Herbicide Performance in Soybeans at Morris, MN - 2001. Jeffrey L. Gunsolus and George Nelson. The study area was planted to corn in 2000. A 31-80-80 fertilizer was broadcast applied on October 20, 2000 and the site was chisel plowed after fertilizer application. The trial site was field cultivated on May 15, 2001. PPI treatments were applied on May 16 with a light breeze out of the south, the entire study was then field cultivated 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 May 16. Preemergence treatments were applied on May 17 with the wind out of the west at 10 mph. Postemergence treatments were applied on 4-inch green and yellow foxtail, mustard, and pigweeds on June 19 with the wind out of the southwest at 10-15 mph. Soybeans were at the 1st trifoliate growth stage and the high temperature for the day was 75 degrees. The second application of postemergence treatments were applied on June 28 (6-8 inch foxtail, 8-12 inch mustard, 3-6 inch pigweed) with the wind out of the south at 10-15 mph. The high temperature for the day was 90 degrees. Canopy postemergence treatments were applied on July 18 with the wind out of the south at 5-10 mph. The soybeans were harvested with an Almaco plot combine on October 5, 2001. Harvest area was 137.5 square feet (5 ft. by 27.5 ft.).

Table. Herbicide performance in soybeans at Morris, MN - 2001. (Gunsolus and Nelson).

		Weed Control				Soybean		
Treatment	Rate	Gr/ye[1]	Colq	Poam	Wimu	Injury	SR[2]	Yield
	(lb/A)	(%)						Bu/A
(Preplant incorporate) + (Postemergence June 19)								
(Pendimethalin) + (imazamox + acifluorfen[3] + NIS[4] + AMS[5])	(1.0) + (0.031 + 0.188 + 0.25% + 3.4)	91	96	100	100	9	1	48
(Pendimethalin) + (imazethapyr & glyphosate[6] + NIS + AMS)	(1.0) + (0.063 & 0.75 + 0.25% + 3.4)	100	100	100	100	2	10	48
(Sulfentrazone + trifluralin) + (fomesafen + COC[7] + AMS)	(0.21 + 0.75) + (0.176 + 1% + 2.5)	72	95	92	97	10	2	39
(Preemergence) + (Postemergence June 19)								
(Flumetsulam) + (chloransulam + clethodim + lactofen + COC + AMS)	(0.053) + (0.016 + 0.09 + 0.09 + 0.625% + 2.5)	93	100	100	100	2	0	47
(Sulfentrazone + chloransulam)[8] + fluazifop & fenoxaprop[9] + COC + AMS	(0.25 + 0.031) + (0.156 & 0.044 +0.625% + 2.5)	96	100	100	100	0	0	47
(Flumioxazin) + (chloransulam + clethodim + COC + AMS	(0.078) + (0.016 + 0.094 + 1% + 2.5)	92	79	88	100	0	0	46
(S-metolachlor & metribuzin[10]) + fomesafen + fluazifop & fenoxaprop + COC + AMS	(0.98 & 0.23) + (0.23 + 0.156 & 0.044 + 1% + 2.5)	99	100	100	100	0	0	50
(Sulfentrazone[16]) + (fomesafen +quizalofop + COC +AMS)	(0.21) + (0.23 +0.06 + 1% + 2.5)	9	100	100	85	0	0	47
(Preemergence) + (Postemergence June 28)								
(Flumetsulam) + (glyphosate[11] + AMS)	(0.053) + (0.75 + 2.5)	99	100	100	100	2	0	47
(Sulfentrazone + chloransulam) + (glyphosate + AMS)	(0.25 + 0.031) + (0.56 + 2.5)	100	100	100	100	0	0	45
(Sulfentrazone + clomazone)[12] + (glyphosate[13] + AMS)	(0.188 + 0.375) + (0.38 + 2.5)	100	100	98	100	0	0	48
(Flumioxazin) + (glyphosate[13] + AMS)	(0.0625) +(0.75 + 2.5)	100	100	100	100	0	0	46
(S-metolachlor & metribuzin) +(glyphosate[14] + AMS)	(0.98 & 0.23) + (0.75 + 2.5)	100	100	100	100	0	0	46
(Alachlor) + (glyphosate[13] + AMS)	(2.0) + (0.75 + 2.5)	100	100	100	100	0	0	50
(FOE 5043 & metribuzin[15]) + (glyphosate[13] + AMS)	(0.15 & 0.22) +(0.56 + 2.5)	100	100	100	100	0	0	51
(Sulfentrazone[16]) + (glyphosate[12] + AMS)	(0.19) + (0.75 + 2.5)	100	99	100	98	0	0	50
Postemergence June 19								
Fomesafen + fluazifop & fenoxaprop + thifensulfuron + COC + AMS	0.23 + 0.156 & 0.044 + 0.0019 + 1% + 2.5	88	91	97	100	1	0	47
Imazamox + acifluorfen +NIS + AMS	0.031 + 0.188 + 0.25% + 3.4	59	97	100	100	4	0	44
Glyphosate[11] + chloransulam + AMS	0.75 + 0.016 + 2.5	100	99	100	100	0	0	49
Glyphosate[14] + AMS	0.75 + 2.5	100	100	100	100	0	0	51
Glyphosate[13] + AMS	0.75 + 2.5	100	99	100	99	0	0	53
(Postemergence June 19) + (Postemergence July 18)								
(Glyphosate[13] + AMS) + (Glyphosate[13] + AMS)	(0.75 + 2.5) + (0.75 + 2.5)	94	99	99	100	0	0	49
Weedy Check		--	--	--	--	0	0	28
Weedfree Check		100	100	100	100	0	0	48
LSD (0.05)		10	6	10	ns	4	3	5

[1] Gr/ye = Green and yellow foxtail.
[2] SR = Stand Reduction.
[3] Ultra Blazer 2L.
[4] NIS = Class Preference nonionic surfactant.
[5] AMS = spray grade ammonium sulfate.
[6] Extreme 2.17L.
[7] COC =Class crop oil concentrate.
[8] Gauntlet package mix.
[9] Fusion 2.66E.
[10] Boundary 7.8F.
[11] Glyphomax Plus 3L.
[12] Command Extra package mix.
[13] Roundup Ultra Max 3.75L.
[14] Touchdown IQ 3L.
[15] Domain 60DF.
[16] Authority 75DF.