

Wild oat control in hard red spring wheat with reduced rates of Puma, Axial XL, and Discover NG at Crookston, MN - 2008. Durgan, Beverly R., Jochum Wiersma, Jim Cameron, and Douglas W. Miller. This experiment was designed to evaluate wild oat control with Puma (fenoxaprop & safener), Axial XL (pinoxaden & adjuvant), and Discover NG (clodinafop and cloquintocet) applied at the labeled rate and at two reduced rates and at two application times. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, the experimental area received 100 lb/A of N and was plowed in the fall. In the spring of the following year, the experimental area was disked and harrowed. 'Freyr' hard red spring wheat was seeded on April 15 at 1.5 Bu/A. The experimental design was a randomized complete block with treatments in a split plot arrangement with three replications. Application date comprised whole plots and herbicide treatments, subplots. Subplot size was 10 by 16 ft. All herbicide treatments were applied with a backpack type sprayer delivering 10 gpa at 30 psi using 80015 flat fan nozzles. Application data and environmental conditions are listed below. Crop injury and wild oat control were rated visually. Yields were measured. All data are presented in the table below.

Treatment Date	May 23	June 4
Target wild oat stage	3 leaf	5 leaf
Air temperature (°F)	57	73
Relative humidity (%)	--	55
Sky	clear	clear
Wind	E 10 mph	SE 1 mph
Rainfall before Application		
Week 1 (inch)	0.02	0.93
Rainfall after Application		
Week 1 (inch)	0.32	1.72
Week 2 (inch)	0.61	0.87

Wet conditions at planting caused poor stands in areas of the experiment, resulting in a large variation in yield between replicates of various treatments. Because this variation was not consistent among all treatments, yield differences observed in the data may not totally represent the effect of the herbicide treatment applied.

**Wild oat control with reduced rates of Puma, Axial XL, and Discover NG at Crookston, MN - 2008.
Durgan, Wiersma, Cameron, and Miller.**

Treatment	Rate	<u>Wild Oat Control</u>		<u>Wheat Injury</u>			Wheat Yield (Bu/A)
		7/1 (%)	7/17 (%)	6/20 (%)	7/1 (%)	7/17 (%)	
<u>Application #1 (May 23)</u>							
Puma	0.67 pt	87	85	0	0	0	71
Puma	0.5 pt	88	85	0	0	0	63
Puma	0.33 pt	83	82	0	0	0	60
Axial XL	16.2 oz	90	91	0	0	0	64
Axial XL	12.2 oz	91	94	0	0	0	68
Axial XL	8.1 oz	90	88	0	0	0	70
Discover NG	12.8 oz	88	91	0	0	0	74
Discover NG	9.6 oz	90	87	0	0	0	68
Discover NG	6.4 oz	88	90	0	0	0	67
Weedy Check	--			0	0	0	16
<u>Application #2 (June 4)</u>							
Puma	0.67 pt	99	97	0	0	0	68
Puma	0.5 pt	99	96	0	0	0	67
Puma	0.33 pt	90	98	0	0	0	72
Axial XL	16.2 oz	99	98	0	0	0	70
Axial XL	12.2 oz	99	99	0	0	0	68
Axial XL	8.1 oz	99	99	0	0	0	73
Discover NG	12.8 oz	99	99	0	0	0	67
Discover NG	9.6 oz	99	98	0	0	0	73
Discover NG	6.4 oz	98	99	0	0	0	75
Weedy Check	--			0	0	0	16
LSD (0.05)		6	7	ns	ns	ns	14

Puma 1EC = fenoxaprop and safener.

Axial XL 0.42 EC = pinoxaden and adigor adjuvant.

Discover NG 0.5 EC = clodinafop and cloquintocet (safener).