<u>Wild oat control in spring wheat with reduced rates of Rimfire Max, Axial XL,</u> <u>Molverine, and GoldSky at Crookston, MN - 2010.</u> Durgan, Beverly R., Jochum Wiersma, Jim Cameron, and Douglas W. Miller. This experiment was designed to evaluate wild oat 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 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. 'RB07' hard red spring wheat was seeded on April 19 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 17	May 26		
Target wild oat stage	3 leaf	5 leaf		
Air temperature (°F) Relative humidity (%) Wind Sky	71 35 S 5 mph clear	61 61 W 6.5 mph clear		
Rainfall before Application Week 1 (inch) Rainfall after Application	0.36	3.23		
Week 1 (inch) Week 2 (inch)	3.23 0.38	0.46 0.66		

Treatment	Rate	Wild Oat Control			Wheat Injury			Wheat
		6/4	6/25	7/2	6/4	6/25	7/2	Yield
	Product/A	(%)	(%)	(%)	(%)	(%)	(%)	(Bu/A)
Application #1 (May 17)								
Rimfire Max + Quad 7	3 oz + 12.8 oz	85	90	83	0	0	0	62
Rimfire Max + Quad 7	2.25 oz + 12.8 oz	88	93	92	0	0	0	68
Rimfire Max + Quad 7	1.5 oz + 12.8 oz	70	87	78	0	0	0	63
Axial XL	16.2 oz	92	99	88	0	0	0	72
Axial XL	12.2 oz	93	96	90	0	0	0	73
Axial XL	8.1 oz	91	95	90	0	0	0	80
Wolverine	24.7 oz	93	98	83	0	0	0	68
Wolverine	20.5 oz	92	95	82	0	0	0	67
Wolverine	13.7 oz	88	89	70	0	0	0	62
GoldSky + Preference	16 oz + 3.2	87	94	98	0	0	0	68
GoldSky + Preference	12 oz + 3.2	77	91	91	0	0	0	65
GoldSky + Preference	8 oz + 3.2	70	90	81	0	0	0	61
Weedy Check					0	0	0	4
Application #2 (May 26)								
Rimfire Max + Quad 7	3 oz + 12.8 oz	50	88	91	0	0	0	37
Rimfire Max + Quad 7	2.25 oz + 12.8 oz	57	88	87	0	0	0	40
Rimfire Max + Quad 7	1.5 oz + 12.8 oz	50	78	83	0	0	0	29
Axial XL	16.2 oz	58	96	91	0	0	0	44
Axial XL	12.2 oz	60	93	94	0	0	0	39
Axial XL	8.1 oz	58	93	88	0	0	0	48
Wolverine	24.7 oz	50	96	96	0	0	0	43
Wolverine	20.5 oz	57	90	91	0	0	0	43
Wolverine	13.7 oz	55	80	85	0	0	0	41
GoldSky + Preference	16 oz + 3.2	50	80	86	0	0	0	36
GoldSky + Preference	12 oz + 3.2	50	72	77	0	0	0	31
GoldSky + Preference	8 oz + 3.2	53	60	77	0	0	0	46
Weedy Check					0	0	0	1
LSD (0.05)		10	8	13	ns	ns	ns	12

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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.