

Herbicide performance in corn at Morris, MN - 2009. Jeffery L. Gunsolus, George Nelson, and Thomas Hoverstad

The study site was located in range E16-6W, the previous crop was soybeans. The site received 120 lbs/N/ac and was field cultivated to incorporate the fertilizer and prepare a seedbed on May 7, 2009. The study was seeded to P-37Y14 on May 8th at 35,700 seeds per acre in 30-inch rows. Pre-emergence treatments were applied on May 11th, at 8-10:30 am with the wind out of the south at 5-10 mph, 50°F. Post-emergence treatments were applied at the V2-V3 stage on June 9th, 8-9 am with the wind out of the west at 0-5 mph, 55°F, with excellent small lambsquarter (90%, 1-2 inches) and pigweed (10%, 0-1 inches) pressure. Post-emergence treatments were applied at the V4 stage on June 15th, 8-9:30 am with the wind out of the SE at 15 mph, 70°F, 2-4 inch lambsquarter. The re-growth treatment was applied on June 25th to 2 inch weeds, no wind, 75°F (V6 corn). The study was harvested on November 9, 2009, 137.5 sq ft harvest area. Data are presented in the following table.

Table. Herbicide performance in corn at Morris, MN - 2009. (Gunsolus, Nelson, and Hoverstad)

Treatment	Rate (Product/A or % v/v)	Common		Corn Stand		Corn		Corn Yield (Bu/A)
		Lambsquarters		Reduction		Injury		
		6/11	6/30	6/11	6/30	6/11	6/30	
<u>Preemergence on May 11 / POST on June 9 (2-3 collar corn)</u>								
Dual II Magnum / Halex GT+ NIS + AMS	1 pt / 3.6 pt + 0.25% + 3 qt	33	81	0	0	0	0	161
<u>Preemergence on May 11 / POST on June 15 (4 collar corn)</u>								
Harness / Laudis + atrazine + COC + 28%N	1.75 pt / 3 oz + 16 oz + 1% + 1.5 qt	15	100	0	0	0	0	175
Harness / Laudis + Buctril + COC + 28%N	1.75 pt / 3 oz + 6 oz + 1% + 1.5 qt	38	100	0	0	0	0	163
Harness / Ignite + AMS	1.75 pt / 22 oz + 2 qt	35	79	0	0	0	0	170
Harness / Capreno + COC + 28%N	1.75 pt / 3 oz + 1% + 1.5 qt	40	100	0	0	0	0	164
Breakfree / Resolve + mesotrione + safener + atrazine + COC + AMS	1 pt / 1.2 oz + 2.5 oz + 0.3 oz + 16 oz + 1% + 3 qt	20	100	0	0	0	0	160
BreakFree / Resolve Q + Roundup Original Max + AMS	1 pt / 1.25 oz + 22oz + 3 qt	25	88	0	0	0	0	155
Harness / Roundup Weathermax + AMS	1.25 pt / 22 oz + 3 qt	23	89	0	0	0	0	150
Lumax / Touchdown Total + AMS	3 pt / 24 oz + 3 qt	28	96	0	0	0	0	161
Camix / Touchdown Total + AMS	2.5 pt / 24 oz + 3 qt	28	95	0	0	0	0	158
Surestart / Durango + AMS	1.75 pt / 24 oz + 3 qt	23	84	0	0	0	0	156
Surestart / Durango + AMS	2.5 pt / 24 oz + 3 qt	13	80	0	0	0	0	153
Surestart + Atrazine / Durango + AMS	1.75 pt + 1.5 pt / 24 oz + 3 qt	33	90	0	0	0	0	167
Integrity / Roundup Weathermax + Status + NIS + AMS	17 oz / 22 oz + 2.5 oz + 0.25% + 3 qt	43	99	0	0	0	0	155
Harness / Impact + atrazine + MSO + 28%N	1.75 pt / 0.75 oz + 16 oz + 1% + 2.5%	28	98	0	0	0	0	153
Harness / Impact + atrazine + Roundup Weathermax + AMS	1.25 pt / 0.5 oz + 16 oz + 22 oz + 3 qt	18	96	0	0	0	0	159
<u>POST on June 9 (2-3 collar corn) / POST on June 25 (regrowth)</u>								
Roundup Weathermax + AMS / Roundup Weathermax + AMS	22 oz + 3 qt / 22 oz + 3 qt	--	98	--	0	--	0	170
<u>POST on June 9 (2-3 collar corn)</u>								
Surestart + Durango + AMS	1.75 pt + 24 oz + 3 qt	--	73	--	0	--	0	159
Halex GT + atrazine + NIS + AMS	3.6 pt + 16 oz + 0.25% + 3 qt	--	91	--	0	--	0	163
Resolve + mesotrione + safener + Roundup Original Max + AMS	1.2 oz + 2.5 oz + 0.3 oz + 22 oz + 3 qt	--	59	--	0	--	0	155
Steadfast Q + Callisto + atrazine + COC + AMS	1.5 oz + 2 oz + 16 oz + 1% + 3 qt	--	100	--	0	--	0	174
Resolve Q + atrazine + Roundup Powermax + AMS	1.25 oz + 16 oz + 22 oz + 3 qt		90		0		0	169
Weedy Check	--	--	--	0	0	0	0	72
Weed-free Check	--		100	100	0	0	0	172
LSD (0.05)	--	22.6	10.7	ns	ns	ns	ns	21.5

Dual II Magnum 7.64E = s-metolachlor & safener.
Halex GT 4.39L = s-metolachlor (2.09 lbs ai/gal) & glyphosate (2.09 lbs ae/gal) & mesotrione (0.209 lbs ai/gal).
NIS = Preference nonionic surfactant.
AMS = N-PaK AMS 34% ammonium sulfate solution (3.4 lbs ammonium sulfate/gal).
Harness 7E = acetochlor.
Laudis 3.5L = tembotrione.
atrazine 4L.
COC = crop oil concentrate.
28% = 28% UAN (urea ammonium nitrate solution).
Buctril 2E = bromoxynil.
Ignite 2.34S = glufosinate.
Capreno 3.45L = thiencazobenzothiazolone-methyl (0.57 lbs ai/gal) & tembotrione (2.88 lbs ai/gal).
Breakfree 6.4L = acetochlor.
Resolve 25DF = rimsulfuron.
mesotrione 50DF.

safener 50DF.
Resolve Q 22.4DF = rimsulfuron (18.4%) & thifensulfuron (4%).
Roundup Original Max 4.5S = glyphosate.
Roundup Weathermax 4.5S = glyphosate.
Lumax 3.95L = s-metolachlor (2.68 lbs ai/gal) & mesotrione (0.268 lbs ai/gal) & atrazine (1.0 lbs ai/gal).
Touchdown Total 4.17L = glyphosate.
Camix 3.67L = s-metolachlor (3.34 lbs ai/gal) & mesotrione (0.33 lbs ai/gal)
Surestart 4.25L = acetochlor (3.75 lbs ai/gal) & flumetsulam (0.12 lbs ai/gal) & clopyralid (0.29 lbs ae/gal).
Durango 4S = glyphosate.
Integrity 5.57L = saflufenacil (0.57 lbs ai/gal) & dimethenamid-P (5.0 lbs ai/gal)
Status 56WG = diflufenzopyr (16%) & dicamba (40%).
Impact 2.8SC = topramezone.
Steadfast Q 37.7WDG = nicosulfuron (25.2%) & rimsulfuron (12.5%) & safener.
Callisto 4SC = mesotrione.
Roundup Powermax 4.5S = glyphosate.