

**Foxtail control in hard red spring wheat with Puma and Achieve plus broadleaf herbicide tank mixes at Rosemount, MN - 1999.** Durgan, Beverly R. and Douglas Miller. The purpose of this experiment was to evaluate antagonism of foxtail control and crop injury with Puma (fenoxaprop & safener) and Achieve (tralkoxydim) plus various broadleaf herbicides in tank mix combinations. The experiment was conducted at Rosemount, MN on a Waukegon silt loam soil. Following soybeans, the experimental area was fall chisel plowed. In the spring, the area was fertilized with 50 lbs/A N and 70 lbs/A K, then was disked once, field cultivated once, and harrowed twice. 'Butte 86' hard red spring wheat was seeded on April 29 at 80 lbs/A. The experimental design was a randomized complete block with three replications and plot size was 10 by 25 ft. All herbicide treatments were applied to a 6 ft strip with a backpack type sprayer delivering 10 gpa at 35 psi using 11001 flat-fan nozzles. Bromoxynil (0.25 lb ai/A) was applied postemergence to control broadleaf weeds. Visual foxtail control, visual wheat injury ratings, and yields are presented in the table. Environmental conditions, plant sizes, and densities are listed below.

Treatment Date	May 26
Target weed or crop stage	3-4 leaf foxtail

Temperature (EF)	
air	70
soil (at 2")	68
Soil Moisture	moist at 0.5"
Wind (mph)	2-5 W
Relative Humidity (%)	31
Sky	clear
Rainfall before Application	
Week 1 (inch)	1.41
Rainfall after Application	
Week 1 (inch)	0.17
Week 2 (inch)	0.86

<b>Wheat</b>		<b>Giant foxtail</b>	
leaf stage	3.75-4.25	density (#/ft <sup>2</sup> )	150-400
tillers	1-2	leaf no.	2-4
height (inch)	4-6	height (inch)	1-1.5

**Table. Foxtail control in hard red spring wheat with Puma and Achieve plus broadleaf herbicide tank mixes at Rosemount, MN - 1999 (Durgan and Miller).**

Treatment	Rate (lb ai/A)	Foxtail Control			Wheat			Yield Bu/A
		6/12	6/24	7/10	Injury			
		----- % -----			6/12	6/24	7/10	
Fenoxaprop & safener <sup>1</sup>	0.041	85	92	96	15	12	10	31
Fenoxaprop & safener + MCPA ester	0.041 + 0.5	90	90	91	10	17	10	33
Fenoxaprop & safener + 2,4-D ester	0.041 + 0.5	87	95	94	10	10	10	33
Fenoxaprop & safener + bromoxynil & MCPA <sup>2</sup>	0.041 + 0.25 & 0.25	90	95	91	10	10	10	31
Fenoxaprop & safener + bromoxynil	0.041 + 0.25	87	92	95	10	10	10	32
Fenoxaprop & safener + thifensulfuron & tribenuron <sup>3</sup> + MCPA ester	0.041 + 0.009 & 0.005 + 0.375	87	92	96	12	12	10	28
Fenoxaprop & safener + carfentrazone + MCPA ester	0.041 + 0.008 + 0.375	87	95	95	10	12	10	31
Tralkoxydim + surf <sup>4</sup>	0.18 + 1.0%	57	68	60	30	32	10	21
Tralkoxydim + MCPA ester + surf	0.18 + 0.5 + 1.0%	78	82	70	33	33	10	24
Tralkoxydim + 2,4-D ester + surf	0.18 + 0.5 + 1.0%	83	90	92	20	20	10	31
Tralkoxydim + bromoxynil & MCPA <sup>2</sup> + surf	0.18 + 0.25 & 0.25 + 1.0%	80	83	82	22	23	10	26
Tralkoxydim + bromoxynil + surf	0.18 + 0.25 + 1.0%	63	75	73	32	32	10	17
Tralkoxydim + thifensulfuron & tribenuron + MCPA ester + surf	0.18 + 0.009 & 0.005 + 0.375 + 1.0%	60	60	50	37	40	10	15
Tralkoxydim + carfentrazone + MCPA ester + surf	0.18 + 0.008 + 0.375 + 1.0%	73	78	73	27	23	10	20
Weedy check		--	--	--	0	0	0	26
Weedy check		--	--	--	0	0	0	26
Weedy check		--	--	--	0	0	0	25
Weedy check		--	--	--	0	0	0	26
LSD (P=.05)		12	9	12	8	7	1	4

<sup>1</sup> Puma.

<sup>2</sup> Premix = Bronate 4E.

<sup>3</sup> Premix = Harmony Extra 75DF.

<sup>4</sup> surf = TF8035 crop oil concentrate = Supercharge.