

**Broadleaf weed control in spring wheat at Crookston, MN - 2004.** Durgan, Beverly R., Jochum Wiersma, 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. 'Alsen' hard red spring wheat was seeded on April 27 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 Redroot Pigweed (AMARE), 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 8
Target weed stage	2-4" weeds
Crop stage	4.5 Leaf
Air Temperature (° F)	63
Relative humidity (%)	51
Soil conditions	moist
Soil temperature (°F)	58
Rainfall before Application	
Week 1 (inch)	0.53
Rainfall after Application	
Week 1 (inch)	0.37
Week 2 (inch)	0.25

**Table. Broadleaf weed control in spring wheat at Crookston, MN - 2004 (Durgan, Wiersma, Cameron, and Miller).**

Treatment	Rate (lb ai/A)	Wheat Injury				Control (7/8)			Wheat Yield (bu/A)
		6/6	6/12	6/18	7/1	AMARE	POLCO	SINAR	
Carfentrazone-ethyl <sup>1</sup> + thifensulfuron & tribenuron <sup>2</sup> + NIS <sup>3</sup>	0.008 + 0.0093 & 0.0047 + 0.25%	12	23	7	15	100	95	100	63
Carfentrazone-ethyl + 2,4-D ester + dicamba <sup>4</sup> + NIS	0.008 + 0.197 + 0.094 + 0.25%	30	30	18	13	97	83	100	66
Carfentrazone-ethyl + thifensulfuron + NIS	0.008 + 0.014 + 0.25%	32	33	20	8	98	93	100	69
Carfentrazone-ethyl + MCPA ester + NIS	0.008 + 0.25 + 0.25%	42	37	25	8	97	93	100	62
Carfentrazone-ethyl + 2,4-D ester + NIS	0.008 + 0.197 + 0.25%	35	33	18	15	95	85	100	56
Bromoxynil & MCPA <sup>5</sup>	0.375 & 0.375	15	7	3	3	100	100	100	62
Bromoxynil & MCPA	0.25 & 0.25	10	5	0	0	98	97	100	61
Bromoxynil & MCPA + fluroxypyr	0.25 & 0.25 + 0.062	7	3	0	0	100	97	100	61
Bromoxynil & MCPA + fluroxypyr thifensulfuron + NIS	0.25 & 0.25 + 0.062 + 0.0047 + 0.25%	5	5	3	0	100	97	100	62
Bromoxynil & MCPA + fluroxypyr thifensulfuron + NIS	0.25 & 0.25 + 0.062 + 0.0047 + 0.25%	0	3	3	0	100	97	100	65
Bromoxynil & MCPA + thifensulfuron & tribenuron + NIS	0.25 & 0.25 + 0.0093 & 0.0047 + 0.25%	0	3	7	0	100	97	100	68
Bromoxynil & MCPA + tribenuron + NIS	0.25 & 0.25 + 0.0078 + 0.25%	0	2	0	0	100	100	100	62
Fluroxypyr	0.062	0	0	0	0	80	78	93	66
Carfentrazone-ethyl + NIS	0.008 + 0.25%	35	27	15	10	87	78	100	65
Thifensulfuron + 2,4-D ester + NIS	0.0187 + 0.5 + 0.25%	12	8	7	0	100	100	100	67
Bromoxynil & MCPA + tribenuron + fluroxypyr + NIS	0.25 & 0.25 + 0.0078 + 0.062 + 0.25%	0	5	2	0	100	100	100	64
Clopyralid & MCPA ester + NIS	0.092 & 0.51 + 0.25%	0	0	0	0	97	93	100	63
Weedy check		0	0	0	0	--	--	--	58
Carfentrazone-ethyl & 2,4-D ester <sup>7</sup> + NIS	0.008 & 0.24 + 0.25%	20	13	3	3	95	87	100	67
Carfentrazone-ethyl & 2,4-D ester <sup>7</sup> + thifensulfuron + NIS	0.008 & 0.24 + 0.014 + 0.25%	16	13	3	0	100	100	100	70
2,4-D Ester <sup>8</sup>	0.25	2	0	5	0	97	85	100	68
2,4-D Ester <sup>9</sup>	0.25	0	0	0	0	100	92	100	67
2,4-D Ester <sup>9</sup>	0.5	3	0	7	0	97	90	100	66
2,4-D Ester <sup>9</sup>	0.5	3	3	3	0	95	83	100	69
Carfentrazone-ethyl & 2,4-D ester <sup>7</sup> + thifensulfuron	0.008 & 0.24 + 0.014	13	12	3	0	100	96	100	66
LSD (P=.05)		10	6	8	5	2	10	7	ns

<sup>1</sup> Aim 2E.

<sup>2</sup> Premix = Harmony Extra 75DF.

<sup>3</sup> NIS = Class Preference nonionic surfactant.

<sup>4</sup> Clarity.

<sup>5</sup> Premix = Bronate Advanced 5E.

<sup>6</sup> Premix = Curtail M 2.77E

<sup>7</sup> Premix = AGH 02001.

<sup>8</sup> AGH 02007 6E.

<sup>9</sup> 2,4-D LV6.