

Foxtail control in hard red spring wheat with Puma and Achieve plus broadleaf herbicide tank mixes at Rosemount, MN - 2000. 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 K. The field was disked once, field cultivated once, and harrowed twice. 'Butte 86' hard red spring wheat was seeded on April 25 at 85 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 pt/A) was broadcast on May 15 to control broadleaf weeds. Visual weed control ratings, wheat injury ratings, and yields are presented in the tables. Environmental conditions and plant sizes are listed below.

Treatment Date	May 25
Target weed or crop stage	3-4 leaf foxtail

Temperature (°F)	
air	64
soil (at 2")	66
Soil Moisture	moist at 0.75"
Wind (mph)	0-5 WNW
Relative Humidity (%)	46
Sky	5% clouds
Rainfall before Application	
Week 1 (inch)	1.57
Rainfall after Application	
Week 1 (inch)	1.44
Week 2 (inch)	2.21

Wheat		Giant foxtail	
leaf stage	4.5	density (#/ft ²)	7
tillers	1-2	leaf no.	2-4
height (inch)	8-10	height (inch)	0.5-2

Table. Foxtail control in hard red spring wheat with Puma and Achieve plus broadleaf herbicide tank mixes at Rosemount, MN - 2000 (Durgan and Miller).

Treatment	Rate (lb ai/A)	Foxtail Control		Wheat		Yield Bu/A
		6/15	%	Injury		
				6/8	6/15	
Fenoxaprop & safener ¹	0.041	95		0	0	50
Fenoxaprop & safener + MCPA ester	0.041 + 0.5	95		0	8	51
Fenoxaprop & safener + 2,4-D ester	0.041 + 0.5	93		0	0	54
Fenoxaprop & safener + bromoxynil & MCPA ²	0.041 + 0.25 & 0.25	95		0	0	53
Fenoxaprop & safener + bromoxynil	0.041 + 0.25	95		0	2	50
Fenoxaprop & safener + thifensulfuron & tribenuron ³ + MCPA ester	0.041 + 0.009 & 0.005 + 0.375	95		0	0	48
Fenoxaprop & safener + carfentrazone + MCPA ester	0.041 + 0.008 + 0.375	95		0	0	49
Tralkoxydim + surf ⁴	0.18 + 1.0%	95		0	3	53
Tralkoxydim + MCPA ester + surf	0.18 + 0.5 + 1.0%	95		0	3	49
Tralkoxydim + 2,4-D ester + surf	0.18 + 0.5 + 1.0%	95		0	3	50
Tralkoxydim + bromoxynil & MCPA ² + surf	0.18 + 0.25 & 0.25 + 1.0%	95		2	2	48
Tralkoxydim + bromoxynil + surf	0.18 + 0.25 + 1.0%	95		3	0	47
Tralkoxydim + thifensulfuron & tribenuron + MCPA ester + surf	0.18 + 0.009 & 0.005 + 0.375 + 1.0%	93		0	7	46
Tralkoxydim + carfentrazone + MCPA ester + surf	0.18 + 0.008 + 0.375 + 1.0%	95		0	2	51
Weedy check		--		0	0	51
Weedy check		--		0	0	47
Weedy check		--		0	0	50
Weedy check		--		0	0	50
LSD (P=.05)		ns		2	ns	ns

¹ Puma.

² Premix = Bronate 4E.

³ Premix = Harmony Extra 75DF.

⁴ surf = TF8035 crop oil concentrate = Supercharge.