

Preemergence weed control in corn. Wanatah, IN, 2004. Dewell, Reece A., William G. Johnson, J. Earl Creech, and Vince Davis. A field study was conducted to compare various preemergence treatments for weed control in corn. The study was conducted on a Tracey sand soil with 2.1% organic matter at the Pinney Purdue Agricultural Center near Wanatah, IN. Treatments were arranged in a randomized complete block with four replications. Individual plot dimensions were 10 by 30 feet. Beck's 5727 corn was planted 1.5 inches deep into a conventional-till seedbed on May 20 in 30-inch rows, at a population of 32,000 seeds/acre. Preemergence herbicide treatments were applied with a CO<sub>2</sub> backpack sprayer delivering 15 gpa and equipped with XR8002 flat fan nozzles. Application date, weed growth stage, and weather data are listed below:

Date	May 21, 2004
Treatment	PRE
Temperature	
Air (F)	80
Soil (F)	72
Soil moisture	moist
Wind (mph)	calm
Cloud cover (%)	100
Relative humidity (%)	80
Precipitation	
Prior week (inch)	1.17
Week 1 (inch)	0.59
Week 2 (inch)	1.41
Corn (inch)	na

Crop injury at the early rating was <15% and did not differ between treatments. All evidence of injury had disappeared by 14 days after emergence. Giant ragweed control was still greater than 90% on July 27 (67 DAT) for all treatments containing mesotrione, both treatments containing acetochlor&atrazine&MON 4660, flufenacet&isoxaflutole, and acetochlor&atrazine&dichlormid + flumetsulam&clopyralid. Velvetleaf control was greater than 90% with treatments containing either mesotrione or isoxaflutole at this latest rating date. There were no significant treatment differences when comparing corn yield. However, the five highest yielding treatments all contained mesotrione. (Dept. Botany and Plant Pathology, Purdue University, West Lafayette, IN).

Table. Preemergence weed control in corn. Wanatah, IN, 2004. (Dewell, Johnson, Creech, and Davis).

Treatment <sup>a</sup>	Rate (lb/A)	Application	----- ABUTH -----		----- AMBTR -----			----- ZEAMX -----
			6/23 <sup>d</sup>	7/27 <sup>e</sup>	6/9 <sup>c</sup>	6/23 <sup>d</sup>	7/27 <sup>e</sup>	10/21
			----- % control -----			--- Yield (bu/A) ---		
S-metolachlor&mesotrione&atrazine&benoxacor(LX)	1.1&0.143&1.1	PRE	100	100	100	93	92	157
S-metolachlor&mesotrione&atrazine&benoxacor(LX)	1.3&0.173&1.3	PRE	100	100	99	95	98	159
S-metolachlor&mesotrione&atrazine&benoxacor(LX)	1.5&0.2&1.5	PRE	100	100	100	97	100	157
S-metolachlor&atrazine&benoxacor	1.27&1.63	PRE	55	51	100	53	65	144
S-metolachlor&mesotrione&atrazine&benoxacor	1.68&0.168&0.626	PRE	100	100	98	98	99	164
S-metolachlor&mesotrione&atrazine&benoxacor(LX) +simazine	1.3&0.173&1.3 +1.0	PRE	100	100	99	95	98	159
Dimethenamid-P&atrazine	0.636&1.23	PRE	79	66	100	76	76	148
Acetochlor&atrazine&MON 4660	1.55&1.25	PRE	73	60	99	88	91	152
Flufenacet&isoxaflutole	0.3&0.0624	PRE	98	96	99	94	94	151
Acetochlor&atrazine&dichlormid	1.94&1.46	PRE	64	56	98	84	72	140
Acetochlor&atrazine&MON 4660 + isoxaflutole	2.16&1.07+0.047	PRE	100	98	99	94	93	142
Acetochlor&atrazine&dichlormid +flumetsulam&clopyralid	1.94&1.46 +0.0346&0.093	PRE	94	84	100	92	91	141
Atrazine&metolachlor	1.0&0.78	PRE	28	36	98	63	63	145
Atrazine&metolachlor + isoxaflutole	1.0&0.78+0.031	PRE	97	93	97	78	74	150
Non-treated Check			--	--	--	--	--	141
LSD (0.05)			15	20	ns	20	21	ns

<sup>a</sup> Treatments: S-metolachlor&mesotrione&atrazine&benoxacor(LX) = Lexar (or A14244) from Syngenta<sup>b</sup> Evaluation (June 2) is 7 days after emergence (DAE)<sup>c</sup> Evaluation (June 9) is 14 DAE<sup>d</sup> Evaluation (June 23) is 28 DAE<sup>e</sup> Evaluation (July 27) is 67 DAT (PRE)