

POST broadleaf weed control in spring wheat, Carrington, 2011. Kirk Howatt, Greg Endres, and Janet Harrington. The experiment was conducted at the NDSU Carrington Research Extension Center on a conventionally-tilled Heimdal-Emrick loam soil. The experimental design was a randomized complete block with three replicates. 'Glenn' HRS wheat was seeded May 17. Herbicide treatments were applied with a CO₂-hand-boom plot sprayer delivering 8.5 gal/A at 35 psi through 11001 TT flat fan nozzles to the center 6.7 ft of 10- by 25-ft plots. Treatments were applied on June 23 with 73°F, 46% RH, 5% cloud-cover, 1 to 3 mph wind at 0°, and damp soil at 78°F to four-leaf wheat, 2- to 5-inch redroot pigweed, 1- to 4-inch common lambsquarters, and 3- to 8-inch flax. The trial was not harvested for seed yield due to significant plant damage caused by hail on July 24. All ratings were recorded July 19

Table.

Treatment	Rate	Injury	Control		
		Wheat	Rrpw	Colq	Flax
	oz/A	%	%	%	%
Fluroxypyr&MCPA	8	0	96	99	99
Dicamba&fluroxypyr	1.85	9	93	94	99
Clopyralid&fluroxypyr	3	0	88	97	95
Clopyralid&MCPA	9.4	0	94	99	60
Clpy&flox+thif-sg+trib-sg	2+0.1+0.1	0	92	95	95
Thif-sg+trib-sg+MCPA+NIS	0.24+0.06+4+0.25%	3	99	99	53
Thif-sg+trib-sg+2,4-D+NIS	0.15+0.15+4+0.25%	3	98	98	78
Flas&MCPA+NIS	5.07+0.25%	0	82	95	82
Carf&2,4-D+NIS	4.1+0.25%	7	95	97	95
Pyraflufen+2,4-D+NIS	0.013+4+0.25%	0	92	95	80
Bromoxynil&MCPA5	8	1	94	97	0
Bromoxynil&pyrasulfotol	2.9	0	94	99	37
Untreated	0	0	0	0	0
CV		69	2	1	6
LSD 5%		2	3	2	6

Large wheat with lush vegetation likely prevented full coverage of weed tissue with spray mixture, but the lush wheat vegetation was very competitive with weeds. Weed vegetation was not above the wheat canopy in untreated plots at evaluation, and the weed population in untreated plots was less than during application.

Herbicide injury to wheat occurred with four treatments. Dicamba and fluroxypyr caused the most injury at 9%. This likely was the action of dicamba as the injury manifested as shorter wheat plants with less leaf tissue and more upright leaf architecture. Carfentrazone and 2,4-D caused 7% injury as small necrotic lesions. Minor injury from thifensulfuron and tribenuron tank-mixed with a phenoxy herbicide was visible as slight chlorosis, but thifensulfuron and tribenuron plus clopyralid and fluroxypyr did not elicit a visible response.

Redroot pigweed and common lambsquarters were quite easily controlled in all plots, except that several pigweed survived florasulam and MCPA. Fluroxypyr provided at least 95% control of flax, and carfentrazone and 2,4-D also controlled flax at 95%.