Control of Canada Thistle in Corn

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Objective

To evaluate the effect of several different herbicides on the control of Canada thistle in corn.

Background

Cooperator: Tom Weiler
Fertilizer: 211-52-162 at planting
County: Morrow
Herbicides: PRE: Dual II Magnum 1.3 pt/A
Nearest town: Chesterville
Centerburg silt loam
Hybrid: Superior 109A
Previous Crop: Soybeans
Row Width: 30 inches
Soil Type: Systematically tiled
Soil Test: pH 6.0, P 11 ppm, K 113 ppm, CEC 11
Planting Rate: 30,200 seeds/A
Harvest Date: October 22, 2001
Planting Date: April 28, 2001
Nearest town: Chesterville
Soil Type: Centerburg silt loam
Hybrid: Superior 109A
Previous Crop: Soybeans
Row Width: 30 inches
Soil Test: pH 6.0, P 11 ppm, K 113 ppm, CEC 11
Planting Rate: 30,200 seeds/A
Harvest Date: October 22, 2001
Planting Date: April 28, 2001

Methods

The Canada thistle pressure in the study was moderate. Five herbicide treatments and an untreated check were replicated four times in a randomized complete block design. Plot size was 10 feet wide by 40 feet in length. The treatments were applied postemergence on June 8, 2001, with a carbon-dioxide-pressurized backpack sprayer. The sprayer had an output of 20 gallons per acre at 30 pounds of pressure. The corn was 10 inches tall and at the five-collar stage at time of application. The Canada thistle plants were 10 to 12 inches tall and mostly in the early bud stage. Canada thistle control was visually evaluated on June 26, 2001, (18 days after treatment) on a scale of 0 (no control) to 100% (complete plant death).

Results

Table 1. Visual Evaluation of Control of Canada Thistle in Corn

<table>
<thead>
<tr>
<th>Herbicide Treatments</th>
<th>Rate</th>
<th>Canada Thistle Control (Control)</th>
<th>Cost (A)</th>
<th>Total Cost (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinct 76.4DF</td>
<td>4.0 oz/A</td>
<td>77 ab</td>
<td>8.96</td>
<td>10.05</td>
</tr>
<tr>
<td>NIS</td>
<td>0.25 % v/v</td>
<td>77 ab</td>
<td>0.8</td>
<td>10.05</td>
</tr>
<tr>
<td>UAN</td>
<td>1.25 % v/v</td>
<td>82 ab</td>
<td>0.29</td>
<td>0.29</td>
</tr>
<tr>
<td>Distinct 76.4 DF</td>
<td>6.0 oz/A</td>
<td>83 ab</td>
<td>13.44</td>
<td>14.53</td>
</tr>
<tr>
<td>NIS</td>
<td>0.25 % v/v</td>
<td>83 ab</td>
<td>0.8</td>
<td>14.53</td>
</tr>
<tr>
<td>UAN</td>
<td>1.25 % v/v</td>
<td>83 ab</td>
<td>0.29</td>
<td>0.29</td>
</tr>
<tr>
<td>Hornet 78.5 DF</td>
<td>5.0 oz/A</td>
<td>83 ab</td>
<td>20.88</td>
<td>22.26</td>
</tr>
<tr>
<td>NIS</td>
<td>0.25 % v/v</td>
<td>83 ab</td>
<td>0.8</td>
<td>22.26</td>
</tr>
<tr>
<td>UAN</td>
<td>2.5 % v/v</td>
<td>83 ab</td>
<td>0.58</td>
<td>0.58</td>
</tr>
</tbody>
</table>
Summary and Notes

Hornet (5.0 oz/A) plus Stinger (4.0 oz/A) provided significantly greater Canada thistle control compared to Laddock S-12 (2.33 pt/A). All other treatments provided similar control. The Laddock S-12 burned off most of the thistle tissues shortly after application, but regrowth had occurred before rating. Distinct (4.0 oz/A) was the cheapest herbicide program to control Canada thistle at $10.05/A. Each of these treatments will be evaluated in the spring of 2002 for root control to determine their long-term effectiveness.

Acknowledgment

We would like to thank Tom Weiler for his assistance with this project.

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