

Evaluation of conventional weed control programs in corn. Horky, Kevin T. and Alex R. Martin. A field study was conducted to evaluate the efficacy of conventional weed control 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. EPOST treatments were applied 19 days after planting, MPOST treatments were applied 26 days after planting, and LPOST treatments were applied 32 days after planting. Application, weed, and environmental data are presented below:

Date	May 28	June 16	June 23	June 29
Treatment	PRE	EPOST	MPOST	LPOST
Sprayer				
gpa	15	15	15	15
psi	30	30	30	30
Temperature (°C)				
air	29	27	30	21
soil (4 inch)	19	21	21	21
Soil Moisture	adequate	adequate	adequate	adequate
Wind (mph)	4	7	2	2
Sky (% cloudy)	40	70	10	5
Relative				
humidity (%)	29	53	19	54
Precip. After appl. (inches)				
week 1	0.51	1.53	0.07	2.92
week 2	0.18	0.07	3.23	0.66
Corn				
stage	--	V3	V4	V5
height (cm)	--	12.7	24	35
Common sunflower				
height (cm)	--	10	20	25
infestation (m ²)	--	4	4	1
Palmer amaranth				
height (cm)	--	10	14	20
infestation (m ²)	--	5	5	5
Velvetleaf				
height (cm)	--	7	10	20
infestation (m ²)	--	4	4	4
Green foxtail				
height (cm)	--	10	12	20
infestation (m ²)	--	5	5	1

Summary comment: All treatments provided good to excellent control of grass and broadleaf weeds. Crop injury was not observed with any of the treatments. Results of the study are summarized in the following table. (Dept. of Agronomy and Horticulture, University of Nebraska-Lincoln)

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

Treatment	Application		-----HELAN-----			-----AMAPA-----			-----ABUTH-----			-----SETVI-----		
	Rate	Timing	6/15	6/30	7/19	6/15	6/30	7/19	6/15	6/30	7/19	6/15	6/30	7/19
	(lb/a)		-----% Weed Control-----											
Atrazine& S-metolachlor& benoxacor/ nicosulfuron& rimsulfuron+ mesotrione+ atrazine+ COC ¹ + AMS ²	0.775 0.6 0.023 0.012 0.063 0.75 1 %v/v 2.0	PRE/ MPOST	57	98	98	62	98	98	60	96	96	73	85	85
Rimsulfuron& thifensulfuron+ atrazine/ nicosulfuron& rimsulfuron+ mesotrione+ atrazine+ COC+ AMS	0.016 0.008 0.75 0.023 0.012 0.063 0.75 1 %v/v 2.0	PRE/ MPOST	70	98	98	87	96	96	77	99	99	77	88	88
Atrazine& S-metolachlor& benoxacor/ nicosulfuron& rimsulfuron+ mesotrione+ atrazine+ COC+ AMS	0.26 0.2 0.023 0.012 0.063 1.5 1 %v/v 2.0	PRE/ MPOST	50	98	98	38	96	96	42	98	98	37	88	88
Atrazine/ nicosulfuron& rimsulfuron+ mesotrione+ atrazine+ COC+ AMS	1.25 0.023 0.012 0.063 0.25 1 %v/v 2.0	PRE/ MPOST	83	96	96	68	98	98	65	98	98	82	88	88
Nicosulfuron& rimsulfuron+ mesotrione+ atrazine+ COC+ AMS	0.023 0.012 0.063 1.5 1 %v/v 2.0	MPOST	0	98	98	0	95	95	0	98	98	0	88	88

(continued)

Table. Evaluation of conventional weed control programs in corn (Horky and Martin), continued.

Treatment	Application		-----HELAN-----			-----AMAPA-----			-----ABUTH-----			-----SETVI-----		
	Rate	Timing	6/15	6/30	7/19	6/15	6/30	7/19	6/15	6/30	7/19	6/15	6/30	7/19
	(lb/a)		-----% Weed Control-----											
Atrazine& S-metolachlor& benoxacor+	0.97 0.75	EPOST	0	96	96	0	98	98	0	96	96	0	88	88
nicosulfuron& rimsulfuron+	0.023 0.012													
mesotrione+	0.063													
COC+	1 %v/v													
AMS	2.0													
Dimethenamid-P& atrazine+	0.85 1.65	PRE	90	87	87	91	88	88	85	82	82	93	88	88
isoxaflutole	0.047													
Dimethenamid-P& atrazine/	0.85 1.65	PRE/	95	87	92	96	90	95	90	85	92	82	75	85
dicamba& diflufenzopyr+	0.125 0.05	LPOST												
NIS ³ +	0.25 %v/v													
AMS	2.0													
Dimethenamid-P& atrazine+	0.425 0.825	MPOST	0	83	83	0	87	87	0	80	80	0	92	92
dicamba& diflufenzopyr&	0.125 0.05													
nicosulfuron+	0.031													
NIS+	0.25 %v/v													
AMS	2.0													
Pendimethalin+ atrazine/	1.19 1.0	PRE/	78	87	87	77	83	83	78	88	88	80	88	88
dicamba& diflufenzopyr+	0.125 0.05	MPOST												
NIS+	0.25 %v/v													
AMS	2.0													
LSD (P=.05)			13	6	6	19	6	6	23	6	6	13	10	7

¹COC = 'Prime Oil' by Agrilience²AMS = 'N-PAK' by Agrilience³NIS = 'Preference' by Agrilience