

Herbicide performance in soybeans at Waseca, MN common ragweed site in 2002. Hoverstad, Thomas R and Jeffrey L. Gunsolus. The objective of this trial was to evaluate soybean weed management systems available to producers in southern Minnesota on several annual weed species. This site had a particularly high infestation of common ragweed. The research site was a Webster clay loam soil containing 6% organic matter with a pH of 7.0 and soil test P and K levels of 26 and 165 ppm, respectively. The previous crop was oats that had been fall chisel plowed. The entire area was field cultivated once in the spring prior to herbicide application. Following preplant incorporated treatments the entire area was field cultivated twice to a depth of 3 to 4 inches to incorporate herbicides and prepare a seedbed. Asgrow '2103' soybeans were planted on May 15, 2002 in 30-inch rows. All treatments were applied with a tractor-mounted sprayer delivering 20 gpa at 40 psi using 8002 flat-fan nozzle tips. Visual estimates of weed control were taken on September 9, 2002. Application dates, environmental conditions, crop and weed stages are listed below.

Date	May 15	May 16	June 17	June 24	July 12
Treatment			Post I	Post II	Post III
Application Stage	PPI	Pre	4-inch weeds	6-inch weeds	Crop canopy
air temp °F	75	65	76	87	72
soil temp (4-inch)	70	58	63	76	72
Relative humidity (%)	40	30	45	46	45
Wind	W 8	N 6	SW 2	W 8	N 5
Soil moisture	dry	Dry	Moist	Moist	Moist
Soybeans					
Stage	-	-	V2	V4	R1
height (inch)	-	-	6	8	14
Giant foxtail					
leaf no.	-	-	3-4	4-6	3-4
height (inch)	-	-	3-4	5-7	3
Common ragweed					
leaf no.	-	-	2-4	6-10	3-4
height (inch)	-	-	3-4	4-6	4
Common lambsquarters					
leaf no.	-	-	4-8	8-12	6
height (inch)	-	-	3-4	4	4
Rainfall after application (inch)					
week 1	0.00	0.00	2.19	1.15	0.00
week 2	0.71	0.74	1.15	0.00	0.56
week 3	2.52	2.49	0.00	0.89	1.24

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2002 Soybean Herbicide Evaluation - Waseca

Common Ragweed Site

Herbicide	Rate	Giant	Common	Common		Weed Control		
		Foxtail	Ragweed	Velvetleaf	Lambsquarters	Yield	Cost	Returns
	(pt/A)	-----(% control)-----				(bu/A)	(\$/A)	(\$/A)
<u>PPI 2X / Postemergence (4-inch weeds)</u>								
Prowl / Raptor + Ultra Blazer + NIS + AMS	2.17 / 4 + 12oz + 0.25% + 17 lb/100gal	94	99	96	98	52.5	\$44.00	\$213
Prowl / Raptor + FirstRate + NIS + AMS	2.17 / 4 + 0.2oz + 0.25% + 17 lb/100gal	99	96	99	98	56.1	\$39.93	\$235
Prowl / Extreme + NIS + AMS	2.5 / 3 + 0.25% + 13 lb/100gal	99	99	99	99	55.9	\$43.49	\$231
<u>Preemergence</u>								
Guantlet + Boundary	5.9 oz/A + 1.25	85	54	61	79	47.5	\$32.07	\$201
<u>Pre / Postemergence (4-inch weeds)</u>								
Python / FirstRate + Select + Cobra + NIS + AMS	1 oz / 0.3 oz + 8 oz + 8 oz + 0.25% + 2.5 lb	98	99	99	30	46.7	\$46.49	\$182
Guantlet / Fusion + COC + AMS	5.9 oz / 10 oz + 1 + 2.5 lb	99	55	77	86	50.3	\$37.97	\$208
Valor / FirstRate + Phoenix+ Select + COC + AMS	2.5 oz / 0.3 oz + 8 oz + 8 oz + 1% + 2.5 lb	99	99	99	43	51.6	\$49.14	\$204
Boundary / Flexstar + Fusion + COC + AMS	1.25 / 16 oz + 8 oz + 1% + 2.5 lb	99	99	99	83	55.8	\$43.36	\$230
Authority / Flexstar + Assure II + COC + AMS	4.5 oz / 16 oz + 9 oz + 1% + 2.5 lb	99	99	92	81	53.6	\$46.30	\$216
<u>Pre / Postemergence (6-inch weeds)</u>								
Authority / Roundup Ultra Max + Classic + AMS	3.5 oz / 26 oz + 0.33 oz + 2.5	99	99	99	99	53.9	\$44.67	\$219
Python / Glyphomax Plus + AMS	1 oz / 2 oz + 2.5 lb	99	99	99	99	57.2	\$40.48	\$240
Guantlet / Glyphosate Plus + AMS	3 oz / 2 + 2.5	99	99	99	99	54.6	\$39.36	\$228
Valor + Roundup Ultra Max + AMS	2 oz / 26 oz + 2.5	99	99	99	99	55.5	\$40.38	\$231
Boundary / Touchdown IQ + AMS	1.25 / 2 + 2.5	99	99	96	97	53.3	\$42.60	\$219
Domain / Roundup Ultra Max + AMS	10 oz / 19 oz + 2.5	98	96	99	99	52.6	\$36.23	\$222
Authority / Roundup Ultra Max	4 oz / 26 oz + 2.5	99	97	99	99	55.8	\$41.86	\$232
<u>Postemergence (4-inch weeds)</u>								
Flexstar + Fusion + Harmony GT + COC + AMS	16 oz + 10 oz + ¹ / ₃₂ oz + 1% + 2.5 lb	99	99	99	88	50.4	\$29.59	\$217
<u>Pre / Postemergence (6-inch weeds)</u>								
Roundup Ultra Max + AMS / Roundup Ultra Max + AMS	26 oz + 2.5 lb / 26 oz + 2.5 lb	99	99	99	99	55.7	\$41.85	\$231
<u>Postemergence (6-inch weeds)</u>								
Glyphomax Plus + Aim + AMS	2 + 0.25 oz + 2.5 lb	98	97	97	96	57.5	\$27.60	\$254
Glyphomax Plus + FirstRate + AMS	2 + 0.3 oz + 2.5 lb	99	97	97	98	54.8	\$30.36	\$238
Extreme + NIS + AMS	3 + 0.125% + 2.5	99	93	99	99	52.3	\$29.63	\$226
Roundup Ultra Max + AMS	26 oz + 2.5 lb	98	99	99	99	55.7	\$25.93	\$247
<u>Checks</u>								
Weedy	-	0	0	0	0	14.4	\$0.00	\$70
Weed-Free	-	100	100	100	100	58.1	\$0.00	
	LSD(0.10)	2	9	8	8	4.1		\$20

Soybean Price = \$4.90
(Waseca Co. 2002 Loan Rate)