Weed control in glufosinate-resistant corn. Waltz, Aaron L., Alex R. Martin, and Jess J. Spotanski. A field study was conducted to evaluate pre, sequential pre/post, and postemergent weed control in conventionally-tilled, glufosinate-resistant field corn. A randomized complete block design with three replications per treatment was utilized. The study was conducted on a Kennebec silt loam with 2.4% organic matter and a pH of 6.9. Seedbed preparation consisted of disking one week prior to planting and one field cultivation the day of planting. Individual plots consisted of six 30-inch rows, each 30 feet long. 'Pioneer 33G28LL' corn was planted May 16 at a population of 24,200 seeds/acre. Treatments were applied with a tractor-mounted sprayer traveling 2.5 mph. Application, crop, weed, and environmental data are presented below:

Date	May 16	June 3	June 13
Treatment	PRE	EPOST	POST
Sprayer			
gpa	20	20	20
psi	40	40	40
Temperature (°F)			
Air	63	70	67
Soil (4 inch)	61	57	73
Soil Moisture	Adequate	Adequate	Dry
Wind (mph)	9	4	6
Sky (% cloudy)	100	90	90
Relative Humidity (%)	52	74	64
Precip. after appl.			
Week 1 (inch)	0.51	0.0	0.0
Week 2 (inch)	2.09	0.08	0.0
Corn			
Leaf no.	--	2	4-5
Height (inch)	--	2	12
Common sunflower			
Leaf no.	--	2	8
Height (inch)	--	1.5	8
Infestation (m^2)	--	1	1
Velvetleaf			
Leaf no.	--	2-3	5-7
Height (inch)	--	1-2	4-12
Infestation (m^2)	--	30	20
Annual grasses			
Leaf no.	--	2	3-4
Height (inch)	--	1	2-4
Infestation (m^2)	--	15	2
Pigweed species			
Leaf no.	--	4-6	many
Height (inch)	--	0.5-1.5	4-12
Infestation (m^2)	--	40	40

Summary comments: Precipitation was good until early June, then conditions were very dry. Grass species include green and giant foxtail with some fall panicum and large crabgrass. Pigweed species include mostly Palmer amaranth, with some redroot pigweed and common waterhemp. PRE only treatments resulted in inadequate common sunflower and velvetleaf control. Generally, the POST and sequential treatments gave good weed control. Results of the study are summarized in the following table (Dept. of Agronomy and Horticulture, University of Nebraska-Lincoln).

Table. Weed control in glufosinate-resistant corn (Waltz, Martin, and Spotanski).

Treatment	Application		HELAN			ABUTH			GGGAN[a]			AMASS[b]		
	Rate	Timing	6/28	7/15	7/29	6/28	7/15	7/29	6/28	7/15	7/29	6/28	7/15	7/29
	(lb/A)		% weed control											
Isoxaflutole/	0.06	PRE/	100	100	98	95	93	93	95	95	95	100	100	98
glufosinate+	0.37	POST												
atrazine+	0.5													
AMS[c]	3.0													
Isoxaflutole/	0.06	PRE/	95	95	90	93	92	90	98	97	97	98	97	97
AE F130360 01+	0.033	POST												
28%[d]+	2.0 qt													
MSO[e]	1.5 pt													
Isoxaflutole+	0.07	PRE	73	70	67	82	73	73	95	93	92	95	93	93
flufenacet	0.45													
Isoxaflutole+	0.07	PRE	87	78	73	82	73	70	88	82	77	100	100	100
atrazine	1.0													
Isoxaflutole+	0.07	PRE	87	80	80	85	77	73	88	85	80	100	98	97
flufenacet+	0.38													
atrazine	1.0													
Flufenacet/	0.45	PRE/	98	98	98	83	75	70	97	95	95	92	88	88
glufosinate+	0.37	POST												
atrazine+	0.5													
AMS	3.0													
Flufenacet/	0.45	PRE/	100	98	97	93	88	80	100	98	95	92	78	78
AE F130360 01+	0.033	POST												
dicamba&	0.062													
SAN 1269H+	0.025													
28%+	2.0 qt													
MSO	1.5 pt													
Glufosinate+	0.37	EPOST	98	98	97	82	73	73	90	90	88	97	95	95
atrazine+	0.5													
AMS	3.0													
Flufenacet/	0.788	PRE/	100	100	90	77	70	67	97	95	88	88	85	80
bromoxynil&	0.25	POST												
atrazine	0.5													
Isoxaflutole/	0.07	PRE/	100	100	100	95	95	95	85	75	75	98	98	97
bromoxynil&	0.25	POST												
atrazine	0.5													
AE F130360 01+	0.033	POST	100	100	100	97	95	88	95	93	93	93	80	70
dicamba&	0.062													
SAN 1269H+	0.025													
28%+	2.0 qt													
MSO	1.5 pt													
Nicosulfuron+	0.031	POST	97	97	95	92	87	82	93	93	93	90	83	83
dicamba&	0.062													
SAN 1269H+	0.025													
28%+	2.0 qt													
MSO	1.5 pt													
Check			0	0	0	0	0	0	0	0	0	0	0	0
LSD (p=0.05)			4	6	9	4	8	7	4	7	8	4	6	7

[a]GGGAN = green and giant foxtail, with some fall panicum and large crabgrass

[b]AMASS = mostly Palmer amaranth, with little common waterhemp and redroot pigweed

[c]AMS = 'N-Pa-K' by Agriliance

[d]28% = 'Class' by Agriliance

[e]MSO = 'Destiny' by Agriliance