

Herbicide performance in soybeans at Waseca, MN giant 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 a site that was heavily infested with giant ragweed. The research site was a Webster clay loam soil containing 6% organic matter with a pH of 6.9 and soil test P and K levels of 26 and 216 ppm, respectively. The previous crop was corn 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 14	June 17	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	73	71	72
soil temp (4-inch)	70	58	70	68	72
Relative humidity (%)	40	30	30	55	45
Wind	W 8	N 6	NW 10	NW 2	N 5
Soil moisture	Dry	Dry	Moist	Moist	Moist
Soybeans					
Stage	-	-	V2	V3	R1
height (inch)	-	-	4	5	14
Giant ragweed					
leaf no.	-	-	4-6	4-6	3-4
height (inch)	-	-	4-6	6-10	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

Giant Ragweed Site

Herbicide	Rate	Giant Weed Control			
		Giant Ragweed -(% control)-	Yield (bu/A)	Cost (\$/A)	Returns (\$/A)
<u>PPI 2X / Postemergence (4-inch weeds)</u>					
	(pt/A)				
Prowl / Raptor + Ultra Blazer + NIS + AMS	2.17 / 4 + 12oz + 0.25% + 17 lb/100gal	41	9.7	\$44.00	\$3
Prowl / Raptor + FirstRate + NIS + AMS	2.17 / 4 + 0.2oz + 0.25% + 17 lb/100gal	94	38.5	\$39.93	\$149
Prowl / Extreme + NIS + AMS	2.5 / 3 + 0.25% + 13 lb/100gal	98	48.7	\$43.49	\$195
<u>Preemergence</u>					
Guantlet + Boundary	5.9 oz/A + 1.25	16	1.0	\$32.07	-\$27
<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	93	37.5	\$46.49	\$137
Guantlet / Fusion + COC + AMS	5.9 oz / 10 oz + 1 + 2.5 lb	14	0.2	\$37.97	-\$37
Valor / FirstRate + Phoenix+ Select + COC + AMS	2.5 oz / 0.3 oz + 8 oz + 8 oz + 1% + 2.5 lb	93	40.7	\$49.14	\$150
Boundary / Flexstar + Fusion + COC + AMS	1.25 / 16 oz + 8 oz + 1% + 2.5 lb	86	35.6	\$43.36	\$131
Authority / Flexstar + Assure II + COC + AMS	4.5 oz / 16 oz + 9 oz + 1% + 2.5 lb	91	37.0	\$46.30	\$135
<u>Pre / Postemergence (6-inch weeds)</u>					
Authority / Roundup Ultra Max + Classic + AMS	3.5 oz / 26 oz + 0.33 oz + 2.5	96	39.9	\$44.67	\$151
Python / Glyphomax Plus + AMS	1 oz / 2 oz + 2.5 lb	95	41.9	\$40.48	\$165
Guantlet / Glyphosate Plus + AMS	3 oz / 2 + 2.5	95	41.8	\$39.36	\$166
Valor + Roundup Ultra Max + AMS	2 oz / 26 oz + 2.5	93	43.2	\$40.38	\$171
Boundary / Touchdown IQ + AMS	1.25 / 2 + 2.5	94	42.2	\$42.60	\$164
Domain / Roundup Ultra Max + AMS	10 oz / 19 oz + 2.5	90	40.6	\$36.23	\$163
Authority / Roundup Ultra Max	4 oz / 26 oz + 2.5	90	37.6	\$41.86	\$142
<u>Postemergence (4-inch weeds)</u>					
Flexstar + Fusion + Harmony GT + COC + AMS	16 oz + 10 oz + $\frac{1}{32}$ oz + 1% + 2.5 lb	48	19.3	\$29.59	\$65
<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	100	48.4	\$41.85	\$195
<u>Postemergence (6-inch weeds)</u>					
Glyphomax Plus + Aim + AMS	2 + 0.25 oz + 2.5 lb	66	18.0	\$27.60	\$61
Glyphomax Plus + FirstRate + AMS	2 + 0.3 oz + 2.5 lb	95	47.0	\$30.36	\$200
Extreme + NIS + AMS	3 + 0.125% + 2.5	94	42.0	\$29.63	\$176
Roundup Ultra Max + AMS	26 oz + 2.5 lb	86	35.5	\$25.93	\$148
<u>Checks</u>					
Weedy	-	0	7.4	\$0.00	\$36
Weed-Free	-	100	41.5	\$0.00	
	LSD(0.10)	14	8.5		\$42

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