

Foxtail control in spring wheat with reduced rates of Rimfire Max, Axial XL, Wolverine, GoldSky, Everest 2.0 and Huskie Complete at Rosemount, MN - 2012. Durgan,

Beverly R. and Douglas W. Miller. This experiment was designed to evaluate foxtail control with Rimfire Max (propoxycarbazone & mesosulfuron), Axial XL (pinoxaden & adjuvant), Wolverine (fenoxaprop & pyrasulfotole & bromoxynil), GoldSky (pyroxsulam & fluroxypyr & florasulam) Everest 2.0 (flucarbazone-sodium & safener) and Huskie Complete (thiencarbazone-methyl & pyrosulfotole & bromoxynil) applied at the labeled rate and at a reduced rate and at two application times. The experiment was conducted at Rosemount, MN on a Waukegon silt loam soil with pH 6.2 and 4.1% organic matter. Soil test for P and K were 20 lbs/A and 196 lbs/A, respectively. Following soybeans, the experimental area was fall chisel plowed. In the spring, the area was fertilized with 65 lbs/A N, 25 lbs/A P, and 30 lbs/A K and field cultivated. On April 11, the area was field cultivated and 'RB-07' hard red spring wheat was seeded at 115 lbs/A. The experimental design was a randomized complete block with treatments in a split plot arrangement with three replications. Application date comprised whole plots and herbicide treatments, subplots. Subplot size was 10 by 24 ft. All herbicide treatments were applied with a backpack type sprayer delivering 10 gpa at 35 psi using 11001 flat fan nozzles. A broadcast application of Buctril (bromoxynil) at 1.0 pt/A (0.25 lb ai/A) was applied on May 18 to control broadleaf weeds. Application data and environmental conditions are listed below. Visual weed control, wheat injury and yield data are presented in the table below.

Treatment Date	May 14	May 25
All Grass Weeds		
stage	1-4 leaf (1 lf=10%, 2 lf=35%, 3 lf=50%, 4 lf=5%)	--
height (inch)	0.25-2 (average 0.5 to 1.25)	--
density (#/ft ²)	28	35
- Giant Foxtail (28%)		
stage	--	1-5 leaf (majority 3-4 leaf)
height (inch)	--	1-3.5 (majority 1.5-2)
density (#/ft ²)	--	94
- Yellow Foxtail (38%)		
stage	--	3-5 leaf (majority 4 leaf)
height (inch)	--	1-4 (majority 1.5-2.5)
density (#/ft ²)	--	94
- Barnyardgrass (30%)		
stage	--	1-5 leaf (majority 3 leaf)
height (inch)	--	1-2 (majority 1.5)
density (#/ft ²)	--	94
- Woolly Cupgrass (4%)		
stage	--	2-4 leaf
height (inch)	--	1-2
density (#/ft ²)	--	1.5
Wheat		
stage	3.9-4.25 leaf (majority 4.25 leaf) (Zadoks Z14, Z21-22)	5.5-6.3, jointed (Zadoks Z16, Z21-22, Z31)
tillers	1-2 (majority 1)	1-2
height (inch)	6-8	8-10
Air temperature (°F)	81	66
Relative humidity (%)	24	50
Dewpoint (°F)	41	47
Sky	5% clouds	70% clouds
Wind	SW 2-9 mph	W 0-4 mph
Soil conditions	moist at 0.5"	moist
Soil temperature (°F)	84	68

Treatment Date	May 14	May 25
Rainfall before Application		
Week 1 (inch)	0.08	1.30
Rainfall after Application		
Week 1 (inch)	0.14	0.82
Week 2 (inch)	1.16	0.02

Early injury symptoms were stunting and some yellowing. Foxtail species (giant and yellow) were the only grasses rated for control.

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Treatment	Rate (Product/A)	Foxtail				Wheat Yield (Bu/A)
		Control 7/15 (%)	Wheat Injury			
			6/6 (%)	6/13 (%)	7/15 (%)	
Application #1 (May 14)						
Rimfire Max + Destiny HC	3 oz + 12 oz	82	7	5	0	35
Rimfire Max + Destiny HC	2.25 oz + 12 oz	82	6	3	0	31
Axial XL	16.4 oz	99	0	0	0	36
Axial XL	12.2 oz	98	0	0	0	37
Wolverine	27.4 oz	98	0	0	0	37
Wolverine	20.5 oz	96	0	0	0	36
GoldSky + Preference	16 oz + 3.2	70	12	7	0	31
GoldSky + Preference	12 oz + 3.2	68	5	5	0	33
Everest 2.0 + Newton	0.75 oz + 12.8 oz	65	5	3	0	36
Everest 2.0 + Newton	0.57 oz + 12.8 oz	62	5	2	0	34
Huskie Complete	13.7 oz	88	5	2	0	35
Huskie Complete	10.3 oz	88	5	2	0	33
Weedy Check	--	--	0	0	0	40
Application #2 (May 25)						
Rimfire Max + Destiny HC	3 oz + 12 oz	75	8	3	0	35
Rimfire Max + Destiny HC	2.25 oz + 12 oz	72	6	2	0	38
Axial XL	16.4 oz	98	0	0	0	38
Axial XL	12.2 oz	98	0	2	0	38
Wolverine	27.4 oz	96	0	0	0	39
Wolverine	20.5 oz	96	0	2	0	39
GoldSky + Preference	16 oz + 3.2	72	8	3	0	36
GoldSky + Preference	12 oz + 3.2	72	23	2	0	36
Everest 2.0 + Newton	0.75 oz + 12.8 oz	77	7	3	0	37
Everest 2.0 + Newton	0.57 oz + 12.8 oz	62	5	0	0	35
Huskie Complete	13.7 oz	82	10	5	0	35
Huskie Complete	10.3 oz	85	5	2	0	33
Weedy Check	--	--	0	0	0	38
LSD (0.05)		4	10	4	ns	4

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.

Axial XL 0.42EC = pinoxaden and adigor adjuvant.

Wolverine 1.38E = fenoxaprop-p-ethyl (0.38 lb ai/gal) & pyrasulfotole (0.17 lb ai/gal) & bromoxynil octanoate (0.41 lb ai/gal) & bromoxynil heptanoate (0.42 lb ai/gal).

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

Preference = nonionic surfactant.

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

Newton = surfactant blend and ammoniated salts.

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