

Herbicide performance in corn at Waseca, MN giant ragweed site in 2002. Hoverstad, Thomas R. and Jeffrey L. Gunsolus. The objective of this trial was to evaluate weed management systems available to corn producers in southern Minnesota on a site that was heavily infested with giant ragweed. The research site was a Webster clay loam soil containing 6.7% organic matter, pH = 6.9 and soil test P and K levels of 26 and 217 ppm, respectively. The previous crop was corn that had been chisel plowed in the fall. The area was field cultivated once in the spring prior to fertilizing with 150 lb N/A as urea and field cultivated again once to a depth of 3 inches to prior to planting to prepare a seedbed. Novartis 'NK 42B7' (imidazolinone and glufosinate tolerant) corn seed was planted on May 10, 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 10	June 5	June 7
Treatment	Pre	3-collar	4-collar
air temp °F	63	74	85
soil temp (4-inch) °F	60	68	70
Relative humidity (%)	35	30	30
Wind	W 11	S 5	S 15
Soil moisture	Dry	Wet	moist
Corn			
stage	--	V3	V3
height (inch)	--	4	5
Giant Ragweed			
Leaf no.	--	3-4	3-4
height (inch)	--	6-10	8-12
Rainfall after application (inch)			
Week 1	0.41	1.15	0.36
Week 2	0.00	0.36	3.15
Week 3	0.74	3.15	0.00

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2002 Corn Herbicide Evaluation - Waseca  
Giant Ragweed

Herbicide	Rate	Giant			Weed Control	
		Ragweed (% control)	H2O (%)	Yield (bu/A)	Cost (\$/A)	Returns (\$/A)
<u>Preemergence</u>						
Surpass + Hornet WDG	2.75 + 4 oz	32	21.7	11	41.31	-24
Balance Pro+Define+Atrazine	2.25 oz +10 oz +1.1 lb	61	21.2	19		
<u>Pre / Postemergence (3-4 inch weeds)</u>						
Surpass / Hornet WDG + atrazine + COC + AMS	2.75 / 3 oz + 0.83 lb + 1% + 2.5 lb	91	20.6	152	46.66	205
Surpass / Hornet WDG + Clarity + NIS + AMS	2.75 / 3 oz + 4 oz + 0.25% + 2.5 lb	92	19.6	175	47.60	246
Outlook / Hornet WDG + Aim + NIS + AMS	20 oz / 3 oz + 0.5 oz + 0.25% + 2.5 lb	89	19.6	163	45.65	228
Outlook / Aim + atrazine + COC	20 oz / 0.5 oz 1.1 lb + 1%	33	19.4	53	37.51	53
Outlook / Distinct + NIS + AMS	20 oz / 4 oz + 0.25% + 2.5 lb	81	19.3	128	42.69	174
Axiom / Option + MSO + 28%N	15 oz / 1.5 oz + 1.5 + 3	39	21.6	57	44.40	48
Dual II Magnum / Callisto + atrazine + COC + 28%N	2 / 3 oz + 0.28 lb + 1% + 2.5%	92	20.3	158	51.62	210
Dual II Magnum / Northstar + COC + 28%N	2 / 5 oz + 1% + 2.5%	90	19.2	157	48.98	216
Dual II Magnum /	1 /	96	20.4	171	45.78	237
Callisto + Steadfast + atrazine + COC + 28%N	3 oz + 0.5 oz + 0.28 lb + 1% + 2.5%	90	19.5	155	46.17	214
Dual II Magnum / Callisto + Liberty + AMS	1 / 3 oz + 14 oz + 3 lb	90	19.3	142	49.23	190
Define / Option + Distinct + MSO + 28%N	1 / 4 oz + 0.55 lb + 1% + 2.5%	80	19.3	142	49.23	190
Dual II Magnum /	0.75 /	97	20.5	177	51.13	241
Accent Gold WDG + atrazine + COC + 28%N	3.5 oz + 0.83 lb + 1% + 4	67	20.2	108	42.23	137
Define / Liberty + atrazine + AMS	10 oz / 24 oz + 0.55 lb + 3 lb	87	20.7	146	44.60	197
Harness / Yukon + NIS	2.5 / 4 oz + 0.25%	87	20.7	146	44.60	197
<u>Postemergence (3 collar corn)</u>						
Lightning + Marksman + NIS + AMS	1.28 oz + 2 oz + 0.25% + 2.5 lb	88	19.4	150	24.51	228
<u>Postemergence (4 collar corn)</u>						
Steadfast + Callisto + atrazine + COC + AMS	0.75 oz + 2 oz + 0.28 lb + 1% + 2 lb	71	20.7	113	30.10	156
Steadfast + Hornet WDG + atrazine + COC + AMS	0.75 oz + 3 oz + 0.55 lb + 1% + 2 lb	85	20.2	142	32.82	204
Steadfast + Aim + atrazine + COC	0.75 oz + 0.5 oz + 0.55 lb + 1% + 2 lb	4	21.8	17	25.56	3
Accent Gold WDG + Clarity + atrazine + COC + AMS	3.5 oz + 4 oz + 0.55 lb + 1% + 2 lb	96	20.5	159	37.42	226
Accent Gold WDG + Callisto + atrazine + COC + AMS	3.5 oz + 1 oz + 0.28 lb + 1% + 2 lb	90	21.0	157	37.99	220
<u>Checks</u>						
Weedy Check	-	0	23.0	11	0.00	17
Weed-Free	-	100	18.8	174	0.00	
	LSD(0.10)	14	2.7	31		54
Corn Price = \$1.82	Drying Cost \$0.025/pt to 15.5%					
	Shrink = 1.35%/ pt to 15.5 %					