

Broadleaf weed control and hard red spring wheat tolerance to Harmony Extra and Express tank mixes at Crookston, MN - 1997. Durgan, Beverly R., Eric Spandl, 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. 'Pioneer 2375' hard red spring wheat was seeded on May 6 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 dates and environmental conditions are listed below. Crop injury and weed control were visually rated on June 17, July 1, and July 14. Wheat yields were measured. All data are presented in the table below.

Treatment Date	June 9
Target weed or crop stage	3-4 leaf wheat
Soil Moisture	dry
Sky	clear
Wind (mph)	0-3 S
Temperature (°F)	68
Rainfall before Application	
Week 1 (inch)	0.60
Rainfall after Application	
Week 1 (inch)	0.56
Week 2 (inch)	0.72
Wheat leaf no.	4
Colq density (#/ft ²)	0.7
Wibu density (#/ft ²)	4.3
Wimu density (#/ft ²)	5.8

Table. Broadleaf control and wheat tolerance to Harmony Extra and Express tank mixes at Crookston, MN - 1997. (Durgan, Spandl, and Cameron).

Treatment	Rate (lb/A)	Control									Wheat			Yield (Bu/A)
		Colq			Wibu			Wimu			Injury			
		6/17	7/1	7/14	6/17	7/1	7/14	6/17	7/1	7/14	6/17	7/1	7/14	
----- (%) -----														
Postemergence (June 9)														
Thifensulfuron & tribenuron ¹ + bromoxynil & MCPA ester ² + NIS ³	0.009 & 0.005 + 0.187 & 0.187 + 0.125%	95	100	100	80	90	91	93	99	100	12	3	0	47
Thifensulfuron & tribenuron + bromoxynil & MCPA ester + NIS	0.009 & 0.005 + 0.218 & 0.218 + 0.125%	95	100	100	80	90	90	94	100	100	13	2	2	45
Thifensulfuron & tribenuron + bromoxynil & MCPA ester + NIS	0.009 & 0.005 + 0.25 & 0.25 + 0.125%	95	100	100	78	95	94	92	99	100	12	5	0	47
Thifensulfuron & tribenuron + 2,4-D ester + dicamba + NIS	0.009 & 0.005 + 0.25 + 0.062 + 0.125%	95	100	100	60	88	92	77	92	100	15	12	5	48
Thifensulfuron & tribenuron + MCPA ester + dicamba + NIS	0.009 & 0.005 0.25 + 0.062 + 0.125%	95	100	100	67	82	94	78	90	100	10	12	5	44
Thifensulfuron & tribenuron + 2,4-D ester + NIS	0.012 & 0.006 + 0.375 + 0.125%	95	100	100	68	82	93	80	95	100	13	5	2	47
Thifensulfuron & tribenuron + 2,4-D ester + NIS	0.012 & 0.006 + 0.25 + 0.125%	95	100	100	67	85	95	70	92	100	10	3	0	44
Tribenuron + 2,4-D ester + dicamba + NIS	0.006 + 0.25 + 0.062 + 0.125%	95	100	100	70	85	89	80	95	100	17	15	10	46
Tribenuron + MCPA ester + dicamba + NIS	0.006 + 0.25 + 0.062 + 0.125%	95	100	100	63	80	92	75	92	98	17	15	5	46
Tribenuron + 2,4-D ester + NIS	0.008 + 0.375 + 0.125%	95	100	100	65	75	75	75	95	100	13	3	2	44
Tribenuron + 2,4-D ester + NIS	0.008 + 0.25 + 0.125%	95	100	100	60	73	74	73	96	100	10	5	0	46
2,4-D ester + dicamba	0.25 + 0.062	95	100	100	67	83	86	72	85	100	15	17	5	42
MCPA ester + dicamba	0.25 + 0.062	95	100	100	62	83	85	65	80	100	17	13	5	43
Bromoxynil & MCPA ester	0.25 & 0.25	95	100	100	72	75	62	88	90	100	12	2	0	46
Bromoxynil	0.25	95	100	100	80	73	65	82	85	90	10	2	0	47
Weedy check		--	--	--	--	--	--	--	--	--	0	0	0	29
LSD (0.05)		ns	ns	ns	10	7	13	11	6	4	6	5	4	4

¹ Premix = Harmony Extra 75DF.

² Premix = Bronate 4E.

³ NIS = Class Preference nonionic surfactant.