

**Foxtail control in hard red spring wheat at Rosemount, MN - 2000.** Durgan, Beverly R. and Douglas Miller. The purpose of this experiment was to evaluate antagonism of foxtail control and crop injury with Puma and Discover in various tank mix combinations. The experiment was conducted at Rosemount, MN on a Waukegon silt loam soil. Following soybeans, the experimental area was fall chisel plowed. In the spring, the area was fertilized with 50 lbs/A N and 70 lbs K. The field was disked once, field cultivated once, and harrowed twice. 'Butte 86' hard red spring wheat was seeded on April 25 at 85 lbs/A. The experimental design was a randomized complete block with three replications and plot size was 10 by 25 ft. All herbicide treatments were applied to a 6 ft strip with a backpack type sprayer delivering 10 gpa at 35 psi using 11001 flat-fan nozzles. Bromoxynil (0.25 pt/A) was broadcast on May 15 to control broadleaf weeds. Visual weed control ratings, wheat injury ratings, and yields are presented in the tables. Environmental conditions and plant sizes are listed below.

|                           |                  |
|---------------------------|------------------|
| Treatment Date            | May 19           |
| Target weed or crop stage | 2-4 leaf foxtail |

|  |         |
|--|---------|
| Temperature (°F)                               |         |
| air  | 46      |
| ** Possible light frost in early morning hours |         |
| soil (at 2")                                   | 49      |
| Soil Moisture                                  | moist   |
| Wind (mph)                                     | 2-6 SSE |
| Relative Humidity (%)                          | 37      |
| Sky  | clear   |
| Rainfall before Application                    |         |
| Week 1 (inch)                                  | 1.75    |
| Rainfall after Application                     |         |
| Week 1 (inch)                                  | 0.13    |
| Week 2 (inch)                                  | 2.12    |

|               |     |                              |           |
|---------------|-----|------------------------------|-----------|
| <b>Wheat</b>  |     | <b>Giant foxtail</b>         |           |
| leaf stage    | 3   | density (#/ft <sup>2</sup> ) | 6         |
| tillers       | 0-1 | leaf no.                     | 1-3       |
| height (inch) | 4-6 | height (inch)                | 0.25-1.25 |

**Table. Foxtail control in hard red spring wheat with tank mixes at Rosemount, MN -2000 (Durgan and Miller).**

| Treatment   | Rate<br>(lb ai/A)                      | Foxtail Control (6/15)<br>----- % ----- | Wheat<br>Injury |      | Yield<br>Bu/A |
|---|--|---|-----------------|------|---------------|
|   |  |   | 5/31            | 6/15 |               |
| Imazamethabenz <sup>1</sup> + NIS <sup>2</sup>  | 0.31 + 0.25%                           | 88                                      | 0               | 0    | 50            |
| Fenoxaprop & safener <sup>3</sup>   | 0.041                                  | 90                                      | 0               | 0    | 52            |
| Fenoxaprop & safener  | 0.023                                  | 95                                      | 0               | 0    | 48            |
| Imazamethabenz + fenoxaprop & safener + NIS   | 0.28 + 0.041 + 0.25%                   | 95                                      | 0               | 0    | 51            |
| Imazamethabenz + fenoxaprop & safener +<br>bromoxynil & MCPA ester <sup>4</sup> + NIS | 0.28 + 0.041 +<br>0.25 & 0.25 + 0.25%  | 90                                      | 0               | 0    | 52            |
| CGA-184927 <sup>5</sup> & safener + surf <sup>6</sup>                                 | 0.06 + 1%                              | 93                                      | 0               | 0    | 46            |
| Imazamethabenz + CGA-184927 & safener + surf  | 0.31 + 0.06 + 1%                       | 95                                      | 0               | 0    | 52            |
| Imazamethabenz + CGA-184927 & safener + surf  | 0.31 + 0.019 + 1%                      | 93                                      | 0               | 0    | 52            |
| Imazamethabenz + CGA-184927 & safener + surf  | 0.31 + 0.01 + 1%                       | 90                                      | 0               | 0    | 49            |
| Fenoxaprop & safener  | 0.083                                  | 95                                      | 0               | 0    | 49            |
| Diclofop + COC <sup>7</sup>   | 0.75 + 1.25%                           | 93                                      | 0               | 0    | 50            |
| Fenoxaprop & 2,4-D & MCPA <sup>8</sup>  | 0.06 & 0.09 & 0.26                     | 95                                      | 0               | 0    | 47            |
| Tralkoxydim + TF8035 COC <sup>9</sup>   | 0.18 + 0.5%                            | 95                                      | 0               | 0    | 53            |
| CGA-184927 & safener +<br>bromoxynil & MCPA + surf                                    | 0.06 +<br>0.25 & 0.25 + 1%             | 93                                      | 0               | 0    | 49            |
| CGA-184927 & safener + bromoxynil + surf  | 0.06 + 0.25 + 1%                       | 95                                      | 0               | 0    | 48            |
| CGA-184927 & safener +<br>thifensulfuron & tribenuron <sup>10</sup> + MCPA + surf     | 0.06 +<br>0.09 & 0.05 + 0.375 + 1%     | 95                                      | 0               | 0    | 51            |
| CGA-184927 & safener +<br>thifensulfuron + MCPA + surf                                | 0.06 +<br>0.014 + 0.25 + 1%            | 93                                      | 0               | 0    | 48            |
| CGA-184927 & safener +<br>fluroxypyr & MCPA ester <sup>11</sup> + surf                | 0.06 +<br>0.13 & 0.54 + 1%             | 93                                      | 0               | 0    | 53            |
| Imazamethabenz + fenoxaprop & safener +<br>fluroxypyr + NIS                           | 0.28 + 0.041 +<br>0.125 + 0.25%        | 90                                      | 0               | 0    | 51            |
| Imazamethabenz + fenoxaprop & safener +<br>thifensulfuron + MCPA ester + NIS          | 0.28 + 0.041 +<br>0.014 + 0.25 + 0.25% | 95                                      | 0               | 0    | 50            |
| Weedy check   |  | --                                      | 0               | 0    | 44            |
| Weedy check   |  | --                                      | 0               | 0    | 49            |
| Weedy check   |  | --                                      | 0               | 0    | 50            |
| Weedy check   |  | --                                      | 0               | 0    | 47            |
| LSD (P=0.05)  |  | ns                                      | ns              | ns   | ns            |

<sup>1</sup> Assert LC 2.5E.

<sup>2</sup> NIS = Class Preference nonionic surfactant.

<sup>3</sup> Puma 1E.

<sup>4</sup> Premix = Bronate 4E.

<sup>5</sup> Discover 2E.

<sup>6</sup> surf = Score.

<sup>7</sup> COC = Class Crop Oil Concentrate.

<sup>8</sup> Premix = Tiller 2.77E.

<sup>9</sup> surf = TF8035 crop oil concentrate = Supercharge.

<sup>10</sup> Premix = Harmony Extra 75DF.

<sup>11</sup> Premix = Starane + Sword 3.55E