YieldGard® Rootworm corn evaluated

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Abstract
Jon Tollefson, research entomologist, and Jim Oleson, agricultural specialist, published a 2002 report that evaluated the performance of a variety of control measures for corn rootworm larvae. One of the products they evaluated was the recently approved YieldGard® Rootworm corn. In their tests, the seed was treated with Gaucho ST as a preventive for seed-attacking insects such as seedcorn maggots and wireworms. The in-field performance of YieldGard Rootworm in protecting the plant from corn rootworm injury is going to be one of the critical factors determining its acceptance in the agricultural community.

Keywords
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Disciplines
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So, how did they rate the performance of this product? They concluded that, "YieldGard Rootworm seed corn provided excellent root protection and 100 percent consistency under moderately heavy populations of corn rootworm larvae (1.90 nodes eaten in the untreated check)." The table shows data from last year and a brief explanation of each category to help you interpret the research findings.

Node injury

Root injury was rated using the Iowa State node-injury scale [1] (0-3): 0.00, no feeding injury (lowest rating possible); 1.00, one node (circle of roots), or the equivalent of one node (partially eaten nodes can be combined) eaten back to within approximately 2 inches of the stalk; 2.00, two nodes eaten; and 3.00, three or more nodes eaten (highest rating possible) (see article on pages 21-22). Injury in-between complete nodes eaten is noted as the percentage of the node missing, e.g., 0.25, 1/4 of one node eaten or 1.50, = 11/2 nodes eaten.

Product consistency

Product consistency, expressed as a percentage, was calculated for each treatment. Product consistency equals the percentage of times a treatment limited feeding injury to 0.25 node or less (greater injury can result in economic yield losses).

Percentage of lodging

A plant was considered lodged if it was leaning at least 30 degrees from vertical.

Plot data

Corn was planted May 6, stand counts were taken May 31, roots were dug and measured for
injury from rootworm larvae July 15, and lodging counts were taken September 11.

**Average root-injury ratings, product consistency, percentage of lodging, and stand counts for planting-time insecticide treatments and YieldGard® Rootworm seed corn (Ames, IA 2002).**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Placement</th>
<th>Node Injury</th>
<th>Product Consistency (%)</th>
<th>% Lodging</th>
<th>Stand Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>YieldGard Rootworm</td>
<td>--</td>
<td>0.01 a</td>
<td>100 a</td>
<td>0 a</td>
<td>29.25 a</td>
</tr>
<tr>
<td>Aztec 2.1G</td>
<td>T-band</td>
<td>0.16 ab</td>
<td>95 a</td>
<td>0 a</td>
<td>29.00 a</td>
</tr>
<tr>
<td>Lorsban 15G</td>
<td>T-band</td>
<td>0.38 ab</td>
<td>70 ab</td>
<td>0 a</td>
<td>29.25 a</td>
</tr>
<tr>
<td>Force 3G</td>
<td>T-band</td>
<td>0.51 b</td>
<td>45 b</td>
<td>0 a</td>
<td>27.00 b</td>
</tr>
<tr>
<td>Check&lt;sup&gt;a&lt;/sup&gt;</td>
<td>--</td>
<td>1.90 c</td>
<td>0 c</td>
<td>58 b</td>
<td>29.25 a</td>
</tr>
</tbody>
</table>

Numbers (means) within a column sharing a common letter do not differ significantly according to Ryan's Q test (P < 0.05).

<sup>a</sup>Seed treated with Gaucho seed treatment.

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