

Evaluation of preemergence weed control programs in corn. Horky, Kevin T. and Alex R. Martin.

A field study was conducted to evaluate the efficacy of preemergence herbicide programs in corn. A randomized complete block design with three replications per treatment was utilized. The study was conducted on a Sharpsburg silt loam with 2.7% organic matter and a pH of 6.8. Individual plots consisted of six 30-inch rows, each 30 feet long. 'Dekalb 6016' corn was planted May 28 at a population of 20,600 seeds per acre. Treatments were applied with a tractor-mounted sprayer at a speed of 3.0 mph. Application, weed, and environmental data are presented below:

Date	May 28
Treatment	PRE
Sprayer	
gpa	15
psi	30
Temperature (°C)	
air	29
soil (4 inch)	19
Soil Moisture	adequate
Wind (mph)	4
Sky (% cloudy)	40
Relative	
humidity (%)	29
Precip. After appl. (inches)	
week 1	0.51
week 2	0.18
Corn	
stage	--
height (cm)	--
Palmer amaranth	
height (cm)	--
infestation (m ²)	--
Green foxtail	
height (cm)	--
infestation (m ²)	--
Velvetleaf	
height (cm)	--
infestation (m ²)	--

Summary comments: The addition of isoxaflutole, mesotrione, flumetsulam, and clopyralid to atrazine combinations improved velvetleaf control. Results of the study are summarized in the following table. (Dept. of Agronomy and Horticulture, University of Nebraska-Lincoln)

Table. Evaluation of preemergence weed control programs in corn (Horky and Martin).

Treatment	Application		-----AMAPA-----			-----SETVI-----			-----ABUTH-----			ZEAMX
	Rate	Timing	6/18	7/2	7/16	6/18	7/2	7/16	6/18	7/2	7/16	Yield 10/20
	(lb/a)		-----% Weed Control-----									(bu/ac)
S-metolachlor& atrazine& mesotrione& benoxacor	1.09 1.09 0.14	PRE	98	98	93	90	90	85	98	98	93	155
S-metolachlor& atrazine& mesotrione& benoxacor	1.305 1.305 0.168	PRE	98	96	93	98	98	93	98	98	93	160
S-metolachlor& atrazine& mesotrione& benoxacor	1.52 1.52 0.196	PRE	99	99	95	99	99	95	99	99	95	160
S-metolachlor& atrazine& benoxacor	1.26 1.628	PRE	96	96	92	96	95	92	92	92	87	142
S-metolachlor& atrazine& mesotrione& benoxacor	1.675 0.625 0.168	PRE	98	98	93	96	96	92	99	99	95	154
S-metolachlor& atrazine& mesotrione& benoxacor+	1.305 1.305 0.168	PRE	99	99	95	98	98	92	96	96	92	158
simazine	1.0											
Dimethenamid-P& atrazine	0.723 1.4	PRE	96	96	93	82	80	80	82	82	80	150
Acetochlor& atrazine& MON 4660	2.47 0.98	PRE	99	99	95	88	88	85	85	85	83	143
Flufenacet& isoxaflutole	0.33 0.069	PRE	91	90	87	90	90	83	90	88	87	130
Acetochlor& atrazine& dichlormid	1.95 1.46	PRE										
Acetochlor& atrazine& dichlormid+	0.975 0.73	PRE	99	99	95	96	95	92	92	90	85	153
isoxaflutole	0.07											
Acetochlor& atrazine& dichlormid+	1.95 1.46	PRE	99	99	95	96	95	92	90	90	88	155
flumetsulam& cloprralid	0.034 0.113											
Acetochlor& atrazine& MON 4660	1.46 1.07	PRE	98	96	93	90	90	85	85	85	82	150
LSD (P=.05)			5	6	5	7	7	7	7	7	7	22