Crop response from corn herbicides on two sweet corn varieties. Urbana, Illinois, 2004. Maxwell, Douglas J., Aaron G. Hager, and James L. Moody. The objective of this research was to evaluate two sweet corn varieties and their response to various corn herbicides. One variety is more sensitive to herbicidal crop response and the other is more tolerant. The study was established at the Crop Sciences Research and Education Center, Urbana. The soil was a Catlin silt loam with a pH of 6.6 and 4.7% organic matter. Illinois Foundation Seeds, Inc. provided susceptible variety 70597LF 177A and tolerant variety 71931LR 182A. The corn was planted 2 inches deep on April 5 in 30 inch rows. Treatments were arranged in randomized complete blocks with three replications of plots 10 by 30 feet. Herbicides were applied with a CO_2 backpack sprayer delivering 20 gpa and equipped with 8003 flat fan nozzles. Application information is listed below:

Date	May 5	May 27
Application	pre	post
Temperature (F)		
Air	74	80
Soil	63	73
Soil Moisture	moist	moist
Wind (mph)	3-W	5-SW
Sky Cover (%)	0	100
Precip. after application		
Week 1 (inch)	0.85	0.20
Week 2 (inch)	2.37	1.85
Relative humidity (%)	40	73
Corn		
Leaf no.	-	5
Height (inch)	-	10

Injury from preemergence applications was minor and not present by 43 days after treatment (DAT) for the sensitive (variety 70597LF) and tolerant (variety 71931LR) sweet corn. Several treatments showed very significant crop response (≥25%) on the sensitive variety at 2 DAT, including plant growth regulator products; carfentrazone containing treatments; and mesotrione postemergence. Foramsulfuron containing treatments had increasing injury from 8 DAT to 22 DAT, with some crop recovery by 34 DAT. Permanent severe injury (≥50%) was recorded with many treatments on the sensitive variety. All of these contained 0.033 lb/A foramsulfuron with MSO & 28%N except one, which was the 0.125 lb/A dicamba & 0.05 lb/A diflufenzopyr with MSO & 28%N treatment. All treatments showed < 3% injury 43 DAT on the tolerant variety except the 0.125 lb/A dicamba & 0.05 lb/A diflufenzopyr with MSO & 28%N treatment, which had 13% damage. (Dept. of Crop Sciences, University of Illinois, Urbana).

Table 1. Crop response from corn herbicides on two sweet corn varieties. Urbana, Illinois, 2004. (Maxwell, Hager, and Moody).

Treatment	Appl Rate	Time	Zeams 5-26	Zeams 5-26	Zeams 5-29	Zeams 5-29	Zeams 6-1	Zeams 6-1
	(lb/A)		---------- % inj ----------					
			Susc	Toler	Susc	Toler	Susc	Toler
Foramsulfuron+MSO[1]+28%N	0.033+0.94%+1.88%	post	0	0	0	0	8	0
Dicamba&diflufenzopyr	0.125+0.05	post	0	0	30	15	48	22
+MSO+28%N	0.94%+1.88%							
Mesotrione+MSO+28%N	0.094+0.94%+1.88%	post	0	0	12	0	47	17
Foramsulfuron+dica&diflufenzopyr	0.033+0.125+0.05	post	0	0	3	0	23	3
+MSO+28%N	0.94%+1.88%							
Foramsulfuron+dica&diflufenzopyr	0.033+0.063+0.025	post	0	0	0	0	18	2
+MSO+28%N	0.94%+1.88%							
Foramsulfuron+mesotrione	0.033+0.094	post	0	0	0	0	13	0
+MSO+28%N	0.94%+1.88%							
Check	-	-	0	0	0	0	0	0
Foramsulfuron+mesotrione	0.033+0.047	post	0	0	0	0	3	0
+MSO+28%N	0.94%+1.88%							
Foramsulfuron&iodosulfuron	0.054+0.004	post	0	0	0	0	5	0
+MSO+28%N	0.94%+1.88%							
Atrazine+fluroxypyr	0.75+0.125	post	0	0	5	2	10	0
+Herbimax[2]	1.0%							
Pendimethalin	1.90	pre	0	0	0	0	47	10
+mesotrione	0.094	post						
+Herbimax+28%N	1.0%+1.25%							
Pendimethalin	1.19	pre	0	0	0	0	48	12
+mesotrione	0.094	post						
+Herbimax+28%N	1.0%+1.25%							
Acetochlor&dichlormid	2.0	pre	0	0	40	13	27	8
+fluroxypyr	0.125	post						
Acetochlor&dichlormid	2.0	pre	0	0	27	12	28	10
+fluroxypyr+dica&diflufenzopyr	0.125+0.063+0.025	post						
Acetochlor&dichlormid	2.0	pre	0	0	27	10	18	5
+fluroxypyr&clopyralid	0.12+0.12	post						
Foramsulfuron+fluroxapyr&clopyralid	0.033+0.12+0.12	post	0	0	3	0	7	0
+MSO	0.94%							
Foramsulfuron+nicosulfuron+meso	0.033+0.016+0.094	post	0	0	2	0	5	0
+MSO	0.94%							
Nicosulfuron+mesotrione	0.016+0.094	post	0	0	0	0	3	0
+Herbimax	1.0%							
S-meto&mesotrione&benoxacor	1.99+0.21	post	0	0	27	22	33	13
+foramsulfuron+MSO	0.016+0.94%							
Halosulfuron&carfentrazone	0.026+0.013	post	0	0	42	25	50	12
+Herbimax+28%N	1.0%+1.88%							
Halosulfuron&carfentrazone	0.026+0.013	post	0	0	53	28	65	10
+foramsulfuron+MSO+28%N	0.033+0.94%+1.88%							
KIH-485	0.22	post	0	0	3	0	5	0
S-meto&atra&meso&benoxacor	1.3+1.3+0.16	pre	0	0	0	0	2	0
Flufenacet&isoxaflutole	0.562+0.068	pre	0	0	2	0	2	0
LSD (0.05)			0	0	10	5	13	8

[1] MSO is a methylated oil and surfactant blend from Loveland Products, Inc; [2] Herbimax is an oil, emulsifier, and surfactant blend from Loveland Products, Inc.

Table 2. Crop response from corn herbicides on two sweet corn varieties. Urbana, Illinois, 2004. (Maxwell, Hager, and Moody).

Treatment	Appl Rate	Time	Zeams 6-5	Zeams 6-5	Zeams 6-16	Zeams 6-16	Zeams 7-9	Zeams 7-9
	(lb/A)		---------- % inj ----------					
			Susc	Toler	Susc	Toler	Susc	Toler
Foramsulfuron+MSO[1]+28%N	0.033+0.94%+1.88%	post	42	22	90	8	67	0
Dicamba&diflufenzopyr	0.125+0.05	post	63	25	57	27	50	13
+MSO+28%N	0.94%+1.88%							
Mesotrione+MSO+28%N	0.094+0.94%+1.88%	post	63	12	38	3	18	0
Foramsulfuron+dica&diflufenzopyr	0.033+0.125+0.05	post	67	35	92	15	93	2
+MSO+28%N	0.94%+1.88%							
Foramsulfuron+dica&diflufenzopyr	0.033+0.063+0.025	post	60	32	93	8	88	0
+MSO+28%N	0.94%+1.88%							
Foramsulfuron+mesotrione	0.033+0.094	post	47	18	83	10	53	0
+MSO+28%N	0.94%+1.88%							
Check	-	-	0	0	0	0	0	0
Foramsulfuron+mesotrione	0.033+0.047	post	57	22	85	8	55	0
+MSO+28%N	0.94%+1.88%							
Foramsulfuron&iodosulfuron	0.054+0.004	post	48	17	87	7	60	2
+MSO+28%N	0.94%+1.88%							
Atrazine+fluroxypyr	0.75+0.125	post	12	8	3	0	0	0
+Herbimax[2]	1.0%							
Pendimethalin	1.90	pre	65	5	35	2	10	0
+mesotrione	0.094	post						
+Herbimax+28%N	1.0%+1.25%							
Pendimethalin	1.19	pre	67	10	32	2	7	0
+mesotrione	0.094	post						
+Herbimax+28%N	1.0%+1.25%							
Acetochlor&dichlormid	2.0	pre	8	12	0	3	0	0
+fluroxypyr	0.125	post						
Acetochlor&dichlormid	2.0	pre	12	15	0	3	0	0
+fluroxypyr+dica&diflufenzopyr	0.125+0.063+0.025	post						
Acetochlor&dichlormid	2.0	pre	7	10	0	3	0	0
+fluroxypyr&clopyralid	0.12+0.12	post						
Foramsulfuron+fluroxapyr&clopyralid	0.033+0.12+0.12	post	40	15	75	3	37	0
+MSO	0.94%							
Foramsulfuron+nicosulfuron+meso	0.033+0.016+0.094	post	43	15	63	2	22	0
+MSO	0.94%							
Nicosulfuron+mesotrione	0.016+0.094	post	35	7	77	0	23	0
+Herbimax	1.0%							
S-meto&mesotrione&benoxacor	1.99+0.21	post	58	22	82	3	38	0
+foramsulfuron+MSO	0.016+0.94%							
Halosulfuron&carfentrazone	0.026+0.013	post	70	27	43	10	20	2
+Herbimax+28%N	1.0%+1.88%							
Halosulfuron&carfentrazone	0.026+0.013	post	82	23	93	10	73	0
+foramsulfuron+MSO+28%N	0.033+0.94%+1.88%							
KIH-485	0.22	post	5	7	2	0	0	0
S-meto&atra&meso&benoxacor	1.3+1.3+0.16	pre	3	0	0	0	0	0
Flufenacet&isoxaflutole	0.562+0.068	pre	0	0	0	0	0	0
LSD (0.05)			13	9	8	9	8	3

[1] MSO is a methylated oil and surfactant blend from Loveland Products, Inc; [2] Herbimax is an oil, emulsifier, and surfactant blend from Loveland Products, Inc.