

Broadleaf weed control in spring wheat at Crookston, MN - 2003. Durgan, Beverly R., Jim Cameron, and Douglas Miller. This experiment was designed to evaluate broadleaf herbicides for weed control and wheat injury . 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. Weed species present were Wild Buckwheat (POLCO) and Wild Mustard (SINAR). Crop injury and weed control were visually rated and yields were measured. Data presented in the table below.

Treatment Date	June 2
Target weed or crop stage	2-4" weeds
Air Temperature (° F)	69
Rainfall before Application	
Week 1 (inch)	0.43
Rainfall after Application	
Week 1 (inch)	0.70
Week 2 (inch)	0.96

Table. Broadleaf weed control in spring wheat at Crookston, MN - 2003 (Durgan, Cameron, and Miller).

Treatment	Rate (lb ai/A)	Wheat Injury				Control				Wheat Yield (bu/A)
		6/6	6/12	6/18	7/1	POLCO		SINAR		
		%				6/18	7/1	6/18	7/1	
Carfentrazone-ethyl ¹ + thifensulfuron & tribenuron ² + NIS ³	0.008 + 0.0093 & 0.0047 + 0.25%	0	0	2	0	99	100	99	100	68
Carfentrazone-ethyl + 2,4-D ester + dicamba ⁴ + NIS	0.008 + 0.197 + 0.094 + 0.25%	17	13	5	3	99	99	99	98	66
Carfentrazone-ethyl + thifensulfuron + NIS	0.008 + 0.014 + 0.25%	0	3	0	0	99	100	99	100	64
Carfentrazone-ethyl + MCPA ester + NIS	0.008 + 0.25 + 0.25%	15	7	2	0	88	68	96	97	67
Carfentrazone-ethyl + 2,4-D ester + NIS	0.008 + 0.197 + 0.25%	27	17	5	0	88	97	98	100	70
Bromoxynil & MCPA ⁵	0.375 & 0.375	0	0	2	0	98	100	98	100	71
Bromoxynil & MCPA	0.25 & 0.25	0	3	2	0	99	100	99	100	67
Bromoxynil & MCPA + fluroxypyr	0.25 & 0.25 + 0.062	0	0	0	0	99	100	99	100	67
Bromoxynil & MCPA + fluroxypyr thifensulfuron + NIS	0.25 & 0.25 + 0.062 + 0.0047 + 0.25%	0	0	0	0	99	95	99	100	63
Bromoxynil & MCPA + fluroxypyr thifensulfuron	0.25 & 0.25 + 0.062 + 0.0047	0	2	0	0	99	100	99	100	65
Bromoxynil & MCPA + thifensulfuron & tribenuron + NIS	0.25 & 0.25 + 0.0093 & 0.0047 + 0.25%	3	7	2	0	99	100	99	100	64
Bromoxynil & MCPA + tribenuron NIS	0.25 & 0.25 + 0.0078 0.25%	0	3	3	0	99	100	99	100	69
Flucarbazone + NIS	0.0262 + 0.25%	0	3	3	3	67	67	90	92	69
Flucarbazone + bromoxynil + NIS	0.0262 + 0.25 + 0.25%	3	8	3	0	99	98	99	100	68
Flucarbazone + bromoxynil & MCPA ester	0.0262 + 0.25 & 0.25	3	10	2	2	99	100	99	100	68
Fluroxypyr	0.062	0	3	0	0	92	80	95	98	59
Flucarbazone + fluroxypyr + NIS	0.0262 + 0.062 + 0.25%	3	20	7	3	93	77	96	96	67
Carfentrazone-ethyl + NIS	0.008 + 0.25%	17	7	0	8	57	80	88	83	61
Flucarbazone + carfentrazone-ethyl + NIS	0.0262 + 0.008 + 0.25%	0	8	2	3	99	77	99	97	61
Flucarbazone + clopuralid & MCPA ester ⁶ + NIS	0.0262 + 0.092 & 0.51 + 0.25%	10	13	5	3	96	100	98	100	57
Thifensulfuron + 2,4-D ester + NIS	0.0187 + 0.5 + 0.25%	0	7	3	3	98	100	99	100	62
Flucarbazone + thifensulfuron + 2,4-D ester + NIS	0.0262 + 0.0187 + 0.5 + 0.25%	17	15	10	7	99	100	99	100	73
Clopuralid & MCPA ester + NIS	0.092 & 0.51 + 0.25%	0	0	2	0	99	100	99	100	61
Weedy check		0	0	0	0	--	--	--	--	58
Carfentrazone-ethyl & 2,4-D ester ⁷ + NIS	0.008 & 0.24 + 0.25%	33	13	2	0	91	80	98	100	73
Carfentrazone-ethyl & 2,4-D ester ⁷ + thifensulfuron + NIS	0.008 & 0.24 + 0.014 + 0.25%	18	5	2	0	98	100	98	100	73
2,4-D Ester ⁸	0.25	0	0	2	0	86	62	93	92	68
2,4-D Ester ⁹	0.25	0	0	2	0	20	75	46	92	66
2,4-D Ester ⁹	0.5	0	3	2	0	87	73	93	98	72
2,4-D Ester ⁹	0.5	0	10	0	0	27	77	40	96	72
LSD (P=0.05)		9	12	4	ns	14	16	16	8	ns

¹ Aim 2E.

² Premix = Harmony Extra 75DF.

³ NIS = Class Preference nonionic surfactant.

⁴ Clarity.

⁵ Premix = Bronate Advanced 5E.

⁶ Premix = Curtail M 2.77E

⁷ Premix = AGH 02001.

⁸ AGH 02007 6E.

⁹ 2,4-D LV6.