

Wild oat control in spring wheat with Varro and Everest 2.0 at Crookston, MN - 2014.

Durgan, Beverly R., Jochum J. Wiersma, Jim Cameron, Matthew Green, and Douglas Miller. The objective of this experiment was to evaluate wild oat control and crop injury with Varro and Everest 2.0 alone and in tank mixes with broadleaf herbicides. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, the experimental area was burned to remove the standing straw and, after receiving 100 lb/A of N as urea, was chisel plowed in the fall. In the spring of the following year, a seedbed was prepared using a field cultivator with rolling baskets. 'RB07' hard red spring wheat was seeded on May 17 at 1.8 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	June 3
Wild oat stage	3-4 leaf
Air temperature (°F)	72
Soil temperature (°F)	68
Relative humidity (%)	55
Wind	SW 2 mph
Sky	partly cloudy
Rainfall before Application	
Week 1 (inch)	1.48
Rainfall after Application	
Week 1 (inch)	0.70
Week 2 (inch)	2.69

Initial control of wild oat was good to excellent for all treatments. Wild oat control ratings at the July 30 date was generally good to excellent with some exceptions: Control with Varro + the higher rates of Carnivore showed only fair control indicating possible antagonism. The Wolverine Advanced treatment began to show decreased control at the July 10 and 16 dates and control at the July 30 date was only fair. Early wheat injury symptoms were slight. At the July 10 rating date, some elevated injury symptoms were observed with the Varro + 1.5 pt rate of Carnivore, Varro + Weld, and Rimfire Max + Huskie treatments. No significant yield differences were observed between the herbicide treatments but all herbicide treatments had greater yields than the weedy check.

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Treatment	Rate (Product/A)	Wild Oat Control				Wheat Injury		Wheat
		6/27 (%)	7/10 (%)	7/16 (%)	7/30 (%)	6/27 (%)	7/10 (%)	Yield (Bu/A)
Varro	6.85 oz	95	99	96	99	0	0	79
Varro + Bison	6.85 oz + 1 pt	95	96	94	96	2	2	75
Varro + Bison + Preference + Interlock	6.85 oz + 1 pt +3.2 oz + 4 oz	95	98	96	93	0	2	72
Varro + Carnivore	6.85 oz + 1 pt	95	99	98	93	0	3	76
Varro + Carnivore	6.85 oz + 1.5 pt	95	96	88	83	2	7	71
Varro + Carnivore + Preference + Interlock	6.85 oz + 1.5 pt + 3.2 oz + 4 oz	95	99	91	87	2	7	72
Varro + Weld	6.85 oz + 1.3 pt	95	99	99	90	0	8	77
Varro + Weld	6.85 oz + 1.5 pt	95	95	95	90	0	7	72
Varro + Weld + Preference + Interlock	6.85 oz + 1.5 pt + 3.2 oz + 4 oz	95	99	99	96	0	3	73
Varro + Widematch + MCPA ester	6.85 oz + 1 pt + 0.5 pt	95	98	99	98	0	0	77
Varro + Widematch + Affinity Tankmix	6.85 oz + 1 pt + 0.6 oz	95	95	99	93	0	2	81
Varro + Olympus +Carnivore	6.85 oz + 0.2 oz + 1 pt	95	98	99	98	0	0	73
Huskie Complete + N-Pak AMS	13.7 oz + 1.18 pt	95	99	98	93	3	0	72
Wolverine Advanced	27.4 oz	95	92	90	82	0	2	74
Rimfire Max + Huskie + MSO	3 oz + 11 oz + 1.5 pt	95	99	99	96	2	8	77
Axial XL	16.4 oz	95	99	96	99	0	0	75
Everest 2.0	1 oz	95	98	93	96	0	0	76
Everest 2.0 + Bison	1 oz + 1 pt	95	99	99	99	0	0	73
Everest 2.0 + Bison + Preference + Interlock	1 oz + 1 pt + 3.2 oz + 4 oz	95	99	99	99	0	0	77
Everest 2.0 + Carnivore	1 oz + 1.5 pt	95	99	96	96	0	2	78
Everest 2.0 + Carnivore + Preference + Interlock	1 oz + 1.5 pt + 3.2 oz + 4 oz	95	98	96	95	5	0	74
Everest 2.0 + Weld	1 oz + 1.5 pt	95	99	98	99	0	0	76
Everest 2.0 + Weld + Preference + Interlock	1 oz + 1.5 pt + 3.2 oz + 4 oz	95	99	98	98	0	3	73
Weedy Check	--	--	--	--	--	--	--	19
LSD (0.05)		ns	ns	ns	7	ns	5	11

Varro 0.083L = thiencazabone-methyl.

Bison 4E = bromoxynil (2 lb ai/gal) & MCPA (2 lb ae/gal).

Preference = nonionic surfactant.

Interlock = drift control agent.

Carnivore 4E = bromoxynil (1.67 lb ai/gal) & MCPA (1.67 lb ae/gal) & fluroxypyr (0.67 lb ae/gal).

Weld 2.89E = clopyralid (0.50 lb ai/gal) & MCPA (1.75 lb ae/gal) & fluroxypyr (0.64 lb ae/gal).

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

MCPA Ester 4E.

Affinity Tankmix 50SG = thifensulfuron (40%) & tribenuron (10%).

Olympus 70WDG = propoxycarbazone-sodium.

Huskie Complete 1.76L = thiencazabone-methyl (0.042 lb ai/gal) & pyrasulfotole (0.26 lb ai/gal) & bromoxynil phenol equivalent (1.46 lb ai/gal).

N-Pak AMS = 34% ammonium sulfate solution (3.4 lbs ammonium sulfate/gal).

Wolverine Advanced 1.58E = fenoxaprop-p-ethyl (0.40 lb ai/gal) & pyrasulfotole (0.13 lb ai/gal) & bromoxynil (1.05 lb ai/gal).

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

Huskie 2.08 EC = pyrasulfotole (0.23 lb ai/gal) & bromoxynil 1.85 lb ai/gal) & safener.

MSO = methylated soybean oil.

Axial XL 0.42EC = pinoxaden and adigor adjuvant.

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