

Herbicide Performance in Corn at Morris, MN - 2000. Jeffrey L. Gunsolus and George Nelson. Fall fertilizer was applied to the trial site on October 28, 1999 @ 120-46-60 and incorporated via chisel plow. The trial site was field cultivated once on May 15, 2000. PPI treatments were applied on May 17th with the wind out of the south at 15-20 mph and the site was field cultivated for herbicide incorporation and seedbed preparation. The site was then seeded in 4-row plots at 34,000 seeds per acre to NK 42N7LL- Bt-IT corn with Counter CR applied at 6 pounds per acre. Pre-emergence treatments were applied on May 19 with the wind out of the south at 5-10 mph. Post-emergence treatments were applied at 2-collar on June 9, wind out of south 10-15 mph, 3-collar on June 19, wind out of the east at 15 mph, and 4-collar on June 22, wind out of the west at 15 mph. Mechanical treatments were applied as follows; the first rotary hoe and harrow on May 31, the second rotary hoe and harrow on June 9, and row cultivation on June 29. The corn was harvested on October 19th with a harvest area of 137.5 square feet.

Table. Herbicide performance in corn at Morris, MN - 2000. (Gunsolus and Nelson).

Treatment	Rate (lb/A)	Weed Control				Corn	
		Gr/ye ¹	Colq	Ebns	Rrpw	Injury	SR ²
(EPTC & R-29148 & acetochlor ³) + (dicamba ⁴)	(4.2 & 1.05) + (0.5)	100	100	100	100	0	0
(S-metolachlor & CGA-154281 ⁵) + (dicamba)	(1.91) + (0.5)	100	100	100	100	0	0
(Acetochlor ⁶) + (dicamba)	(1.97) + (0.5)	100	100	100	100	0	0
(Dimethenamid) + (dicamba)	(1.0) + (0.5)	100	100	100	100	0	0
(Preemergence) + (Post 4 collar corn)							
(S-metolachlor & CGA-154281) + (dicamba)	(1.91) + (0.5)	100	97	100	98	0	0
(Acetochlor ⁶) + (dicamba)	(1.97) + (0.5)	100	93	94	94	0	0
(Dimethenamid) + (dicamba)	(1.0) + (0.5)	100	97	100	100	0	0
Weedy check	--	--	--	--	--	0	0
(Preemergence) + (Post 4 collar corn) + Cultivation 43 DAP							
(S-metolachlor & CGA-154281) + (dicamba) +	(1.91) + (0.5)	100	100	100	100	0	0
(Acetochlor ⁶) + (dicamba)	(1.97) + (0.5)	100	100	100	100	0	0
(Dimethenamid) + (dicamba)	(1.0) + (0.5)	100	100	100	100	0	0
Handweeded check	--	100	100	100	100	0	0
(Preemergence)							
Acetochlor & atrazine ⁷ + flumetsulan & clopyralid ⁸	0.94 & 0.63 + 0.04 & 0.12	100	100	100	100	5	0
Acetochlor ⁹ + RPA 201772 ¹⁰	1.0 + 0.005	100	100	100	100	4	0
(Preemergence) + (Post 3 collar corn)							
(Dimethenamid) + (dicamba & SAN 1269H ¹¹ + NIS ¹² + 28%N ¹³)	(1.0) + (0.187 & 0.075 + 0.25% + 1.25%)	100	100	100	100	0	0
(Dimethenamid) + (dicamba & SAN 1269H + NIS ¹² + 28%N ¹³)	(1.0) + (0.125 & 0.05 + 0.25% + 1.25%)	100	99	100	100	3	0
(Acetochlor) + (glufosinate + atrazine + AMS ¹⁴)	(1.2) + (0.26 + 0.45 + 2.5)	100	100	100	100	1	0
(S-metolachlor & CGA-154281) + (nicosulfuron & rimsulfuron & clopyralid & flumetsulam ¹⁵ + dicamba + COC ¹⁶ + 28%N)	(0.63) + (0.012 & 0.012 & 0.094 & 0.03 + 0.125 + 1.0% + 4.0%)	100	98	100	99	6	0
(Flufenacet & metribuzin ¹⁷) + (glufosinate + atrazine + AMS)	(0.37 & 0.09) + (0.26 + 0.45 + 2.5)	100	100	100	100	0	0
(Flufenacet & metribuzin) + (nicosulfuron & rimsulfuron & clopyralid & flumetsulam + COC + 28%N)	(0.44 & 0.11) + (0.012 & 0.012 & 0.094 & 0.035 + 1.0% + 4.0%)	100	100	100	100	4	0
(Rimsulfuron + flufenacet) + (dicamba)	(0.03 + 0.45) + (0.25)	100	97	100	100	3	0
(S-metolachlor & CGA-154281) + (carfentrazone + flumetsulam & clopyralid + NIS)	(1.91) + (0.008 + 0.04 & 0.12 + 0.25%)	99	93	95	92	5	1
(S-metolachlor & CGA-154281) + (primisulfuron & dicamba ¹⁸ + carfentrazone + NIS)	(1.91) + (0.023 & 0.125 + 0.008 + 0.25%)	97	94	100	99	0	0
(Flufenacet & metribuzin) + (dicamba)	(0.78 & 0.2) + (0.5)	99	100	90	100	3	0
(Acetochlor) + (ZA 1296 + COC + 28%N)	(2) + (0.094 + 1.0% + 2.5%)	100	100	100	100	0	0
(Acetochlor) + (flumetsulam & clopyralid + dicamba + NIS + 28%N)	(2) + (0.035 & 0.094 + 0.125 + 0.25% + 2.5%)	99	98	99	99	0	0
(RPA 210772) + (glufosinate + atrazine + AMS)	(0.058) + (0.31 + 0.45 + 2.5)	100	100	100	98	0	0
(S-metolachlor & CGA-154281) + (primisulfuron & dicamba + COC + 28%)	(1.91) + (0.023 & 0.125 + 1.25% + 2.5%)	100	96	100	96	3	0
Mechanical Treatments							
Rotary Hoe 14 DAP & 23 DAP + Cultivation 43 DAP	--	100	99	100	97	0	6
Harrow 14 DAP & 23 DAP + Cultivation 43 DAP	--	99	98	100	97	1	0
Postemergence 2 collar corn + Cultivation 43 DAP							
Rimsulfuron & thifensulfuron ¹⁹ + dicamba + NIS + 28%N + cultivation	0.01 & 0.005 + 0.25 + 0.25% + 4%	100	100	100	100	6	0

(continued)

Table. Herbicide performance in corn at Morris, MN - 2000. (continued)

Treatment	Rate (lb/A)	Weed Control				Corn	
		Gr/ye ¹	Colq	Ebns	Rrpw	Injury	SR ²
		----- (%) -----					
Postemergence 3 collar corn + Cultivation 43 DAP							
Rimsulfuron & nicosulfuron & atrazine ²⁰ + flumetsulam & clopyralid + COC + 28%N	0.012 & 0.012 & 0.76 + 0.035 & 0.094 + 1.0% + 1.25%	100	100	100	100	0	0
Imazethapyr & imazapyr + dicamba + NIS + 28%N	0.042 & 0.014 + 0.1875 + 0.25% + 1.25%	100	99	100	99	0	0
Postemergence 4 collar corn + Cultivation 43 DAP							
Nicosulfuron & dicamba & diflufenzopyr ²¹ + NIS + 28%	0.031 + 0.137 & 0.05 + 0.25% + 1.25%	99	100	100	100	0	1
Postemergence 3 collar corn							
Rimsulfuron & nicosulfuron & atrazine + flumetsulam & clopyralid + COC + 28%N	0.012 & 0.012 & 0.76 + 0.035 & 0.094 + 1.0% + 1.25%	100	100	100	100	0	0
Imazethapyr & imazapyr + dicamba + NIS + 28%N	0.042 & 0.014 + 0.1875 + 0.25% + 1.25%	100	100	100	100	3	17
Rimsulfuron + nicosulfuron + dicamba & diflufenzopyr + NIS + 28%N	0.012 + 0.023 + 0.125 & 0.05 + 0.25% + 2.5%	100	99	100	99	5	1
Postemergence 4 collar corn							
Nicosulfuron & dicamba & diflufenzopyr + NIS + 28%	0.031 + 0.137 & 0.05 + 0.25% + 1.25%	98	96	100	97	0	0
Glufosinate + atrazine + AMS	0.26 + 0.45 + 2.5	96	99	100	92	3	1
Nicosulfuron & rimsulfuron & clopyralid & flumetsulam + dicamba + COC + 28%N	0.012 & 0.012 & 0.094 & 0.035 + 0.0125 + 1% + 2.5%	99	97	98	98	8	0
LSD (0.05)	--	2	4	6	5	ns	ns

¹ Gr/ye = Green and yellow foxtail.

² SR = Stand Reduction.

³ Premix = Doubleplay 7E.

⁴ Clarity 4L.

⁵ Dual II Magnum 7.64E.

⁶ Harness 7E.

⁷ Surpass 100 5L.

⁸ Hornet 68.5DF.

⁹ Surpass 6.4E.

¹⁰ Balance Pro 4L.

¹¹ Distinct 70DF.

¹² NIS = Class preference nonionic surfactant

¹³ 28%N = 28% aqueous solution of urea and ammonium nitrate.

¹⁴ AMS = ammonium sulfate.

¹⁵ Accent Gold 83.8DF.

¹⁶ COC = Class 17% crop oil concentrate.

¹⁷ Axiom 68DF.

¹⁸ Northstar 47.4WG.

¹⁹ Basis 75DF.

²⁰ Basis Gold 89.9DF.

²¹ Celebrity Plus 75.3DF.