

Herbicide performance in soybeans at Morris, MN - 1998. Jeffrey Gunsolus and George Nelson. The study site was in wheat in 1997. Fertilizer was applied at a rate of 18-46-60 and the site was chisel plowed in the fall of 1997. The site was field cultivated on May 8th. Pre-Plant Incorporated treatments were applied on May 15th, as per plot plan. The wind was out of the south at 13 mph and the temperature was 70°F, the daily high was 81°F. The site was field cultivated twice after PPI application for chemical incorporation and seedbed preparation. The study was seeded to Stine 1284RR soybeans in 30 inch rows at 73 lbs/ac on May 15, 1998. Pre-emergence treatments were applied as per plot plan on May 18th. The wind was out of the south at 3-5 mph and the temperature was 80°F at spraying, the daily high was 97°F. Plots were shortened to 27.5 feet on May 28th. Post I applications were on 3-4 inch weeds on June 8th with the wind was out of the east at 13-19 mph and the temperature was 55°F, the daily high was 65°F. Post and Post II applications were at the 2nd trifoliolate stage, 4 inch weeds on June 10th, with the wind out of the east at 9-15 mph and the temperature was 65°F, the daily high was 72°F. Treatment 34, 6-8 inch weeds, was applied on June 18th with the wind out of the south at 10-20 mph and the temperature was 74°F, the daily high was 77°F. Treatment 35, Post II, 10-14 days later, was applied on June 23rd, with the wind out of the east at 10-15 mph and the temperature was 70°F, the daily high was 75°F. The plots were row cultivated as per plot plan on July 1st. The study was harvested with an Almaco plot combine on October 9th. Grain yield was recorded. Harvest area was two 27.5 foot rows.

Table. Herbicide performance in soybeans at Morris, MN - 1998. (Gunsolus and Nelson).

Treatment	Rate (lb/A)	Weed Control					Soybean		
		gr/ye ¹	Ebns	Colq	Rrpw	Wimu	Injury	SR ²	Yield Bu/A
(Preplant incorporate 2X)									
Imazethapyr & pendimethalin ³	0.063 & 0.85	99	100	100	100	100	0	0	64
Trifluralin + NAF-75	0.75 + 0.03	100	100	100	100	100	0	5	61
(Preplant incorporate 2X) + (Postemergence 4" weeds)									
(Trifluralin) + (imazethapyr + COC ⁴ + 28%N ⁵)	(0.75) + (0.031 + 1.25% + 1.25%)	100	100	100	100	100	0	5	60
(Trifluralin) + (imazethapyr + COC + 28%N)	(0.75) + (0.063 + 1.25% + 1.25%)	100	100	100	100	100	8	4	58
(Trifluralin) + (acifluorfen & bentazon ⁶ + 28%N)	(0.75) + (0.17 & 0.75 + 2.5%)	91	100	100	98	100	0	9	60
(Trifluralin) + (imazethapyr + lactofen + COC + 28%N)	(0.75) + (0.047 + 0.063 + 0.625% + 2%)	100	100	100	100	100	4	25	59
(Clomazone) + (imazethapyr + COC + 28%N)	(0.75) + (0.031 + 1.25% + 1.25%)	100	100	100	100	100	0	1	62
(Imazethapyr & pendimethalin) + (glyphosate + NIS ⁷ + AMS ⁸)	(0.063 & 0.85) + (0.375 + 0.25% + 2.5)	100	100	100	100	100	0	0	61
(Trifluralin) + (glyphosate)	(0.75) + (0.56)	99	88	88	100	81	0	5	59
(Trifluralin) + (NAF-75 + thifensulfuron + NIS + 28%N)	(0.75) + (0.016 + 0.002 + 0.125% + 2.5%)	100	75	100	100	100	0	10	59
(Trifluralin) + (imazamox + COC + 28%N)	(0.75) + (0.03 + 1.25% + 1.25%)	100	100	100	100	100	2	5	62
(Trifluralin) + (imazethapyr + NAF-75 + COC + 28%N)	(0.75) + (0.031 + 0.016 + 1.25% + 2.5%)	100	100	100	100	100	0	6	60
(Trifluralin) + (imazethapyr + fomesafen + COC + 28%N)	(0.75) + (0.031 + 0.176 + 1.25% + 1.25%)	100	100	100	100	100	2	5	59
Weedy check		--	--	--	--	--	0	0	24
(Preplant incorporate 2X) + (Postemergence 4" weeds) + cultivation									
(Trifluralin) + (imazethapyr + COC + 28%N) + cultivation	(0.75) + (0.031 + 1.25% + 1.25%)	100	100	100	100	100	0	0	61
(Trifluralin) + (imazethapyr + COC + 28%N) + cultivation	(0.75) + (0.063 + 1.25% + 1.25%)	100	100	100	100	100	0	2	62
(Trifluralin) + (acifluorfen & bentazon + 28%N) + cultivation	(0.75) + (0.17 & 0.75 + 2.5%)	96	100	100	100	100	0	4	59
Handweeded check + cultivation		100	100	100	100	100	0	0	62
(Preemergence) + (Postemergence 4" weeds)									
(Dimethenamid) + (sethoxydim & bentazon & acifluorfen ⁹ + COC + 28%N)	(0.94) + (0.28 & 0.75 & 0.17 + 0.625% + 1.25%)	100	100	100	95	100	4	4	51
(CGA 77102 + metribuzin) + (CGA 277476 + NIS + 28%N)	(1.91 + 0.32) + (0.094 + 0.25% + 1.25%)	100	100	100	100	100	0	0	58
(Metolachlor & flumetsulam) + (glyphosate)	(2.34 & 0.063) + (0.56)	100	100	100	100	100	0	1	55
(Clomazone) + (glyphosate)	(0.75) + (0.56)	100	100	100	100	100	0	1	59
(Sulfentrazone) + (glyphosate + chlorimuron)	(0.25) + (0.56 + 0.005)	100	100	100	100	100	0	1	56
(USA 1999) + (glyphosate)	(0.5) + (0.56)	100	100	100	100	100	0	0	59
(Flumetsulam) + (glyphosate)	(0.04) + (0.56)	100	100	100	100	100	0	0	57
Weedy check		--	--	--	--	--	0	0	21
(Postemergence 4" weeds)									
Imazethapyr + NAF-75 + COC + 28%N	0.063 + 0.016 + 1.25% + 2.5%	100	100	100	100	100	0	0	56
NAF-75+ glyphosate + AMS + NIS	0.016 + 0.56 + 2 + 0.125%	100	100	100	100	98	0	0	60
Fenoxaprop & fluzifop ¹⁰ + fomesafen + thifensulfuron + COC + 28%N	0.05 & 0.15 + 0.24 + 0.002 + 1% + 4%	100	100	100	100	100	0	0	60
Imazamox + COC + 28%N	0.04 + 1.25% + 1.35%	100	100	100	100	100	1	0	61
Sethoxydim & bentazon & acifluorfen + NAF-75 + COC + 28%N	0.28 & 0.75 & 0.17 + 0.01 + 0.625% + 1.25%	100	99	90	92	95	1	0	57
CGA 277476 + glyphosate	0.094 + 0.56	100	98	100	98	100	0	0	62
Glyphosate + chlorimuron	0.56 + 0.005	100	100	100	100	100	0	0	62
Glyphosate	0.75	100	88	98	100	89	0	0	60
(Postemergence 3-4" weeds) + (Postemergence 4" regrowth)									
(Glyphosate) + (glyphosate)	(0.56) + (0.375)	100	100	100	100	96	0	0	61
(Postemergence 3-4" weeds) + (Postemergence 4" weeds)									
(Quizalofop + COC) + (Thifensulfuron & chorimuron ¹¹ + NIS + 28%N)	(0.063 + 1%) + (0.0028 & 0.005 + 0.25% + 2.5%)	100	0	100	98	100	0	0	62
(Quizalofop + COC) + (Thifensulfuron & chorimuron + fomesafen + NIS + 28%N)	(0.063 + 1%) + (0.0028 & 0.005 + 0.24 + 0.25% + 2.5%)	100	100	100	100	100	0	0	57
Handweeded check		100	100	100	100	100	0	0	61
(Postemergence 4" weeds)									
Sethoxydim & bentazon ¹² + fomesafen + COC + 28%N	0.2 + 1.0 + 0.18 + 0.625% + 1.25%	100	100	100	100	100	1	1	59
Imazethapyr + COC + 28%N	0.063 + 1.25% + 1.25%	99	100	99	100	100	0	0	63
(Postemergence 4" weeds) + cultivation									
Sethoxydim & bentazon + fomesafen + COC + 28%N + cultivation	0.2 + 1.0 + 0.18 + 0.625% + 1.25%	100	100	100	100	100	0	0	61
Imazethapyr + COC + 28%N + cultivation	0.063 + 1.25% + 1.25%	100	100	100	100	100	0	0	64
LSD (0.05)		3	14	ns	ns	3	ns	8	6

¹ Gr/ye = Green and yellow foxtail.

² SR = Stand Reduction.

³ Premix = Pursuit Plus 2.9E.

⁴ COC = Class crop oil concentrate.

⁵ 28%N = 28% aqueous urea-ammonia solution.

⁶ Premix = Galaxy 3.67E.

⁷ NIS = Class Preference nonionic surfactant.

⁸ AMS = spray grade ammonium sulfate.

⁹ Package mix = Manifest.

¹⁰ Premix = Fusion 2.56F.

¹¹ Premix = Reliance 25DF.

¹² Package mix = Result.