

## Weed Control in Corn

Isoxaflutole, mesotrione, and chloroacetamides on grass and waterhemp. Wait, Jim D. and William G. Johnson. The objective of this study was to evaluate control of grass and common waterhemp with isoxaflutole, mesotrione, and chloroacetamides. This study was conducted at the Bradford Research and Extension Center near Columbia, MO. The soil was a Mexico silt loam with a pH of 5.8 and 3.1% organic matter. Northrup King 6800 LL was planted 1.5-inch deep on May 3 in 30-inch rows. Treatments were arranged in a randomized complete block design with four replications of 5 by 35 feet plots. Herbicide applications were made with a CO<sub>2</sub> backpack sprayer equipped with XR8002 flat fan nozzles.

Application data is listed below:

Date	May 3
Application	pre
Temperature (F)	
air	70
soil	58
Soil moisture	moist
Wind (mph)	4
Cloud cover	20
Relative humidity (%)	48
Precipitation after application	
week 1 (inch)	5.65
week 2 (inch)	2.96

Crop injury was insignificant. Giant foxtail control on May 21 was  $\geq 90\%$  with all treatments except mesotrione at 0.094 and 0.14 lb/a with 79 and 48% control, respectively. At the July 8 rating all treatments provided less than 77% control. Common waterhemp control was variable with isoxaflutole and mesotrione alone, but tended to be higher with mesotrione. Mesotrione + s-metolachlor provided similar control at 76%. (Department of Agronomy, University of Missouri-Columbia)

Table. Isoxaflutole, mesotrione, and chloroacetamides on grass and waterhemp (Wait and Johnson)

Application	Rate (lb/A)	App Time	Injury		SETFA		AMATA	
			6-7	7-8	5-21	7-8	5-21	7-8
Clopyralid & flumetsulam <sup>a</sup> + flufenacet	0.075 & 0.023 + 0.675	pre	2	0	98	45	95	56
Clopyralid & flumetsulam + acetochlor <sup>b</sup>	0.075 & 0.023 + 2.1	pre	1	7	100	33	93	85
Clopyralid & flumetsulam + acetochlor <sup>c</sup>	0.075 & 0.023 + 1.95	pre	1	0	100	45	100	72
Clopyralid & flumetsulam + s-metolachlor	0.075 & 0.023 + 1.4	pre	0	0	100	77	96	72
Clopyralid & flumetsulam + dimethenamid-P	0.075 & 0.023 + 0.85	pre	1		100	40	100	73
Isoxaflutole	0.047	pre	1	6	96	0	70	32
Mesotrione	0.094	pre	3	12	79	0	61	42
Isoxaflutole	0.07	pre	2	6	96	0	86	47
Mesotrione	0.14	pre	1	8	48	0	91	77
Isoxaflutole	0.094	pre	1	3	92	0	91	31
Mesotrione	0.187	pre	1	0	90	0	61	81
Isoxaflutole + flufenacet	0.07 + 0.45	pre	1	0	100	17	95	58
Mesotrione + s-metolachlor	0.187 + 1.27	pre	1	0	99	56	97	76
Isoxaflutole + flufenacet + atrazine	0.047 + 0.6 + 1.5	pre	1	6	98	0	100	69
Untreated			0	0	0	0	0	0
LSD (0.05)			2	12	20	26	23	34

<sup>a</sup>Clopyralid & flumetsulam = Hornet from Dow AgroSciences<sup>b</sup>Acetolachlor = Degree from Monsanto<sup>c</sup>Acetolachlor = TopNotch from Dow AgroSciences