POST foxtail 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. 'Tioga' durum wheat was seeded May 17. Herbicide treatments were applied with a CO_2-hand-boom plot sprayer delivering 10 gal/A at 35 psi through 8001 flat fan nozzles to the center 6.7 ft of 10- by 25-ft plots. Treatments were applied on June 9 with 64 F, 34% RH, 40% clear sky, and 2 mph wind to three-leaf wheat and one- to three-leaf yellow foxtail. Average plant density in untreated plots on May 28: wheat = 26 plants/ft^2 and foxtail = 60 plants/ft^2. The trial was not harvested for seed yield due to significant hail damage on July 24.

Table.

		June 16	June 23		July 19
Treatment	Rate	Wht	Wht	Yeft	Yeft
	oz/A	%	%	%	%
Flcz 2.0+brox&MCPA5+BB	0.32+8+1%	0	0	87	89
Prcz+brox&MCPA5+BB	0.42+8+1%	0	0	63	23
Prcz&Mess+brox&MCPA5+BB	0.2+8+1%	0	0	60	17
Pxlm+brox&MCPA5+BB	0.26+8+1%	0	0	87	65
Pxlm&flas&flox+BB	1.68+1%	0	0	88	85
Fenoxaprop+brox&MCPA5	0.8+8	0	0	68	80
Fenoxaprop+brox&MCPA5	1.32+8	0	0	73	77
Clfp-ng+brox&MCPA5	0.8+8	0	0	83	83
Pxdn+brox&MCPA5	0.86+8	0	0	85	85
Untreated	0	0	0	0	0
CV		0	0	6	12
LSD 5%		0	0	6	12

Wheat chlorosis or other visible injury was not observed with any herbicide treatment. The area where this study was placed had a history of foxtail survival that indicated the presence of ACCase-resistant foxtail biotypes. In fact, replicate data for some of the treatments had more variance than typically expected and produced the larger LSD for the July evaluation. This possibly indicated response differences of the biotypes on a micro scale. However, the overall average control values for ACCase herbicides were not catastrophic, mimicking the slow buildup of resistance in the field population. Yellow foxtail control on July 19 ranged from 77 to 85% control with ACCase herbicides.

Flucarbazone or the pyroxsulam premix gave yellow foxtail control of 85 to 90%. The adjuvant load or florasulam, an ALS broadleaf herbicide, in the premix may be improving control of grasses with pyroxsulam compared with the dry solo formulation. This tendency has been observed in other studies this year, but this is the only case where a significant difference was recorded. Tribenuron, another ALS broadleaf herbicide, has been implicated in several studies as increasing foxtail control with ALS grass herbicides.