MANA 283 and MANA 284 rate comparisons. Young, Bryan, G. and Sean D. Nettleton. This study was designed to determine the efficacy of different premix formulation ratios of metolachlor and atrazine on important corn weeds. The study was conducted on an Ebbert silt loam with 2.7% organic matter and pH 6.2 at the Belleville Research Center. Fertilizer applied was 150 and 100 lb/A of N and K_2O, 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 5, 2005. Plots consisted of four 30 inch rows, 30 ft long arranged in a randomized complete block design with 4 replications. The herbicides were broadcast applied with a CO_2 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 9th, 0.4 inches on the 14th, and 0.32 inches on the 20th. Weed population per 0.25m^2 in the nontreated plots, mid-season, was 41 giant foxtail, 25 velvetleaf, 3 common lambsquarters, 1 each of common cocklebur and common waterhemp, and <1 giant ragweed. The application was made preemergence (PRE). Application information is listed below.

Date	May-06-05
Treatment	PRE
Air temperature (F)	60
Relative humidity (%)	44
Soil moisture	NORMAL

No corn injury was observed from any treatment. All of the herbicides evaluated provided complete control of common lambsquarters and common waterhemp, regardless of herbicide rate. Increasing the rate of metolachlor & atrazine (283) and metolachlor & atrazine (284) tended to increase control of giant foxtail, however, giant foxtail control was less than 65% from any rate of either product by 42 days after emergence (DAE). Similarly, the highest rate of s-metolachlor (2.0 lb/A) & atrazine (2.6 lb/A) evaluated controlled only 68% of giant foxtail at 42 DAE. None of the herbicides controlled greater than 75% of common cocklebur, velvetleaf, or giant ragweed by 42 DAE, regardless of rate. (Dept. of Plant, Soil and Agricultural Systems, Southern Illinois University, Carbondale).

Table. MANA 283 and MANA 284 rate comparisons. (Young and Nettleton)

Treatment[a]	Application Rate	Application Time	Corn injury, days after emergence			Control, days after emergence																					
						SETFA				XANST				ABUTH				CHEAL				AMATA				AMBTR	
			14	28	42	14	28	42	56	14	28	42	56	14	28	42	56	14	28	42	56	14	28	42	56	42	56
	(lb/A)		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Nontreated			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Metolachlor & atrazine & benoxacor(283)	1.0 & 0.835	PRE	0	0	0	60	40	35	33	25	15	15	15	39	8	5	5	99	99	99	99	99	99	99	99	14	14
Metolachlor & atrazine & benoxacor(283)	1.5 & 1.25	PRE	0	0	0	88	60	51	53	44	25	20	15	65	21	18	18	99	99	99	99	99	99	99	99	18	25
Metolachlor & atrazine & benoxacor(283)	2.0 & 1.67	PRE	0	0	0	94	68	63	53	58	41	30	25	79	46	46	44	99	99	99	99	99	99	99	99	28	29
Metolachlor & atrazine & benoxacor(284)	0.87 & 0.9	PRE	0	0	0	61	30	26	26	33	3	3	3	45	0	0	0	99	98	98	99	99	98	98	99	25	25
Metolachlor & atrazine & benoxacor(284)	1.31 & 1.36	PRE	0	0	0	85	53	46	45	44	23	20	20	60	28	20	20	99	99	99	99	99	98	98	99	19	21
Metolachlor & atrazine & benoxacor(284)	1.74 & 1.8	PRE	0	0	0	90	61	60	60	58	35	30	28	79	46	49	46	99	99	99	99	99	99	99	99	35	35
S-metolachlor & atrazine & benoxacor(BCP)	0.67 & 0.86	PRE	0	0	0	66	25	20	21	30	3	3	5	43	3	3	6	99	99	99	99	99	98	98	99	11	4
S-metolachlor & atrazine & benoxacor(BCP)	1.0 & 1.3	PRE	0	0	0	86	53	54	55	41	21	10	8	58	23	21	30	99	99	99	99	99	99	99	99	0	0
S-metolachlor & atrazine & benoxacor(BCP)	1.5 & 1.94	PRE	0	0	0	95	76	70	69	68	55	54	55	81	59	58	60	99	99	99	99	99	99	99	99	24	24
S-metolachlor & atrazine & benoxacor(BCP)	2.0 & 2.6	PRE	0	0	0	97	76	68	68	73	64	53	53	91	75	75	75	99	99	99	99	99	99	99	99	56	57
LSD			0	0	0	10	14	16	18	15	14	15	17	15	20	19	18	0	0.8	0.8	0	0	1.3	1.3	0.6	31	33
P			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	0.01	0.01	1.0	0.01	0.01	1.0	1.0	0.01	0.01	0.01	0.05	0.05

[a](283) = MANA-283, (284) = MANA-284, and (BCP) = Bicep II Magnum.