

Preemergence herbicide programs for weed control in corn. Dekalb, Illinois, 2003. Hasty, Ryan F., Christy L. Sprague, and Dawn E. Nordby. The objective of this research was to evaluate preemergence herbicide programs for weed control in corn. The study was established at the Northern Illinois Research and Education Center, Dekalb. The soil was a Drummer silty-clay loam with a pH of 6.0 and 6.0% organic matter. Pioneer 33G29 corn was planted 2 inches deep on April 28 in 30 inch rows. Treatments were arranged in randomized complete blocks with three replications of plots 7.5 by 28 feet. Herbicides were applied with a CO<sub>2</sub> backpack sprayer delivering 20 gpa and equipped with 8003 flat fan nozzles. Application information is listed below:

Date	April 29
Application	pre
Temperature (F)	
Air	60
Soil	57
Soil Moisture	Moist
Wind (mph)	5-W
Sky Cover (%)	0
Precip. after application	
Week 1 (inch)	1.31
Week 2 (inch)	1.46
Relative humidity (%)	44

No crop response was observed from any herbicide treatment. With the exception of metolachlor and metolachlor&atrazine, all treatments offered  $\geq 75$  % control of giant foxtail, velvetleaf, common lambsquarters, and Pennsylvania smartweed 30 days after treatment (DAT). Giant foxtail control 60 DAT revealed few differences with all herbicide treatments providing  $\geq 80\%$  control. Weed control from KIH-485 + atrazine was comparable to many of the acetamide pre-mixtures tested. (Dept. of Crop Sciences, University of Illinois, Urbana).

Table. Preemergence herbicide programs for weed control in corn. Dekalb, Illinois, 2003. (Hasty, Sprague, and Nordby).

Treatment	Appl Rate	Time	Zeamd 5-20 % inj	Zeamd 5-28 % inj	Setfa 5-28	Abuth 5-28 % control	Cheal 5-28	Polpy 5-28	Zeamd 6-27 % inj	Setfa 6-27	Abuth 6-27 % control	Cheal 6-27	Polpy 6-27
S-metolachlor&atrazine &mesotrione&CGA-154281	2.0+0.75 0.20	pre	0	0	99	99	99	99	0	88	98	99	99
S-metolachlor&atrazine &mesotrione&CGA-154281 +atrazine	2.0+0.75 0.20 1.0	pre	0	0	99	99	99	99	0	85	99	99	99
S-metolachlor&atrazine &mesotrione&CGA-154281 +simazine	2.0+0.75 0.20 1.0	pre	0	0	99	99	99	99	0	92	99	99	99
S-metolachlor&atrazine &CGA-154281	1.56+2.02	pre	0	0	99	80	99	99	0	83	70	91	99
Acetochlor&atrazine &MON4660	2.35+1.85	pre	0	0	99	82	99	99	0	95	85	98	91
Check	-	-	0	0	0	0	0	0	0	0	0	0	0
Flufenacet&isoxaflutole	0.446+0.094	pre	0	0	99	99	99	99	0	83	99	99	99
Acetochlor&atrazine <sup>1</sup>	2.63+1.97	pre	0	0	99	93	99	99	0	91	77	99	99
Acetochlor&atrazine <sup>1</sup> +flumetsulam&clopyralid	2.63+1.97 0.035+0.094	pre	0	0	99	93	99	99	0	96	96	99	99
Acetochlor&atrazine <sup>1</sup> +isoxaflutole	1.2+0.9 0.094	pre	0	0	99	99	99	99	0	92	98	99	99
Metolachlor	1.95	pre	0	0	99	0	99	65	0	82	0	70	0
Metolachlor&atrazine	2.0+1.58	pre	0	0	99	73	99	99	0	88	72	89	99
Dimethenamid-P&atrazine	0.98+1.9	pre	0	0	99	87	99	99	0	95	83	98	99
S-metolachlor&atrazine &mesotrione&CGA-154281	1.67+0.624 0.166	pre	0	0	99	98	99	99	0	81	99	99	99
S-metolachlor&atrazine &mesotrione&CGA-154281 +atrazine	1.67+0.624 0.166 1.0	pre	0	0	98	99	99	99	0	88	99	99	99
S-metolachlor&atrazine &mesotrione&CGA-154281 +simazine	1.67+0.624 0.166 1.0	pre	0	0	99	99	99	99	0	82	96	99	99
S-metolachlor&atrazine &CGA-154281	1.26+1.63	pre	0	0	99	75	99	99	0	90	72	92	99
Acetochlor&atrazine <sup>2</sup> +flumetsulam&clopyralid	2.1+1.4 0.035+0.094	pre	0	0	99	92	99	99	0	95	77	98	99
Dimethenamid-P&atrazine +isoxaflutole	0.85+1.65 0.047	pre	0	0	99	98	99	99	0	97	96	99	99
Flufenacet+isoxaflutole	0.45+0.07	pre	0	0	98	98	99	99	0	83	98	99	99
Isoxaflutole+atrazine	0.094+1.5	pre	0	0	99	99	99	99	0	87	99	99	99
Flufenacet+isoxaflutole +atrazine	0.45+0.07 1.5	pre	0	0	99	99	99	99	0	89	96	98	99
Flufenacet&isoxaflutole +atrazine	0.39+0.08 1.5	pre	0	0	99	98	99	99	0	88	98	99	99
KIH-485+atrazine	0.19+1.5	pre	0	0	99	83	99	99	0	80	73	99	99
LSD (0.05)			0	0	1	7	1	3	0	8	6	8	5

<sup>1</sup> Keystone; <sup>2</sup> Fulltime