Foxtail control with grass and broadleaf herbicide combinations in spring wheat at

Rosemount, MN – 2011. Durgan, Beverly R. and Douglas W. Miller. The objective of this experiment was to evaluate foxtail control with several herbicides alone and in combination with broadleaf herbicides. The experiment was conducted at Rosemount, MN on a Waukegon silt loam soil. Following soybeans, the experimental area was fall chisel plowed. The area was fertilized with 50 lbs/A N and field cultivated on April 15. On April 25, the area was field cultivated and 'RB-07' hard red spring wheat was seeded at 90 lbs/A. The experimental design was a randomized complete block with three replications. Plot 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 June 6 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	June 1	June 13			
Foxtail (giant and yellow)					
stage	2-4 leaf (majority 3 leaf)	2-7 leaf (majority 4-6 leaf)			
height (inch)	0.25-2 (majority 1 to 1.5)	1-8 (majority 3-5)			
density (#/ft ²)	70	88			
Wheat					
stage	4.25-4.75 leaf	7.3			
5	(Zadoks Z14-15, Z22)	(Zadoks Z17, Z21-23)			
tillers	2	1-3			
height (inch)	6-8	10-13			
Air temperature (°F)	77	72			
Relative humidity (%)	29	31			
Dewpoint (°F)	41	not recorded			
Sky	50% clouds	75% clouds			
Wind	W 7-10	SSE 5-12			
Soil conditions	moist at 1"	moist			
Soil temperature (°F)	74	64			
Rainfall before Application					
Week 1 (inch)	0.98	1.46			
Rainfall after Application					
Week 1 (inch)	0.19	2.74			
Week 2 (inch)	1.60	0.57			

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Treatment	Rate	Foxtail Control			Wheat Injury			Wheat
		6/25	7/12	7/30	6/25	7/12	7/30	Yield
	Product/A	(%)	(%)	(%)	(%)	(%)	(%)	(Bu/A)
Application #1 (June 1)								
Everest 2.0 + Newtone	0.75 oz + 12.8 oz	90	98	77	0	0	0	23
Everest 2.0 + Supremacy + Newtone	0.75 oz + 5 oz + 12.8 oz	90	99	83	0	0	0	20
Application #2 (June 13)								
Everest 2.0 + Newtone	0.75 oz + 12.8 oz	80	99	78	0	0	0	19
Everest 2.0 + Supremacy + Newtone	0.75 oz + 5 oz + 12.8 oz	82	99	83	0	2	0	19
Everest 2.0 + Widematch + MCPA ester + Newtone	0.75 oz + 1 pt + 0.5 pt + 12.8 oz	80	99	82	0	5	0	19
Everest 2.0 + Supremacy + Newtone	1.0 oz + 5 oz + 12.8 oz	82	99	83	0	5	0	19
Raze + ARY-0546-001 + ARY-0547-001 + Newtone	7.0 oz + 0.3 oz + 0.1 oz + 12.8 oz	90	93	82	0	0	0	19
Raze + ARY-0546-001 + ARY-0547-001 + Newtone	9.0 oz + 0.3 oz + 0.1 oz + 12.8 oz	90	99	82	0	0	0	18
Axial XL + Supremacy	16.4 oz + 0.5 oz	90	98	92	0	0	0	21
Axial XL	16.4 oz	90	99	90	0	0	0	20
GoldSky + Newtone	1 pt + 12.8 oz	80	83	53	0	0	0	18
Wolverine	27.4 oz	90	99	96	0	0	0	20
Puma	0.5 pt	90	99	96	0	0	0	22
Rimfire Max + Destiny	3 oz + 1.5 pt	40	37	13	0	0	0	17
Rimfire Max + Huskie + Destiny	3 oz + 11 oz + 1.5 pt	40	40	10	0	0	0	15
Rimfire Max + Huskie + Quad 7	3 oz + 11 oz + 0.8 pt	40	43	7	0	0	0	15
636 4-Way	13.69 oz	82	70	17	0	0	0	18
A17713	8.2 oz	82	99	98	0	0	0	19
Weedy Check	-				0	0	0	14
LSD (0.05)		2	6	8	ns	1	ns	3

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

Newtone = ammonium salt, buffering agent, and surfactant blend.

Supremacy 31WG = thifensulfuron (4.5%) & tribenuron (1.5%) & fluroxypyr (25% ae).

Widematch 1.5E = clopyralid (0.75 lb ae/gal) & fluroxypyr (0.75 lb ae/gal).

MCPA Ester 4E.

Raze 2L = flucarbazone-sodium (0.322 lb ai/gal) & fluroxypyr ester (1.68 lb ae/gal).

ARY-0546-001 75WG = thifensulfuron.

ARY-0547-001 75WG = tribenuron.

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).

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)

 $\label{eq:puma_lec} Puma \ 1EC = fenoxaprop \ and \ safener.$

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

Destiny = methylated soybean oil plus emulsifiers.

Huskie 2.08EC = pryrasulfotole (0.23 lb ai/gal) & bromoxynil 1.85 lb ai/gal) & safener.

Quad 7 = ammonium salt, buffering agent, and surfactant blend.

636 4-Way = premix from Bayer CropScience.

A17713 = experimental from Syngenta.