

Foxtail control in spring wheat with Varro at Rosemount, MN – 2015. Durgan, Beverly R., Douglas W. Miller, and Bradley Kinkaid. The objective of this experiment was to evaluate foxtail control and crop injury with Varro alone and in tank mixes with broadleaf herbicides. The experiment was conducted at Rosemount, MN on a Waukegon silt loam soil with pH 6.2 and 4.6% organic matter. Soil test for P and K were 22 lbs/A and 288 lbs/A, respectively. Following soybeans, the experimental area was fall chisel plowed. On April 15, the area was fertilized with 70 lbs/A N, 60 lbs/A P, and 60 lbs/A K and field cultivated twice. 'Linkert' hard red spring wheat was seeded with a 12 foot wide drill at 115 lbs/A on April 16. The experimental design was a randomized complete block with three replications. Plot size was 10 by 24 ft. All herbicide treatments were applied to a 6 foot strip with a backpack type CO₂ powered sprayer delivering 10 gpa at 35 psi using 11001 flat fan nozzles with 18 inch spacing. Application data and environmental conditions are listed below. Weed control and wheat injury were visually rated. Yields were determined by harvesting a 5 X 24 foot strip in the treated area with a small plot combine. Data is summarized in the Table below.

Treatment Date	June 1
Foxtail (giant and yellow mix)	
stage	2 lf (6%), 3 lf (24%), 4 lf (46%), 5 lf (21%), 6 lf (3%)
height (inch)	0.5-0.75" (2 lf), 1-1.5" (3 lf), 1.5-2.5" (4 lf), 2.5-4" (5 lf), 4-5" (6 lf)
density (#/ft ²)	185
Wheat	
stage	5.9-6.2 leaf (Zadoks Z16, Z22-24, Z32-33)
tillers	2-4
height (inch)	12-15
Air temperature (°F)	61
Relative humidity (%)	44
Dewpoint (°F)	39
Sky	10% clouds
Wind	ESE 0-6
Soil conditions	moist
Soil temperature (°F)	68
Rainfall before Application	
Week 1 (inch)	1.45
Rainfall after Application	
Week 1 (inch)	1.70
Week 2 (inch)	0.60

Results

No significant differences in foxtail control were observed with the exception of the two Rimfire Max treatments, which resulted in lower foxtail control compared to the other herbicide treatments. No significant injury was observed. There were no differences in wheat yields between herbicide treatments or the weedy check.

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Treatment	Rate (Product/A)	Grass Control		Wheat Injury			Wheat
		6/23 (%)	7/1 (%)	6/2 (%)	6/23 (%)	7/1 (%)	Yield (Bu/A)
Varro + AMS	6.85 oz + 1.18 pt	91	92	0	0	0	49
Varro + Bison + AMS	6.85 oz + 1 pt + 1.18 pt	91	90	0	0	0	45
Varro + Weld + AMS	6.85 oz + 1.3 pt + 1.18 pt	92	88	0	2	0	46
Varro + Carnivore + AMS	6.85 oz + 1 pt + 1.18 pt	92	92	0	0	0	48
Varro + Widematch + 2,4-D ester + AMS	6.85 oz + 1 pt + 0.33 pt + 1.18 pt	92	90	0	0	0	41
Varro + Widematch + MCPA ester + AMS	6.85 oz + 1 pt + 0.5 pt + 1.18 pt	91	92	0	0	0	42
Varro + Widematch + Affinity Tankmix + AMS	6.85 oz + 1 pt + 0.6 oz + 1.18 pt	91	88	0	0	0	45
Varro + Olympus + Carnivore + AMS	6.85 oz + 0.2 oz + 1 pt + 1.18 pt	89	90	0	0	0	42
Huskie Complete + N-Pak AMS	13.7 oz + 1.18 pt	91	90	0	0	0	47
Wolverine Advanced	27.4 oz	92	96	0	0	0	49
Everest 2.0 + Supremacy + Preference	0.75 oz + 4.5 oz + 3.2 oz	91	88	0	2	0	50
GoldSky + MCPA ester	1 pt + 0.5 pt	88	85	0	3	0	49
Rimfire Max + Huskie + MSO	3 oz + 11 oz + 1.5 pt	63	75	0	0	0	44
Rimfire Max + WideMatch	3 oz + 1.5 pt	55	60	0	0	0	47
Weedy Check	--	--	--	--	--	--	46
LSD (0.05)		10	13	ns	ns	ns	ns

Varro 0.083L = thiencazone-methyl.

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

Bison 4E = bromoxynil (2 lb ai/gal) & MCPA (2 lb ae/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 6E.

MCPA Ester 4E.

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

Olympus 70WDG = propoxycarbazone-sodium.

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

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

Supremacy 31WG = thifensulfuron (4.5%) & tribenuron 1.5%) & fluroxypyr (25% ae).

Preference = nonionic surfactant.

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