

Foxtail control in hard red spring wheat at Rosemount, MN - 1997. Durgan, Beverly R., Eric Spandl, and Douglas Miller. The purpose of this experiment was to evaluate antagonism of foxtail control and crop injury with HOE1102 (fenoxaprop and safener), tralkoxydim, and propanil by F8426/MCPA and Harmony Extra 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 17 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. 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 27
Target weed or crop stage	Tillering wheat
Temperature (°F)	
air	55
soil (at 2")	54
Soil Moisture	moist at 0.5"
Wind (mph)	3-5 E
Sky	cloudy
Relative Humidity (%)	31
Rainfall before Application	
Week 1 (inch)	0.72
Rainfall after Application	
Week 1 (inch)	0.18
Week 2 (inch)	0.57

Wheat

leaf stage	5.5 - 6.25
tillers	2-4
height (inch)	7-9

Giant foxtail

density (#/ft ²)	9.4
leaf no.	1-5
height (inch)	0.5-2

Common lambsquarters

density (#/ft ²)	6.4
leaf no.	2-14
height (inch)	1-3

Eastern black nightshade

density (#/ft ²)	0.4
leaf no.	2-3
height (inch)	0.5

Pennsylvania smartweed

density (#/ft ²)	0.9
leaf no.	3-5
height (inch)	1-2

Prostrate Knotweed

density (#/ft ²)	0.3
height (inch)	1-2

Redroot pigweed

density (#/ft ²)	68
leaf no.	1-4
height (inch)	0.25-4

Velvetleaf

density (#/ft ²)	2.7
leaf no.	1-2
height (inch)	0.75-1

Wild buckwheat

density (#/ft ²)	0.8
leaf no.	1-3
height (inch)	1-2

Wallflower mustard

density (#/ft ²)	0.6
leaf no.	0.5-2 (dia)
height (inch)	0.5-1

Wild mustard

density (#/ft ²)	0.1
leaf no.	4-8 (dia)

Table. Foxtail control in hard red spring wheat at Rosemount, MN - 1997 (Durgan, Spandl, and Miller).

Treatment	Rate (lb/A)	Foxtail Control			Wheat Injury			Wheat Yield (Bu/A)
		6/4	6/18	7/24	6/4	6/18	7/24	
		----- (%) -----						
Postemergence (May 27)								
Carfentrazone-ethyl & MCPA ¹ + HOE 1133 + 28%N ²	0.023 & 0.375 + 0.104 + 2.0%	88	90	80	28	12	10	37
Carfentrazone-ethyl & MCPA + tralkoxydim + TF8035 COC + 28%N	0.023 & 0.375 + 0.18 + 0.5% + 2.0%	78	70	45	40	10	10	41
Carfentrazone-ethyl & MCPA + HOE 1133 + 28%N	0.031 & 0.5 + 0.104 + 2.0%	90	85	90	23	13	8	42
Carfentrazone-ethyl & MCPA + tralkoxydim + TF8035 COC + 28%N	0.031 & 0.5 + 0.18 + 0.5% + 2.0%	82	70	68	38	20	18	37
Carfentrazone-ethyl & MCPA + thifensulfuron & tribenuron ³ + HOE 1133 + 28%N	0.023 & 0.375 + 0.006 & 0.003 + 0.104 + 2.0%	88	90	83	30	15	12	40
Carfentrazone-ethyl & MCPA + thifensulfuron & tribenuron + tralkoxydim + TF8035 COC + 28%N	0.023 & 0.375 + 0.006 & 0.003 + 0.18 + 0.5% + 2.0%	68	73	32	45	20	17	35
Carfentrazone-ethyl & MCPA + propanil + 28%N	0.023 & 0.375 + 1.0 + 2.0%	63	63	43	15	10	7	45
HOE 1133	0.104	93	95	95	0	5	3	47
Tralkoxydim + TF8035 COC	0.18 + 0.5%	90	73	77	7	3	7	39
Propanil + MCPA ester + COC	1.0 + 0.25 + 1.25%	73	68	67	8	8	2	41
Diclofop + COC ⁴	0.75 + 2.5%	88	90	89	7	7	2	46
Fenoxaprop & 2,4-D & MCPA ⁵	0.06 & 0.07 & 0.22	88	92	90	13	15	13	39
Fenoxaprop & 2,4-D & MCPA	0.07 & 0.09 & 0.26	90	95	94	17	18	10	45
Weedy check		--	--	--	0	0	0	41
Weedy check		--	--	--	0	0	0	43
Weedy check		--	--	--	0	0	0	43
LSD (0.05)		7	12	20	8	6	7	6

¹ Premix = Affinity MCPA 66DF.

² 28%N = 28% UAN fertilizer solution.

³ Premix = Harmony Extra 75DF.

⁴ COC = Class Crop Oil Concentrate.

⁵ Premix = Tiller 2.77E.