

Herbicide performance in corn at Waseca, MN common ragweed site in 2005. 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 several annual weed species. This site had an especially high population of common ragweed. The research site was a Webster clay loam soil containing 7% organic matter, pH = 7.0 and soil test P and K levels of 38 and 155 ppm, respectively. The previous crop was oats that had been moldboard plowed in the fall. The area was fertilized in the spring with 150 lb N/A as anhydrous ammonia and field cultivated once to a depth of 3 inches prior to planting to prepare a seedbed. Pioneer '38H69' was planted on May 23, 2005 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 3, 2005. Application dates, environmental conditions, crop and weed stages are listed below.

Date	May 23	June 9	June 13	June 16
Treatment	Pre	Post I	Post II	Post III
air temp °F	79	79	75	81
soil temp (4-inch) °F	57	66	68	69
Relative humidity (%)	32	40	45	23
Wind	NE 6	E 1	E 5	N 5
Soil moisture	Moist	Wet	Moist	Moist
Corn				
stage	-	V2	V3	V4
height (inch)	-	4	5	6
Giant foxtail				
leaf no.	-	2	3	4
height (inch)	-	1	2	4
Common ragweed				
leaf no.	-	4	5	6
height (inch)	-	2	3	4
Redroot pigweed				
leaf no.	-	2	3	4
height (inch)	-	0.5	1	2
Common lamquarters				
leaf no.	-	4	5	6
height (inch)	-	2	2	3
Rainfall after application (inch)				
Week 1	0.74	0.55	0.32	1.00
Week 2	0.24	0.99	1.94	2.54
Week 3	1.61	2.55	1.95	0.35

Broadleaf weed control was excellent with all treatments. Grass control was slightly less than average for the following treatments: 1.) Lumax preemergence, 2.) KIH-485 preemergence followed by Hornet plus Callisto plus atrazine, and 3.) Outlook preemergence followed by Aim plus atrazine plus Clarity. These slight reductions in giant foxtail control did not result in reduced yields. (University of Minnesota, Southern Research and Outreach Center, Waseca, MN and Dept of Agronomy and Plant Genetics, University of Minnesota, St Paul).

Table. Herbicide performance in corn at a common ragweed site at Waseca, MN in 2005 (Hoverstad and Gunsolus).

Treatment	Rate (product/A)	Giant foxtail	Common ragweed	Common lambsquarters	Redroot pigweed	Yield Bu/A ^a
		-----(% control)-----				
<u>Preemergence</u>						
Keystone LA + Hornet WDG	2.2 qt + 4oz	97	99	99	99	194
Lumax	6 pt	92	99	99	99	207
<u>Preemergence/POST III (V4 corn)</u>						
Surpass / Hornet + Callisto + atrazine + COC + AMS	2.75 pt / 3 oz + 0.75 oz + 8 oz + 1% + 3 qt	98	94	99	99	191
KIH-485 / Hornet + Callisto + atrazine + COC + AMS	8 oz / 3 oz + 0.75 oz + 8 oz + 1% + 3 qt	90	99	99	99	209
Outlook / Distinct + atrazine + NIS + AMS	21 oz / 4 oz + 16 oz + 0.25% + 2.5 lb	99	99	99	99	198
Define SC/ Liberty+atrazine+AMS	12 oz / 32 oz + 16 oz + 3.5 qt	99	99	99	99	209
Define SC/ Option+Distinct+MSO+28%	12 oz / 1.5 oz + 2 oz + 1.5 pt + 3 pt	98	99	99	99	176
Cinch/ Steadfast+ Callisto+atrazine+COC+AMS	1 pt / 0.75 oz + 2 oz + 16 oz + 1% + 4.7 pt	99	99	99	99	196
Dual II Magnum/ Callisto+atrazine+COC+28%N	2 pt / 3 oz + 16 oz + 1% + 2.5%	96	99	99	99	189
Outlook/ Aim+atrazine+Clarity+NIS	21 oz / 0.5 oz + 16 oz + 3 oz + 0.25%	91	99	99	99	186
Harness/ Roundup WeatherMax+AMS	1.25 pt / 22 oz + 3 qt	99	99	99	99	188
Keystone LA / Glyphomax XRT + AMS	2.2 pt / 24 oz + 3 qt	99	99	99	99	190
Outlook/ Distinct + RoundupWeatherMax + NIS + AMS	12 oz / 3 oz + 11 oz + 0.25% + 3 qt	99	99	99	99	203
Basis + atrazine/ Roundup OriginalMax	0.4 oz + 12 oz/ 22 oz	98	99	99	99	209
<u>POST I (V2 Corn)</u>						
Basis + Lumax + NIS	0.33 oz + 3.5 pt + 0.25%	95	99	99	99	205
Lumax + Touchdown Total + AMS	3 pt + 24oz + 2 qt	97	99	99	99	208
Lumax + Liberty + AMS	3 pt + 20oz + 2 qt	99	99	99	99	190
Steadfast + Lumax + NIS	0.75 oz + 2 pt + 0.25%	98	99	99	99	212
<u>POST II (V3 corn)</u>						
Option + Callisto + MSO + 28%N	1.5 oz + 1.5 oz + 1.5 pt + 3 pt	96	99	99	99	206
<u>POST III (V4 corn)</u>						
Steadfast + Callisto + Atrazine + COC + AMS	0.75 oz + 2 oz + 16 oz + 1% + 4.7 pt	99	99	99	99	210
Resolve + Roundup OriginalMax + AMS	1 oz + 22 oz + 4.7 pt	99	99	99	99	193
Resolve + atrazine + Roundup OriginalMax + AMS	1 oz + 16 oz + 22 oz + 4.7 pt	99	99	99	99	215
<u>Checks</u>						
Weedy	-	0	0	0	0	144
Hand-Weeded	-	100	100	100	100	194
	LSD (0.10)	4	2	1	1	17

^a Yield adjusted to 15.5% moisture.