Weed control in glufosinate resistant corn. Horky, Kevin T. and Alex R. Martin. A field study was conducted to evaluate the efficacy of weed control programs in glufosinate 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. 'Pioneer 35Y62' 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	1.15
week 2	0.23	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)	--	8	17
infestation (m^2)	--	4	5
Palmer amaranth			
height (cm)	--	3	15
infestation (m^2)	--	3	4
Green foxtail			
height (cm)	--	3	12
infestation (m^2)	--	1	3

Summary comments: Limited rainfall reduced performance of PRE treatments. PRE + POST treatments 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)

Weed control in glufosinate resistant corn (Horky and Martin).

	Application		------ABUTH------		------HELAN------		-----AMAPA------		------SETVI-------		----------ZEAMX----------		
											------INJURY------		YIELD
Treatment	Rate	Timing	5/31	6/23	5/31	6/23	5/31	6/23	5/31	6/23	5/31	6/23	10/3
			----------% Weed Control----------								%Chlorosis	%Stunting	(bu/ac)
Acetochlor&	1.99	PRE	65	62	87	87	73	72	80	70	0	0	83
atrazine&	1.49												
dichlormid+													
flumetsulam&	0.035												
clopyralid	0.11												
Acetochlor&	1.99	PRE/	57	95	85	99	70	91	85	80	0	0	106
atrazine&	1.49												
dichlormid/													
flumetsulam&	0.035	MPOST											
clopyralid+	0.11												
atrazine+	0.83												
UAN[1]+	2.5% v/v												
COC[2]	1% v/v												
Acetochlor&	1.99	PRE/	50	99	82	99	67	99	80	86	0	0	113
atrazine&	1.49												
dichlormid/													
flumetsulam&	0.035	MPOST											
clopyralid+	0.11												
mesotrione+	0.023												
atrazine+	0.28												
UAN+	2.5% v/v												
COC	1% v/v												
Flufenacet&	0.45	PRE	63	85	78	83	75	70	83	71	0	0	70
isoxaflutole+	0.05												
atrazine	0.75												
Flufenacet&	0.56	PRE	78	80	88	90	90	77	87	68	0	0	82
isoxaflutole+	0.07												
atrazine	0.75												
Flufenacet&	0.67	PRE	80	86	87	88	85	88	92	85	0	0	89
isoxaflutole+	0.08												
atrazine	0.75												
S-metolachlor&	1.68	PRE	91	91	92	98	95	95	95	85	0	0	103
atrazine&	0.63												
mesotrione&	0.168												
benoxacor													
S-metolachlor&	1.31	PRE	90	96	88	93	95	98	92	75	0	0	95
atrazine&	1.31												
mesotrione&	0.168												
benoxacor													
Acetochlor&	2.47	PRE	87	85	90	88	90	90	93	87	0	0	95
atrazine&	0.98												
MON 4660+													
isoxaflutole	0.063												

(continued)

Weed control in glufosinate resistant corn (Horky and Martin), continued.

	Application		------ABUTH------		------HELAN------		-----AMAPA------		------SETVI-------		----------ZEAMX----------		
											------INJURY------		YIELD
Treatment	Rate	Timing	5/31	6/23	5/31	6/23	5/31	6/23	5/31	6/23	5/31	6/23	10/3
			----------% Weed Control----------								%Chlorosis	%Stunting	(bu/ac)
Acetochlor&	2.47	PRE	82	83	82	92	87	83	90	83	0	0	97
atrazine&	0.98												
MON 4660+													
flumetsulam&	0.037												
clopyralid	0.12												
Isoxaflutole/	0.047	PRE/	63	99	70	99	68	99	73	99	0	0	114
glufosinate+	0.42	MPOST											
atrazine+	0.5												
AMS[3]	3												
Isoxaflutole+	0.078	PRE	80	95	63	93	87	91	90	86	0	0	84
atrazine	1												
Isoxaflutole+	0.07	PRE	68	93	82	90	73	90	82	91	0	0	90
flufenacet+	0.38												
atrazine	1												
Flufenacet/	0.38	PRE/	43	99	52	99	40	99	62	99	0	0	119
foramsulfuron+	0.033	MPOST											
dicamba&	0.125												
diflufenzopyr+	0.05												
MSO[4]+	1.5 pt/a												
UAN	2.5% v/v												
Glufosinate+	0.42	EPOST	96	85	99	95	99	93	96	86	3	0	111
atrazine+	0.5												
AMS	3												
Glyphosate+	0.77	EPOST	96	86	99	98	99	78	99	85	0	0	106
AMS	2% v/v												
Flufenacet/	0.81	PRE/	27	87	35	99	35	94	33	93	0	0	113
bromoxynil+	0.25	MPOST											
atrazine	0.5												
Foramsulfuron+	0.033	MPOST	0	99	0	99	0	99	0	99	0	0	111
dicamba&	0.125												
diflufenzopyr+	0.05												
MSO+	1.5 pt/a												
UAN	2.5% v/v												
Glufosinate+	0.42	EPOST	99	96	99	99	99	99	99	96	3	0	114
atrazine+	0.5												
AMS/	3												
glufosinate+	0.37	MPOST											
AMS	3												
Glufosinate+	0.27	MPOST	0	95	0	95	0	85	0	90	0	0	105
NIS&AMS[5]	2.5% v/v												
Glufosinate+	0.27	MPOST	0	75	0	92	0	70	0	90	0	10	97
NIS&AMS+	2.5% v/v												
AG 05017[6]	4 oz/a												
Glufosinate	0.27	MPOST	0	85	0	96	0	82	0	88	0	0	101

(continued)

Weed control in glufosinate resistant corn (Horky and Martin), continued.

	Application		------ABUTH------		------HELAN------		-----AMAPA------		------SETVI-------		----------ZEAMX----------		
											------INJURY------		YIELD
Treatment	Rate	Timing	5/31	6/23	5/31	6/23	5/31	6/23	5/31	6/23	5/31	6/23	10/3
			----------% Weed Control----------								%Chlorosis	%Stunting	(bu/ac)
Glufosinate+	0.27	MPOST	0	96	0	98	0	88	0	96	0	0	116
AMS	5.8% v/v												
LSD (P=.05)			18	13	19	12	18	16	17	20	2	6	17

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

[2]COC = 'Prime Oil' by Agriliance

[3]AMS = 'N- PAK' by Agriliance

[4]MSO = 'Destiny' by Agriliance

[5]NIS&AMS = 'Class Act' by Agriliance

[6]AG O5017 = 'AG 05017' by Agriliance