

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

The study was in corn in 2002. An 18-46-60 fertilizer was broadcast applied on October 25, 2002 and the site was chisel plowed after fertilizer application that same day. The trial site was field cultivated on May 21, 2003, PPI treatments were applied, (wind out of the southwest at 10 mph) and the trial site was then field cultivated a second time to incorporate the treatments. The trial was seeded to Pioneer P-90B74 RR soybeans at 196,000 seeds per acre in 30-inch 4-row plots with a Hiniker planter on May 21. Pre-emergence treatments were applied on May 22 with the wind out of the southeast at 5-10 mph. Post-emergence treatments were applied as follows: **4-inch treatments** (common lambsquarters (CHEAL) 2-5 inches, Powell amaranth (AMAPO) 3-4 inches, sparse foxtail (SETSS) 5-6 inches) on June 19 with the wind out of the east at 5-7 mph, **6-inch treatments** (CHEAL 6-10 inches, AMAPO 4-10 inches, SETSS 8-10 inches) on June 30 with the wind out of the south at 5-10 mph, and **canopy treatments** (CHEAL and AMAPO 2-3 inches, SETSS 5 inches) on July 17 with the wind out of the east at 10 mph. Weed densities were Powell amaranth at 2/ft², common lambsquarters at 1-2/ft², and green and yellow foxtail (9:1 ratio) at 20/ft². The study was harvested on September 24, 2003. Harvest area was 27.5 feet by 5 feet.

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

Treatment ¹	Rate ¹ (lb/A)	Weed Control			Soybean		
		SETSS ²	CHEAL	AMAPO	Injury	SR ³	Yield Bu/A
		----- (%) -----			-----		
(Preplant incorporate) + (Postemergence June 19)							
(Pendimethalin ⁴) + (imazamox + acifluorfen ⁵ + NIS ⁶ + AMS ⁷)	(1.27) + (0.023 + 0.125 + 0.25% + 2.5)	93	90	100	7	0	50
(Pendimethalin) + (imazamox + chloransulam + NIS + AMS)	(1.27) + (0.023 + 0.01 + 0.25% + 2.5)	99	96	100	7	1	40
(Pendimethalin) + (imazethapyr & glyphosate ⁸ + NIS + AMS)	(1.27) + (0.063 & 0.75 + 0.125% + 2.6)	100	100	100	8	0	43
(Preemergence) + (Postemergence June 19)							
(Flumioxazin + chloransulam) ⁹ + (lactofen ¹⁰ + clethodim + NIS + AMS)	(0.08 + 0.031) + (0.125 + 0.094 + 0.25% + 2.0)	99	87	99	12	0	39
(Flumioxazin + chloransulam + lactofen ¹⁰ + clethodim + NIS + AMS)	(0.05 + 0.016) + (0.016 + 0.125 + 0.094 + 0.25% + 2.5)	99	75	100	12	0	42
(Flumetsulam) + (chloransulam + clethodim + lactofen ¹¹ + COC ¹² + AMS)	(0.05) + (0.016 + 0.125 + 0.094 + 1.0% + 2.5)	98	80	100	6	0	41
(S-metolachlor & metribuzin) ¹³ + (fomesafen + fluzifop & fenoxaprop ¹⁴ + COC + AMS)	(0.98 & 0.23) + (0.24 + 0.125 & 0.035 + 1.0% + 2.5)	98	97	100	2	0	48
(Sulfentrazone ¹⁵) + (fomesafen + quizalofop + COC + AMS)	(0.25) + (0.24 + 0.06 + 1.0% + 2.5)	100	100	100	2	0	46
(Preemergence) + (Postemergence June 30)							
(Sulfentrazone) + (glyphosate ¹⁵ + chlorimuron + AMS)	(0.16) + (0.75 + 0.016 + 2.5)	98	100	100	1	0	53
(Flumetsulam) + (glyphosate ¹⁶ + AMS)	(0.05) + (0.75 + 2.5)	96	100	100	0	0	49
(Flumioxazin + chloransulam) + (glyphosate ¹⁵ + AMS)	(0.05 + 0.016) + (0.75 + 2.5)	100	100	100	0	0	47
(S-metolachlor & metribuzin) + (glyphosate ¹⁷ + AMS)	(0.82 & 0.2) + (0.75 + 2.5)	100	100	100	0	0	48
(Flumioxazin) + (glyphosate ¹⁵ + AMS)	(0.063) + (0.75 + 2.5)	100	98	98	0	0	48
Sulfentrazone) + (glyphosate ¹⁵ + AMS)	(0.19) + (0.75 + 2.5)	100	100	100	0	0	49
Postemergence June 19							
Fomesafen + fluzifop & fenoxaprop + thifensulfuron + COC + AMS	0.24 + 0.156 & 0.044 + 0.002 + 1.0% + 2.5	98	98	99	2	0	47
Fomesafen + fluzifop & fenoxaprop + chloransulam + COC + AMS	0.24 + 0.156 & 0.044 + 0.0016 + 1.0% + 2.5	97	79	100	4	0	47
(Postemergence June 19) + (Postemergence July 17)							
(Glyphosate ¹⁵ + AMS) + (Glyphosate ¹⁵ + AMS)	(0.75 + 2.5) + (0.75 + 2.5)	100	100	100	0	0	52
Postemergence June 30							
Glyphosate ¹⁵ + carfentrazone + AMS	0.75 + 0.004 + 2.5	100	95	98	0	0	49
Glyphosate ¹⁹ + AMS	0.75 + 2.5	99	91	97	1	0	43
Glyphosate ¹⁶ + AMS	0.75 + 2.5	100	98	99	0	0	48
Glyphosate ¹⁵ + AMS	0.75 + 2.5	99	94	94	0	0	46
Weedy Check		--	--	--	0	0	16
Weedfree Check		100	100	100	0	0	46
LSD (0.05)		3	9	ns	5	ns	10

¹ Treatments and rates in parenthesis represent a separate application.

² SETSS = Green and yellow foxtail.

³ SR = Stand Reduction.

⁴ Prowl H₂O 3.8L.

⁵ Ultra Blazer 2L.

⁶ NIS = Class Preference nonionic surfactant.

⁷ AMS = spray grade ammonium sulfate.

⁸ Premix = Extreme 2.17L.

⁹ Gangster package mix.

¹⁰ Phoenix 2EC.

¹¹ Cobra 2EC.

¹² COC = Class crop oil concentrate.

¹³ Premix = Boundary 6.5E.F.

¹⁴ Premix = Fusion 2.5E.

¹⁵ Roundup WeatherMax 4.5L.

¹⁶ Glyphomax HC.

¹⁷ Touchdown IQ 3L.

¹⁸ Glyphomax Plus 3S.

¹⁹ Clearout 41 Plus 4L.