

Annual weed control with Prefix, Valor, Gangster, Authority First, and Authority MTZ in glyphosate-resistant soybeans at Lamberton, MN in 2007. Getting, Jodie K. The objective of this study was to evaluate soybean herbicide combinations for annual grass and annual broadleaf weed control in glyphosate-resistant soybeans. This study was conducted on a Normania loam soil containing 4.7% organic matter, pH 6.3 and soil test P and K levels of 34 and 380 lb/A, respectively. A randomized complete block design with four replications and a plot size of 10 by 30 ft was used. The site was planted to oats in 2006 and was fall chiseled. The area was fertilized with 140-60-60 on April 20, 2007. On May 15, 2007, Pioneer '91M92 RR/STS' glyphosate-resistant/sulfonylurea tolerant soybeans were planted in 30-inch rows at a seeding rate of 160,000 seeds/A. On August 7, all plots were treated with chlorpyrifos for soybean aphid and spider mite control. All treatments were applied with a tractor-mounted sprayer delivering 20 gpa at a pressure of 40 psi. The sprayer was equipped with 8002 flat-fan nozzles spaced 15 inches apart on the boom. Application dates, environmental conditions, plant sizes and rainfall data are listed below:

Date	May 17	June 11	July 2
Treatment	PRE	POST I	POST II
Temperature (F)			
air	43	81	70
soil (4 inch)	52	76	74
Relative humidity (%)	66	62	80
Wind (mph)	calm	S 5	SW 8
Sky	clear	clear	cloudy
Soil moisture	dry	dry	dry
Soybean			
leaf no.	-	V2	R1
height (inch)	-	6	20
Yellow foxtail			
leaf no.	-	3 to 5	2 to 4
height (inch)	-	3 to 5	2 to 4
no./ft ²	-	5	4
Common lambsquarters			
leaf no.	-	4 to 6	-
height (inch)	-	2 to 4	-
no./ft ²	-	1	-
Tall waterhemp			
leaf no.	-	3 to 5	2 to 4
height (inch)	-	2 to 4	2 to 4
no./ft ²	-	2	< 1
Rainfall after application (inch)			
1 week	0.31	1.43	0.00
2 week	0.14	0.17	0.00
3 week	1.90	0.00	0.78

(Southwest Research and Outreach Center, University of Minnesota, Lamberton).

Table. Annual weed control with Prefix, Valor, Gangster, Authority First, and Authority MTZ in glyphosate-resistant soybeans at Lamberton, MN in 2007 (Getting).

Treatment ^a	Rate (oz/A, pt/A, lb/A or %)	Yellow foxtail				Common lambsquarters				Tall waterhemp				Yield (bu/A) ^b
		6/11	6/20	7/2	9/13	6/11	6/20	7/2	9/13	6/11	6/20	7/2	9/13	
<u>Preemergence/POST I (4-inch weeds)</u>														
Prefix / Touchdown Total + AMS	1.5 pt / 24 oz + 2 qt	71	100	96	92	92	100	100	100	97	100	100	100	50.1
Prefix / Touchdown Total + AMS	2 pt / 24 oz + 2 qt	70	100	97	93	94	100	100	99	98	100	100	100	52.0
Valor / Touchdown Total + AMS	2 oz / 24 oz + 2 qt	56	100	86	81	98	100	100	100	98	100	100	98	51.3
Gangster V + Gangster FR / Touchdown Total + AMS	1.5 oz + 0.3 oz / 24 oz + 2 qt	58	100	89	86	98	100	99	100	98	100	98	100	51.0
Authority First / Touchdown Total + AMS	3.2 oz / 24 oz + 2 qt	53	100	90	89	91	100	100	100	97	100	100	100	52.2
Authority MTZ / Touchdown Total + AMS	10 oz / 24 oz + 2 qt	30	100	87	83	96	100	100	100	97	100	96	100	53.0
F7119 / Touchdown Total + AMS	4.8 oz / 24 oz + 2 qt	38	100	85	83	97	100	100	100	98	100	100	100	52.1
<u>POST I (4-inch weeds)</u>														
Touchdown Total + AMS	24 oz + 2 qt	0	100	91	89	0	100	99	98	0	100	100	100	53.8
<u>POST I (4-inch weeds)/POST II (soybean canopy)</u>														
Touchdown Total + AMS / Touchdown Total + AMS	24 oz + 2 qt / 24 oz + 2 qt	0	100	89	98	0	100	100	100	0	100	100	100	51.9
<u>Check</u>														
Weedy Check	-	0	0	0	0	0	0	0	0	0	0	0	0	33.3
	LSD (0.10)	11.7	ns	5.7	5.5	4.4	ns	1.4	1.5	1.0	ns	2.1	1.9	4.59

^a AMS = liquid spray grade ammonium sulfate.

^b Yield adjusted to 13% moisture.