

Control of volunteer glyphosate-resistant corn in glyphosate-resistant soybean. Sellers, Brent A., Jim D. Wait, Jianmei Li and Reid J. Smeda. The objective of this study was to compare V10117, V10137 and V10139 with clethodim tankmixed with glyphosate for control of volunteer glyphosate-resistant corn in glyphosate-resistant soybean. This study was conducted at the Bradford Research and Extension Center near Columbia, MO. The soil was a Mexico silt loam with a pH of 6.5 and 2.8% organic matter. 'MFA RT 3881' glyphosate-resistant soybean was planted 1.0-inch deep on May 23 in 15-inch rows. Treatments were arranged in a randomized complete block design with four replications of 5 by 35 foot plots. Herbicide applications were made with a CO<sub>2</sub> backpack sprayer equipped with XR8002 flat fan nozzles calibrated to deliver 15 GPA.

Application data are listed below:

Date	June 30
Application	12-18" corn
Temperature (F)	
air	79
soil	80
Soil moisture	moist
Wind (mph)	2
Cloud cover	95
Relative humidity (%)	75
Precipitation after application	
week 1 (inch)	0
week 2 (inch)	0.6
Soybean	
stage	V4
height (inch)	8
Corn	
leaf no.	5
height (inch)	14
infestation (sq. ft.)	4
fall panicum	
leaf no.	4
height (inch)	2
infestation (sq. ft.)	4
large crabgrass	
leaf no.	4
height (inch)	2
infestation (sq. ft.)	16

Crop injury was <10% seven days after application and was not present by 28 days after application. Control of volunteer glyphosate-resistant corn was poor in all herbicide treatments seven days after application, but control increased to  $\geq 88\%$  by 28 days after application. Fall panicum and large crabgrass control was  $\geq 99\%$  in all herbicide treatments by 28 days after application. All treatments performed equally well on grass weed species. V10117, V10137 and V10139 may be marginally better than clethodim, but results were inconsistent among treatments. (Department of Agronomy, University of Missouri-Columbia)

Table.

Application <sup>a</sup>	Rate (lb/A)	Time	Injury			ZEAMX			PANDI			DIGSA		
			DA 12-18" corn											
			7	14	28	7	14	28	7	14	28	7	14	28
Untreated			0	0	0	0	0	0	0	0	0	0	0	0
Clethodim+glyphosate(W)+AMS	0.08+0.77+2.5	12-18" corn	4	1	0	49	95	88	100	99	100	100	93	99
V10117+glyphosate(W)+AMS+NIS	0.07+0.77+2.5+0.25%	12-18" corn	6	1	0	54	95	95	100	99	100	100	95	99
Fluazifop+glyphosate(W)+AMS	0.07+0.77+2.5	12-18" corn	9	1	0	60	97	97	100	99	100	100	96	99
V10137+glyphosate(W)+AMS	0.07+0.77+2.5	12-18" corn	4	0	0	54	95	89	100	99	100	100	97	99
V10139+glyphosate(W)+AMS+NIS	0.08+0.77+2.5+0.25%	12-18" corn	3	0	0	48	95	92	99	99	100	100	97	99
V10137+glyphosate(O)+AMS+NIS	0.07+0.77+2.5+0.25%	12-18" corn	5	0	0	41	94	93	100	99	100	100	93	99
V10139+glyphosate(O)+AMS+NIS	0.08+0.77+2.5+0.25%	12-18" corn	5	0	0	51	94	95	100	99	100	100	97	99
Glyphosate(W)+AMS	0.77+2.5	12-18" corn	3	0	0	0	0	0	100	99	99	100	94	99
LSD (0.05)			3	2	0	15	1	5	1	0	1	1	4	0

<sup>a</sup>Glyphosate (W)=Roundup WeatherMax; glyphosate (O) = Roundup Original; both expressed as lb ae/A.  
NIS=Astute, nonionic surfactant from MFA Crop Advantage  
AMS=ammonium sulfate from MFA Crop Advantage