

Herbicide performance in corn at Rochester, MN in 2002. Soderholm, Courtney L. Fritz R. Breitenbach, and Lisa M. Behnken. The objective of this trial was to evaluate isoxaflutole, flufenacet, atrazine, glufosinate, AE F130360 01, dicamba & San 1269H, and bromoxynil alone and in combinations for weed control in corn in southeastern Minnesota. The research site was a Lawler loam 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 site was disked twice and chisel plowed. The corn hybrid, NK 32-L9, was planted on April 30, 2002, at a depth of 2.0 inches in 30-inch rows at 31,000 seeds/A. A randomized complete block design with four replications was used. Preemergence (PRE) and postemergence (POST) treatments were applied with a tractor-mounted sprayer delivering 20 gpa at a pressure of 32 psi using Turbo Tee 11002 nozzles. Evaluations of the plot were taken on May 20, June 5, and June 14, 2002. Application dates, environment conditions, and crop and weed stages are listed below.

<i>Date</i>	<i>May 1, 2002</i>	<i>June 6, 2002</i>
Treatment	PRE	POST
Temperature (F)		
air	47	70
soil	51	---
Relative humidity (%)	66	62
Wind (mph)	8	16
Soil moisture	adequate	adequate
Corn		
stage	---	4 collar
height (inch)	---	8
Giant ragweed		
weed density/ft ²	---	10.9
height (inch)	---	9.13
Common waterhemp		
weed density/ft ²	---	14.6
height (inch)	---	2.25
Common lambsquarters		
weed density/ft ²	---	2.63
height (inch)	---	3
Giant foxtail		
weed density/ft ²	---	14.6
height (inch)	---	4.1
Rainfall after application (inch)		
week 1	0.38	1.24
week 2	0.64	0.64
week 3	0.05	2.68

Excellent giant ragweed control was achieved with soil applied isoxaflutole / glufosinate + atrazine, pre/post applied flufenacet /AE F130360 01 + dicamba & San 1269H, isoxaflutole / bromoxynil + atrazine, and post applied AE F130360 01 + dicamba & San 1269H. Most treatments resulted in excellent control of common lambsquarters. Control was slightly lower with pre/post applied flufenacet /AE F130360 01 + dicamba & San 1269H and post applied glufosinate + atrazine and AE F130360 01 + dicamba & San 1269H. Most treatments gave excellent common waterhemp control. Very good control was achieved with pre/post applied flufenacet /AE F130360 01 + dicamba & San 1269H, flufenacet / bromoxynil + atrazine, and post applied AE F130360 01 + dicamba & San 1269H. Post applied glufosinate + atrazine control of common waterhemp was significantly lower than all other treatments. Two pre/post treatments, isoxaflutole / glufosinate + atrazine and flufenacet/AE F130360 01 + dicamba & San 1269H resulted in 99% control of giant foxtail. Control was only 86.0 and 88.8% respectively, with pre/post applied flufenacet / bromoxynil + atrazine and isoxaflutole / bromoxynil + atrazine and 84.5% with post applied glufosinate + atrazine gave less control of giant foxtail than all other treatments. The highest yield, 224 bu/A, was achieved with pre/post treatment isoxaflutole / bromoxynil + atrazine. (Southeast District, University of Minnesota Extension Service, Rochester).

Table. Herbicide performance in corn on June 14 at Rochester, MN in 2002 (Soderholm, Breitbenbach, and Behnken).

<i>Treatment</i>	<i>Rate</i>	<i>AMBTR control</i>	<i>CHEAL control</i>	<i>AMATA control</i>	<i>SETFA control</i>	<i>Crop Injury</i>	<i>Corn yield</i>
	(lb/A)	(%)	(%)	(%)	(%)	(%)	(bu/A)
<u>Preemergence</u>							
Isoxaflutole + flufenacet	0.094+0.45	87	99	99	96	0	186
Isoxaflutole + atrazine	0.094+1.0	89	99	99	92	0	182
Isoxaflutole + flufenacet + atrazine	0.07+0.375+1.0	85	99	99	93	0	157
<u>Preemergence/Postemergence</u>							
Isoxaflutole / glufosinate + atrazine + AMS	0.047/0.313+0.5+3.0	97	99	99	99	0	159
Isoxaflutole / AE F130360 01 + UAN + MSO	0.047/0.033+2%+1.5%	85	99	98	93	0	181
Flufenacet / glufosinate + atrazine + AMS	0.375/0.313+0.5+3.0	87	99	99	95	0	167
Fict /AE F130360 01 + dica & San 1269H + UAN + MSO	0.375/0.033+0.0156&0.0063+2.5%+0.94%	95	95	95	99	0	188
Flufenacet / bromoxynil + atrazine	0.675/+0.25&0.5	90	99	92	86	0	187
Isoxaflutole / bromoxynil + atrazine	0.07+0.25&0.5	97	99	99	89	0	224
<u>Postemergence</u>							
Glufosinate + atrazine + AMS	0.365+0.5+3.0	89	95	88	85	0	156
AE F130360 01 + dica & San 1269H + UAN + MSO	0.033+0.0156&0.0063+2.5%+0.94%	95	95	95	96	0	176
Untreated	0	0	0	0	0	0	3
LSD (0.10)		3	3	4	4	0	27