Evaluation of nicosulfuron & rimsulfuron and AE F130360 01 alone and in herbicide combinations for weed control in corn at Rochester, MN in 2002. Schaufler, Kristal L., Fritz R. Breitenbach, and Lisa M. Behnken. The objective of this trial was to evaluate the performance of nicosulfuron & rimsulfuron, AE F130360 01, and mesotrione for weed control in corn in southeastern Minnesota. The research site was a Lawler loam soil containing 2.4% organic matter with a pH of 6.2 and soil test P and K levels of 35 and 132 ppm, respectively. The previous crop was soybean. The area was fertilized in the fall of 2001 with 200 lb/A Pel-lime, 200 lb/A potash and 8 tons/A turkey manure. The soil was disked twice and chisel plowed once. In the spring of 2002, the field was field cultivated twice. The corn hybrid, Pioneer 37-H27, was planted on April 30, 2002, at a depth of 2 inches in 30-inch rows at 31,000 seeds/A. A randomized complete block design with four replications was used. Preemmergence (PRE) and postemergence (POST) treatments were applied with a tractor-mounted sprayer, delivering 20 gpa at 32 psi using TurboTee 11002 nozzles. Evaluations of the plot were taken on May 20, June 11 and 25, 2002. Application dates, environmental conditions, crop and weed stages are listed below.

Date	*April 30*	*May 31*
Treatment	PRE	POST
Temperature (F)		
air	60	70
Soil	51	---
Relative humidity (%)	42	4
Wind (mph)	7	7
Soil moisture	adequate	adequate
Corn		
Stage	---	2 collar
height (inch)	---	5
Giant ragweed		
weed density/ft^2	---	15
height (inch)	---	4
Common lambsquarter		
weed density/ft^2	---	5.8
height (inch)	---	1.5
Common waterhemp		
weed density/ft^2	---	6
height (inch)	---	1
Giant ragweed		
weed density/ft^2	---	12
height (inch)	---	1.75
Rainfall after application (inch)		
week 1	0.38	3.64
week 2	0.64	1.24
week 3	0.25	2.66

Most of the treatments resulted in over 90% control of giant ragweed. Two post treatments, nicosulfuron & rimsulfuron + atrazine and AE F130360 01 alone gave only fair control, 73 and 60% respectively. Post treatments nicosulfuron & rimsulfuron alone gave no control of giant ragweed. Giant ragweed control with tank mixes of nicosulfuron & rimsulfuron + mesotrione + atrazine were influenced more by atrazine rate than mesotrione rate. Control of common lambsquarters was only fair with post treatments nicosulfuron & rimsulfuron alone. Control was improved with the addition of *s*-metolachlor & CGA-154281, atrazine and mesotione. Common waterhemp control with tank mixes of nicosulfuron & rimsulfuron + mesotrione + atrazine was influenced more by mesotrione rate than atrazine rate. Common waterhemp control with post applied AE F130360 01 alone and with atrazine was only fair and significantly lower than all other treatments. The highest yields were achieved with both pre/post treatments and post treatments nicosulfuron & rimsulfuron + mesotrione (at 0.047, 0.063, and 0.094) + atrazine. Nicosulfuron & rimsulfuron alone and AE F130360 01 alone resulted in the lowest yields, 16 and 46 bu/A respectively. (Southeast District, University of Minnesota Extension Service, Rochester).

Table. Nicosulfuron & rimsulfuron and AE F130360 01 performance in corn on June 25 at Rochester, MN in 2002 (Schaufler, Breitenbach, and Behnken).

Treatment	*Rate*	*AMBTA control*	*CHEAL control*	*AMATA control*	*SETFA control*	*Corn yield*
	(lb/A)	(%)	(&)	(%)	(%)	(bu/A)
Preemergence/Postemergence						
S-meto & CGA-154281 + nico & rims + meso + atra + COC + AMS	0.956+0.035+0.047+0.75+1.0% +2.0	98	99	96	96	186
Isox + AE F130360 01 + atra + MSO + AMS	0.047+0.033+0.75+1.0%+2.0	96	99	97	94	205
Postemergence						
Nicosulfuron & rimsulfuron + COC + AMS	0.023&0.0117+1.0%+2.0	0	79	83	94	16
Nico & rims + atra + COC + AMS	0.023&0.0117+0.75+1.0%+2.0	73	99	65	94	136
AE F130360 01 + MSO + AMS	0.033+1.0%+2.0	60	92	54	95	46
AE F130360 01 + atrazine + MSO+ AMS	0.033+0.988+1.0%+2.0	94	99	54	94	167
Nico & rims + meso + atra + COC + AMS	0.023&0.012+0.031+0.75+1.0%+2.0	95	99	87	93	175
Nico & rims + meso + atra + COC + AMS	0.023&0.012+0.047+0.75+1.0%+2.0	98	99	93	89	212
Nico & rims + meso + atra + COC + AMS	0.023&0.012+0.063+0.25+1.0%+2.0	94	99	93	93	187
Nico & rims + meso + atra + COC + AMS	0.023&0.012+0.063+0.75+1.0%+2.0	98	99	94	90	204
Nico & rims + meso + atra + COC + AMS	0.023&0.012+0.094+0.75+1.0%+2.0	98	98	90	92	207
Untreated		0	0	0	0	2
	LSD (0.10)	3	5	7	4	32