Weed control with AE F130360 in corn at Lamberton, MN in 2002. Getting, Jodie K. and Bruce D. Potter. The objective of this study was to evaluate AE F130360 tank-mix combinations for annual grass and annual broadleaf weed control in corn. This study was conducted on a Normania loam soil containing 4.2% organic matter, pH 6.5 and soil test P and K levels of 60 and 316 lb/A, respectively. A randomized complete block design with four replications and a plot size of 10 by 30 ft was used. The site was planted to oats in 2001 and was fall chiseled. The area was fertilized with 180 lb/A of nitrogen as urea. On May 2, 2002, Mycogen '4150LL' glufosinate resistant field corn was planted in 30-inch rows at a seeding rate of 33,000 seeds/A. Tefluthrin (Force 3G) was applied at 4 oz/1000 row feet in a T-band for the control of northern corn rootworm larvae. All treatments were applied with a tractor-mounted sprayer delivering 20 gpa at a pressure of 40 psi. The sprayer was equipped with 8002 flat-fan nozzles spaced 15 inches apart on the boom. Application dates, environmental conditions, plant sizes and rainfall data are listed below:

Date	May 3	June 5
Treatment	PRE	POST
Temperature (F)		
air	48	68
soil (4 inch)	42	76
Relative humidity (%)	30	49
Wind (mph)	SE 10	calm
Sky	clear	clear
Soil moisture	dry	moist
Corn		
leaf no.	-	3-collar
height (inch)	-	4
Yellow foxtail		
leaf no.	-	1 to 4
height (inch)	-	1 to 3
no./ft^2	-	40
Common lambsquarters		
leaf no.	-	3 to 5
height (inch)	-	1 to 2
no./ft^2	-	4
Redroot pigweed		
leaf no.	-	3 to 5
height (inch)	-	1 to 2
no./ft^2	-	6
Rainfall after application (inch)		
1 week	1.25	0.57
2 week	0.36	0.24
3 week	0.00	1.18

None of the herbicide treatments caused visible crop injury. On June 3, prior to POST treatments, flufenacet applied PRE gave 71% yellow foxtail control, 51% common lambsquarters control, and 59% redroot pigweed control. Isoxaflutole + atrazine and dimethenamid-P applied PRE provided 89% or greater control of yellow foxtail, common lambsquarters, and redroot pigweed. In September, the PRE/POST treatments gave 90 to 94% yellow foxtail control and 96% or greater common lambsquarters and redroot pigweed control. AE F130360 applied POST provided 81% yellow foxtail control. AE F130360 tank-mixed with [dicamba & SAN 1269H], mesotrione, or flufenacet gave 80 to 83%, 76 to 80%, and 81 to 84% control, respectively. All herbicide treatments resulted in 91% or greater common lambsquarters control and 89% or greater redroot pigweed control. (Southwest Research and Outreach Center, University of Minnesota, Lamberton).

Table. Weed control with AE F130360 in corn at Lamberton, MN in 2002 (Getting and Potter).

Treatment[a]	Rate	SETLU				CHEAL				AMARE			
		6/3	6/21	6/28	9/9	6/3	6/21	6/28	9/9	6/3	6/21	6/28	9/9
	(lb/A or %)	----------(% control)----------											
POST (2 to 4-inch weeds)													
AE F130360+MSO+28%N	0.03+0.94%+2.5%	0	91	90	81	0	96	94	93	0	97	91	93
AE F130360+[Dica&SAN 1269H] +MSO+28%N	0.03+[0.064&0.0.026] +0.94%+2.5%	0	88	86	83	0	95	94	93	0	97	91	90
AE F130360+[Dica&SAN 1269H] +MSO+28%N	0.03+[0.128&0.0.051] +0.94%+2.5%	0	87	85	80	0	97	94	93	0	98	93	91
AE F130360+mesotrione+MSO+28%N	0.03+0.047+0.94%+2.5%	0	86	84	78	0	97	95	93	0	97	89	89
AE F130360+mesotrione+MSO+28%N	0.03+0.063+0.94%+2.5%	0	89	88	80	0	97	97	95	0	97	90	93
AE F130360+mesotrione+MSO+28%N	0.03+0.094+0.94%+2.5%	0	86	86	76	0	97	95	93	0	97	92	92
AE F130360+[Prim&Dica] +MSO+28%N	0.03+[0.019&0.1] +0.94%+2.5%	0	90	89	85	0	96	96	95	0	96	93	94
AE F130360+flufenacet+MSO+28%N	0.03+0.23+0.94%+2.5%	0	91	89	84	0	92	93	91	0	97	95	92
AE F130360+flufenacet+MSO+28%N	0.03+0.3+0.94%+2.5%	0	88	88	81	0	98	97	96	0	98	98	97
[Nico&Rims]+mesotrione+Atra +COC+AMS	[0.023&0.012]+0.063+0.25 +1%+2.0	0	91	90	84	0	97	97	95	0	97	96	95
AE F130360+mesotrione+Atra +COC+AMS	0.03+0.063+0.25 +1%+2.0	0	82	84	76	0	98	97	95	0	98	95	95
Preemergence/POST (2 to 4-inch weeds)													
Isoxaflutole+Atra/ AE F130360+MSO+28%N	0.047+0.75/ 0.03+0.94%+2.5%	89	94	95	93	93	98	98	97	93	98	98	97
Dimt-P/[Dica&SAN 1269H] +NIS+AMS	0.94/[0.128&0.051] +0.25%+1.0	93	92	94	94	89	98	98	96	94	97	98	96
Flufenacet/Gluf+Atra+AMS	0.375/0.31+0.5+3.0	71	94	98	90	51	98	98	96	59	98	96	96
Checks													
Weedy check		0	0	0	0	0	0	0	0	0	0	0	0
Weed-free		100	100	100	100	100	100	100	100	100	100	100	100
	LSD (0.10)	2.7	3.6	3.9	7.2	6.5	1.9	2.7	3.2	11.7	1.4	3.5	4.3

[a] AE F130360 = Option 35 DF; Atra or atrazine = Aatrex 4L; [Dica&SAN 1269H] or [dicamba & SAN 1269H] = Distinct 70WG; Dimt-P or dimethenamid-P = Outlook 6L; flufenacet = Define 60DF; Gluf or glufosinate = Liberty 1.67L; isoxaflutole = Balance Pro 4L; mesotrione = Callisto 4L; [Nico&Rims] or [nicosulfuron & rimsulfuron] = Steadfast 75DF; [Prim&Dica] or [primsulfuron & dicamba] = Northstar 47.4WG; COC = crop oil concentrate; MSO = methylated seed oil; NIS = nonionic surfactant; 28%N = an aqueous solution of urea and ammonium nitrate; AMS = spray grade ammonium sulfate.