

**Herbicide Performance in Corn at Morris, MN - 2003.** Jeffrey L. Gunsolus and George Nelson.

The study area was in soybeans in 2002. An 18-46-60 fertilizer was broadcast applied on October 25, 2002 and 100 lbs/Nitrogen broadcast on October 28<sup>th</sup> and incorporated via chisel plow. The trial site was field cultivated for seedbed preparation on April 30<sup>th</sup> 2003 and seeded that same day. The study was seeded in 4-row plots at 32,000 seeds per acre to LL and RR corn as per plot plan with a Hiniker planter, Counter CR insecticide was applied at 6 lb/ac at seeding. Pre-emergence treatments were applied on May 1 and 2. Postemergence treatments were applied on June 3 at V2 (4 leaf) and on June 11 at V3 (5+ leaf). Weeds at V3 treatment were Powell amaranth (AMAPO) at 6 inches, common lambsquarters (CHEAL) at 4-6 inches. Weed densities were Powell amaranth at 5/ft<sup>2</sup>, common lambsquarters at 2/ft<sup>2</sup>, and wild mustard (SINAR) at 2/ft<sup>2</sup>. Scattered green and yellow foxtail (SETSS) were also present. The study was harvested on October 15, 2003. Harvest area was 27.5 feet by 5 feet. Weed control, injury, and yield data are presented in the table below.

**Table. Herbicide performance in corn at Morris, MN - 2003. (Gunsolus and Nelson).**

Treatment <sup>1</sup>	Rate <sup>1</sup> (lb/A)	Weed Control			Corn		
		AMAPO	CHEAL	SINAR	Injury	S.R. <sup>2</sup>	Yield
		----- (%) -----			----- (bu/A) -----		
<b>Preemergence</b>							
Acetochlor & atrazine <sup>3</sup> + flumetsulan & clopyralid <sup>4</sup>	2.2 & 0.8 + 0.047 & 0.125	99	100	100	0	5	205
S-metolachlor & atrazine & mesotrione & CGA-154281 <sup>5</sup>	2.0 & 0.75 & 0.2 & --	98	100	100	0	8	202
<b>(Preemergence) + (Postemergence June 11)</b>							
(Acetochlor <sup>6</sup> ) + (flumetsulan & clopyralid + atrazine +COC <sup>7</sup> + AMS <sup>8</sup> )	(2.2) + (0.034 & 0.094 + 0.67 +1% + 2.5)	100	100	100	0	7	205
(Acetochlor <sup>6</sup> ) + (flumetsulan & clopyralid + mesotrione + atrazine + COC + AMS)	(2.2) + (0.034 & 0.094 0.02 + 0.25 + 1.0% + 2.5)	100	100	100	0	8	194
(Acetochlor & atrazine) + flumetsulan & clopyralid dicamba <sup>9</sup> + NIS <sup>10</sup> + AMS	(2.2 & 0.8) + 0.034 & 0.094 + 0.125 + 0.25% + 2.5	100	100	100	0	7	196
(Dimethenamid) + (dicamba & diflufenzopyr <sup>11</sup> + atrazine + NIS + AMS)	0.098) + (0.125 & 0.05 + 0.45 + 0.25% + 2.5)	100	100	100	0	13	190
(Flufenacet) + (glufosinate + atrazine + AMS)	(0.45) + (0.42 + 0.45 + 3.0)	100	100	100	0	5	207
(Flufenacet) + (foramsulfuron + dicamba & diflufenzopyr MSO <sup>12</sup> + 28%N <sup>13</sup> )	(0.45) + (0.03 + 0.125 & 0.05 + 0.94% + 2.0%)	99	99	100	0	6	201
(S-metolachlor & CGA-154281 <sup>14</sup> ) + (nicosulfuron & rimsulfuron & clopyralid & flumetsulam <sup>15</sup> + mesotrione + atrazine +COC + AMS)	(0.71) + (0.012 & 0.012 & 0.112 & 0.035 + 0.03 + 0.45 +1% + 2.0)	100	100	100	0	7	197
(S-metolachlor & CGA-154281 <sup>14</sup> ) + (nicosulfuron & rimsulfuron <sup>16</sup> + mesotrione + atrazine +COC + AMS)	(0.71) + (0.023 & 0.012 + 0.063 + 0.45 +1% +2.0)	100	100	100	0	11	197
(S-metolachlor & CGA-154281 <sup>17</sup> ) + (primisulfuron & dicamba <sup>18</sup> + atrazine + COC + 28%N)	(1.91) + (0.023 & 0.125 + 0.45 + 1% + 2.5%)	100	100	100	0	6	201
(S-metolachlor & CGA-154281 <sup>17</sup> ) + mesotrione + atrazine + COC + 28%N <sup>11</sup> )	(0.96) + (0.094 + 0.25 + 1% + 2.5%)	100	100	100	0	6	194
(Dimethenamid) + (carfentrazone + atrazine + COC)	(0.098) + (0.008 + 0.9 + 1%)	100	100	100	0	11	189
(Acetochlor <sup>19</sup> ) + glyphosate <sup>20</sup> + AMS	(1.09) + (0.75 + 2.5)	99	99	100	0	6	199
(S-metolachlor & CGA-154281 <sup>17</sup> ) + glyphosate <sup>21</sup> + AMS	(0.96) + (0.75 + 2.5)	97	99	99	0	5	199
(Dimethenamid) + (dicamba + glyphosate <sup>20</sup> )	(0.56) + (0.25 & 0.375	99	100	100	1	13	190
<b>Postemergence June 3</b>							
Glyphosate <sup>20</sup> + AMS	0.75 + 2.5	92	98	100	0	7	204
<b>Postemergence June 11</b>							
Glufosinate + atrazine + AMS	0.42 + 0.5 + 3.0	96	99	100	0	10	198
Nicosulfuron & rimsulfuron + mesotrione + COC + AMS	0.023 & 0.012 + 0.063 + 1% + 2.0	98	100	100	0	8	192
Nicosulfuron & rimsulfuron & atrazine <sup>21</sup> + mesotrione + COC + AMS	0.023 & 0.012 & 0.75 + 0.063 + 1% + 2.0	97	99	100	0	6	207
Nicosulfuron & rimsulfuron & clopyralid & flumetsulam + dicamba + atrazine + COC + AMS	0.012 & 0.012 & 0.112 & 0.035 + 0.125 & 0.03 + 1% + 2.0	97	98	100	0	16	197
Nicosulfuron & rimsulfuron + S-metolachlor & atrazine & mesotrione & CGA-154281 + NIS + AMS	0.023 & 0.012 + 0.67 & 0.25 & 0.07 & -- + 0.25% + 2.0	99	99	100	0	17	208
Weedy check		-	-	-	0	0	124
Weedfree check		100	100	100	0	6	202
LSD (0.05)		3	ns	ns	ns	7	13

<sup>1</sup> Treatments and rates in parenthesis represent a separate application.

<sup>2</sup> SR = Stand Reduction.

<sup>3</sup> Premix = Keystone LA 5.5L.

<sup>4</sup> Premix =Hornet 68.5WDG.

<sup>5</sup> Premix = Lumax 3.95L.

<sup>6</sup> Surpass 6.4E.

<sup>7</sup> COC = Class 17% crop oil concentrate.

<sup>8</sup> AMS = ammonium sulfate.

<sup>9</sup> Clarity 4L..

<sup>10</sup> NIS = Class preference nonionic surfactant.

<sup>11</sup> Distinct 70DF.

<sup>12</sup> MSO = methylated seed oil.

<sup>13</sup> 28%N = 28% aqueous solution of urea and ammonium nitrate.

<sup>14</sup> Cinch 7.64E.

<sup>15</sup> Premix = Accent Gold 78.1DF.

<sup>16</sup> Premix = Steadfast 75DF

<sup>17</sup> Dual II Magnum 7.64E.

<sup>18</sup> Northstar 47.4WG.

<sup>19</sup> Harness 7E.

<sup>20</sup> Roundup WeatherMax 5.5L.

<sup>21</sup> Premix = Steadfast ATZ 89.3DF