Foxtail control in hard red spring wheat with reduced rates at Rosemount, MN - 2006. Durgan, Beverly R.,Krishona Martinson, and Douglas Miller. This experiment was designed to evaluate foxtail control with Puma (fenoxaprop & safener), Axial (pinoxaden) Discover (clodinaop and cloquintocet), and Rimfire (propoxycarbazone & mesosulfuron) applied at the labeled rate and at two reduced rates and at two application times. 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. 'Alsen' hard red spring wheat was seeded on May 10 at 85 lbs/A. The experimental design was a randomized complete block with treatments in a split plot arrangement with three replications. Application date comprised whole plots and herbicide treatments, subplots. Subplot 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. Application data and environmental conditions are listed below. Crop injury and foxtail control were rated visually. Wheat and foxtail biomass data were collected from 1 ft^2 areas in each plot. Yields were measured. All data are presented in the table below.

Treatment Date	June 3	June 12
Foxtail		
stage	2-5 leaf	3-7
height (inch)	--	1-6
density (#/ft^2)	3	5.3
Wheat		
stage	4.5 leaf	--
tillers	2	--
height (inch)	6-8	7-10
Air temperature (°F)	79	70
Dewpoint (°F)	44	38
Relative humidity (%)	28	31
Sky	clear	25% clouds
Wind	E 2-9	NE 0-5
Soil conditions	dry	moist at 0.75”
Rainfall before Application		
Week 1 (inch)	0.13	0.5
Rainfall after Application		
Week 1 (inch)	0.5	0.28
Week 2 (inch)	0.28	0.71

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		Foxtail Control		Foxtail	Wheat	Wheat Injury			Wheat
Treatment	Rate	7/11	7/27	Biomass	Biomass	6/21	7/11	7/27	Yield
	Product/A	(%)	(%)	(g/ft2)	(g/ft2)	(%)	(%)	(%)	(Bu/A)
Application #1 (June 3)									
Puma	0.5 pt	99	99	0	91	0	0	0	46
Puma	0.37 pt	99	95	1	81	2	0	0	39
Puma	0.25 pt	99	92	0	111	2	0	0	40
Axial + Adigor Adjuvant	8.2 oz + 9.6 oz	99	95	0	105	0	0	0	48
Axial + Adigor Adjuvant	6.2 oz + 9.6 oz	99	85	1	84	0	0	0	38
Axial + Adigor Adjuvant	4.1 oz + 9.6 oz	99	92	0	112	0	0	0	44
Discover NG	12.8 oz	99	96	0	127	0	0	0	50
Discover NG	9.6 oz	99	96	0	103	0	0	0	46
Discover NG	6.4 oz	99	90	0	91	0	0	0	43
Rimfire + Destiny	1.75 oz + 1.5 pt	99	80	2	76	3	2	0	33
Rimfire + Destiny	1.31 oz + 1.5 pt	99	73	2	91	3	2	0	40
Rimfire + Destiny	0.88 oz + 1.5 pt	99	83	4	86	0	2	0	37
Weedy Check	--	--	--	8	88	0	0	0	44
Application #2 (June 12)									
Puma	0.5 pt	99	95	0	99	3	2	0	43
Puma	0.37 pt	99	96	0	106	0	0	0	47
Puma	0.25 pt	99	90	1	97	0	2	0	45
Axial + Adigor Adjuvant	8.2 oz + 9.6 oz	99	88	0	72	2	2	0	44
Axial + Adigor Adjuvant	6.2 oz + 9.6 oz	99	80	0	66	5	2	0	36
Axial + Adigor Adjuvant	4.1 oz + 9.6 oz	99	94	0	89	0	0	0	54
Discover NG	12.8 oz	99	96	0	116	2	0	0	55
Discover NG	9.6 oz	99	88	0	85	0	0	0	41
Discover NG	6.4 oz	99	93	0	68	0	2	0	46
Rimfire + Destiny	1.75 oz + 1.5 pt	99	88	1	95	3	3	3	44
Rimfire + Destiny	1.31 oz + 1.5 pt	99	80	4	76	2	2	3	46
Rimfire + Destiny	0.88 oz + 1.5 pt	99	68	0	86	3	0	0	41
Weedy Check	--	--	--	7	81	1.7	0	0	42
LSD (0.05)		ns	13	4	ns	ns	ns	1	ns

Puma 1EC = fenoxaprop and safener

Axial 0.83 EC = pinoxaden.

Adigor Adjuvant = emulsifable oil adjuvant from Syngenta.

Discover NG 0.5 EC = clodinafop and cloquintocet (safener).

Rimfire 10.2 WDG = propoxycarbazone (8.14%) & mesosulfuron (2.03%).

Destiny = methylated soybean oil and nonionic surfactant blend.