

Foxtail control in spring wheat with Everest formulations at Rosemount, MN – 2016. Durgan, Beverly R., Douglas W. Miller, Bradley Kinkaid, Rafael Pedroso da Silva, and Maria Karis. The objective of this experiment was to evaluate foxtail control and crop injury with Everest formulations and several other products. The experiment was conducted at Rosemount, MN on a Waukegon silt loam soil with pH 6.2 and 3.8% organic matter. Soil test for P and K were 22 lbs/A and 274 lbs/A, respectively. Following soybeans, the experimental area was fall chisel plowed. On April 11, the area was field cultivated. On April 13, the area was fertilized with 70 lbs/A N, 60 lbs/A P, and 60 lbs/A K and field cultivated a second time. 'Linkert' hard red spring wheat was seeded with a 12 foot wide drill at 115 lbs/A on April 14. Bromoxynil (0.31 lb ai/A) and MCPA (0.31 lb ai/A) were broadcast postemergence over the plot area on May 25 to control broadleaf weeds. 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	May 20
Foxtail (giant and yellow mix)	
stage	1 lf (5%), 2 lf (30%), 3 lf (60%), 4 lf (5%)
height (inch)	0.25-2
density (#/ft ²)	70
Wheat	
stage (Haun)	4.8-5.2 leaf (Zadoks Z15, Z21-22)
tillers	0-2
height (inch)	6-9
Air temperature (°F)	64
Relative humidity (%)	46
Dewpoint (°F)	43
Sky	90% clouds
Wind	SE 2-6
Soil conditions	moist at 1"
Soil temperature (°F)	48
Rainfall before Application	
Week 1 (inch)	0.15
Rainfall after Application	
Week 1 (inch)	0.46
Week 2 (inch)	1.03

Results

Initial foxtail control ratings were excellent for all treatments except for Rimfire Max + Destiny. Foxtail control ratings on June 22 and July 25 were fair to good. Rimfire Max, Everest 2.0, AL-X1581ad (1.5 oz/A) + Audit, and AL-X1581ad (2.0 oz/A) treatments were on the lower range of foxtail control compared to the other treatments. Injury symptoms were minimal by the June 9 rating date with PerfectMatch causing slightly greater wheat stunting compared to the other treatments. Wheat yields did not differ significantly.

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Treatment	Rate (Product/A)	Foxtail Control			Wheat Injury		Wheat Yield (Bu/A)
		6/9 (%)	6/22 (%)	7/25 (%)	6/9 (%)	6/22 (%)	
Everest 2.0 + Preference + AMS	0.75 oz + 3.2 oz + 2.35 pt	95	73	78	0	0	43
AL-X1581ad + Preference + AMS	1.5 oz + 3.2 oz + 2.35 pt	96	85	85	2	0	42
AL-X1581ad + Audit 1:1 + Preference + AMS	1.5 oz + 0.4 oz + 3.2 oz + 2.35 pt	98	75	80	7	0	42
AL-X1581ad + Preference + AMS	2 oz + 3.2 oz + 2.35 pt	96	77	75	2	0	41
AL-X1581ad + Audit 1:1 + Preference + AMS	2 oz + 0.4 oz + 3.2 oz + 2.35 pt	98	87	82	3	0	42
Varro + Preference + AMS	6.85 oz + 3.2 oz + 2.35 pt	98	87	83	8	0	40
Axial XL	16.4 oz	99	83	83	3	0	43
GoldSky + Preference	1 pt + 3.2 oz	95	85	85	2	0	39
Huskie Complete	13.7 oz	98	87	85	0	0	41
Rimfire Max + Destiny HC	3 oz + 0.75 pt	73	72	75	5	0	40
PerfectMatch + Activator 90 + AMS	1 pt + 6.4 oz + 3.5 pt	92	83	83	13	0	37
Weedy Check	--	--	--	--	0	0	41
LSD (0.05)		6	10	ns	5	ns	ns

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

Preference = nonionic surfactant.

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

AL-X1581ad 1.75SC = experimental from Arysta.

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

Varro 0.083L = thien carbazole-methyl.

Axial XL 0.42EC = pinoxaden and adigor adjuvant.

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

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

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

Destiny HC = methylated soybean oil, high fructose corn syrup, sorbitan fatty acid esters.

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

Activator 90 = nonionic surfactant.