

Postemergence herbicide programs for weed control in corn. Urbana, Illinois, 2003. Hager, Aaron G., Douglas J. Maxwell, and Dawn E. Nordby. The objective of this research was to evaluate postemergence herbicide programs for weed control in corn. The study was established at the Crop Sciences Research and Education Center, Urbana. The soil was an Elburn silt loam with a pH of 6.6 and 4.7% organic matter. Pioneer 33Y09 corn was planted 2 inches deep on April 23 in 30 inch rows. Treatments were arranged in randomized complete blocks with three replications of plots 7.5 by 30 feet. Herbicides were applied with a CO₂ backpack sprayer delivering 20 gpa and equipped with 8003 flat fan nozzles. Application information is listed below:

Date	May 27
Application	epost
Temperature (F)	
Air	72
Soil	70
Soil Moisture	Moist
Wind (mph)	4-N
Sky Cover (%)	0
Precip. after application	
Week 1 (inch)	0.42
Week 2 (inch)	0.48
Relative humidity (%)	35
Corn	
Leaf no.	4
Height (inch)	9
Giant Foxtail	
Leaf no.	2
Height (inch)	3
Common Lambsquarters	
Leaf no.	>8
Height (inch)	3
Velvetleaf	
Leaf no.	2
Height (inch)	2
Tall Morningglory	
Leaf no.	2
Height (inch)	2
Common Waterhemp	
Leaf no.	8
Height (inch)	3

All treatments except one caused some minor crop injury by 10 days after application, but no crop injury was observed 30 days after application. Most treatments provided less than 65 percent giant foxtail control 10 days after treatment. Adding mesotrione to foramsulfuron or foramsulfuron and iodosulfuron resulted in reduced giant foxtail control 10 days after treatment compared with foramsulfuron or foramsulfuron and iodosulfuron alone. However, by 30 days after treatment the reduced control of giant foxtail was less apparent. Foramsulfuron plus mesotrione plus atrazine, with MSO and 28% UAN, was the only treatment to provide 90 percent or greater control of all broadleaf weed species 10 days after treatment. By 30 days after treatment, only treatments containing mesotrione plus atrazine provided 95 percent or greater control of common waterhemp, while all treatments except nicosulfuron and rimsulfuron provided 98 to 99 percent control of common lambsquarters. (Dept. of Crop Sciences, University of Illinois, Urbana).

Table 1. Postemergence herbicide programs for weed control in corn. Urbana, Illinois, 2003. (Hager, Maxwell, and Nordby).

Treatment	Appl Rate (lb/A)	Time	Zeamd	Setfa	Abuth	Cheal	Phbpu	Amata
			6-6 % inj	6-6	6-6	6-6	6-6	6-6
Nicosulfuron+mesotrione+atrazine +Herbimax ¹ +28% N	0.016+0.094+1.0 1.0%+2.5%	epost	1	62	87	93	85	92
Nicosulfuron+mesotrione+atrazine +Herbimax+28% N	0.023+0.094+1.0 1.0%+2.5%	epost	0	63	83	90	87	92
Nicosulfuron+flumetsulam&clopyralid +Herbimax+28% N	0.023+0.035+0.094 1.0%+2.5%	epost	4	65	43	55	40	40
Nicosulfuron+dicamba&diflufenzopyr +Herbimax+28% N	0.023+0.125+0.05 1.0%+2.5%	epost	1	57	73	62	58	53
Nicosulfuron&rimsulfuron +mesotrione+atrazine +Herbimax+28% N	0.0107+0.0053 0.094+1.0 1.0%+2.5%	epost	1	60	83	92	83	82
Nicosulfuron&rimsulfuron +mesotrione+atrazine +Herbimax+28% N	0.015+0.008 0.094+1.0 1.0%+2.5%	epost	1	58	82	92	85	82
Check	-	-	0	0	0	0	0	0
Nicosulfuron&rimsulfuron +mesotrione+atrazine +Herbimax+28% N	0.023+0.012 0.094+1.0 1.0%+2.5%	epost	1	62	87	94	88	85
Nicosulfuron&rimsulfuron +mesotrione +Herbimax+28% N	0.023+0.012 0.047 1.0%+2.5%	epost	1	57	50	40	43	50
Nicosulfuron&rimsulfuron +mesotrione+atrazine +Herbimax+28% N	0.023+0.012 0.047+0.75 1.0%+2.5%	epost	2	57	82	84	85	75
Nicosulfuron&rimsulfuron +dica&diflufenzopyr+atrazine +Herbimax+28% N	0.023+0.012 0.063+0.025+0.25 1.0%+2.5%	epost	2	47	72	60	67	72
Nicosulfuron&rimsulfuron+atrazine +Herbimax+28% N	0.023+0.012+0.75 1.0%+2.5%	epost	2	50	62	42	72	52
Nicosulfuron&rimsulfuron+atrazine +Herbimax+28% N	0.023+0.012+1.0 1.0%+2.5%	epost	1	60	77	70	77	75
Nicosulfuron&rimsulfuron +flumetsulam&clopyralid+atrazine +Herbimax+28% N	0.023+0.012 0.035+0.094+0.5 1.0%+2.5%	epost	2	60	80	78	75	73
Foramsulfuron+mesotrione+atrazine +Herbimax+28% N	0.033+0.094+1.0 1.0%+2.5%	epost	1	62	82	82	85	78
Foramsulfuron+mesotrione+atrazine +MSO ² +28% N	0.033+0.094+1.0 1.0%+2.5%	epost	1	65	90	92	92	93
Fora+flumetsulam&clopyralid +MSO+28% N	0.033+0.035+0.094 1.0%+2.5%	epost	4	68	60	52	50	57
Fora+dicamba&diflufenzopyr +MSO+28% N	0.033+0.063+0.025 1.0%+2.5%	epost	1	67	68	67	68	70
Nicosulfuron&rimsulfuron +Herbimax+28% N	0.023+0.012 1.0%+2.5%	epost	1	72	42	55	38	53
Foramsulfuron +MSO+28% N	0.033 1.0%+2.5%	epost	2	63	57	43	40	50
Foramsulfuron&iodosulfuron +MSO+28% N	0.0544+0.0036 1.0%+2.5%	epost	2	57	63	37	33	47
Foramsulfuron&iodosulfuron +dicamba&diflufenzopyr +MSO+28% N	0.0544+0.0036 0.063+0.025 1.0%+2.5%	epost	3	55	72	57	40	53
Foramsulfuron+mesotrione +MSO+28% N	0.033+0.047 1.0%+2.5%	epost	3	42	40	37	30	38
Foramsulfuron&iodosulfuron &mesotrione+MSO+28% N	0.0544+0.0036 0.047+1.0%+2.5%	epost	4	43	43	33	33	30
LSD (0.05)			2	7	8	8	8	12

¹ Herbimax is a paraffinic oil and surfactant blend from Loveland Indus.; ² MSO is a methylated seed oil and non-ionic surfactant blend from Loveland Indus.

Table 2. Postemergence herbicide programs for weed control in corn. Urbana, Illinois, 2003. (Hager, Maxwell, and Nordby).

Treatment	Appl Rate (lb/A)	Time	Zeamd	Setfa	Abuth	Cheal	Phbpu	Amata	Yield
			6-24 % inj	6-24	6-24	6-24	6-24	6-24	10-7 Bu/A
Nicosulfuron+mesotrione+atrazine +Herbimax ¹ +28% N	0.016+0.094+1.0 1.0%+2.5%	epost	0	75	99	99	87	99	174.7
Nicosulfuron+mesotrione+atrazine +Herbimax+28% N	0.023+0.094+1.0 1.0%+2.5%	epost	0	85	99	99	92	99	179.0
Nicosulfuron+flumetsulam&clopyralid +Herbimax+28% N	0.023+0.035+0.094 1.0%+2.5%	epost	0	85	58	99	67	30	140.7
Nicosulfuron+dicamba&diflufenzopyr +Herbimax+28% N	0.023+0.125+0.05 1.0%+2.5%	epost	0	83	98	99	70	78	148.1
Nicosulfuron&rimsulfuron +mesotrione+atrazine +Herbimax+28% N	0.0107+0.0053 0.094+1.0 1.0%+2.5%	epost	0	75	99	99	80	98	177.8
Nicosulfuron&rimsulfuron +mesotrione+atrazine +Herbimax+28% N	0.015+0.008 0.094+1.0 1.0%+2.5%	epost	0	83	99	99	82	96	187.3
Check	-	-	0	0	0	0	0	0	54.4
Nicosulfuron&rimsulfuron +mesotrione+atrazine +Herbimax+28% N	0.023+0.012 0.094+1.0 1.0%+2.5%	epost	0	88	99	99	88	95	179.6
Nicosulfuron&rimsulfuron +mesotrione +Herbimax+28% N	0.023+0.012 0.047 1.0%+2.5%	epost	0	94	73	98	62	57	136.8
Nicosulfuron&rimsulfuron +mesotrione+atrazine +Herbimax+28% N	0.023+0.012 0.047+0.75 1.0%+2.5%	epost	0	87	98	99	68	85	179.0
Nicosulfuron&rimsulfuron +dica&diflufenzopyr+atrazine +Herbimax+28% N	0.023+0.012 0.063+0.025+0.25 1.0%+2.5%	epost	0	87	93	99	62	73	153.0
Nicosulfuron&rimsulfuron+atrazine +Herbimax+28% N	0.023+0.012+0.75 1.0%+2.5%	epost	0	87	65	96	57	20	144.8
Nicosulfuron&rimsulfuron+atrazine +Herbimax+28% N	0.023+0.012+1.0 1.0%+2.5%	epost	0	87	86	99	72	77	183.5
Nicosulfuron&rimsulfuron +flumetsulam&clopyralid+atrazine +Herbimax+28% N	0.023+0.012 0.035+0.094+0.5 1.0%+2.5%	epost	0	93	94	99	67	68	183.9
Foramsulfuron+mesotrione+atrazine +Herbimax+28% N	0.033+0.094+1.0 1.0%+2.5%	epost	0	33	99	98	92	98	144.1
Foramsulfuron+mesotrione+atrazine +MSO ² +28% N	0.033+0.094+1.0 1.0%+2.5%	epost	0	88	99	99	83	98	183.1
Fora+flumetsulam&clopyralid +MSO+28% N	0.033+0.035+0.094 1.0%+2.5%	epost	0	83	90	99	57	33	162.5
Fora+dicamba&diflufenzopyr +MSO+28% N	0.033+0.063+0.025 1.0%+2.5%	epost	0	92	99	99	77	81	166.2
Nicosulfuron&rimsulfuron +Herbimax+28% N	0.023+0.012 1.0%+2.5%	epost	0	93	30	53	43	30	121.3
Foramsulfuron +MSO+28% N	0.033 1.0%+2.5%	epost	0	90	87	99	52	27	139.8
Foramsulfuron&iodosulfuron +MSO+28% N	0.0544+0.0036 1.0%+2.5%	epost	0	82	93	99	50	43	147.9
Foramsulfuron&iodosulfuron +dicamba&diflufenzopyr +MSO+28% N	0.0544+0.0036 0.063+0.025 1.0%+2.5%	epost	0	85	93	99	62	70	149.6
Foramsulfuron+mesotrione +MSO+28% N	0.033+0.047 1.0%+2.5%	epost	0	83	99	99	72	57	142.0
Foramsulfuron&iodosulfuron &mesotrione+MSO+28% N	0.0544+0.0036 0.047+1.0%+2.5%	epost	0	80	99	99	60	57	157.8
LSD (0.05)			0	6	12	3	11	11	30

¹ Herbimax is a paraffinic oil and surfactant blend from Loveland Indus.; ² MSO is a methylated seed oil and non-ionic surfactant blend from Loveland Indus.