	0.014+0.75	post	-	-	0	77	0	85
+N-PaK AMS	5.0%							
Sethoxydim&BCH-815S+glyphosate <sup>1</sup>	0.188+0.75	post	-	-	0	97	0	91
+N-PaK AMS	5.0%							
Fluazifop-P&fenoxaprop-P+glyphosate <sup>1</sup>	0.097+0.028+0.75	post	-	-	0	97	0	99
+N-PaK AMS	5.0%							
Fluazifop-P&fenoxaprop-P+glyphosate <sup>1</sup>	0.033+0.009+0.75	post	-	-	0	98	0	88
+N-PaK AMS	5.0%							
Clethodim <sup>2</sup> +glyphosate <sup>1</sup>	0.078+0.75	post	-	-	0	93	0	82
+N-PaK AMS	5.0%							
V-10117+glyphosate <sup>1</sup>	0.073+0.75	post	-	-	0	98	0	92
+N-PaK AMS	5.0%							
V-10137+glyphosate <sup>1</sup>	0.073+0.75	post	-	-	0	98	0	97
+N-PaK AMS	5.0%							
V-10139+glyphosate <sup>1</sup>	0.075+0.75	post	-	-	0	99	0	98
+N-PaK AMS	5.0%							
V-10117+glyphosate <sup>3</sup>	0.073+0.75	post	-	-	0	99	0	96
+Activator 90+N-PaK AMS	0.25%+5.0%							
V-10137+glyphosate <sup>3</sup>	0.073+0.75	post	-	-	0	99	0	97
+Activator 90+N-PaK AMS	0.25%+5.0%							
V-10139+glyphosate <sup>3</sup>	0.075+0.75	post	-	-	0	96	0	97
+Activator 90+N-PaK AMS	0.25%+5.0%							
Clethodim <sup>4</sup> +glyphosate <sup>1</sup>	0.031+0.75	post	-	-	0	43	0	50
+N-PaK AMS	5.0%							
Clethodim <sup>4</sup> +glyphosate <sup>1</sup>	0.063+0.75	post	-	-	0	97	0	91
+N-PaK AMS	5.0%							
Clethodim <sup>4</sup> +glyphosate <sup>1</sup>	0.094+0.75	post	-	-	0	97	0	92
+N-PaK AMS	5.0%							
Clethodim <sup>2</sup> +glyphosate <sup>3</sup>	0.094+0.75	post	-	-	0	95	0	88
+Preference <sup>8</sup> +N-PaK AMS	0.25%+5.0%							
Glyphosate <sup>1</sup> +N-PaK AMS	0.75+5.0%	post	-	-	0	0	0	0
LSD (0.05)			0	5	0	8	0	5

<sup>1</sup> Roundup Weathermax; <sup>2</sup> Select; <sup>3</sup> Roundup Original; <sup>4</sup> Arrow; <sup>5</sup> Activator 90 is a non-ionic surfactant from Loveland Indus.; <sup>6</sup> N-PaK AMS is an ammonium sulfate solution from Agrilience LLC; <sup>7</sup> MSO is a methylated seed oil and non-ionic surfactant blend from Loveland Indus.; <sup>8</sup> Preference is a non-ionic surfactant from Agrilience LLC.