

Broadleaf weed control in spring wheat at Rosemount, MN - 2002. Durgan, Beverly R., Douglas Miller, and Krishona Martinson. 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 3 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. 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 12
Target weed	4-6 leaf, 2-4 inch weeds
tage	

Temperature (degrees F)	
air	68
Soil Moisture	moist
Wind (mph)	2-6 NE
Relative Humidity (%)	73
Dewpoint (%)	59
Sky	50% clouds
Rainfall before	
Application	
Week 1 (inch)	1.64
Rainfall after	
Application	
Week 1 (inch)	1.03
Week 2 (inch)	4.73

Wheat	
leaf stage	6.75-jointed
tillers	2
height (inch)	12-15
Common Lambsquarters (CHEAL)	
height (inch)	2-8
density (#/ft ²)	5

Pennsylvania Smartweed (POLPY)	
height (inch)	2-8
density (#/ft ²)	4
Wild Mustard (SINAR)	
height (inch)	10-17
density (#/ft ²)	4

Table. Broadleaf weed control in spring wheat at Rosemount, MN - 2002 (Durgan, Miller, and Martinson).

Treatment	Rate (lb ai/A)	Wheat Injury			Weed Control						Wheat Yield (bu/A)
		6/20	6/27	7/31	CHEAL		POLPY		SINAR		
					6/27	7/31	6/27	7/31	6/27	7/31	
Carfentrazone-ethyl ¹ + thifensulfuron & tribenuron ² + NIS ³	0.008 + 0.009 & 0.005 + 0.25%	3	3	10	83	91	83	85	85	98	33
Carfentrazone-ethyl ⁴ + thifensulfuron & tribenuron ² + NIS ³	0.008 + 0.009 & 0.005 + 0.25%	7	7	7	90	98	90	97	88	100	36
Carfentrazone-ethyl ¹ + 2,4-D ester + dicamba ⁵ + NIS	0.008 + 0.28 + 0.094 + 0.25%	10	13	10	87	92	87	92	77	100	37
Carfentrazone-ethyl ¹ + 2,4-D ester + dicamba ⁵ + NIS	0.0125 + 0.28 + 0.094 + 0.25%	8	13	10	88	90	88	90	88	100	33
Carfentrazone-ethyl ¹ + bromoxynil & MCPA ⁶ + NIS	0.008 + 0.188 & 0.188 + 0.25%	8	2	7	88	100	88	95	90	100	36
Carfentrazone-ethyl ⁴ + bromoxynil & MCPA	0.008 + 0.188 & 0.188	10	10	8	62	100	92	93	92	100	31
Carfentrazone-ethyl ⁴ + thifensulfuron + NIS	0.008 + 0.014 + 0.25%	7	5	7	87	96	83	98	83	100	34
Carfentrazone-ethyl ¹ + metsulfuron + 2,4-D ester + NIS	0.0008 + 0.0075 + 0.178 + 0.25%	7	3	10	87	96	87	95	83	98	33
Carfentrazone-ethyl ⁴ + MCPA ester + NIS	0.008 + 0.25 + 0.25%	10	5	7	85	95	85	80	85	95	36
Carfentrazone-ethyl ⁴ + 2,4-D ester + NIS	0.008 + 0.28 + 0.25%	8	2	5	87	98	87	90	92	100	35
Carfentrazone-ethyl ¹ + fluroxypyr & 2,4-D ester ⁷ + NIS	0.008 + 0.1 & 0.4 + 0.25%	3	2	5	78	95	78	90	80	100	37
Bromoxynil & MCPA + NIS	0.188 & 0.188 + 0.25%	2	0	0	92	97	90	90	92	100	41
Bromoxynil & MCPA	0.188 & 0.188	5	0	0	88	100	88	98	88	100	39
Thifensulfuron + fluroxypyr & 2,4-D ester + NIS	0.014 + 0.12 & 0.48 + 0.25%	5	2	3	88	95	78	95	82	98	38
Bromoxynil & MCPA	0.25 & 0.25	5	0	0	96	100	96	95	96	100	38
Bromoxynil & MCPA + fluroxypyr	0.188 & 0.188 + 0.062	3	0	0	93	98	92	95	93	100	38
Bromoxynil & MCPA + thifensulfuron	0.25 & 0.25 + 0.007	5	3	2	95	98	93	95	95	100	37
Thifensulfuron + fluroxypyr + NIS	0.014 + 0.062 + 0.25%	3	2	3	87	96	87	95	85	100	38
Clopyralid & MCPA ⁸	0.09 & 0.5	3	3	0	92	93	92	92	90	100	38
Bromoxynil	0.25	3	2	0	93	93	93	90	93	97	34
Dicamba & MCPA ester	0.094 + 0.25	5	20	10	88	95	88	92	83	90	39
Dicamba & MCPA ester	0.062 + 0.25	3	17	10	85	98	85	92	85	93	37
Thifensulfuron + MCPA ester + NIS	0.014 + 0.25 + 0.25%	2	2	0	85	96	85	92	85	96	42
Weedy check		0	0	0	--	--	--	--	--	--	40
LSD (P=.05)		6	7	5	ns	4	ns	5	ns	3	5

¹ Aim 40DF.

² Premix = Harmony Extra 75DF.

³ NIS = Class Preference nonionic surfactant.

⁴ Aim 2E.

⁵ Clarity.

⁶ Premix = Bronate Advanced 5E.

⁷ Premix = Starane + Salvo 3.75E.

⁸ Premix = Curtail M 2.77E.