Green Foxtail Control with Motive in Dry Beans (1998)

'Maverick' dry beans were planted May 19 in Washburn, ND. Seedbed preparation was conventional with 30-inch row spacing and 60 lb/A seeding rate. Treatments consisted of preplant incorporated and postemergence applications. All postemergence applications were made on June 25 with the exception of one split treatment applied on July 1. On June 25 dry beans were 1-2 trifoliate, while green foxtail was approximately 1-inch tall and 175 plants/ft2. Green foxtail (Grft) control was evaluated on July 8 and August 26. The dry beans were harvested September 2.

Treatment	Rate	7-8 Grft	8-26 Grft	Yield
		---% Control---		lb/A
Sonalan	2.5 pt/A	26	15	308
Sonalan / Motive + Scoil + 28% N	1.5 pt/A / 2 fl oz/A + 1.5% V/V + 1 qt/A	92	98	1428
Prowl	3 pt/A	0	3	158
Prowl / Motive + Scoil + 28% N	2.4 pt/A / 2 fl oz/A + 1.5% V/V + 1 qt/A	87	93	1053
Frontier	20 fl oz/A	66	48	802
Frontier / Motive + Scoil + 28% N	16 fl oz/A / 2 fl oz/A + 1.5% V/V + 1 qt/A	95	97	1385
Motive + Scoil + 28% N	2 fl oz/A + 1.5% V/V + 1 qt/A	88	94	1302
Motive + Scoil + 28% N	3 fl oz/A + 1.5% V/V + 1 qt/A	88	98	1201
Basagran + Herbimax / Poast + COC (Post II)	1.5 pt/A + 2 pt/A / 1.5 pt/A + 2 pt/A	94	90	1375
Basagran + Herbimax + Poast + COC / Basagran + Herbimax (Post II)	0.75 pt/A + 2 pt/A + 1.5 pt/A+ 2 pt/A / 0.75 pt/A+2 pt/A	95	91	1631
Basagran + Assure II + Herbimax	1.5 pt/A + 8 fl oz/A + 2 pt/A	97	88	1314
Motive + Quad 7 + 28% N	2 fl oz/A + 1% V/V + 2 pt/A	83	92	1334
Motive + Activator 90 + 28% N	2 fl oz/A + 0.25% V/V + 1 qt/A	80	86	1164
Motive + Assure II + Herbimax + 28% N	2 fl oz/A + 7 fl oz/A + 2 pt/A + 1 qt/A	82	85	1101
Untreated		0	0	124
CV		12	7	15
LSD (0.05)		13	8	227

Green foxtail populations were very high as indicated by the extremely low dry bean yield in the untreated plot. Sonalan, Prowl, and Frontier applied PPI did not control green foxtail. Frontier looked good initially, but control was poor later in the season. We collected green foxtail from the Sonalan treated area and sent it to a laboratory for testing. It was determined that the green foxtail was completely tolerant to dinitroaniline herbicides (DNA's such as Sonalan, Treflan, Prowl, etc.). Green foxtail control with Motive, Poast, or Assure II was good to excellent in all treatments. Even though much of the green foxtail was tolerant to DNA herbicides, control was

slightly better with a soil-applied herbicide followed by Motive postemergence. Control with Motive + NIS was 5-10% lower compared to other adjuvants. Some antagonism may have occurred with Motive + Assure II as green foxtail control was also 5-10% lower than Motive applied alone.