

Herbicide performance in corn at Morris, MN - 2010. Jeffery L. Gunsolus, George Nelson, and Thomas Hoverstad

The corn site was located in field E16-9W and was in soybeans in 2009 and fall chisel plowed. Nitrogen was applied at 120 lbs/N/ac on April 21, 2010 and the site was field cultivated for nitrogen incorporation and seedbed preparation on the same day. The site was seeded to P-38M60 Bt/Rw/LL/RR corn at 35,700 seeds per acre in 30-inch rows on April 27th. All pre-emergence treatments were applied on April 27th, after seeding. The wind was light and variable and the temperature 65°F. V2-V3 treatments were applied on June 3rd with a light wind out of the south and a 60°F temperature. V4 treatments were applied on June 10th. Weeds were 2-4 inch lambsquarters. There was no wind. Rainfall of 0.68 inches as a steady rain was received 15 minutes after V4 applications. V6 treatments were applied to weeds 4-6 inches in height on June 16th with a south wind at 5 mph. The study was harvested on October 7th with a harvest area of 5 ft by 27.5 ft. Data are presented in the following table.

Table. Herbicide performance in corn at Morris, MN - 2010. (Gunsolus, Nelson, and Hoverstad)

Treatment	Rate (Product/A or % v/v)	Weed Control						Corn Yield (Bu/A)
		Common Lambsquarters			Powell Amaranth			
		6/2 (%)	6/24 (%)	7/12 (%)	6/2 (%)	6/24 (%)	7/12 (%)	
Preemergence on April 27 / POST on June 3 (2-3 collar corn)								
Dual II Magnum / Halex GT+ NIS + AMS	1 pt / 3.6 pt + 0.25% + 3 qt	73	100	100	100	100	100	176
Preemergence on April 27 / POST on June 10 (4 collar corn)								
Harness / Laudis + atrazine + MSO + 28%N	1.75 pt / 3 oz + 16 oz + 1% + 1.5 qt	98	100	100	100	100	100	164
Harness / Laudis + Buctril + MSO + 28%N	1.75 pt / 3 oz + 6 oz + 1% + 1.5 qt	92	100	99	100	100	99	169
Surestart / Durango DMA + AMS	2.5 pt / 24 oz + 3 qt	99	98	98	100	100	98	163
Surestart + atrazine / Durango DMA + AMS	1.75 pt + 1.5 pt / 24 oz + 3 qt	100	100	99	100	100	99	179
Verdict / Roundup Weathermax + NIS + AMS	16 oz / 22 oz + 0.25% + 3 qt	100	100	95	100	100	95	158
Harness / Impact + atrazine + MSO + 28%N	1.75 pt / 0.75 oz + 16 oz + 1% + 3 qt	99	100	78	100	100	100	162
Preemergence on April 27 / POST on June 16 (6 collar corn)								
Harness / Ignite + AMS	1.75 pt / 22 oz + 2 qt	99	100	98	100	100	98	183
BreakFree / Resolve Q + Abundit Extra+ AMS	1.25 pt / 1.25 oz 32 oz + 1% + 3 qt	95	100	100	100	100	100	163
BreakFree / Realm Q + Abundit Extra+ AMS	1.25 pt / 4 oz + 32 oz + 3 qt	88	98	100	100	100	100	150
Harness / Roundup Weathermax + AMS	1.25 pt / 22 oz + 3 qt	99	100	98	100	100	100	157
Lumax / Touchdown Total + AMS	3 pt / 24 oz + 3 qt	100	100	99	100	100	99	178
Surestart / Durango DMA + AMS	1.75 pt / 24 oz + 3 qt	100	100	96	100	100	96	168
Verdict / Roundup Weathermax + Status + NIS + AMS	16 oz / 22 oz + 2.5 oz + 0.25% + 3 qt	100	100	100	100	100	100	167
Harness / Impact + Roundup Weathermax + AMS	1.25 pt / 0.5 oz + 22 oz + 3 qt	90	100	99	100	100	99	179
POST on June 3 (2-3 collar corn)								
Surestart + Durango DMA + AMS	1.75 pt + 24 oz + 3 qt	--	75	86	--	97	86	166
Capreno + Roundup Weathermax + Superb HC + AMS	3 oz + 18 oz + 0.5% + 3 qt	--	93	97	--	99	97	167
POST on June 10 (4 collar corn)								
Roundup Weathermax + AMS	22 oz + 3 qt	--	69	71	--	88	71	157
Realm Q + Abundit Extra+ AMS	4 oz + 32 oz + 3 qt	--	74	91	--	98	91	162
Resolve Q + Abundit Extra+ AMS	1.25 oz + 32 oz + 3 qt	--	68	75	--	98	75	152
POST on June 16 (6 collar corn)								
Accent Q + Impact + MSO + AMS	0.5 oz + 0.5 oz + 1% + 3 qt	--	23	82	--	47	83	145
Weedy Check	--	--	--	--	--	--	--	110
Weed-free Check	--	--	100	100	--	100	100	176
LSD (0.05)	--	8.1	6.5	15.1	ns	7.1	7.4	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.
MSO = Destiny (methylated soybean oil and nonionic surfactant blend).
28% = 28% UAN (urea ammonium nitrate solution).
Buctril 2E = bromoxynil.
Surestart 4.25L = acetochlor (3.75 lbs ai/gal) & flumetsulam (0.12 lbs ai/gal) & clopyralid (0.29 lbs ae/gal).
Durango DMA 4S = glyphosate.
Verdict 5.57L = saflufenacil (0.57 lbs ai/gal) & dimethenamid-P (5.0 lbs ai/gal)
Roundup Weathermax 4.5S = glyphosate.
Impact 2.8SC = topramezone.
Ignite 2.34S = glufosinate.
Breakfree 6.4L = acetochlor.
Resolve Q 22.4DF = rimsulfuron (18.4%) & thifensulfuron (4%) & isoxadifen-ethyl (safener).
Abundit Extra 3S = glyphosate.
Realm Q = rimsulfuron & mesotrione & isoxadifen-ethyl (safener).
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.
Status 56WG = diflufenzopyr (16%) & dicamba (40%).
Capreno 3.45L = thiencazabone-methyl (0.57 lbs ai/gal) & tembotrione (2.88 lbs ai/gal).
Superb HC = high surfactant oil concentrate.
Accent Q 54.5WDG = nicosulfuron & isoxadifen-ethyl (safener).