

**Broadleaf weed control in spring wheat at Rosemount, MN - 2003.** Durgan, Beverly R., and Douglas Miller. This experiment was designed to evaluate broadleaf weed control and wheat injury with various broadleaf herbicides. 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. '2375' hard red spring wheat was seeded on May 2 at 85 lbs/A. The experimental design was a randomized complete block with three replications and plot size was 10 by 24 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. Fenoxaprop & safener (Puma) was applied on June 2 at 0.04 lb ai/A to control grassy weeds. Visual weed control ratings, wheat injury ratings, and yields are presented in the table. Environmental conditions and plant sizes are listed below.

Treatment Date	June 13
Target weed stage	2-4 inch weeds

Temperature (degrees F)	
air	72-76
soil	69
Soil Moisture	dry to 1 inch
Wind (mph)	5-13 NW
Relative Humidity (%)	59-65
Sky	10% clouds
Rainfall before Application	
Week 1 (inch)	0.56
Rainfall after Application	
Week 1 (inch)	0.17
Week 2 (inch)	2.00

<b>Wheat</b>	
leaf stage	6-7 jointed
tillers	2-3
height (inch)	13-18
<b>Common Lambsquarters (CHEAL)</b>	
height (inch)	1-4
density (#/ft <sup>2</sup> )	6

<b>Pennsylvania Smartweed (POLPY)</b>	
height (inch)	1-6
leaf stage	2-6
density (#/ft <sup>2</sup> )	136
<b>Powell Amaranth (AMAPO)</b>	
height (inch)	1-2
density (#/ft <sup>2</sup> )	scattered
<b>Wild Buckwheat (POLCO)</b>	
height (inch)	2-3
density (#/ft <sup>2</sup> )	2

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

Treatment	Rate (lb ai/A)	Weed Control										Wheat	
		Wheat Injury			AMAPO	CHEAL		POLCO		SINAR		Height (inch)	Yield (bu/A)
		6/15	7/15	7/27	7/27	7/15	7/27	7/15	7/27	7/15	7/27		
		----- % -----											
Carfentrazone-ethyl <sup>1</sup> + thifensulfuron & tribenuron <sup>2</sup> + NIS <sup>3</sup>	0.008 + 0.0093 & 0.0047 + 0.25%	7	0	0	97	97	97	88	87	85	83	33	46
Carfentrazone-ethyl + 2,4-D ester + dicamba <sup>4</sup> + NIS	0.008 + 0.197 + 0.094 + 0.25%	25	18	15	100	100	100	100	100	100	100	27	49
Carfentrazone-ethyl + thifensulfuron + NIS	0.008 + 0.014 + 0.25%	5	0	0	93	100	99	100	99	100	98	32	49
Carfentrazone-ethyl + MCPA ester + NIS	0.008 + 0.25 + 0.25%	20	7	7	87	87	87	77	73	75	73	31	45
Carfentrazone-ethyl + 2,4-D ester + NIS	0.008 + 0.197 + 0.25%	15	10	7	90	92	88	80	78	80	78	32	46
Bromoxynil & MCPA <sup>5</sup>	0.375 & 0.375	0	2	2	98	100	100	100	100	100	100	32	47
Bromoxynil & MCPA	0.25 & 0.25	0	0	0	96	100	99	100	100	100	99	31	47
Bromoxynil & MCPA + fluroxypyr	0.25 & 0.25 + 0.062	0	3	3	98	100	98	99	99	99	99	33	46
Bromoxynil & MCPA + fluroxypyr thifensulfuron + NIS	0.25 & 0.25 + 0.062 + 0.0047 + 0.25%	3	13	13	95	97	95	88	86	90	90	31	47
Bromoxynil & MCPA + fluroxypyr thifensulfuron	0.25 & 0.25 + 0.062 + 0.0047	7	3	3	97	98	98	98	98	98	98	30	53
Bromoxynil & MCPA + thifensulfuron & tribenuron + NIS	0.25 & 0.25 + 0.0093 & 0.0047 + 0.25%	7	0	0	98	100	100	100	100	100	100	32	43
Bromoxynil & MCPA + tribenuron NIS	0.25 & 0.25 + 0.0078 0.25%	3	0	0	100	100	100	100	100	100	100	30	45
Flucarbazone + NIS	0.0262 + 0.25%	12	35	30	65	67	65	55	57	50	47	25	48
Flucarbazone + bromoxynil + NIS	0.0262 + 0.25 + 0.25%	10	30	28	96	98	98	98	95	96	95	25	50
Flucarbazone + bromoxynil & MCPA ester	0.0262 + 0.25 & 0.25	13	33	32	98	99	98	99	98	99	98	26	58
Fluroxypyr	0.062	0	0	0	60	68	63	62	57	63	60	33	56
Flucarbazone + fluroxypyr + NIS	0.0262 + 0.062 + 0.25%	12	27	23	60	65	70	68	65	67	65	26	56
Carfentrazone-ethyl + NIS	0.008 + 0.25%	8	0	0	80	78	80	67	67	60	60	32	48
Flucarbazone + carfentrazone-ethyl + NIS	0.0262 + 0.008 + 0.25%	15	33	22	73	75	72	55	53	55	53	26	55
Flucarbazone + clopyralid & MCPA ester <sup>6</sup> + NIS	0.0262 + 0.092 & 0.51 + 0.25%	13	33	32	85	85	85	63	62	64	62	26	51
Thifensulfuron + 2,4-D ester + NIS	0.0187 + 0.5 + 0.25%	3	2	2	93	93	93	91	90	88	86	32	46
Flucarbazone + thifensulfuron + 2,4-D ester + NIS	0.0262 + 0.0187 + 0.5 + 0.25%	18	32	28	90	90	90	82	80	80	77	27	50
Clopyralid & MCPA ester + NIS	0.092 & 0.51 + 0.25%	0	3	3	92	93	92	77	75	78	75	31	51
Carfentrazone-ethyl & 2,4-D ester <sup>7</sup> + NIS	0.008 & 0.24 + 0.25%	17	0	0	82	85	82	68	63	68	67	33	50
Carfentrazone-ethyl & 2,4-D ester <sup>7</sup> + thifensulfuron + NIS	0.008 & 0.24 + 0.014 + 0.25%	23	3	3	96	99	96	90	90	95	95	31	49
2,4-D Ester <sup>8</sup>	0.25	7	0	0	96	96	96	70	65	68	65	30	47
2,4-D Ester <sup>9</sup>	0.25	2	0	0	92	93	93	67	63	68	65	33	45
2,4-D Ester <sup>8</sup>	0.5	7	7	7	95	93	93	68	67	72	67	30	41
2,4-D Ester <sup>9</sup>	0.5	3	10	10	63	93	93	70	70	73	68	30	45
Weedy check		0	0	0	--	--	--	--	--	--	--	33	48
LSD (P=.05)		9	7	9	18	11	13	12	13	11	13	3	8

<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 = AGH02001.

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

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