

**Evaluation of BMP rates of atrazine tank-mixed with broadleaf herbicides at Lamberton, MN in 2008.**

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The objective of this study was to evaluate corn herbicide combinations for annual grass and annual broadleaf weed control in corn. This study was conducted on a Ves loam soil containing 4.3% organic matter, pH 6.7 and soil test P and K levels of 24 and 326 lb/A, respectively. A randomized complete block design with four replications and a plot size of 10 by 30 ft was used. The site was planted to soybeans in 2007 and was fall chiseled. The area was fertilized with 160-60-60 lbs of N, P, and K, respectively. On May 15, 2008, Pioneer '37N16' glufosinate resistant/glyphosate resistant field corn was planted in 30-inch rows at a seeding rate of 33,000 seeds/A. All treatments were applied with a tractor-mounted sprayer delivering 20 gpa at a pressure of 40 psi. The sprayer was equipped with 8002 flat-fan nozzles spaced 15 inches apart on the boom. Application dates, environmental conditions, plant sizes and rainfall data are listed below:

Date	May 14	June 9
Treatment	PRE	POST
Temperature (F)		
air	66	63
soil (4 inch)	66	60
Relative humidity (%)	30	56
Wind (mph)	calm	W 2
Sky	clear	clear
Soil moisture	dry	moist
Corn		
leaf no.	-	V3
height (inch)	-	5
Green foxtail		
leaf no.	-	2 to 4
height (inch)	-	2 to 4
no./ft <sup>2</sup>	-	25
Common lambsquarters		
leaf no.	-	3 to 5
height (inch)	-	1 to 3
no./ft <sup>2</sup>	-	2
Tall waterhemp		
leaf no.	-	2 to 4
height (inch)	-	1 to 3
no./ft <sup>2</sup>	-	2
Rainfall after application (inch)		
1 week	0.10	1.05
2 week	0.18	0.00
3 week	0.87	0.61

(Southwest Research and Outreach Center, University of Minnesota, Lamberton).

**Table. Evaluation of BMP rates of atrazine tank-mixed with broadleaf herbicides at Lamberton, MN in 2008 (Getting, Behnken, Breitenbach, Gunsolus, Hoverstad, and Miller).**

Treatment <sup>a</sup>	Rate	Green foxtail				Common lambsquarters				Tall waterhemp				Yield <sup>b</sup>
		Jun 9	Jun 20	Jul 10	Aug 19	Jun 9	Jun 20	Jul 10	Aug 19	Jun 9	Jun 20	Jul 10	Aug 19	
<b>Preemergence/POST (2 to 4-inch weeds)</b>	(oz/A, pt/A, qt/A, lb/A or %)	-----(% control)-----												(bu/A)
Dual II Magnum / Callisto + COC + 28%N	1 pt / 3 oz + 1% + 2.5%	69 ab	81 bc	79 ab	74 ab	66 bc	97 a	98 a	98 a	90 a	98 a	98 a	98 a	132 de
Dual II Magnum / Callisto + Aatrex + COC + 28%N	1 pt / 3 oz + 1 pt + 1% + 2.5%	71 ab	88 a	81 a	78 a	68 bc	98 a	98 a	98 a	90 a	98 a	98 a	98 a	140 cd
Dual II Magnum / Callisto + Buctril + COC + 28%N	1 pt / 3 oz + 6 oz + 1% + 2.5%	75 a	80 c	74 b-d	70 b	71 ab	98 a	98 a	98 a	88 ab	98 a	98 a	98 a	143 b-d
Dual II Magnum / Callisto + Clarity + COC + 28%N	1 pt / 3 oz + 4 oz + 1% + 2.5%	65 b	75 c	69 d	70 b	76 a	98 a	98 a	98 a	89 ab	98 a	98 a	98 a	139 c-e
Dual II Magnum / Hornet + COC + 28%N	1 pt / 3 oz + 1% + 2.5%	71 ab	65 d	59 e	58 c	61 c	85 b	98 a	98 a	89 ab	98 a	98 a	98 a	123 e
Dual II Magnum / Hornet + Aatrex + COC + 28%N	1 pt / 3 oz + 1 pt + 1% + 2.5%	69 ab	74 c	71 cd	71 ab	65 bc	98 a	98 a	98 a	89 ab	98 a	98 a	98 a	159 ab
Dual II Magnum / Hornet + Callisto + COC + 28%N	1 pt / 3 oz + 1 oz + 1% + 2.5%	71ab	78 c	75 a-d	73 ab	69 a-c	97 a	98 a	98 a	86 b	98 a	98 a	98 a	153 a-c
Dual II Magnum / Clarity + 28%N	1 pt / 1 pt + 2.5%	71ab	78 c	71 cd	70 b	73 ab	96 a	98 a	98 a	90 a	98 a	98 a	98 a	142 cd
Dual II Magnum / Clarity + Aatrex + 28%N	1 pt / 1 pt + 1 pt + 2.5%	70 ab	86 ab	78 a-c	74 ab	73 ab	98 a	98 a	98 a	89 ab	98 a	98 a	98 a	160 a
Dual II Magnum / Clarity + Callisto + COC + 28%N	1 pt / 1 pt + 3 oz + 1% + 2.5%	68 b	79 c	76 a-c	75 ab	70 ab	98 a	98 a	98 a	89 ab	98 a	98 a	98 a	151 a-c
<b>Checks</b>														
Weedy check		0 c	0 e	0 f	0 d	0 d	0 c	0 b	0 b	0 c	0 b	0 b	0 b	31 f
	LSD (0.10)	7.1	6.8	7.1	6.6	8.5	3.9	ns	ns	ns	ns	ns	ns	16.7

<sup>a</sup> COC = crop oil concentrate; 28%N = an aqueous solution of urea and ammonium nitrate.

<sup>b</sup> Yield adjusted to 15.5% moisture.