

Foxtail control in hard red spring wheat with Discover alone and in tank mixes at Rosemount, MN - 2002. Durgan, Beverly R., Douglas Miller, and Krishona Martinson. The purpose of this experiment was to evaluate foxtail control and crop injury with Discover (clodinafop & safener) alone and in tank mix with various broadleaf herbicides. 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 field cultivated twice and harrowed twice. '2375' hard red spring wheat was seeded on May 3 at 85 lbs/A. The experimental design was a randomized complete block with three replications and plot size was 10 by 24 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 June 12 to control broadleaf weeds. Visual weed control ratings, wheat injury ratings, and yields are presented in the table. Environmental conditions and plant sizes are listed below.

Treatment Date	June 12
Target weed or crop stage	3-5 leaf foxtail

Temperature (° F)	
air	65
soil (at 2")	62
Soil Moisture	moist
Wind (mph)	0-5 E
Relative Humidity (%)	72
Dewpoint (%)	55
Sky	90% clouds

Rainfall before Application	
Week 1 (inch)	1.64
Rainfall after Application	
Week 1 (inch)	1.03
Week 2 (inch)	4.73

Wheat	
leaf stage	6.75
tillers	2
height (inch)	12-15

Giant and Yellow foxtail	
density (#/ft ²)	10
leaf no.	2-6 (most 4-5)
height (inch)	1-5

Table. Foxtail control in hard red spring wheat with Discover alone and in tank mixes at Rosemount, MN - 2002 (Durgan, Miller, and Martinson.)

Treatment	Rate (lb ai/A)	Foxtail Control		Wheat			Yield (bu/A)
		6/27	7/31	Injury			
		----- % -----		6/20	6/27	7/31	
Clodinafop & safener + surf ¹	0.05 + 0.08%	92	99	0	2	0	38
Clodinafop & safener + surf	0.0625 + 0.1%	92	99	2	5	0	37
Clodinafop & safener + MCPA ester + surf	0.05 + 0.375 + 0.08%	92	99	5	5	0	36
Clodinafop & safener + MCPA ester + surf	0.0625 + 0.375 + 0.1%	90	99	0	0	0	36
Clodinafop & safener + dicamba ² + surf	0.05 + 0.094 + 0.08%	92	91	2	3	5	36
Clodinafop & safener + dicamba ² + surf	0.0625 + 0.094 + 0.1%	95	91	2	7	5	37
Clodinafop & safener + clopyralid & MCPA ester ³ + surf	0.05 + 0.09 & 0.5 + 0.08%	90	99	2	0	0	35
Clodinafop & safener + clopyralid & MCPA ester + surf	0.0625 + 0.09 & 0.5 + 0.1%	90	98	0	0	0	35
Clodinafop & safener + dicamba ⁴ + surf	0.05 + 0.094 + 0.08%	88	98	3	7	2	37
Clodinafop & safener + dicamba ⁴ + surf	0.0625 + 0.094 + 0.1%	90	91	2	8	5	39
Clodinafop & safener + MCPA amine + surf	0.05 + 0.375 + 0.08%	90	99	0	0	0	37
Clodinafop & safener + MCPA amine + surf	0.0625 + 0.375 + 0.1%	90	99	5	0	0	37
Clodinafop & safener + prosulfuron + surf	0.05 + 0.018 + 0.08%	92	93	3	2	0	37
Clodinafop & safener + prosulfuron + surf	0.0625 + 0.018 + 0.1%	87	99	0	2	0	37
Clodinafop & safener + bromoxynil & MCPA ester ⁵ + surf	0.05 + 0.25 & 0.25 + 0.08%	90	99	3	3	0	35
Clodinafop & safener + bromoxynil & MCPA ester + surf	0.0625 + 0.25 & 0.25 + 0.1%	93	99	0	5	0	37
Clodinafop & safener + 2,4-D amine + surf	0.05 + 0.375 + 0.08%	87	99	2	3	0	40
Clodinafop & safener + 2,4-D amine + surf	0.0625 + 0.375 + 0.1%	92	99	2	0	0	35
Clodinafop & safener + thifensulfuron + MCPA ester + surf	0.05 + 0.028 + 0.375 + 0.08%	88	87	3	2	3	37
Clodinafop & safener + thifensulfuron + MCPA ester + surf	0.0625 + 0.028 + 0.375 + 0.1%	88	87	2	5	0	36
Clodinafop & safener + thifensulfuron & tribenuron ⁶ MCPA ester + surf	0.05 + 0.014 & 0.07 + 0.375 + 0.08%	93	87	3	7	3	34
Clodinafop & safener + thifensulfuron & tribenuron MCPA ester + surf	0.0625 + 0.014 & 0.07 + 0.375 + 0.1%	90	87	2	2	3	35
Fenoxaprop & safener + thifensulfuron + MCPA ester	0.08 + 0.023 + 0.375	93	99	5	2	0	35
Weedy check		--	0	0	0	53	38
LSD (P=0.05)		ns	2	4	ns	3	ns

¹ surf = DSV Adjuvant.

² Clarity 4L.

³ Premix= Curtail M 2.77E.

⁴ Banvel 4L.

⁵ Premix = Bronate Advanced 5E.

⁶ Premix = Harmony Extra 75DF.