Broadleaf weed control in hard red spring wheat with carfentrazone-ethyl at Rosemount, MN - 2000. Durgan, Beverly R. and Douglas Miller. The purpose of this experiment was to evaluate broadleaf weed control and crop injury with carfentrazone-ethyl and various tank mixes in hard red spring wheat. 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. 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 29
Target weed or crop stage	3-4 leaf wheat
Temperature (EF)	
air	54
soil (at 2")	52
Soil Moisture	moist
Wind (mph)	8-12 S
Relative Humidity (%)	78
Dewpoint (%)	51
Sky	cloudy
Rainfall before Application	
Week 1 (inch)	0.73
Rainfall after Application	
Week 1 (inch)	1.85
Week 2 (inch)	1.18

Wheat	
leaf stage	3.75-4.5
tillers	1-2
height (inch)	4-6
Common Lambsquarters	
height (inch)	1-6
density (3/ft^2)	7
Eastern black nightshade	
height (inch)	0.5-1
density (3/ft^2)	1
Pennsylvania smartweed	
height (inch)	2-4
density (3/ft^2)	0.2
Redroot pigweed	
height (inch)	0.5-3
density (3/ft^2)	26

Table. Broadleaf weed control in hard red spring wheat with Aim at Rosemount, MN - 2000 (Durgan and Miller).

Treatment	Rate	Weed control (6/20)				Wheat Injury		Yield
		Ebns	Pesw	Rrpw	Wimu	6/5	6/20	
	(lb ai/A)	%						Bu/A
Carfentrazone-ethyl + NIS[1] + 28%N[2]	0.008 + 0.25% + 4%	82	82	82	82	0	0	49
Carfentrazone-ethyl + NIS + 28%N + 2,4-D amine	0.008 + 0.25% + 4% + 0.375	90	90	90	90	8	0	44
Carfentrazone-ethyl + NIS + AMS[3] + 2,4-D amine	0.008 + 0.25% + 2.0 + 0.375	93	93	93	93	15	0	45
Carfentrazone-ethyl + NIS + 28%N + MCPA amine	0.008 + 0.25% + 4% + 0.375	80	80	80	80	7	0	46
Carfentrazone-ethyl + NIS + AMS + MCPA amine	0.008 + 0.25% + 2.0 + 0.375	95	95	95	88	12	0	42
Carfentrazone-ethyl + NIS + 28%N + 2,4-D ester	0.008 + 0.25% + 4% + 0.25	85	85	85	85	5	0	48
Carfentrazone-ethyl + NIS + 28%N + dicamba + 2,4-D amine	0.008 + 0.25% + 4% + 0.063 + 0.25	95	95	95	95	17	0	48
Carfentrazone-ethyl + NIS + 28%N + dicamba + 2,4-D amine	0.008 + 0.25% + 4% + 0.094 + 0.25	95	95	95	95	17	0	45
Carfentrazone-ethyl + NIS + 28%N + fluroxypyr	0.008 + 0.25% + 4% + 0.125	85	82	85	85	0	0	48
Carfentrazone-ethyl + NIS + 28%N + fluroxypyr	0.008 + 0.25% + 4% + 0.094	83	75	83	83	3	0	45
Carfentrazone-ethyl + NIS + 28%N + fluroxypyr & 2,4-D ester [4]	0.008 + 0.25% + 4% + 0.09 & 0.38	88	88	88	88	5	0	45
Carfentrazone-ethyl + NIS + 28%N + fluroxypyr & MCPA ester [5]	0.008 + 0.25% + 4% + 0.09 & 0.35	95	95	95	95	7	0	45
Carfentrazone-ethyl + NIS + 28%N + thifensulfuron	0.008 + 0.25% + 4% + 0.014	93	93	93	93	3	0	46
Carfentrazone-ethyl + NIS + 28%N+ thifensulfuron & tribenuron [6]	0.008 + 0.25% +4% 0.009 & 0.005	90	90	90	90	3	0	47
Carfentrazone-ethyl + NIS + 28%N + MCPA ester	0.008 + 0.25% + 4% + 0.25	90	90	90	90	8	0	44
Thifensulfuron + MCPA ester + NIS	0.014 + 0.25 + 0.25%	90	90	90	90	2	0	43
Bromoxynil & MCPA[7]	0.25 & 0.25	88	88	88	88	0	0	43
Thifensulfuron & tribenurom + MCPA ester + NIS	0.009 & 0.005 + 0.25 + 0.25%	90	92	90	85	3	0	42
Fluroxypyr & 2,4-D ester	0.09 & 0.38	88	88	88	88	3	0	44
Fluroxypyr & MCPA ester	0.09 & 0.35	88	88	88	88	2	0	48
Weedy check		--	--	--	--	0	0	48
Weedy check		--	--	--	--	0	0	44
Weedy check		--	--	--	--	0	0	42
Weedy check		--	--	--	--	0	0	44
LSD (P=.05)		ns	ns	ns	ns	5	ns	ns

[1] NIS = Class Preference nonionic surfactant.
[2] 28%N = 28% UAN fertilizer solution.
[3] AMS = Spray grade ammonium sulfate. Rate is pounds product per acre.
[4] Premix =.Starane + Salvo 3.75E.
[5] Premix =.Starane + Sword 3.55E
[6] Premix = Harmony Extra 75DF.
[7] Premix = Bronate 4E