

Foxtail control in spring wheat with reduced rates of Rimfire Max, Axial XL, Wolverine, and GoldSky at Rosemount, MN - 2010. Durgan, Beverly R. and Douglas W. Miller. This experiment was designed to evaluate foxtail control with Rimfire Max (propoxycarbazone & mesosulfuron), Axial XL (pinoxaden & adjuvant), Wolverine (fenoxaprop & pyrasulfotole & bromoxynil) and GoldSky (pyroxsulam & fluroxypyr & florasulam) 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 75 lbs K. The field was disked once and field cultivated twice. 'RB-07' hard red spring wheat was seeded on April 27 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 (bromoxynil) at 1.0 pt/A (0.25 lb ai/A) was applied on May 25 to control broadleaf weeds. Application data and environmental conditions are listed below. Crop injury and foxtail control were rated visually and data are presented in the table below. Yields were not measured.

Treatment Date	May 20	June 3
Foxtail (giant and yellow)		
stage	1-3 leaf (majority 2 leaf)	1-6 leaf (majority 3-5 leaf)
height (inch)	0.25-1 (majority 0.5 to 0.75)	1-7 (majority 3-5)
density (#/ft ²)	17.6	26.8
Wheat		
stage	2 - 2.5 leaf (Zadoks Z12-13)	5.5 – 5.9 (Zadoks Z16, Z23-24)
tillers	0-2	3-4
height (inch)	4-5	8-10
Air temperature (°F)	76	74
Relative humidity	22%	35%
Dewpoint (°F)	--	43
Sky	10% clouds	5% clouds
Wind	E 0-3	WSW 0-5
Soil conditions	moist at 1"	moist
Soil temperature (°F)	65	70
Rainfall before Application		
Week 1 (inch)	0.43	1.26
Rainfall after Application		
Week 1 (inch)	0.55	1.56
Week 2 (inch)	1.26	1.28

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Treatment	Rate	Foxtail Control		Wheat Injury	
		6/18	7/18	6/18	7/18
	Product/A	(%)	(%)	(%)	(%)
Application #1 (May 20)					
Rimfire Max + Quad 7	3 oz + 12.8 oz	70	63	0	0
Rimfire Max + Quad 7	2.25 oz + 12.8 oz	70	63	0	0
Rimfire Max + Quad 7	1.5 oz + 12.8 oz	62	60	0	0
Axial XL	16.2 oz	96	93	0	0
Axial XL	12.2 oz	90	90	0	0
Axial XL	8.1 oz	85	80	0	0
Wolverine	24.7 oz	90	87	0	0
Wolverine	20.5 oz	92	92	0	0
Wolverine	13.7 oz	86	80	0	0
GoldSky + Preference	16 oz + 3.2	91	90	0	0
GoldSky + Preference	12 oz + 3.2	88	87	0	0
GoldSky + Preference	8 oz + 3.2	78	75	0	0
Weedy Check	--	--	--	0	0
Application #2 (June 3)					
Rimfire Max + Quad 7	3 oz + 12.8 oz	80	77	0	0
Rimfire Max + Quad 7	2.25 oz + 12.8 oz	77	77	0	0
Rimfire Max + Quad 7	1.5 oz + 12.8 oz	70	67	0	0
Axial XL	16.2 oz	99	95	0	0
Axial XL	12.2 oz	98	93	0	0
Axial XL	8.1 oz	93	87	0	0
Wolverine	24.7 oz	97	92	0	0
Wolverine	20.5 oz	95	89	0	0
Wolverine	13.7 oz	93	91	0	0
GoldSky + Preference	16 oz + 3.2	92	87	0	0
GoldSky + Preference	12 oz + 3.2	92	89	0	0
GoldSky + Preference	8 oz + 3.2	92	93	0	0
Weedy Check	--	--	--	0	0
LSD (0.05)		8	7	ns	ns

Rimfire Max 6.67 WDG = propoxycarbazone-sodium (4.76%) & mesosulfuron-methyl (1.91%).

Quad 7 = ammonium salt, buffering agent, and surfactant blend.

Axial XL 0.42 EC = pinoxaden and adigor adjuvant.

Wolverine 1.38E = fenoxaprop-p-ethyl (0.38 lb ai/gal) & pyrasulfotole (0.17 lb ai/gal) & bromoxynil octanoate (0.41 lb ai/gal) & bromoxynil heptanoate (0.42 lb ai/gal).

GoldSky 1.53L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).

Preference = nonionic surfactant.