

Wild oat control in spring wheat with reduced rates of Rimfire Max, Axial XL, Wolverine, GoldSky and Everest 2.0 at Crookston, MN - 2011. Durgan, Beverly R., Jochum Wiersma, Jim Cameron, and Douglas W. Miller. This experiment was designed to evaluate wild oat control with Rimfire Max (propoxycarbazono & mesosulfuron), Axial XL (pinoxaden & adjuvant), Wolverine (fenoxaprop & pyrasulfotole & bromoxynil), GoldSky (pyroxsulam & fluroxypyr & florasulam) and Everest 2.0 (flucarbazone-sodium & safener) 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 May 17 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	June 6	June 13
Target wild oat stage	3 leaf	5 leaf
Air temperature (°F)	86	63
Relative humidity (%)	41	72
Soil temperature (°F)	74	60
Wind	NW 3 mph	not recorded
Sky	clear	cloudy
Rainfall before Application		
Week 1 (inch)	0.35	0.03
Rainfall after Application		
Week 1 (inch)	0.03	0.22
Week 2 (inch)	0.22	2.12

Injury symptoms on June 17 included crop chlorosis and stunting. Injury symptoms at the later rating dates were noted as growth reduction. Axial XL and Wolverine caused little or no visible injury at all rating dates. Everest 2.0 caused some slight injury. Rimfire Max and GoldSky resulted in the greatest injury observed. Symptoms declined with time and no visible injury was observed in any treatment by the last rating date. Wild oat control was good to excellent for all herbicides, rates, and timing. Wheat yields were variable among replications and no statistically significant differences were noted.

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Treatment	Rate	Wild Oat Control			Wheat Injury				Wheat Yield (Bu/A)
		7/8	7/15	7/29	6/17	7/8	7/15	7/29	
	Product/A	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
Application #1 (June 6)									
Rimfire Max + Quad 7	3 oz + 12.8 oz	96	99	99	18	17	1	0	70
Rimfire Max + Quad 7	2.25 oz + 12.8 oz	94	99	98	12	10	0	0	63
Rimfire Max + Quad 7	1.5 oz + 12.8 oz	92	98	97	7	3	2	0	59
Axial XL	16.4 oz	98	99	99	0	0	0	0	63
Axial XL	12.2 oz	96	99	99	0	0	0	0	57
Axial XL	8.1 oz	98	99	99	0	0	0	0	61
Wolverine	27.4 oz	96	96	99	0	0	0	0	57
Wolverine	20.5 oz	95	99	99	0	3	0	0	62
Wolverine	13.7 oz	96	97	96	2	0	0	0	60
GoldSky + Preference	16 oz + 3.2	96	98	99	8	10	0	0	48
GoldSky + Preference	12 oz + 3.2	95	99	99	12	2	0	0	58
GoldSky + Preference	8 oz + 3.2	93	99	99	5	3	0	0	58
Everest 2.0 + Newtone	0.75 oz + 12.8 oz	99	99	96	7	0	0	0	61
Everest 2.0 + Newtone	0.57 oz + 12.8 oz	95	99	99	5	3	0	0	59
Everest 2.0 + Newtone	0.375 oz + 12.8 oz	95	99	99	2	3	0	0	62
Weedy Check	--	--	--	--	0	0	0	0	40
Application #2 (June 13)									
Rimfire Max + Quad 7	3 oz + 12.8 oz	99	98	97	13	17	2	0	68
Rimfire Max + Quad 7	2.25 oz + 12.8 oz	92	98	97	7	10	3	0	56
Rimfire Max + Quad 7	1.5 oz + 12.8 oz	94	98	99	7	12	3	0	57
Axial XL	16.4 oz	98	99	98	0	0	2	0	59
Axial XL	12.2 oz	96	99	99	0	0	2	0	61
Axial XL	8.1 oz	96	99	99	0	0	0	0	64
Wolverine	27.4 oz	95	98	95	3	3	0	0	62
Wolverine	20.5 oz	96	99	99	0	0	0	0	59
Wolverine	13.7 oz	95	99	99	0	3	2	0	55
GoldSky + Preference	16 oz + 3.2	95	99	99	10	7	2	0	62
GoldSky + Preference	12 oz + 3.2	93	99	99	10	7	2	0	56
GoldSky + Preference	8 oz + 3.2	92	94	93	7	7	7	0	54
Everest 2.0 + Newtone	0.75 oz + 12.8 oz	94	93	93	5	3	3	0	52
Everest 2.0 + Newtone	0.57 oz + 12.8 oz	96	99	99	5	0	0	0	63
Everest 2.0 + Newtone	0.375 oz + 12.8 oz	93	98	95	5	5	2	0	59
Weedy Check	--	--	--	--	0	0	0	0	39
LSD (0.05)		3	ns	ns	5	6	ns	ns	ns

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

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

Axial XL 0.42EC = 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

GoldSky 0.84L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).

Preference = nonionic surfactant.

Everest 2.0 3.5SC = flucarbazone-sodium & cloquintacet (safener).

Newtone = surfactant blend and ammoniated salts.