Wild oat control in spring wheat with broadleaf herbicide tank mixes at Crookston, MN - 2016. Durgan, Beverly R., Jochum J. Wiersma, Jim Cameron, and Douglas Miller. The objective of this experiment was to evaluate wild oat control and crop injury with Varro alone and in tank mixes with broadleaf herbicides. Several other products were also included for comparison. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, the standing residue was burned and, after receiving 126 lbs/A N and 52 lbs/A P, was chisel plowed in the fall of 2015. In the spring of 2016, a seedbed was prepared using a field cultivator with rolling baskets. 'Linkert' hard red spring wheat was seeded on April 12 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	**May 22**
Air temperature (°F)	65
Soil temperature (°F)	58
Relative humidity (%)	30
Wind	E 2.5 mph
Sky	clear
Rainfall before Application	
Week 1 (inch)	0.0
Rainfall after Application	
Week 1 (inch)	2.14
Week 2 (inch)	5.04

Results

Wild oat control was variable and did not differ significantly among treatments at any of the rating dates. Control ranged from 70% to 92% at the July 20 rating date. Yield of the weedy check treatment was significantly less than the other treatments which ranged from 57 to 73 bu/A.

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		Wild Oat Control					Wheat Injury	Wheat
Treatment	Rate	5/27	6/9	6/16	7/1	7/20	5/27	Yield
	(Product/A)	(%)	(%)	(%)	(%)	(%)	(%)	(Bu/A)
Varro + Bison + AMS	6.85 oz + 1 pt + 1.18 pt	47	88	92	85	85	5	62
Varro + Weld + AMS	6.85 oz + 18 oz + 1.18 pt	37	88	94	90	92	3	70
Varro + Carnivore + AMS	6.85 oz + 1 pt + 1.18 pt	43	88	93	92	89	5	70
Varro + Widematch + 2,4-D ester LV4 + AMS	6.85 oz + 1 pt + 0.5 pt + 1.18 pt	43	87	92	83	86	5	63
Varro + Widematch + MCPA ester + AMS	6.85 oz + 1 pt + 0.5 pt + 1.18 pt	50	88	90	85	87	3	61
Varro + Widematch + Affinity Tankmix + AMS	6.85 oz + 1 pt + 0.6 oz + 1.18 pt	43	88	92	90	91	5	65
Huskie Complete	13.7 oz	43	87	88	82	82	2	70
Huskie Complete + N-Pak AMS	13.7 oz + 1.18 pt	47	90	92	85	83	3	72
Axial XL + Huskie	16.4 oz + 13.5 oz	53	90	92	90	90	2	68
Axial XL + Widematch + AMS	16.4 oz + 1 pt + 3.5 pt	50	90	94	87	87	0	69
Wolverine Advanced	27.4 oz	60	88	92	87	88	0	73
Everest 2.0 + Supremecy + Preference	0.75 oz + 4.5 oz + 3.2 oz	53	88	80	77	75	0	63
Everest 2.0 + Widematch + Activator 90 + AMS	0.75 oz + 1 pt + 3.2 oz + 3.5 pt	47	87	82	83	82	0	68
GoldSky + MCPA ester	1 pt + 0.5 pt	43	85	88	82	82	3	67
GoldSky + Activator 90 + AMS	1 pt + 6.4 oz + 3.5 pt	50	87	87	75	74	3	61
GoldSky + 2.4-D ester LV6 + AMS	1 pt + 7.26 oz + 3.5 pt	43	87	83	72	73	2	57
PerfectMatch + Preference	1 pt + 3.2 oz	47	85	85	80	82	12	62
PerfectMatch + 2,4-D ester LV4	1 pt + 0.5 pt	43	87	88	80	82	25	60
PerfectMatch + Activator 90 + AMS	1 pt + 6.4 oz + 3.5 pt	50	87	83	72	70	12	58
PerfectMatch + 2.4-D ester LV6 + AMS	1 pt + 7.26 oz + 3.5 pt	40	87	85	78	81	3	64
Weedy Check	--	--	--	--	--	--	--	16
LSD (0.05)		ns	ns	ns	ns	ns	6	9

Varro 0.083L = thiencarbazone-methyl.
Bison 4E = bromoxynil (2 lb ai/gal) & MCPA (2 lb ae/gal).
N-Pak AMS = 34% ammonium sulfate solution (3.4 lbs ammonium sulfate/gal).
Weld 2.89E = clopyralid (0.50 lb ai/gal) & MCPA (1.75 lb ae/gal) & fluroxypyr (0.64 lb ae/gal).
Carnivore 4E = bromoxynil (1.67 lb ai/gal) & MCPA (1.67 lb ae/gal) & fluroxypyr (0.67 lb ae/gal).
Widematch 1.5E = clopyralid (0.75 lb ae/gal) & fluroxypyr (0.75 lb ae/gal).
2,4-D Ester LV4 (3.8 lb ae/gal).
MCPA Ester 4E.
Affinity Tankmix 50SG = thifensulfuron (40%) & tribenuron (10%).
Huskie Complete 1.76L = thiencarbazone-methyl (0.042 lb ai/gal) & pyrasulfotole (0.26 lb ai/gal) & bromoxynil phenol equivalent (1.46 lb ai/gal).
Axial XL 0.42EC = pinoxaden and adigor adjuvant.
Huskie 2.08 EC = pryrasulfotole (0.23 lb ai/gal) & bromoxynil 1.85 lb ai/gal) & safener.
Wolverine Advanced 1.58E = fenoxaprop-p-ethyl (0.40 lb ai/gal) & pyrasulfotole (0.13 lb ai/gal) & bromoxynil (1.05 lb ai/gal).
Everest 2.0 3.5SC = flucarbazone-sodium & cloquintacet (safener).
Supremacy 31WG = thifensulfuron (4.5%) & tribenuron 1.5%) & fluroxypyr (25% ae).
Preference = nonionic surfactant.
Activator 90 = nonionic surfactant.
GoldSky 0.84L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).
2,4-D Ester LV6 (5.6 lb ae/gal).
PerfectMatch 1.61SE = clopyralid (0.75 lb ae/gal) & fluroxypyr (0.75 lb ae/gal) & pyroxsulam (0.11 lb ai/gal).