Evaluation of topramezon in corn. Horky, Kevin T. and Alex R. Martin. A field study was conducted to evaluate the efficacy of 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 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 20 days after planting, and POST treatments were applied 35 days after planting. Application, weed, and environmental data are presented below:

Date	May 3	May 23	June 7
Treatment	PRE	EPOST	POST
Sprayer			
gpa	15	15	15
psi	30	30	30
Temperature (°C)			
air	17	30	28
soil (4 inch)	8	20	21
Soil Moisture	adequate	adequate	adequate
Wind (mph)	2	3	2
Sky (% cloudy)	5	10	60
Relative			
humidity (%)	20	15	66
Precip. After appl. (inches)			
week 1	0.01	0.15	1.25
week 2	1.99	2.59	0.06
Corn			
stage	--	V3	V5
height (cm)	--	10	30
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	12
infestation (m^2)	--	2	3

Summary comments: Limited rainfall reduced performance of PRE treatments. PRE treatments followed by a POST treatment 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 topramezon in corn (Horky and Martin).

	Application		-------ABUTH--------		--------HELAN-------		-------AMAPA------		--------SETVI---------		--------ZEAMX------	
											Injury	YIELD
Treatment	Rate	Timing	5/31	6/21	5/31	6/21	5/31	6/21	5/31	6/21	5/31	10/3
	(lb/a)		----------% Weed Control----------								% Chlorosis	(bu/ac)
S-metolachlor&	0.96	PRE/	45	99	50	99	50	99	57	99	0	125
atrazine&	1.24											
benoxacor/												
mesotrione+	0.094	POST										
atrazine+	0.25											
COC[1]+	1% v/v											
UAN[2]	2.5% v/v											
S-metolachlor&	0.96	PRE	25	40	30	30	28	35	32	33	0	70
atrazine&	1.24											
benoxacor												
S-metolachlor&	0.96	PRE/	52	99	60	99	60	99	62	99	0	139
atrazine&	1.24											
benoxacor/												
topramezone[3]+	0.016	POST										
atrazine+	0.5											
MSO[4]+	1% v/v											
UAN	2.5% v/v											
S-metolachlor&	0.96	PRE/	42	87	47	96	47	96	53	95	0	130
atrazine&	1.24											
benoxacor/												
dicamba&	0.125	POST										
diflufenzopyr+	0.05											
NIS[5]+	0.25% v/v											
UAN	1.25% v/v											
S-metolachlor&	0.96	PRE/	30	95	40	98	38	98	43	99	0	124
atrazine&	1.24											
benoxacor/												
topramezone+	0.016	POST										
nicosulfuron&	0.023											
rimsulfuron+	0.012											
MSO+	1% v/v											
UAN	2.5% v/v											
Nicosulfuron&	0.023	POST	0	83	0	98	0	88	0	95	0	108
rimsulfuron+	0.012											
MSO+	1% v/v											
UAN	2.5% v/v											
Topramezon+	0.016	POST	0	99	0	88	0	99	0	99	0	105
nicosulfuron&	0.023											
rimsulfuron+	0.012											
atrazine+	0.5											
MSO+	1% v/v											
UAN	2.5% v/v											

(continued)

Table. Evaluation of topramezon in corn (Horky and Martin), continued.

	Application		-------ABUTH--------		--------HELAN-------		-------AMAPA------		--------SETVI---------		--------ZEAMX------	
											Injury	YIELD
Treatment	Rate	Timing	5/31	6/21	5/31	6/21	5/31	6/21	5/31	6/21	5/31	10/3
	(lb/a)		----------% Weed Control----------								% Chlorosis	(bu/ac)
Mesotrione+	0.094	POST	0	98	0	95	0	96	0	93	0	127
nicosulfuron&	0.023											
rimsulfuron+	0.012											
atrazine+	0.25											
COC+	1% v/v											
UAN	2.5% v/v											
Topramezon+	0.016	POST	0	95	0	93	0	96	0	99	0	127
nicosulfuron+	0.031											
atrazine+	0.5											
MSO+	1% v/v											
UAN	2.5% v/v											
Topramezon+	0.016	POST	0	96	0	98	0	98	0	94	0	113
foramsulfuron+	0.033											
atrazine+	0.5											
MSO+	1% v/v											
UAN	2.5% v/v											
Foramsulfuron+	0.033	POST	0	99	0	99	0	98	0	99	0	125
dicamba&	0.125											
diflufenzopyr+	0.05											
MSO+	1% v/v											
UAN	2.5% v/v											
Dimethenamid-P+	0.75	EPOST	99	95	99	99	99	99	99	99	1	130
topramezone+	0.016											
atrazine+	1											
COC+	1% v/v											
UAN	2.5% v/v											
Pendimethalin+	0.75	EPOST	99	92	99	98	99	99	99	93	0	127
topramezone+	0.016											
atrazine+	1											
COC+	1% v/v											
UAN	2.5% v/v											
S-metolachlor&	1.67	EPOST	99	99	99	99	99	99	99	93	30	129
atrazine&	0.63											
mesotrione&	0.17											
benoxacor+												
COC	1% v/v											
LSD (P=.05)			11	9	17	9	13	5	12	12	1	16

[1]COC = 'Prime Oil' by Agriliance

[2]UAN = '28%N' by Agriliance

[3]topramezon = 'Impact' by AMVAC

[4]MSO = 'Destiny' by Agriliance

[5]NIS = 'Preference' by Agriliance