

MANA acetochlor evaluation. Young, Bryan, G. and Sean D. Nettleton. This study was designed to determine the efficacy of various formulations of acetochlor. The study was conducted on a Weir silt loam with 2.2% organic matter and pH 6.9 at the Belleville Research Center. Fertilizer applied was 150 and 100 lb/A of N and K<sub>2</sub>O, 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 reduced-till seedbed on May 6, 2005. Plots consisted of four 30 inch rows, 25 ft long arranged in a randomized complete block design with 4 replications. The herbicides were broadcast applied with a CO<sub>2</sub> pressurized sprayer using 8003 flat fan tips at 40 PSI in 20 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 9<sup>th</sup>, 0.4 inches on the 14<sup>th</sup>, and 0.32 inches on the 20<sup>th</sup>. Weed population per 0.25m<sup>2</sup> in the nontreated plots, mid-season, was 26 giant foxtail. The application was preemergence (PRE). Application information is listed below.

Date	May-06-05
Treatment	PRE
Air temperature (F)	76
Relative humidity (%)	30
Soil moisture	NORMAL

No corn injury was observed from any treatment. Giant foxtail control was 91 to 98% at 28 DAT from acetochlor & dichlormid (MA), acetochlor & dichlormid (SP), and acetochlor & MON 4660 (HN) with no difference between acetochlor products within each rate evaluated. However, acetochlor & MON 4660 (DG) at 0.8 and 1.2 lb/A provided less control of giant foxtail than equivalent rates of acetochlor & MON 4660 (HN). By 42 DAT, control of giant foxtail from acetochlor & MON 4660 (DG) at 0.8 and 1.2 lb/A was only 8 and 48%, respectively, which was significantly less than all other acetochlor products at equivalent rates. (Dept. of Plant, Soil and Agricultural Systems, Southern Illinois University, Carbondale).

Table. MANA acetochlor evaluation. (Young and Nettleton)

Treatment <sup>a</sup>	Application		Corn injury, days after emergence			SETFA control, days after treatment <sup>b</sup>		
	Rate	Time	14	28	42	14	28	42
	(lb/A)		%	%	%	%	%	%
Acetochlor & dichlormid(MA)	0.8	PRE	0	0	0	97	91	49
Acetochlor & dichlormid(MA)	1.2	PRE	0	0	0	97	94	81
Acetochlor & dichlormid(MA)	2.4	PRE	0	0	0	97	98	89
Acetochlor & dichlormid(SP)	0.8	PRE	0	0	0	95	92	61
Acetochlor & dichlormid(SP)	1.2	PRE	0	0	0	97	93	70
Acetochlor & dichlormid(SP)	2.4	PRE	0	0	0	97	98	92
Acetochlor & MON 4660(HN)	0.8	PRE	0	0	0	97	93	66
Acetochlor & MON 4660(HN)	1.2	PRE	0	0	0	98	97	84
Acetochlor & MON 4660(HN)	2.4	PRE	0	0	0	97	97	79
Acetochlor & MON 4660(DG)	0.8	PRE	0	0	0	88	82	8
Acetochlor & MON 4660(DG)	1.2	PRE	0	0	0	93	91	48
Acetochlor & MON 4660(DG)	2.4	PRE	0	0	0	85	94	73
Nontreated			0	0	0	0	0	0
KIH-485	0.148	PRE	0	0	0	96	88	57
KIH-485	0.296	PRE	0	0	0	92	95	81
S-metolachlor & benoxacor	1.27	PRE	0	0	0	94	91	58
LSD			0	0	0	4	4.3	25
P			1.0	1.0	1.0	0.01	0.01	0.01

<sup>a</sup>Bentazon + COC at 1.0 lb/A + 1.0% v/v was applied to all plots 18 days after the PRE application to reduce broadleaf interference.

COC = Prime Oil crop oil concentrate, a petroleum based additive with 17% emulsifier from Agrilience LLC.

(MA) = MANA-ACE, (SP) = Surpass, (HN) = Harness, and (DG) = Degree.

<sup>b</sup>At 14 days after treatment grass pressure was very low in all plots due to lack of rainfall.