

Broadleaf weed control and wheat tolerance to Aim at Crookston, MN - 2000.

Durgan, Beverly R. and Jim Cameron. This experiment was designed to evaluate broadleaf weed control and wheat injury with Aim (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 April 29 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. Wild buckwheat and wild mustard populations were 5 and 11 plants per square foot, respectively. Crop injury was visually rated on June 9 and June 27 and weed control on June 27.. Wheat yields were measured. All data are presented in the table below.

Treatment Date	May 31
Target weed or crop stage	2-4" weeds
Rainfall before Application	
Week 1 (inch)	0.39
Rainfall after Application	
Week 1 (inch)	0.05
Week 2 (inch)	2.64

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

Treatment	Rate (lb ai/A)	Weed control (6/27)		Wheat		Yield Bu/A
		Wibu	Wimu	Injury		
		%		6/9	6/27	
Carfentrazone-ethyl + NIS ¹ + 28%N ² + 2,4-D amine	0.008 + 0.25% + 4% + 0.375	99	99	0	0	48
Carfentrazone-ethyl + NIS + AMS ³ + 2,4-D amine	0.008 + 0.25% + 2.0 + 0.375	99	99	3	8	48
Carfentrazone-ethyl + NIS + 28%N + MCPA amine	0.008 + 0.25% + 4% + 0.375	99	99	2	3	52
Carfentrazone-ethyl + NIS + AMS + MCPA amine	0.008 + 0.25% + 2.0 + 0.375	99	99	3	0	51
Carfentrazone-ethyl + NIS + 28%N + 2,4-D ester	0.008 + 0.25% + 4% + 0.25	99	99	3	0	47
Carfentrazone-ethyl + NIS + 28%N + dicamba + 2,4-D amine	0.008 + 0.25% + 4% + 0.063 + 0.25	99	99	13	22	48
Carfentrazone-ethyl + NIS + 28%N + dicamba + 2,4-D amine	0.008 + 0.25% + 4% + 0.094 + 0.25	99	99	12	22	49
Carfentrazone-ethyl + NIS + 28%N + fluroxypyr	0.008 + 0.25% + 4% + 0.125	99	99	3	5	52
Carfentrazone-ethyl + NIS + 28%N + fluroxypyr	0.008 + 0.25% + 4% + 0.094	99	99	0	3	53
Carfentrazone-ethyl + NIS + 28%N + fluroxypyr & 2,4-D ester ⁴	0.008 + 0.25% + 4% + 0.09 & 0.38	99	99	5	5	49
Carfentrazone-ethyl + NIS + 28%N + fluroxypyr & MCPA ester ⁵	0.008 + 0.25% + 4% + 0.09 & 0.35	99	99	5	0	46
Carfentrazone-ethyl + NIS + 28%N + thifensulfuron	0.008 + 0.25% + 4% + 0.014	99	99	3	2	44
Carfentrazone-ethyl + NIS + 28%N+ thifensulfuron & tribenuron ⁶	0.008 + 0.25% + 4% 0.009 & 0.005	99	99	8	7	47
Carfentrazone-ethyl + NIS + 28%N + MCPA ester	0.008 + 0.25% + 4% + 0.25	99	99	3	0	51
Thifensulfuron + MCPA ester + NIS	0.014 + 0.25 + 0.25%	99	99	7	5	47
Bromoxynil & MCPA ⁷	0.25 & 0.25	99	99	3	5	50
Thifensulfuron & tribenuron + MCPA ester + NIS	0.009 & 0.005 + 0.25 + 0.25%	99	99	7	5	48
Fluroxypyr & 2,4-D ester	0.09 & 0.38	99	99	5	5	47
Fluroxypyr & MCPA ester	0.09 & 0.35	99	99	2	2	49
Weedy check		--	--	0	0	43
LSD (P=.05)		ns	ns	5	6	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.