

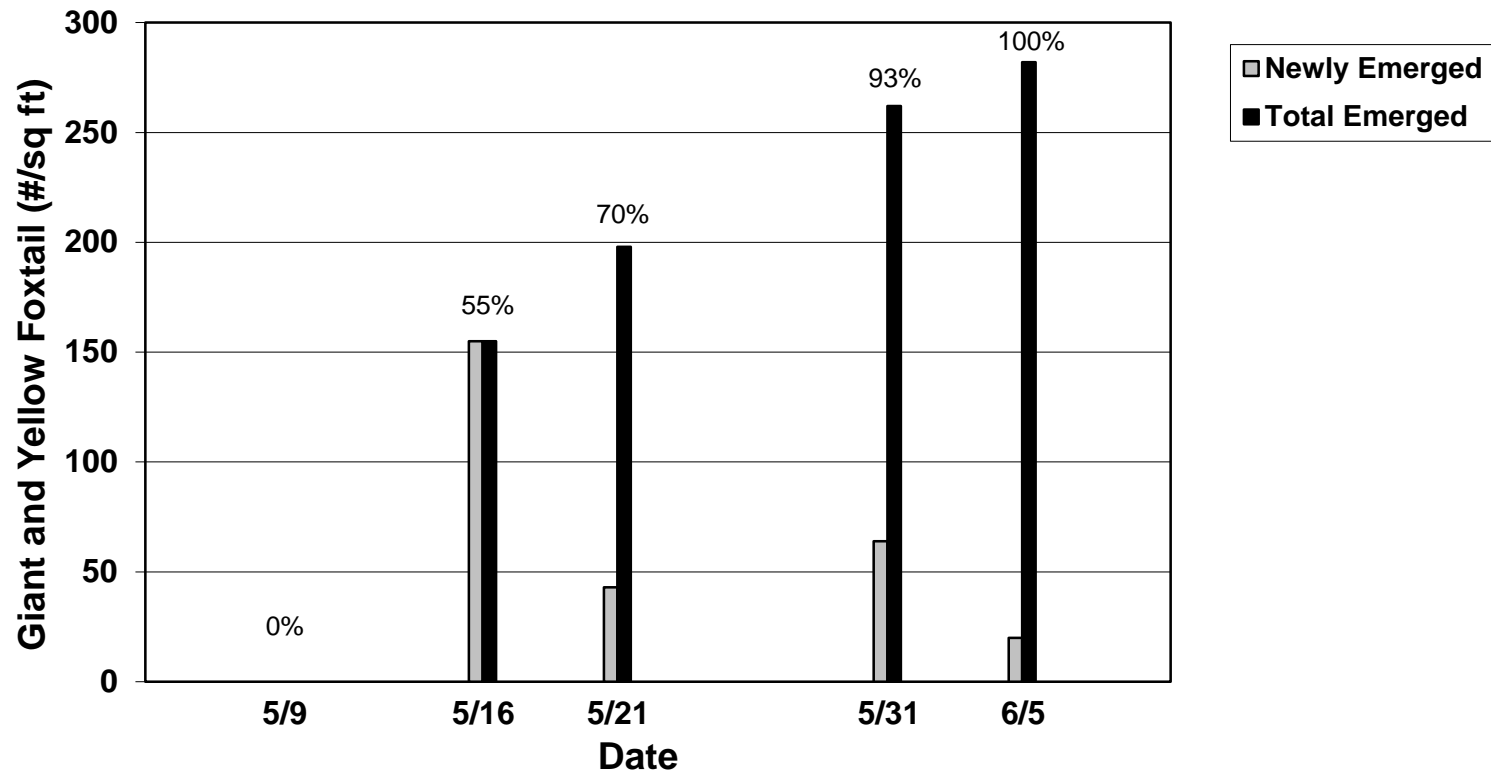
Foxtail control in spring wheat at Rosemount, MN – 2018. Durgan, Beverly R., Douglas W. Miller, Bradley Kinkaid, Ryan Mentz, and Aryane Batista. The objective of this experiment was to evaluate foxtail control and crop injury with various herbicides. The experiment was conducted at Rosemount, MN on a Waukegon silt loam soil (5% sand, 51% silt, 44% clay) with pH 5.7 and 4.7% organic matter. Soil test for P and K were 26 lbs/A and 204 lbs/A, respectively. Following soybeans, the experimental area was fall chisel plowed. On April 30, the area was tilled with a soil finisher. On May 3, the area was fertilized with 70 lbs/A N, 60 lbs/A P, and 60 lbs/A K. The area was field cultivated on May 4 and 'Linkert' hard red spring wheat was seeded with a 12 foot wide drill at 115 lbs/A. Broadleaf weeds were controlled with an application of bromoxynil + MCPA ester (0.31 lb ai/A + 0.31 lb ae/A) on May 23. 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 wide 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 5.74 X 24 foot strip in the treated area with a small plot combine. Foxtail emergence was monitored in an area adjacent to the experimental area. Emergence results are presented in the chart below. Data is summarized in the Table below.

Treatment Date	May 21
Foxtail (giant 85% and yellow 15%)	
stage	1 lf (5%), 2 lf (15%), 3 lf (30%), 4 lf (50%)
height (inch)	0.25-3
density (#/ft ²)	198
Wheat	
stage (Haun)	2.6-2.9 leaf (Zadoks Z13, Z21)
tillers	0-1
height (inch)	4-6
Air temperature (°F)	65
Relative humidity (%)	60
Dewpoint (°F)	50
Sky	90% clouds
Wind	E 5-8
Soil conditions	moist at 1.25"
Soil temperature (°F)	80
Rainfall before Application	
Week 1 (inch)	0.30
Rainfall after Application	
Week 1 (inch)	0.76
Week 2 (inch)	1.71

Results

Rimfire Max resulted in poor foxtail control and wheat yield. Foxtail control was generally good for the remaining treatments.

2018 Foxtail Emergence at Rosemount, MN



Average Total Population = 282/sq ft

Foxtail control in spring wheat at Rosemount, MN – 2018.

Durgan, Miller, Mentz, and Batista.

Treatment	Rate (Product/A)	Foxtail Control			Wheat Injury		Wheat Yield (Bu/A)
		6/5 (%)	6/20 (%)	7/11 (%)	6/5 (%)	6/20 (%)	
Axial Bold	15 oz	92	85	85	0	0	16
Varro + Preference	6.85 oz + 3.2 oz	96	93	95	0	0	21
GoldSky + Preference	1 pt + 3.2 oz	95	90	93	0	0	19
Everest 3.0 + Preference + AMS	2.0 oz + 3.2 oz + 2.35 pt	96	95	96	0	0	22
Rimfire Max + Preference + AMS	3.0 oz + 3.2 oz + 3.535 pt	70	33	13	0	0	5
Varro + Bison	6.85 oz + 1 pt	95	87	90	0	0	20
Varro + Weld	6.85 oz + 18 oz	96	93	95	0	0	20
Varro + Carnivore	6.85 oz + 1 pt	95	92	96	0	3	20
Varro + Widematch + MCPA ester	6.85 oz + 1 pt + 0.5 pt	96	92	95	0	0	20
Varro + Widematch + Affinity Tankmix	6.85 oz + 1 pt + 0.6 oz	95	93	93	0	3	20
Varro + Olympus + Carnivore	6.85 oz + 0.2 oz + 1 pt	96	95	93	0	0	19
Huskie Complete	13.7 oz	96	85	85	0	0	20
Wolverine Advanced	24.7 oz	95	87	85	0	0	19
GoldSky + MCPA ester	1 pt + 0.5 pt	93	87	93	0	0	20
PerfectMatch + 2,4-D ester LV4 + AMS	1 pt + 0.475 pt + 3.5 pt	90	70	80	0	0	16
Axial XL + Talinor + CoAct+	16.3 oz + 13.7 oz + 2.75 oz	95	82	85	0	0	18
Varro + Talinor + CoAct+	6.85 oz + 13.7 oz + 2.75 oz	88	90	92	0	0	20
Varro + Quelex + WideMatch	6.85 oz + 0.75 oz + 1 pt	96	95	95	0	0	21
TeamMate + Hat Trick + Activator 90 + AMS	1 oz + 1.5 pt + 1.6 oz + 3.5 pt	95	87	87	0	0	18
OpenSky + Activator 90 + AMS	1 pt + 3.2 oz + 3.5 pt	92	90	88	0	3	17
Weedy Check	--	--	--	--	0	0	4
LSD (0.05)		4.1	11.2	11.4	ns	ns	4.2

Axial Bold 0.685EC = pinoxaden (0.457 lb/gal) and fenoxaprop-p-ethyl (0.228 lb/gal).

Varro 0.083L = thiencarbazone-methyl.

Preference = nonionic surfactant.

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

Everest 3.0 1.75SC = flucarbazone-sodium.

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

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

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).

MCPA Ester 4E.

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

Olympus 70WG = propoxycarbazone-sodium.

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).

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

PerfectMatch 1.61SE = clopyralid (0.75 lb ae/gal) & fluroxypyr (0.75 lb ae/gal) & pyroxsulam (0.11 lb ai/gal).

2,4-D Ester LV4 (3.8 lb ae/gal).

Axial XL 0.42EC = pinoxaden and adigor adjuvant.

Talinor = bicyclopyrone & bromoxynil.

CoAct+ = adjuvant.

Quelex 20SG = halauxifen-methyl (10%) & flurasulam (10%).

TeamMate 21.5WG = pyroxsulam.

Hat Trick 2.82SE = clopyralid (0.51 lb ae/gal) & fluroxypyr (0.51 lb ae/gal) & MCPA ester (1.8 lb ae/gal).

Activator 90 = nonionic surfactant.

OpenSky 1.057SE = fluroxypyr (0.95 lb/gal) + pyroxsulam (0.107 lb/gal).