

Broadleaf weed control and wheat tolerance to carfentrazone-ethyl at Crookston, MN - 1999. Durgan, Beverly R. and Jim Cameron. This experiment was designed to evaluate broadleaf weed control and wheat injury with carfentrazone-ethyl. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, the experimental area received 100 lb/A of N and was fall plowed. In the spring the experimental area was disked and harrowed. '2375' hard red spring wheat was seeded on May 1 at 1.75 Bu/A. All herbicide treatments were applied with a backpack type sprayer delivering 10 gpa at 30 psi using 80015 flat fan nozzles. The experimental design was a randomized complete block with three replications and plot size was 10 by 24 ft. Application date and environmental conditions are listed below. Crop injury and weed control were visually rated on June 11 and July 9. Wheat yields were measured. All data are presented in the table below.

Treatment Date	June 2
Target weed stage	2-4 inch weeds
Crop stage	3 leaf
Soil Moisture	moist
Sky	clear
Wind (mph)	0-5 SE
Temperature (°F)	62
Rainfall before Application	
Week 1 (inch)	0.64
Rainfall after Application	
Week 1 (inch)	0.42
Week 2 (inch)	1.06

Table. Broadleaf weed control in hard red spring wheat with carfentrazone-ethyl at Crookston, MN - 1999 (Durgan and Cameron).

Treatment	Rate (lb ai/A)	Weed Control				Wheat		Yield Bu/A
		Wibu		Wimu		Injury		
		6/11	7/9	6/11	7/9	6/11	7/9	
Carfentrazone-ethyl + NIS ¹ + 28%N ²	0.008 + 0.25% + 4%	27	27	37	37	0	3	52
Carfentrazone-ethyl + NIS + 28%N + MCPA ester	0.008 + 0.25% + 4% + 0.75	77	80	83	87	0	7	52
Carfentrazone-ethyl + NIS + 28%N + MCPA ester	0.008 + 0.25% + 4% + 0.5	58	53	80	80	0	2	52
Carfentrazone-ethyl + NIS + 28%N + dicamba	0.008 + 0.25% + 4% + 0.094	72	72	72	78	23	10	50
Carfentrazone-ethyl + NIS + 28%N + dicamba + MCPA ester	0.008 + 0.25% + 4% + 0.094 + 0.375	65	60	75	72	20	12	53
Carfentrazone-ethyl + NIS + fluroxypyr + MCPA ester	0.008 + 0.25% + 0.125 + 0.5	88	87	90	90	10	10	53
Carfentrazone-ethyl + NIS + fluroxypyr + MCPA ester	0.008 + 0.25% + 0.06 + 0.25	87	83	90	85	7	7	51
Carfentrazone-ethyl + NIS + fluroxypyr + 2,4-D ester	0.008 + 0.25% + 0.125 + 0.5	80	78	88	85	12	10	52
Carfentrazone-ethyl + NIS + fluroxypyr + 2,4-D ester	0.008 + 0.25% + 0.06 + 0.25	80	80	90	87	3	3	49
Fluroxypyr + MCPA ester	0.125 + 0.5	78	77	87	87	0	0	51
Fluroxypyr + 2,4-D ester	0.125 + 0.5	67	60	73	67	0	0	51
Bromoxynil	0.25	90	87	92	87	3	3	35
Dicamba + MCPA ester	0.094 + 0.375	83	83	85	83	15	10	53
Thifensulfuron & tribenuron + MCPA ester + NIS	0.009 & 0.005 + 0.375 + 0.25%	75	70	83	77	7	3	51
Bromoxynil & MCPA ⁴	0.25 & 0.25	85	80	90	87	0	0	51
Weedy check		--	--	--	--	0	0	40
LSD (P=.05)		24	21	14	16	6	6	6

¹ NIS = Class Preference nonionic surfactant.

² 28%N = 28% UAN fertilizer solution.

³ Premix = Harmony Extra 75DF.

⁴ Premix = Bronate 4E.