

## Herbicide Performance in Soybeans at Morris, MN - 2002. Jeffrey L. Gunsolus and George Nelson.

The study was in corn in 2001. A 18-46-60 fertilizer blend was broadcast applied on October 19, 2001 and the site was chisel plowed after fertilizer application that same day. The trial site was field cultivated on May 22, 2002. PPI treatments were applied on May 23<sup>rd</sup> with the wind out of the east at 15-20 mph. Immediately after PPI application the entire study was field cultivated in a north-south direction for chemical incorporation and seedbed preparation. The trial was seeded to Pioneer P-90B72 RR soybeans at 196,000 seeds per acre in 30-inch 4-row plots with a Hiniker planter on that same day (May 23<sup>rd</sup>). Pre-emergence treatments were applied on May 24<sup>th</sup> with the wind out of the northeast at 5-10 mph. Post-emergence treatments (except treatment 18 – canopy) were applied on 1 to 6-inch green and yellow foxtail, pigweed lambsquarter and mustard (weed growth was slow and erratic), on June 25<sup>th</sup> with the wind out of the south at 5-10 mph. Soybeans were at the V4 stage of growth. Canopy post-emergence treatment 18 was applied on July 15<sup>th</sup>. The soybeans were harvested with an Almaco plot combine on September 25, 2002.. Harvest area was 137.5 square feet (5 ft. by 27.5 ft.). Grain weight and moisture were recorded.

**Table. Herbicide performance in soybeans at Morris, MN - 2002. (Gunsolus and Nelson).**

Treatment	Rate (lb/A)	Weed Control				Soybean		
		Gr/ye <sup>1</sup>	Colq	Poam	Wimu	Injury	SR <sup>2</sup>	Yield Bu/A
		----- (%) -----						
<b>(Preplant incorporate) + (Postemergence June 25)</b>								
(Pendimethalin) + (imazamox + acifluorfen <sup>3</sup> + NIS <sup>4</sup> + AMS <sup>5</sup> )	(1.0) + (0.031 + 0.188 + 0.25% + 3.4)	100	100	100	100	10	0	41
(Pendimethalin) + (imazamox + chloransulam + NIS <sup>4</sup> + AMS <sup>5</sup> )	(1.0) + (0.031 + 0.01 + 0.25% + 3.4)	100	96	98	100	1	0	41
(Pendimethalin) + (imazethapyr & glyphosate <sup>6</sup> + NIS + AMS)	(1.0) + (0.063 & 0.75 + 0.13% + 2.6)	100	100	100	100	1	0	43
<b>(Preemergence)</b>								
[Sulfentrazone + chloransulam] <sup>7</sup> + S-metolachlor & metribuzin <sup>8</sup> )	0.25 + 0.031 + 0.82 & 0.2	100	100	96	100	0	0	42
<b>(Preemergence) + (Postemergence June 25)</b>								
(Flumetsulam) + (chloransulam + clethodim + lactofen + NIS + AMS)	(0.053) + (0.016 + 0.125 + 0.125 + 0.25% + 2.5)	100	94	99	100	4	0	43
(Sulfentrazone + chloransulam) <sup>7</sup> + fluazifop & fenoxaprop <sup>9</sup> + COC <sup>10</sup> + AMS	(0.25 + 0.031) + (0.156 & 0.044 + 0.625% + 2.5)	100	89	92	100	0	0	41
(Flumioxazin) + (chloransulam + lactofen + clethodim + NIS + AMS)	(0.078) + (0.016 + 0.125 + 0.125 + 0.25% + 2.5)	100	100	100	100	4	0	45
(S-metolachlor & metribuzin) + fomesafen + fluazifop & fenoxaprop + COC + AMS	(0.82 & 0.2) + (0.23 + 0.125 + 0.035 + 1% + 2.5)	100	99	100	100	2	0	44
(Sulfentrazone <sup>11</sup> ) + (fomesafen + quizalofop + COC + AMS)	(0.21) + (0.23 + 0.06 + 1% + 2.5)	100	95	96	100	0	0	42
(Sulfentrazone) + (glyphosate <sup>12</sup> + chlorimuron + AMS)	(0.16) + (0.75 + 0.016 + 2.5)	100	100	100	100	1	0	42
(Flumetsulam) + (glyphosate <sup>13</sup> + AMS)	(0.053) + (0.75 + 2.5)	100	100	100	100	0	0	43
(Sulfentrazone + chloransulam) + (glyphosate <sup>13</sup> + AMS)	(0.127 + 0.016) + (0.75 + 2.5)	100	100	100	100	0	0	42
(Flumioxazin) + (glyphosate <sup>12</sup> + AMS)	(0.0625) + (0.75 + 2.5)	100	100	100	100	0	0	42
(S-metolachlor & metribuzin) + (glyphosate <sup>14</sup> + AMS)	(0.82 & 0.2) + (0.75 + 2.5)	100	100	100	100	0	0	43
(Flufenacet & metribuzin <sup>15</sup> ) + (glyphosate <sup>12</sup> + AMS)	(0.15 & 0.22) + (0.56 + 2.5)	100	100	100	100	0	0	42
(Sulfentrazone) + (glyphosate <sup>12</sup> + AMS)	(0.19) + (0.75 + 2.5)	100	100	100	100	0	0	43
<b>Postemergence June 25</b>								
Fomesafen + fluazifop & fenoxaprop + thifensulfuron + COC + AMS	0.23 + 0.156 & 0.044 + 0.0019 + 1% + 2.5	100	81	93	100	10	0	42
Glyphosate <sup>13</sup> + carfentrazone + AMS	0.75 + 0.004 + 2.5	100	99	99	100	2	0	38
Glyphosate <sup>13</sup> + chloransulam + AMS	0.75 + 0.016 + 2.5	100	100	97	100	2	0	41
Imazethapyr & glyphosate + NIS + AMS	0.063 & 0.75 + 0.13% + 2.6	100	100	99	100	0	0	44
Glyphosate <sup>12</sup> + AMS	0.75 + 2.5	100	100	100	100	0	0	45
<b>(Postemergence June 25) + (Postemergence July 15)</b>								
(Glyphosate <sup>12</sup> + AMS) + (Glyphosate <sup>12</sup> + AMS)	(0.75 + 2.5) + (0.75 + 2.5)	100	100	99	100	0	0	42
Weedy Check		--	--	--	--	0	0	--
Weedfree Check		100	100	100	100	0	0	42
<b>LSD (0.05)</b>		ns	8	5	ns	5	ns	ns

<sup>1</sup> Gr/ye = Green and yellow foxtail.

<sup>15</sup> Domain 60DF.

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

<sup>3</sup> Ultra Blazer 2L.

<sup>4</sup> NIS = Class Preference nonionic surfactant.

<sup>5</sup> AMS = spray grade ammonium sulfate.

<sup>6</sup> Extreme 2.17L.

<sup>7</sup> Gauntlet package mix.

<sup>8</sup> Boundary 7.8F.

<sup>9</sup> Fusion 2.66E.

<sup>10</sup> COC = Class crop oil concentrate.

<sup>11</sup> Authority 75DF.

<sup>12</sup> Roundup Ultra Max 3.75L.

<sup>13</sup> Glyphomax Plus 3L.

<sup>14</sup> Touchdown IQ 3L.