

Weed control with Puma, Discover NG, and Axial XL at reduced rates and with broadleaf herbicides at Crookston, MN - 2008. Durgan, Beverly R., Jochum Wiersma, Jim Cameron, and Douglas Miller. The objective of this experiment was to evaluate wild oat control with Puma (fenoxaprop & safener), Discover NG (clodinafop & cloquintocet), and Axial XL (pinoxaden & adjuvant) when applied at regular and reduced rates and in combination with broadleaf herbicides. 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 fall plowed. 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. All herbicide treatments were applied with a backpack type sprayer delivering 10 gpa at 30 psi using 80015 flat fan nozzles. The experimental design was a randomized complete block with three replications and plot size was 10 by 16 ft. Application data and environmental conditions are listed below. Crop injury and wild oat control were visually rated. Yields were measured. All data are presented in the table below.

Treatment Date	May 27
Target wild oat stage	2-4 leaf
Air temperature (°F)	60
Relative humidity (%)	23
Wind	NE 3.5-4.5 mph
Sky	slightly overcast
Rainfall before Application	
Week 1 (inch)	0.00
Rainfall after Application	
Week 1 (inch)	0.68
Week 2 (inch)	1.86

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.

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Treatment	Rate	Wild Oat Control		Wheat Injury			Wheat Yield (Bu/A)
		7/1	7/17	6/20	7/1	7/17	
	Product/A	(%)	(%)	(%)	(%)	(%)	
Puma	0.5 pt	91	96	0	0	0	71
Puma + Bronate Advanced	0.5 pt + 0.8 pt	78	87	0	0	0	70
Puma + Huskie	0.5 pt + 11 oz	92	91	0	0	0	65
Puma + Widematch	0.5 pt + 1 pt	90	88	0	0	0	70
Puma	0.33 pt	88	89	0	0	0	67
Puma + Bronate Advanced	0.33 pt + 0.8 pt	82	68	0	0	0	63
Puma + Huskie	0.33 pt + 11 oz	87	77	0	0	0	65
Puma + Widematch	0.33 pt + 1 pt	83	93	0	0	0	67
Discover NG	9.6 oz	91	95	0	0	0	70
Discover NG + Bronate Advanced	9.6 oz + 0.8 pt	91	94	0	0	0	69
Discover NG + Huskie	9.6 oz + 11 oz	91	93	0	0	0	69
Discover NG + Widematch	9.6 oz + 1 pt	88	94	0	0	0	74
Discover NG	6.4 oz	90	94	0	0	0	81
Discover NG + Bronate Advanced	6.4 oz + 0.8 pt	92	93	0	0	0	62
Discover NG + Huskie	6.4 oz + 11 oz	90	96	0	0	0	76
Discover NG + Widematch	6.4 oz + 1 pt	90	94	0	0	0	73
Axial XL	12.2 oz	92	93	0	0	0	64
Axial XL + Bronate Advanced	12.2 oz + 0.8 pt	95	92	0	0	0	78
Axial + Huskie	12.2 oz + 11 oz	90	95	0	0	0	74
Axial XL + Widematch	12.2 oz + 1 pt	98	97	0	0	0	82
Axial XL	8.1 oz	93	95	0	0	0	81
Axial XL + Bronate Advanced	8.1 oz + 0.8 pt	88	95	0	0	0	76
Axial + Huskie	8.1 oz + 11 oz	89	93	0	0	0	82
Axial XL + Widematch	8.1 oz + 1 pt	95	96	0	0	0	79
Weedy Check	--			0	0	0	9
LSD (0.05)		ns	7	ns	ns	ns	18

Puma 1EC = fenoxaprop and safener

Bronate Advanced 5E = bromoxynil (2.5 lb ai/gal) & MCPA (2.5 lb ae/gal).

Huskie 2.08 EC = pyrasulfotole & bromoxynil & safener.

Widematch 1.5 E = clopyralid (0.75 lb ae/gal) & fluroxypyr (0.75 lb ae/gal).

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

Axial XL 0.053 EC = pinoxaden and adigor adjuvant.