

Flumioxazin plus chloroacetamides in no-till corn. Young, Bryan, G. and Julie M. Young. This study was designed to evaluate flumioxazin plus chloroacetamide herbicide tank-mixes applied at various intervals prior to no-till corn planting. The study was conducted on a Weir silt loam with 1.6% organic matter and pH 6.1 at the Belleville Research Center. Fertilizer applied was 150, 50 and 100 lb/A of N, P₂O₅ and K₂O, respectively, to an area that had been cropped to soybean in 2004. Pioneer brand 33P65 RR field corn was planted 1.5 inch deep at 28000 seed/A into a no-till seedbed on May 4, 2005. Plots consisted of four 30 inch rows, 28 ft long arranged in a randomized complete block design with 3 replications. The herbicides were broadcast applied with a CO₂ pressurized sprayer using 8002 flat fan tips at 40 PSI in 15 GPA water. Monthly rainfall in inches was 2.9, 0.8, 1.6, 4.8 and 3.2 in April, May, June, July and August, respectively. Rainfall in May was sparse; 0.07 inches on the 9th, 0.4 inches on the 14th, and 0.32 inches on the 20th. Weed population per 0.25m² in the nontreated plots, mid-season, was 19 giant foxtail, 8 Pennsylvania smartweed, 5 common ragweed, 2 common lambsquarters, and 1 giant ragweed. Applications were made 28, 21, 14, 7, and 1 day(s) before planting (28DBP), (21DBP), (14DBP), (7DBP), and (1DBP), respectively. Application information is listed below.

Date	Apr-05-05	Apr-10-05	Apr-19-05	Apr-26-05	May-03-05
Treatment	28DBP	21DBP	14DBP	7DBP	1DBP
Air temperature (F)	50	66	62	48	48
Relative humidity (%)	80	82	50	90	60
Soil moisture	NORMAL	NORMAL	NORMAL	ABONOR	NORMAL
little barley					
leaf no.		5-6	5-6	5-6	5-6
height (inch)		2-5	4-6	6-8	6-8
smallflower buttercup					
leaf no.	10+	10+	10+	10+	10+
height (inch)	4-8	4-8	6-12	6-12	6-12
Carolina foxtail					
leaf no.		5-6	5-6	5-6	5-6
height (inch)		2-5	4-6	6-8	6-8
common ragweed					
leaf no.			3-4	5-6	5-6
height (inch)			1-2	1-3	1-3
common lambsquarters					
leaf no.			5-6	8-10	8-10
height (inch)			1-2	1-3	1-3
giant ragweed					
leaf no.	1-2	3-4	3-4	3-4	3-4
height (inch)	0-1	2-2	2-3	2-3	2-3
giant foxtail					
leaf no.			1-2	1-3	1-3
height (inch)			0-1	1-2	1-2

No corn injury was observed from any treatment. All herbicide treatments controlled at least 97% of little barley, smallflower buttercup, Carolina foxtail, and common lambsquarters at 28 days after planting (DAP) regardless of application timing. Control of common ragweed, Pennsylvania smartweed, and giant foxtail from flumioxazin + glyphosate was usually less from applications made 28 days before planting (DBP) compared with applications made 21, 14, 7 and 1 DBP. Adding s-metolachlor & benoxacor to flumioxazin + glyphosate applied 28 DBP increased control of giant foxtail but not common ragweed or Pennsylvania smartweed. Among all herbicide treated plots in the study, corn grain yield was lowest in plots treated with flumioxazin + glyphosate applied 28 DBP. (Dept. of Plant, Soil and Agricultural Systems, Southern Illinois University, Carbondale).

Table. Flumioxazin plus chloroacetamides in no-till corn. (Young and Young)

Treatment ^a	Application ^b		Control, days after planting																		
			Corn			HORPU		RANAB		ALOCA		AMBEL		POLPY		CHEAL		AMBTR		SETFA	
	Rate	Time	yield	Injury, DAP ^c	14	28	14	28	14	28	14	28	14	28	14	28	14	28	14	28	
(lb/A)		bu/A	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Flumioxazin + glyphosate	0.064 +0.77	28DBP	140	0	0	99	99	99	99	99	99	89	76	95	93	99	98	96	88	69	67
Flumioxazin + s-meto & bcor + glyphosate	0.064 +1.6 +0.77	28DBP	171	0	0	99	99	99	99	99	99	90	78	95	90	99	96	93	88	97	93
Flumioxazin + glyphosate	0.064 +0.77	21DBP	175	0	0	99	99	99	99	99	99	99	95	99	99	99	99	94	91	98	89
Flumioxazin + s-meto & bcor + glyphosate	0.064 +1.6 +0.77	21DBP	183	0	0	99	99	99	99	99	99	99	98	99	99	99	99	99	97	98	97
Flumioxazin + glyphosate	0.064 +0.77	14DBP	181	0	0	99	99	99	99	99	99	99	97	99	99	99	97	99	98	99	94
Flumioxazin + s-meto & bcor + glyphosate	0.064 +1.6 +0.77	14DBP	162	0	0	99	99	99	99	99	99	98	93	99	99	99	99	98	95	99	98
Flumioxazin + glyphosate	0.064 +0.77	7DBP	181	0	0	99	99	99	99	99	99	98	89	99	99	99	98	96	90	97	80
Flumioxazin + s-meto & bcor + glyphosate	0.064 +1.6 +0.77	7DBP	166	0	0	99	99	99	99	99	99	98	96	99	99	99	98	96	87	99	97
Flumioxazin + glyphosate	0.064 +0.77	1DBP	172	0	0	99	99	99	99	99	99	98	93	99	98	99	99	98	91	98	87
Flumioxazin + s-meto & bcor + glyphosate	0.064 +1.6 +0.77	1DBP	178	0	0	99	99	99	99	99	99	99	97	99	99	99	99	98	95	99	98
S-meto & bcor + glyphosate	1.6 +0.77	1DBP	184	0	0	99	99	99	99	99	99	99	96	98	99	98	96	94	99	97	
Nontreated			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LSD			43.3	0	0	0	0	0	0	0	0	4.7	13	3.3	6.1	0.4	2.8	5.4	13	13	11
P			0.01	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

^aAll glyphosate was Roundup Original Max. All glyphosate applications included AMS at 2.5 lb/A. AMS = spray grade ammonium sulfate.

S-meto & bcor = s-metolachlor & benoxacor as Dual II Magnum.

All treatments except the nontreated included a postemergence application of glyphosate at 0.77 lbae/A applied 28 days after planting.

^bDBP = Days before planned planting date.

^cDAP = Days after planting.