

Foxtail control in hard red spring wheat with reduced herbicide rates at Rosemount, MN - 2008. Durgan, Beverly R., Krishona Martinson, and Douglas 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 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 and field cultivated twice. 'Freyr' hard red spring wheat was seeded on May 1 at 85 lbs/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 24 ft. All herbicide treatments were applied with a backpack type sprayer delivering 10 gpa at 35 psi using 11001 flat fan nozzles. A broadcast application of Buctril (1.25 pt/A) was applied on June 4 to control broadleaf weeds. 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	May 29	June 10
Foxtail		
stage	2 to 4 leaf	emerging to 4-5 lf (some 6 lf and tillering)
height (inch)	0.5 to 1.5	0.5 to 2-4 (some 5-6)
density (#/ft ²)	41	78
Wheat		
stage	3.5 leaf	5-6 leaf
tillers	0-1	1-2
height (inch)	4-6	8-10
Air temperature (°F)	58	65
Relative humidity	64 %	56 %
Soil temperature (°F)	58	68
Sky	cloudy	70% clouds
Wind	SE 0-3	WSW 9-11
Soil conditions	dry	moist
Rainfall before Application		
Week 1 (inch)	0.09	2.15
Rainfall after Application		
Week 1 (inch)	1.09	1.53
Week 2 (inch)	2.15	0.06

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Treatment	Rate	Foxtail Control				Wheat Injury				W heat
		6/16	6/23	6/30	7/25	6/16	6/23	6/30	7/25	Yield
	Product/A	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(Bu/A)
<u>Application #1 (May 29)</u>										
Puma	0.5 pt	93	90	98	88	2	0	0	0	45
Puma	0.37 pt	96	92	99	95	2	0	0	0	47
Puma	0.25 pt	83	92	95	82	0	0	0	0	47
Axial XL	16.2 oz	95	93	99	95	0	0	0	0	46
Axial XL	12.2 oz	91	92	98	96	0	0	0	0	47
Axial XL	8.1 oz	86	92	95	83	0	0	2	2	42
Discover NG	12.8 oz	89	93	99	96	0	0	0	0	45
Discover NG	9.6 oz	83	93	96	95	0	0	0	0	50
Discover NG	6.4 oz	86	90	98	88	0	0	0	0	46
Weedy Check	--	--	--	--	--	0	0	0	0	39
<u>Application #2 (June 10)</u>										
Puma	0.5 pt	--	95	99	96	0	0	2	0	40
Puma	0.37 pt	--	95	99	98	0	0	0	0	43
Puma	0.25 pt	--	95	99	90	2	0	0	0	46
Axial XL	16.2 oz	--	95	99	99	3	0	0	0	41
Axial XL	12.2 oz	--	95	99	99	0	0	0	0	44
Axial XL	8.1 oz	--	95	99	96	0	0	0	0	43
Discover NG	12.8 oz	--	95	99	99	0	0	0	0	42
Discover NG	9.6 oz	--	93	99	98	0	0	0	0	48
Discover NG	6.4 oz	--	95	98	96	0	0	0	0	47
Weedy Check	--	--	--	--	--	0	0	0	0	42
LSD (0.05)		ns	3	ns	10	ns	ns	ns	ns	6

Puma 1EC = fenoxaprop and safener.

Axial XL 0.42 EC = pinoxaden and adigor adjuvant.

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