

**Broadleaf weed control and wheat tolerance at Crookston, MN - 1999.** Durgan, Beverly R. and Jim Cameron. 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 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 May 1 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. Crop injury and weed control were visually rated on June 11 and July 9. Wheat yields were measured. All data are presented in the table below.

Treatment Date	June 2
Target weed stage	2-4 inch weeds
Crop stage	3 leaf
Soil Moisture	moist
Sky	clear
Wind (mph)	0-5 SE
Temperature (°F)	62
Rainfall before Application	
Week 1 (inch)	0.64
Rainfall after Application	
Week 1 (inch)	0.42
Week 2 (inch)	1.06

**Table. Broadleaf weed control and wheat tolerance at Crookston, MN - 1999 (Durgan and Cameron).**

Treatment	Rate (lb ai/A)	Weed Control				Wheat		Yield Bu/A
		Wibu		Wimu		Injury		
		6/11	7/9	6/11	7/9	6/11	7/9	
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%	94	96	96	97	0	0	49
Thifensulfuron & tribenuron + bromoxynil & MCPA ester + NIS	0.009 & 0.005 + 0.22 & 0.22 + 0.125%	99	93	99	95	0	0	54
Thifensulfuron & tribenuron + bromoxynil & MCPA ester + NIS	0.009 & 0.005 + 0.25 & 0.25 + 0.125%	95	93	99	95	0	0	54
Thifensulfuron & tribenuron + 2,4-D ester + dicamba + NIS	0.009 & 0.005 + 0.25 + 0.062 + 0.125%	82	93	96	95	0	0	54
Thifensulfuron & tribenuron + MCPA ester + dicamba + NIS	0.009 & 0.005 + 0.25 + 0.062 + 0.125%	82	96	87	96	12	10	59
Thifensulfuron & tribenuron + 2,4-D ester + NIS	0.012 & 0.006 + 0.375 + 0.125%	89	93	88	96	0	3	57
Thifensulfuron & tribenuron + 2,4-D ester + NIS	0.012 & 0.006 + 0.25 + 0.125%	77	93	82	97	8	5	57
Tribenuron + 2,4-D ester + dicamba + NIS	0.006 + 0.25 0.062 + 0.125%	72	92	83	93	8	5	56
Tribenuron + MCPA ester + dicamba + NIS	0.006 + 0.25 + 0.062 + 0.125%	78	92	78	93	13	10	55
Tribenuron + 2,4-D ester + NIS	0.008 + 0.375 + 0.125%	80	87	80	97	7	7	51
Tribenuron + 2,4-D ester + NIS	0.008 + 0.25 + 0.125%	82	90	82	94	7	3	53
2,4-D ester + dicamba	0.25 + 0.062	73	91	77	95	5	3	50
MCPA ester + dicamba	0.25 + 0.062	67	93	77	98	5	3	52
Bromoxynil & MCPA ester	0.25 & 0.25	87	91	93	95	0	0	57
Bromoxynil	0.25	87	91	90	94	0	0	55
Fluroxypyr + 2,4-D ester	0.125 + 0.25	77	90	87	92	0	3	53
Fluroxypyr	0.125	72	87	78	91	0	2	52
Fluroxypyr + thifensulfuron & tribenuron + NIS	0.125 + 0.006 & 0.003 + 0.25%	75	94	85	97	0	0	53
Weedy check		--	--	--	--	0	0	33
LSD (P=.05)		10	ns	9	ns	6	6	10

1 Premix = Harmony Extra 75DF.

2 Premix = Bronate 4E.

3 NIS = Class Preference nonionic surfactant.