Effect of adjuvants tank-mixed with Ignite 280 and Laudis on annual weed control in corn at Lamberton, MN in 2009.

Getting, Jodie K.

The objective of this study was to evaluate the effects of adjuvants tank-mixed with Ignite 280 and Laudis on annual grass and annual broadleaf weed control in corn. This study was conducted on a Ves loam soil containing 4.3% organic matter, pH 6.7 and soil test P and K levels of 38 and 390 lb/A, respectively. A randomized complete block design with four replications and a plot size of 10 by 30 ft was used. The site was planted to soybeans in 2008 and was fall chiseled. The area was fertilized with 150 lbs of nitrogen. On May 6, 2009, Pioneer 35F44® glufosinate resistant/glyphosate resistant field corn was planted in 30-inch rows at a seeding rate of 33,000 seeds/A. All treatments were applied with a tractor-mounted sprayer delivering 20 gpa at a pressure of 40 psi. The sprayer was equipped with 8002 flat-fan nozzles spaced 15 inches apart on the boom. Application dates, environmental conditions, plant sizes and rainfall data are listed below:

<table>
<thead>
<tr>
<th>Date</th>
<th>June 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>POST</td>
</tr>
<tr>
<td>Temperature (F)</td>
<td></td>
</tr>
<tr>
<td>air</td>
<td>73</td>
</tr>
<tr>
<td>soil (4 inch)</td>
<td>72</td>
</tr>
<tr>
<td>Relative humidity (%)</td>
<td>31</td>
</tr>
<tr>
<td>Wind (mph)</td>
<td>NE 6</td>
</tr>
<tr>
<td>Sky</td>
<td>clear</td>
</tr>
<tr>
<td>Soil moisture</td>
<td>dry</td>
</tr>
<tr>
<td>Corn</td>
<td>V3</td>
</tr>
<tr>
<td>leaf no.</td>
<td>5</td>
</tr>
<tr>
<td>height (inch)</td>
<td></td>
</tr>
<tr>
<td>Green foxtail</td>
<td></td>
</tr>
<tr>
<td>leaf no.</td>
<td>2 to 4</td>
</tr>
<tr>
<td>height (inch)</td>
<td>3 to 5</td>
</tr>
<tr>
<td>no./ft²</td>
<td>25</td>
</tr>
<tr>
<td>Common lambsquarters</td>
<td></td>
</tr>
<tr>
<td>leaf no.</td>
<td>4 to 6</td>
</tr>
<tr>
<td>height (inch)</td>
<td>2 to 4</td>
</tr>
<tr>
<td>no./ft²</td>
<td>7</td>
</tr>
<tr>
<td>Tall waterhemp</td>
<td></td>
</tr>
<tr>
<td>leaf no.</td>
<td>3 to 4</td>
</tr>
<tr>
<td>height (inch)</td>
<td>2 to 4</td>
</tr>
<tr>
<td>no./ft²</td>
<td>12</td>
</tr>
<tr>
<td>Rainfall after application (inch)</td>
<td></td>
</tr>
<tr>
<td>1 week</td>
<td>1.36</td>
</tr>
<tr>
<td>2 week</td>
<td>0.13</td>
</tr>
<tr>
<td>3 week</td>
<td>1.22</td>
</tr>
</tbody>
</table>

(Southwest Research and Outreach Center, University of Minnesota, Lamberton).
Table. Effect of adjuvants tank-mixed with Ignite 280 and Laudis on annual weed control in corn at Lamberton, MN in 2009 ( Getting ).

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Rate</th>
<th>Green foxtail</th>
<th>Common lambsquarters</th>
<th>Tall waterhemp</th>
<th>Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignite 280 + AMS</td>
<td>22 oz + 1.5 lb</td>
<td>95 a</td>
<td>95 b</td>
<td>89 b</td>
<td>81 a</td>
</tr>
<tr>
<td>Laudis + MSO + AMS</td>
<td>2 oz + 1 pt + 1.5 lb</td>
<td>63 b</td>
<td>71 c</td>
<td>71 c</td>
<td>66 b</td>
</tr>
<tr>
<td>Ignite 280 + Laudis + AMS</td>
<td>22 oz + 2 oz + 1.5 lb</td>
<td>95 a</td>
<td>99 a</td>
<td>91 a</td>
<td>85 a</td>
</tr>
<tr>
<td>Ignite 280 + Laudis + WeatherGuard Complete</td>
<td>22 oz + 2 oz + 2 qt/100 gal</td>
<td>95 a</td>
<td>99 a</td>
<td>91 a</td>
<td>85 a</td>
</tr>
<tr>
<td>Ignite 280 + Laudis + Array</td>
<td>22 oz + 2 oz + 9 lb/100 gal</td>
<td>96 a</td>
<td>99 a</td>
<td>91 a</td>
<td>84 a</td>
</tr>
<tr>
<td>Ignite 280 + Laudis + Class Act + Interlock</td>
<td>22 oz + 2 oz + 5 qt/100 gal + 4 oz</td>
<td>96 a</td>
<td>99 a</td>
<td>91 a</td>
<td>83 a</td>
</tr>
<tr>
<td>Ignite 280 + Laudis + Guardian Plus</td>
<td>22 oz + 2 oz + 2.5 gal/100 gal</td>
<td>96 a</td>
<td>99 a</td>
<td>91 a</td>
<td>84 a</td>
</tr>
<tr>
<td>Ignite 280 + Laudis + Hel-Fire + Grounded</td>
<td>22 oz + 2 oz + 2 pt/100 gal + 1 gal/100 gal</td>
<td>94 a</td>
<td>98 a</td>
<td>90 ab</td>
<td>81 a</td>
</tr>
<tr>
<td>Ignite 280 + Laudis + DoubleDownr</td>
<td>22 oz + 2 oz + 2.5 gal/100 gal</td>
<td>96 a</td>
<td>99 a</td>
<td>90 ab</td>
<td>83</td>
</tr>
<tr>
<td>Ignite 280 + Laudis + Border Xtra 8L</td>
<td>22 oz + 2 oz + 2.5 gal/100 gal</td>
<td>95 a</td>
<td>98 a</td>
<td>90 ab</td>
<td>85 a</td>
</tr>
<tr>
<td>Ignite 280 + Laudis + Bronc Max EDT</td>
<td>22 oz + 2 oz + 2 qt/100 gal</td>
<td>94 a</td>
<td>99 a</td>
<td>91 ab</td>
<td>83 a</td>
</tr>
<tr>
<td>Ignite 280 + Laudis + Request + Grounded</td>
<td>22 oz + 2 oz + 2 qt/100 gal + 1 gal/100 gal</td>
<td>94 a</td>
<td>98 a</td>
<td>91 ab</td>
<td>83 a</td>
</tr>
</tbody>
</table>

Checks

<table>
<thead>
<tr>
<th>Weedy check</th>
<th></th>
<th>0 c</th>
<th>0 d</th>
<th>0 d</th>
<th>0 c</th>
<th>0 g</th>
<th>0 d</th>
<th>0 c</th>
<th>0 c</th>
<th>0 d</th>
<th>0 d</th>
<th>0 d</th>
<th>49 b</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSD (0.10)</td>
<td>4.6</td>
<td>1.7</td>
<td>2.0</td>
<td>4.2</td>
<td>6.1</td>
<td>2.2</td>
<td>2.0</td>
<td>4.0</td>
<td>3.3</td>
<td>1.8</td>
<td>2.5</td>
<td>2.9</td>
<td>22.8</td>
</tr>
</tbody>
</table>

* MSO = methylated seed oil; AMS = spray grade ammonium sulfate.
* Yield adjusted to 15.5% moisture.