

Foxtail control with grass and broadleaf herbicide combinations in spring wheat at Rosemount, MN – 2012. 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 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 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 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)	36	33
- Giant Foxtail (12%)		
stage	--	2-6 leaf (majority 3-4 leaf)
height (inch)	--	1-5 (majority 1.5-2)
density (#/ft ²)	--	4.25
- Yellow Foxtail (50%)		
stage	--	2-5 leaf (majority 3-4 leaf)
height (inch)	--	1-5 (majority 1.5-2.5)
density (#/ft ²)	--	17.25
- Barnyardgrass (23%)		
stage	--	2-4 leaf (majority 3 leaf)
height (inch)	--	1-3 (majority 1.5)
density (#/ft ²)	--	8.25
- Woolly Cupgrass (9%)		
stage	--	2-4 leaf
height (inch)	--	1-2
density (#/ft ²)	--	3.25
Wheat		
stage	3.9-4.25 leaf (majority 4.25 leaf) (Zadoks Z14, Z21-22)	5.9-6.5, jointed (Zadoks Z17, Z21-22, Z31)
tillers	1-2 (majority 1)	1-2
height (inch)	6-8	8-12
Air temperature (°F)	77	64
Relative humidity (%)	32	32
Dewpoint (°F)	34	46
Sky	clear	40% clouds
Wind	SW 2-8 mph	W 4-7 mph
Soil conditions	moist at 0.5"	moist
Soil temperature (°F)	80	66
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. Late injury symptoms were crop shortening. Foxtail species (giant and yellow) were the only grasses rated for control.

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Treatment	Rate (Product/A)	Foxtail Control		Wheat Injury		Wheat Yield (Bu/A)
		7/15 (%)	6/6 (%)	6/13 (%)	7/15 (%)	
Application #1 (May 14)						
Everest 2.0 + Newtone	0.75 oz + 12.8 oz	82	5	5	0	32
Everest 2.0 + Newtone	1.0 oz + 12.8 oz	77	5	5	0	33
Everest 2.0 + ARY-0546-001 + ARY-0547-001 + Newtone	0.75 oz + 0.3 oz + 0.1 oz + 12.8 oz	77	3	10	0	34
GoldSky + Newtone	1.0 pt + 12.8 oz	83	3	5	0	32
Application #2 (May 25)						
Rimfire Max + Destiny HC	3 oz + 0.75 pt	72	2	0	5	35
Rimfire Max + Huskie + Destiny HC	3 oz + 11 oz + 0.75 pt	58	5	10	0	33
Rimfire Max + Huskie + Quad 7	3 oz + 11 oz + 0.8 pt	77	3	7	0	33
Rimfire Max + Huskie + MSO	3 oz + 11 oz + 1.5 pt	73	5	10	0	34
Rimfire Max + Affinity Tankmix + Quad 7	3 oz + 0.6 oz + 0.8 pt	65	5	6	5	32
Rimfire Max + Starane + Quad 7	3 oz + 0.33 pt + 0.8 pt	57	5	5	0	32
Rimfire Max + Widematch	3 oz + 1.0 pt	58	0	0	0	31
Puma	0.5 pt	99	0	0	0	34
Puma + Bronate Advanced	0.5 pt + 0.8 pt	99	6	10	0	33
Puma + Affinity Tankmix	0.5 pt + 0.6 oz	94	5	5	0	35
Everest 2.0 + Newtone	0.75 oz + 12.8 oz	85	2	0	0	33
Everest 2.0 + Newtone	1.0 oz + 12.8 oz	80	0	0	0	33
Everest 2.0 + Supremacy + Newtone	0.75 oz + 5 oz + 12.8 oz	83	0	0	0	34
Everest 2.0 + Widematch + MCPA ester + Newtone	0.75 oz + 1 pt + 0.5 pt + 12.8 oz	73	0	0	0	32
Everest 2.0 + Supremacy + Newtone	1.0 oz + 5 oz + 12.8 oz	92	0	0	8	34
Everest 2.0 + ARY-0546-001 + ARY-0547-001 + Newtone	0.75 oz + 0.3 oz + 0.1 oz + 12.8 oz	87	5	10	0	33
Axial XL	16.4 oz	99	0	0	0	37
Axial XL + Pulsar + MCPA ester	16.4 oz + 8.3 oz + 8.6 oz	96	5	9	7	30
Axial XL + Widematch + Affinity Tankmix	16.4 oz + 1.0 pt + 0.6 oz	91	5	5	3	29
Axial XL + Affinity Tankmix	16.4 oz + 0.6 oz	99	3	5	0	36
Axial XL + Huskie	16.4 oz + 11 oz	99	0	0	2	34
Axial Star + Bronate Advanced	16.4 oz + 12.8 oz	99	5	9	0	32
GoldSky + Newtone	1.0 pt + 12.8 oz	93	5	5	0	33
GoldSky + Affinity Tankmix + Newtone	1.0 pt + 0.6 oz + 12.8 oz	85	5	10	5	32
GoldSky + Huskie + Newtone	1.0 pt + 11 oz + 12.8 oz	68	5	10	0	35
GoldSky + N-Pak AMS + Preference	1.0 pt + 3.5 pt + 6.4 oz	85	3	9	0	32
GoldSky + MCPA ester	1.0 pt + 0.75 pt	87	5	7	0	33
Huskie Complete	13.7 oz	85	2	0	0	32
Huskie Complete + N-Pak AMS	13.7 oz + 1.18 pt	87	0	0	0	32
Wolverine	27.4 oz	99	0	0	0	36
Foxtail	8.2 oz	96	2	0	0	37
ACH 120020 + Class Act NG	7 oz + 2 pt	65	0	0	0	37
ACH 120020 + Class Act NG + Interlock	7 oz + 2 pt + 4 oz	85	3	7	0	34
ACH 120020 + Affinity Tankmix + Class Act NG	7 oz + 2 pt + 0.6 oz	91	5	5	3	37
Weedy Check	--	--	0	0	0	33
LSD (0.05)		15	3	2	ns	4

Everest 2.0 3.5SC = flucarbazone-sodium & cloquintacet (safener).
 Newtone = ammonium salt, buffering agent, and surfactant blend.
 ARY-0546-001 75WG = thifensulfuron.
 ARY-0547-001 75WG = tribenuron.
 GoldSky 0.84L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 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.
 Huskie 2.08EC = pyrasulfotole (0.23 lb ai/gal) & bromoxynil 1.85 lb ai/gal) & safener.
 Quad 7 = ammonium salt, buffering agent, and surfactant blend.
 MSO = methylated soybean oil.
 Affinity Tankmix 50SG = thifensulfuron (40%) & tribenuron (10%).
 Starane 1.5 E = fluroxypyr.
 Widematch 1.5E = clopyralid (0.75 lb ae/gal) & fluroxypyr (0.75 lb ae/gal).
 Puma 1EC = fenoxaprop and safener.
 Bronate Advanced 5E = bromoxynil (2.5 lb ai/gal) & MCPA (2.5 lb ae/gal).
 Supremacy 31WG = thifensulfuron (4.5%) & tribenuron (1.5%) & fluroxypyr (25% ae).
 MCPA Ester 4E.
 Axial XL 0.42EC = pinoxaden and adigor adjuvant.
 Pulsar 1.67 L = dicamba (0.7275 lb ae/gal) + fluroxypyr (0.9455 lbs ae/gal).
 Axial Star 1.15EC = pinoxaden (0.42 lb ai/gal) & fluroxypyr (0.73 lb ae/gal).
 GoldSky 0.84L = pyroxsulam (0.11 lb ai/gal) & fluroxypyr (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).
 N-Pak AMS = 34% ammonium sulfate solution (3.4 lbs ammonium sulfate/gal).
 Preference = nonionic surfactant.
 Huskie Complete 1.76L = thiencazobone-methyl (0.042 lb ai/gal) & pyrasulfotole (0.26 lb ai/gal) & bromoxynil phenol equivalent (1.46 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).
 Foxtail 0.84EC = pinoxaden (0.42 lb ai/gal) & fenoxaprop (0.42 lb ai/gal).
 AGH 120020 = experimental from Agrilience.
 Class Act NG = ammonium sulfate and nonionic surfactant blend.
 Interlock = drift control agent.