

Evaluation of glyphosate programs in corn II. Horky, Kevin T. and Alex R. Martin. A field study was conducted to evaluate the efficacy of weed control programs in glyphosate resistant 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 6019RR' corn was planted April 27 at a population of 22000 seeds per acre. Treatments were applied with a tractor-mounted sprayer at a speed of 3.0 mph. EPOST treatments were applied 26 days after planting, and MPOST treatments were applied 41 days after planting. Application, weed, and environmental data are presented below:

Date	April 27	May 23	June 7
Treatment	PRE	EPOST	MPOST
Sprayer			
gpa	15	15	15
psi	30	30	30
Temperature (°C)			
air	14	30	28
soil (4 inch)	8	20	21
Soil Moisture	adequate	adequate	adequate
Wind (mph)	10	3	2
Sky (% cloudy)	100	10	60
Relative			
humidity (%)	28	15	66
Precip. After appl. (inches)			
week 1	0.09	0.15	1.25
week 2	0.23	2.59	0.06
Corn			
stage	--	V3	V6
height (cm)	--	10	25
Velvetleaf			
height (cm)	--	5	15
infestation (m ²)	--	6	5
Common sunflower			
height (cm)	--	7	18
infestation (m ²)	--	4	5
Palmer amaranth			
height (cm)	--	3	15
infestation (m ²)	--	3	4
Green foxtail			
height (cm)	--	1	10
infestation (m ²)	--	2	3

Summary comments: Limited rainfall reduced performance of PRE treatments. PRE treatments followed by glyphosate POST provided the greatest weed control and crop yield. Results of the study are summarized in the following table. (Dept. of Agronomy and Horticulture, University of Nebraska-Lincoln)

Table. Evaluation of glyphosate programs in corn II (Horky and Martin).

Treatment	Application		-----ABUTH-----		-----HELAN-----		-----AMAPA-----		-----SETVI-----		ZEAMX YIELD
	Rate (lb/a)	Timing	5/31	6/23	5/31	6/23	5/31	6/23	5/31	6/23	9/30 (bu/ac)
S-metolachlor& atrazine& mesotrione& benoxacor	1.675 0.625 0.1675	PRE	72	88	73	91	73	88	73	82	99
Isoxaflutole+ flufenacet	0.094 0.75	PRE	77	88	80	85	80	88	87	86	99
Acetochlor& atrazine& MON4660/ glyphosate ¹ + AMS ²	1.01 0.79 0.75 2% v/v	PRE/ MPOST	20	99	38	99	37	98	65	99	129
Alachlor& atrazine& MON4660/ glyphosate ¹ + AMS	1.35 0.67 0.75 2% v/v	PRE/ MPOST	20	99	40	99	37	99	60	99	124
Alachlor& atrazine& MON4660/ glyphosate ¹ + AMS	1.35 0.67 0.75 2% v/v	EPOST	96	90	99	99	99	98	99	99	123
S-metolachlor& atrazine& mesotrione& benoxacor+ glyphosate ³ + AMS	1.34 0.5 0.13 0.78 2% v/v	EPOST	99	99	99	99	99	99	99	99	128
LSD (P=.05)			18	10	20	14	18	14	16	11	31

¹glyphosate = 'Roundup Original Max' by Monsanto²AMS = 'N-PAK' by Agrilience³glyphosate = 'Touchdown Total' by Syngenta