

**Broadleaf weed control and wheat tolerance at Rosemount, MN - 2000.** Durgan, Beverly R. and Douglas Miller. This experiment was designed to evaluate broadleaf weed control and wheat injury with various tank mixes of Harmony Extra and Express with other 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. 'Butte 86' hard red spring wheat was seeded on April 25 at 80 lbs/A. The experimental design was a randomized complete block with three replications and plot size was 10 by 25 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 tables. Environmental conditions and plant sizes are listed below.

Treatment Date	May 29
Target weed or crop stage	3-4 leaf wheat

Temperature (EF)	
air	54
soil (at 2")	52
Soil Moisture	moist
Wind (mph)	8-12 S
Relative Humidity (%)	78
Dewpoint (%)	51
Sky	cloudy
Rainfall before Application	
Week 1 (inch)	0.73
Rainfall after Application	
Week 1 (inch)	1.85
Week 2 (inch)	1.18

<b>Wheat</b>	
leaf stage	3.75-4.5
tillers	1-2
height (inch)	4-6
<b>Common Lambsquarters</b>	
height (inch)	1-6
density (#/ft <sup>2</sup> )	5
<b>Eastern Black Nightshade</b>	
height (inch)	0.5-1
density (#/ft <sup>2</sup> )	1

<b>Pennsylvania Smartweed</b>	
height (inch)	2-4
density (#/ft <sup>2</sup> )	1
<b>Redroot pigweed</b>	
height (inch)	0.5-3
density (#/ft <sup>2</sup> )	46

**Table. Broadleaf weed control and wheat tolerance at Rosemount, MN - 2000 (Durgan and Miller).**

Treatment	Rate (lb ai/A)	Weed Control (6/20)			Wheat		
		Ebns	Pesw	Rrpw	Injury		Yield
		----- % -----			6/5	6/20	Bu/A
Thifensulfuron & tribenuron <sup>1</sup> + bromoxynil & MCPA ester <sup>2</sup> + NIS <sup>3</sup>	0.009 & 0.005 + 0.19 & 0.19 + 0.125%	83	93	93	0	0	43
Thifensulfuron & tribenuron + bromoxynil & MCPA ester + NIS	0.009 & 0.005 + 0.22 & 0.22 + 0.125%	95	95	95	2	0	45
Bromoxynil & MCPA ester + 2,4-D ester	0.25 & 0.25 + 0.25	82	82	82	0	0	50
Bromoxynil & MCPA ester + tribenuron + NIS	0.25 & 0.25 + + 0.004 + 0.125%	82	82	82	0	0	46
Bromoxynil & MCPA ester + fluroxypyr	0.25 & 0.25 + 0.047	90	90	90	0	0	48
Thifensulfuron & tribenuron + 2,4-D ester + NIS	0.012 & 0.006 + 0.375 + 0.125%	95	95	95	2	0	48
Thifensulfuron & tribenuron + 2,4-D ester + NIS	0.012 & 0.006 + 0.25 + 0.125%	90	90	90	0	0	46
Bromoxynil & MCPA ester + thifensulfuron + NIS	0.19 & 0.19 + + 0.016 + 0.125%	90	90	90	2	0	46
Tribenuron + MCPA ester + dicamba + NIS	0.006 + 0.25 + 0.062 + 0.125%	93	93	93	2	0	47
Tribenuron + 2,4-D ester + NIS	0.008 + 0.25 + 0.125%	88	88	88	2	0	44
2,4-D ester + dicamba	0.25 + 0.062	92	92	92	0	0	47
MCPA ester + dicamba	0.25 + 0.062	80	80	80	3	0	42
Bromoxynil & MCPA ester	0.25 & 0.25	82	82	82	5	0	46
Bromoxynil	0.25	50	50	50	0	0	42
Fluroxypyr + 2,4-D ester	0.125 + 0.25	87	87	87	0	0	44
Fluroxypyr	0.125	52	52	52	0	0	44
Fluroxypyr + thifensulfuron & tribenuron + NIS	0.125 + 0.006 & 0.003 + 0.25%	82	82	82	0	0	47
Thifensulfuron + MCPA ester + NIS	0.014 + 0.25 + 0.25%	83	93	93	3	0	48
Thifensulfuron + 2,4-D ester + NIS	0.014 + 0.25 + 0.25%	85	85	85	0	0	47
Thifensulfuron + fluroxypyr + NIS	0.014 + 0.25 + 0.25%	93	93	93	0	0	48
Weedy check		--	--	--	0	0	41
Weedy check		--	--	--	0	0	45
Weedy check		--	--	--	0	0	42
Weedy check		--	--	--	0	0	42
LSD (P=.05)		22	20	20	ns	ns	5

1 Premix = Harmony Extra 75DF.

2 Premix = Bronate 4E.

3 NIS = Class Preference nonionic surfactant.