

Foxtail control in spring wheat with Varro and Everest 2.0 at Rosemount, MN – 2014. Durgan, Beverly R., Douglas W. Miller, and Bradley Kinkaid. The objective of this experiment was to evaluate foxtail control and crop injury with Varro and Everest 2.0 alone and in tank mixes with broadleaf herbicides. The experiment was conducted at Rosemount, MN on a Waukegon silt loam soil with pH 6.3 and 4.0% organic matter. Soil test for P and K were 18 lbs/A and 200 lbs/A, respectively. Following soybeans, the experimental area was fall chisel plowed. On May 5, the area was fertilized with 70 lbs/A N, 25 lbs/A P, and 50 lbs/A K and field cultivated twice. 'RB-07' hard red spring wheat was seeded with a 12 foot wide drill at 115 lbs/A on May 6. 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 10
Foxtail (giant and yellow mix)	
stage	2 lf (21%), 3 lf (30%), 4 lf (25%), 5 lf (13%), 6-7 lf (11%)
height (inch)	0.5" (2 lf), 1" (3 lf), 1.5" (4 lf), 2" (5 lf), 3-4" (6-7 lf)
density (#/ft ²)	129
Wheat	
stage	5.3-5.7 leaf (Zadoks Z15-16, Z22-24)
tillers	2-4
height (inch)	10-12
Air temperature (°F)	66
Relative humidity (%)	67
Dewpoint (°F)	55
Sky	20% clouds
Wind	E 0-6
Soil conditions	moist
Soil temperature (°F)	not recorded
Rainfall before Application	
Week 1 (inch)	1.22
Rainfall after Application	
Week 1 (inch)	2.90
Week 2 (inch)	3.23

Heavy dew was present at application time. On July 3, foxtail control was highest with Axial XL and Wolverine Advanced with all other treatments showing significantly lower control. Within the Varro treatments, Varro alone or with Olympus generally had better control than the other tank mixes but the differences were not all significant. Varro + Weld at the 1.5 pt/A rate had the lowest control rating in the Varro group. The addition of Preference and Interlock resulted in improved control. All Everest 2.0 treatments resulted in similar control regardless of tank mix partner. Rimfire Max had the lowest control on July 3. No significant differences in foxtail control were detected at the August 3 rating date. No Injury was visible at the July rating and no significant yield differences were measured.

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Treatment	Rate (Product/A)	Foxtail Control		Wheat	
		7/3 (%)	8/3 (%)	Injury 7/3 (%)	Yield (Bu/A)
Varro	6.85 oz	80	83	0	41
Varro + Bison	6.85 oz + 1 pt	73	77	0	44
Varro + Bison + Preference + Interlock	6.85 oz + 1 pt + 3.2 oz + 4 oz	72	73	0	47
Varro + Carnivore	6.85 oz + 1 pt	72	80	0	40
Varro + Carnivore	6.85 oz + 1.5 pt	73	82	0	47
Varro + Carnivore + Preference + Interlock	6.85 oz + 1.5 pt + 3.2 oz + 4 oz	73	78	0	42
Varro + Weld	6.85 oz + 1.3 pt	77	82	0	44
Varro + Weld	6.85 oz + 1.5 pt	70	78	0	36
Varro + Weld + Preference + Interlock	6.85 oz + 1.5 pt + 3.2 oz + 4 oz	77	80	0	40
Varro + Widematch + MCPA ester	6.85 oz + 1 pt + 0.5 pt	77	78	0	42
Varro + Widematch + Affinity Tankmix	6.85 oz + 1 pt + 0.6 oz	75	83	0	41
Varro + Olympus + Carnivore	6.85 oz + 0.2 oz + 1 pt	82	82	0	39
Huskie Complete + N-Pak AMS	13.7 oz + 1.18 pt	75	87	0	43
Wolverine Advanced	27.4 oz	93	87	0	45
Rimfire Max + Huskie + MSO	3 oz + 11 oz + 1.5 pt	62	73	0	36
Axial XL	16.4 oz	96	87	0	43
Everest 2.0	1 oz	72	78	0	35
Everest 2.0 + Bison	1 oz + 1 pt	73	78	0	39
Everest 2.0 + Bison + Preference + Interlock	1 oz + 1 pt + 3.2 oz + 4 oz	75	80	0	41
Everest 2.0 + Carnivore	1 oz + 1.5 pt	72	75	0	44
Everest 2.0 + Carnivore + Preference + Interlock	1 oz + 1.5 pt + 3.2 oz + 4 oz	77	82	0	44
Everest 2.0 + Weld	1 oz + 1.5 pt	73	77	0	43
Everest 2.0 + Weld + Preference + Interlock	1 oz + 1.5 pt + 3.2 oz + 4 oz	72	80	0	39
Weedy Check	--	--	--	--	37
LSD (0.05)		7	ns	ns	ns

Varro 0.083L = thien carbazono-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 = thien carbazono-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).