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Scouting and management of stalk borers

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Scouting and management of stalk borers

Abstract
Stalk borers are notorious for killing or stunting the corn rows next to fences, grassy waterways, and conservation terraces. Control measures can be taken to prevent this damage, but fields must first be scouted and then the economics of treatment should be considered. Stalk borer larvae have already hatched and most of the larvae are now in brome or other grasses, and in giant ragweed. However, some stalk borers may already be in corn because they moved there first instead of the grass. Eventually, the stalk borers in the grass get too big for the grass stems and they disperse in search of larger-diameter plants, which often happens to be corn.

Keywords
Entomology

Disciplines
Agricultural Science | Agriculture | Entomology

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Scouting and management of stalk borers

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Stalk borer larvae have already hatched and most of the larvae are now in brome or other grasses, and in giant ragweed. However, some stalk borers may already be in corn because they moved there first instead of the grass. Eventually, the stalk borers in the grass get too big for the grass stems and they disperse in search of larger-diameter plants, which often happens to be corn.

We are approaching the dates in June when stalk borers will move out of grass and into corn. About 10 percent of the larvae will move out of the grass by 1,400 degree days (base 41°F) and 50 percent of the larvae will have moved by 1,700 degree days. When 1,300-1,400 degree days have occurred in your area (see map), scout to determine if the larvae are moving into corn. These dates predict when 10 percent of the larvae will move to corn.

January 1, 1999 to May 31, 1999 Base-41 degree days (projected migration date in parentheses).

Begin by scouting corn adjacent to grass terraces, waterways, ditches, and fencerows; and especially those areas where stalk borer stand loss has occurred in previous years. Look for feeding holes in the new leaves or small larvae resting inside the whorls. Larvae that are
feeding in the whorl, but that haven't tunneled into the plant, can be killed with an insecticide. The smaller the corn, the more likely it is to be killed by stalk borers. Once corn reaches the 7-leaf stage (V7 stage), stalk borers are unlikely to kill the plants.

![Young stalk borer larva showing purple body with white longitudinal lines.](http://www.ipm.iastate.edu/ipm/icm/node/1365/print)

Stalk borers don't disperse very far from grass, so only the first four rows of corn next to grass would need to be sprayed. However, the exception to the problem in the first four rows is when weedy grasses or giant ragweed are growing throughout a cornfield. If these weeds are killed with herbicides, the stalk borers will move out of the weeds and into the corn. Stalk borers can destroy a corn stand under these circumstances. To prevent this from happening, an insecticide should be tank mixed with the herbicide (if it is a fast burndown herbicide) or the field should be sprayed with the insecticide about 7 days after the herbicide (if it is a slow burndown herbicide). Be sure to read the insecticide label before mixing pesticides.

![Stalk borer damage to corn border rows.](http://www.ipm.iastate.edu/ipm/icm/node/1365/print)

Economic thresholds (see chart) can help in deciding whether or not to apply an insecticide. These economic thresholds are based on the percentage of infested plants, and assume $13 per acre control costs and 80 percent control with an insecticide. If the number of infested plants exceeds the percentage given for the plant stage, then an insecticide application can be economically justified. Young plants have a lower threshold because they are more easily killed than older plants. Scouting can stop when the plants reach the V7 stage. Thanks to Larry Pedigo, entomologist at Iowa State University, for development of the economic thresholds.

Labeled insecticides and rates per acre include Ambush (6.4 to 12.8 ounces), Asana XL (5.8 to 9.6 ounces), Lorsban 4E (2 to 3 pints), Pounce 3.2EC (4 to 8 ounces), or Warrior T or 1E (2.56 to 3.84 ounces). These products, with the exception of Lorsban, are restricted use pesticides. Always read and follow label directions.

**Stalk borer economic thresholds at $2.00 per bushel of corn**

<table>
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<th>Leaf stage</th>
<th>Infested plants (%)</th>
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<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
<td>12</td>
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