

**Foxtail control in spring wheat at Rosemount, MN – 2017.** Durgan, Beverly R., Douglas W. Miller, Bradley Kinkaid, Hugo Oliveira, and Ryan Mentz. 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 with pH 5.7 and 4.7% organic matter. Soil test for P and K were 22 lbs/A and 154 lbs/A, respectively. Following soybeans, the experimental area was fall chisel plowed. On April 21, the area was field cultivated and fertilized with 70 lbs/A N, 60 lbs/A P, and 60 lbs/A K and field cultivated a second time. The area was field cultivated again on May 4 and 'Linkert' hard red spring wheat was seeded with a 12 foot wide drill at 115 lbs/A on May 5. 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 CO<sub>2</sub> 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 not determined. Data is summarized in the Table below.

<b>Treatment Date</b>	<b>May 31</b>
Foxtail (giant and yellow mix)	
stage	1 lf (10%), 2 lf (40%), 3 lf (20%), 4 lf (25%), 5 lf (5%)
height (inch)	0.25-3
density (#/ft <sup>2</sup> )	163
Wheat	
stage (Haun)	4.0-4.4 leaf (Zadoks Z14, Z21-23)
tillers	1-3
height (inch)	6-9
Air temperature (°F)	70
Relative humidity (%)	34
Dewpoint (°F)	37
Sky	5% clouds
Wind	NW 10-15
Soil conditions	moist at 0.75"
Soil temperature (°F)	63
Rainfall before Application	
Week 1 (inch)	0.17
Rainfall after Application	
Week 1 (inch)	0.07
Week 2 (inch)	1.75

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Treatment	Rate (Product/A)	Foxtail Control			Wheat Injury	
		6/27 (%)	7/5 (%)	7/30 (%)	6/27 (%)	7/5 (%)
Varro + Bison + AMS	6.85 oz + 1 pt + 1.18 pt	90	72	80	0	0
Varro + Weld + AMS	6.85 oz + 18 oz + 1.18 pt	93	62	68	5	0
Varro + Carnivore + AMS	6.85 oz + 1 pt + 1.18 pt	93	68	75	3	0
Varro + Widematch + 2,4-D ester LV6 + AMS	6.85 oz + 1 pt + 0.34 pt + 1.18 pt	95	67	72	5	0
Varro + Widematch + MCPA ester + AMS	6.85 oz + 1 pt + 0.5 pt + 1.18 pt	93	67	73	7	0
Varro + Widematch + Affinity Tankmix + AMS	6.85 oz + 1 pt + 0.6 oz + 1.18 pt	93	68	75	2	0
Varro + Preference + AMS	6.85 oz + 3.2 oz + 2.35 pt	95	68	75	3	0
Varro + Preference	6.85 oz + 3.2 oz	92	65	68	0	0
Huskie Complete	13.7 oz	83	60	57	3	0
Huskie Complete + N-Pak AMS	13.7 oz + 1.18 pt	93	73	78	0	0
Wolverine Advanced	24.7 oz	92	82	87	0	0
A21996	15 oz	95	80	90	2	0
GoldSky + Preference	1 pt + 3.2 oz	72	57	62	0	0
PerfectMatch + 2,4-D ester LV6 + AMS	1 pt + 0.5 pt + 3.5 pt	85	56	57	5	0
PerfectMatch + Preference + AMS	1 pt + 3.2 oz + 3.5 pt	77	63	70	3	0
TeamMate + Hat Trick + Activator 90 + AMS	1 oz + 1.5 pt + 1.6 oz + 3.5 pt	85	63	70	0	0
Axial XL + Widematch + AMS	16.4 oz + 1 pt + 3.5 pt	77	73	67	0	0
Axial XL + Talinor + CoAct+	16.3 oz + 16.4 oz + 3.28 oz	85	62	67	5	0
Everest 2.0 + Widematch + Activator 90 + AMS	0.75 oz + 1 pt + 3.2 oz + 3.5 pt	95	75	83	0	0
Everest 2.0 + Preference + AMS	0.75 oz + 3.2 oz + 2.35 pt	95	82	88	10	0
Everest 2.0 + Preference + AMS	1.0 oz + 3.2 oz + 2.35 pt	95	77	87	3	0
AL-X1581ac + Preference + AMS	2.0 oz + 3.2 oz + 2.35 pt	95	83	90	2	0
AL-X1581af + Preference + AMS	2 oz + 3.2 oz + 2.35 pt	95	72	77	12	0
AL-X1581ag + Preference + AMS	2 oz + 3.2 oz + 2.35 pt	95	77	83	8	0
AL-X1581ag + Audit 1:1 + Preference + AMS	2 oz + 0.4 oz + 3.2 oz + 2.35 pt	95	77	87	15	0
AL-X2678aa + Preference + AMS	16.4 oz + 3.2 oz + 2.35 pt	95	83	88	3	0
AL-X2682aa + Preference + AMS	13.7 oz + 3.2 oz + 2.35 pt	95	80	90	3	0
AL-X2678aa + Audit 1:1 + Preference + AMS	16.4 oz + 0.4 oz + 3.2 oz + 2.35 pt	95	80	90	0	0
AL-X2682aa + Audit 1:1 + Preference + AMS	13.7 oz + 0.4 oz + 3.2 oz + 2.35 pt	95	82	87	0	0
Weedy Check	--	--	--	--	0	0
LSD (0.05)		11	15	15	7	ns

Varro 0.083L = thien carbazono-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 LV6 (5.6 lb ae/gal).

MCPA Ester 4E.

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

Preference = nonionic surfactant.

Huskie Complete 1.76L = thien carbazono-methyl (0.042 lb ai/gal) & pyrasulfotole (0.26 lb ai/gal) & bromoxynil phenol equivalent (1.

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

A21996 = experimental from Syngenta.

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

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

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.

Axial XL 0.42EC = pinoxaden and adigor adjuvant.

Talinor = bicyclopyrone & bromoxynil.

CoAct+ = adjuvant.

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

AL-X1581ac = experimental from Arysta.

AL-X1581af = experimental from Arysta.

AL-X1581ag = experimental from Arysta.

Audit 1:1 50WDG = thifensulfuron (25%) & tribenuron (25%).

AL-X2678aa = experimental from Arysta.

AL-X2682aa = experimental from Arysta.