

**Weed control with Axial, Puma, Discover, Rimfire and Everest alone and with broadleaf herbicides at Rosemount, MN - 2006.** Durgan, Beverly R., Krishona Martinson, and Douglas Miller. The objective of this experiment was to evaluate foxtail control with Axial (pinoxaden), Puma (fenoxaprop & safener), Discover NG (clodinafop & cloquintocet), Rimfire (propoxycarbazone & mesosulfuron), and Everest (flucarbazone) alone and in combination with several broadleaf herbicides. The experiment was conducted at Rosemount, MN on a Waukegon silt loam soil. Following soybeans, the experimental area was fall chisel plowed. In the spring, the area was fertilized with 50 lbs/A N and 70 lbs K. The field was disked once, field cultivated once, and harrowed twice. 'Alsen' hard red spring wheat was seeded on May 10 at 90 lbs/A. The experimental design was a randomized complete block with three replications. Plot size was 10 by 24 ft. All herbicide treatments were applied with a backpack type sprayer delivering 10 gpa at 35 psi using 11001 flat fan nozzles. Application data and environmental conditions are listed below. Crop injury and foxtail control were rated visually. Yields were measured. All data are presented in the table below.

Treatment Date	June 3	June 12
Wheat		
stage	4.5 leaf	7 leaf
tillers	2	--
height (inch)	6-8	7-10
Foxtail		
stage	2-4 leaf	2-7
height (inch)	--	1-4
density (#/ft <sup>2</sup> )	0.3	1.8
Broadleaf weeds		
height (inch)	1-3	3-6
Air temperature (°F)	77	65
Dewpoint (°F)	44	39
Relative humidity (%)	30	38
Sky	clear	25% clouds
Wind	E 2-9	NE 2-5
Soil conditions	dry	moist at 0.75 inch
Rainfall before Application		
Week 1 (inch)	0.13	0.5
Rainfall after Application		
Week 1 (inch)	0.5	0.28
Week 2 (inch)	0.28	0.71

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**Table 1.**

Treatment	Rate	Broadleaf Weed Control									
		Colq	Rrpw			Wibu			Wimu		
		7/27	6/27	7/5	7/27	6/27	7/5	7/27	6/27	7/5	7/27
	Product/A	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b>Application #1 (June 3)</b>											
Axial + Adigor Adjuvant	8.2 oz + 0.6 pt	--	--	--	--	--	--	--	--	--	--
Axial + Adigor Adjuvant + Bronate Advanced	8.2 oz + 0.6 pt + 0.8 pt	99	88	99	70	93	99	86	93	99	99
Axial + Adigor Adjuvant + Widematch + MCPA-Ester	8.2 oz + 0.6 pt + 0.6 pt + 0.4 pt	99	95	99	85	95	99	91	95	99	99
Axial + Adigor Adjuvant + Widematch + Affinity Tankmix	8.2 oz + 0.6 pt + 0.6 pt + 0.6 oz	99	95	99	99	95	99	98	95	99	99
Axial + Adigor Adjuvant + Harmony GT XP + MCPA-Ester	8.2 oz + 0.6 pt + 0.4 oz + 0.5 pt	99	88	99	99	96	83	85	96	99	99
Axial + Adigor Adjuvant + Clarity	8.2 oz + 0.6 pt + 2 oz	99	95	99	99	95	99	60	95	99	99
<b>Puma</b>											
Puma	0.6 pt	--	--	--	--	--	--	--	--	--	--
Puma + Bronate Advanced	0.6 pt + 0.8 pt	99	85	99	80	92	99	90	92	99	99
Puma + Widematch + MCPA-Ester	0.6 pt + 0.6 pt + 0.4 pt	99	95	99	92	95	99	90	95	99	99
Puma + Widematch + Affinity Tankmix	0.6 pt + 0.6 pt + 0.6 oz	99	98	99	99	98	99	97	98	99	99
Puma + Clarity	0.6 pt + 2 oz	99	85	99	99	85	99	48	85	99	99
<b>Discover NG</b>											
Discover NG	12.8 oz	--	--	--	--	--	--	--	--	--	--
Discover NG + Bronate Advanced	12.8 oz + 0.8 pt	99	87	99	83	92	99	88	92	99	99
Discover NG + Widematch + MCPA-Ester	12.8 oz + 0.6 pt + 0.4 pt	99	91	99	96	96	99	91	96	99	99
Discover NG + Affinity Tankmix	12.8 oz + 0.6 oz	99	87	96	99	87	83	72	87	99	99
<b>Rimfire + Quad 7</b>											
Rimfire + Quad 7	1.75 oz + 0.8 pt	70	8	96	98	8	75	37	8	99	99
Rimfire + Widematch + Affinity Tankmix + Quad 7	1.75 oz + 0.67 pt + 0.6 oz + 0.8 pt	99	93	99	99	93	99	93	93	99	99
<b>Everest + Quad 7</b>											
Everest + Quad 7	0.4 oz + 0.8 pt	83	73	85	98	73	84	52	73	98	99
Everest + Starane + Salvo + Affinity Tankmix + Quad 7	0.4 oz + 0.3 pt + 0.5 pt + 0.6 oz + 0.8 pt	99	96	99	99	96	99	99	96	99	99
<b>Application #2 (June 12)</b>											
Axial + Adigor Adjuvant	8.2 oz + 0.6 pt	--	--	--	--	--	--	--	--	--	--
Axial + Adigor Adjuvant + Bronate Advanced	8.2 oz + 0.6 pt + 0.8 pt	99	96	99	58	96	99	47	95	99	99
Axial + Adigor Adjuvant + Widematch + MCPA-Ester	8.2 oz + 0.6 pt + 0.6 pt + 0.4 pt	99	88	83	85	83	83	93	88	83	99
Axial + Adigor Adjuvant + Widematch + Affinity Tankmix	8.2 oz + 0.6 pt + 0.6 pt + 0.6 oz	99	98	91	99	98	91	99	98	91	99
Axial + Adigor Adjuvant + Harmony GT XP + MCPA-Ester	8.2 oz + 0.6 pt + 0.4 oz + 0.5 pt	99	92	99	98	92	91	90	92	99	99
<b>Puma</b>											
Puma	0.6 pt	--	--	--	--	--	--	--	--	--	--
Puma + Bronate Advanced	0.6 pt + 0.8 pt	96	80	91	75	80	91	63	80	99	99
Puma + Harmony GT XP + Starane	0.6 pt + 0.3 oz + 0.33 pt	99	85	91	99	85	91	97	85	91	99
Puma + Widematch + MCPA-Ester	0.6 pt + 0.6 pt + 0.4 pt	99	93	80	90	93	93	98	93	93	99
Puma + Widematch + Affinity Tankmix	0.6 pt + 0.6 pt + 0.6 oz	99	95	96	99	95	96	99	95	96	99
<b>Discover NG</b>											
Discover NG	12.8 oz	--	--	--	--	--	--	--	--	--	--
Discover NG + Bronate Advanced	12.8 oz + 0.8 pt	99	73	83	63	73	83	63	73	99	99
Discover NG + Widematch + MCPA-Ester	12.8 oz + 0.6 pt + 0.4 pt	99	87	91	90	87	91	92	87	99	99
Discover NG + Affinity Tankmix + Widematch	12.8 oz + 0.6 oz + 0.6 pt	99	90	91	99	90	91	99	90	99	99
Weedy Check	--	--	--	--	--	--	--	--	--	--	--
LSD (0.05)		11	21	ns	17	20	ns	18	19	ns	ns

Axial 0.83 EC = pinoxaden.  
 Adigor Adjuvant = emulsifiable oil adjuvant.  
 Bronate Advanced 5E = bromoxynil (2.5 lb ai/gal) & MCPA (2.5 lb ae/gal).  
 Widematch 1.5 E = clopyralid (0.75 lb ae/gal) & fluroxypyr (0.75 lb ae/gal).  
 Affinity Tankmix 50SG = thifensulfuron (40%) & tribenuron (10%).  
 Harmony GT XP 75 DF = thifensulfuron.  
 Clarity 4L = dicamba.  
 Puma 1EC = fenoxaprop and safener  
 Discover NG 0.5 EC = clodinafop and cloquintocet (safener).  
 Rimfire 10.2 WDG = propoxycarbazone (8.14%) & mesosulfuron (2.03%).  
 Quad 7 = ammonium salt, buffering agent, and surfactant blend.  
 Everest 70 WG = flucarbazone.  
 Starane 1.5 E = fluroxypyr.  
 Salvo 5E = 2,4-D ester.

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**Table 2.**

Treatment	Rate	Foxtail					Wheat Yield (Bu/A)
		Control 7/27	Wheat Injury				
	Product/A	(%)	6/21 (%)	6/27 (%)	7/5 (%)	7/27 (%)	
<b>Application #1 (June 3)</b>							
Axial + Adigor Adjuvant	8.2 oz + 0.6 pt	99	0	0	0	0	39
Axial + Adigor Adjuvant + Bronate Advanced	8.2 oz + 0.6 pt + 0.8 pt	99	0	0	2	0	41
Axial + Adigor Adjuvant + Widematch + MCPA-Ester	8.2 oz + 0.6 pt + 0.6 pt + 0.4 pt	99	0	0	2	0	39
Axial + Adigor Adjuvant + Widematch + Affinity Tankmix	8.2 oz + 0.6 pt + 0.6 pt + 0.6 oz	99	0	0	0	0	36
Axial + Adigor Adjuvant + Harmony GT XP + MCPA-Ester	8.2 oz + 0.6 pt + 0.4 oz + 0.5 pt	99	0	0	0	0	43
Axial + Adigor Adjuvant + Clarity	8.2 oz + 0.6 pt + 2 oz	99	0	0	0	0	43
Puma	0.6 pt	99	0	0	0	0	44
Puma + Bronate Advanced	0.6 pt + 0.8 pt	83	2	3	0	0	44
Puma + Widematch + MCPA-Ester	0.6 pt + 0.6 pt + 0.4 pt	99	0	0	0	0	43
Puma + Widematch + Affinity Tankmix	0.6 pt + 0.6 pt + 0.6 oz	96	0	0	0	0	42
Puma + Clarity	0.6 pt + 2 oz	99	0	2	0	0	44
Discover NG	12.8 oz	99	2	0	0	0	42
Discover NG + Bronate Advanced	12.8 oz + 0.8 pt	99	0	2	2	0	42
Discover NG + Widematch + MCPA-Ester	12.8 oz + 0.6 pt + 0.4 pt	99	0	0	2	0	44
Discover NG + Affinity Tankmix	12.8 oz + 0.6 oz	99	2	0	0	0	43
Rimfire + Quad 7	1.75 oz + 0.8 pt	99	0	0	0	0	44
Rimfire + Widematch + Affinity Tankmix + Quad 7	1.75 oz + 0.67 pt + 0.6 oz + 0.8 pt	88	0	3	2	3	42
Everest + Quad 7	0.4 oz + 0.8 pt	99	0	0	0	0	40
Everest + Starane + Salvo + Affinity Tankmix + Quad 7	0.4 oz + 0.3 pt + 0.5 pt + 0.6 oz + 0.8 pt	99	3	5	2	7	39
<b>Application #2 (June 12)</b>							
Axial + Adigor Adjuvant	8.2 oz + 0.6 pt	99	0	0	0	0	42
Axial + Adigor Adjuvant + Bronate Advanced	8.2 oz + 0.6 pt + 0.8 pt	99	2	0	2	0	43
Axial + Adigor Adjuvant + Widematch + MCPA-Ester	8.2 oz + 0.6 pt + 0.6 pt + 0.4 pt	99	0	0	0	0	44
Axial + Adigor Adjuvant + Widematch + Affinity Tankmix	8.2 oz + 0.6 pt + 0.6 pt + 0.6 oz	99	0	0	0	0	44
Axial + Adigor Adjuvant + Harmony GT XP + MCPA-Ester	8.2 oz + 0.6 pt + 0.4 oz + 0.5 pt	94	2	0	0	0	46
Puma	0.6 pt	99	0	0	0	0	45
Puma + Bronate Advanced	0.6 pt + 0.8 pt	99	0	0	2	0	43
Puma + Harmony GT XP + Starane	0.6 pt + 0.3 oz + 0.33 pt	96	0	0	0	0	42
Puma + Widematch + MCPA-Ester	0.6 pt + 0.6 pt + 0.4 pt	99	0	0	0	0	45
Puma + Widematch + Affinity Tankmix	0.6 pt + 0.6 pt + 0.6 oz	99	0	0	0	3	41
Discover NG	12.8 oz	99	0	0	0	3	45
Discover NG + Bronate Advanced	12.8 oz + 0.8 pt	98	0	0	3	0	44
Discover NG + Widematch + MCPA-Ester	12.8 oz + 0.6 pt + 0.4 pt	99	0	2	0	0	45
Discover NG + Affinity Tankmix + Widematch	12.8 oz + 0.6 oz + 0.6 pt	94	2	0	2	0	41
Weedy Check	--	--	0	0	0	0	42
LSD (0.05)		ns	ns	ns	ns	3	ns

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