

# INTEGRATED CROP MANAGEMENT

## Up next: Stalk borers in corn

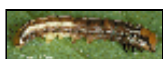
Stalk borers are notorious for killing or stunting the corn row next to fences, grassy waterways, and conservation terraces. Control measures can be taken to prevent this damage, but fields must first be scouted on a timely basis.



**Stalk borer damage to corn border rows.**

[Enlarge](#) [1]

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

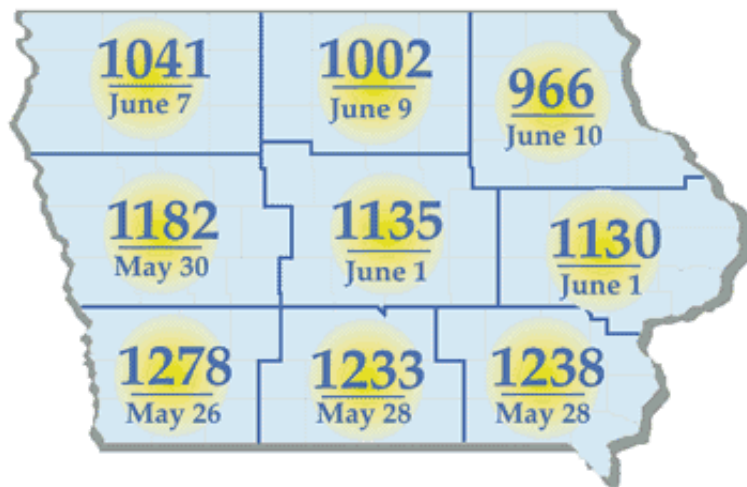


**Early stage stalk borer has a purple midsection and an orange head with a black stripe.**

[Enlarge](#) [2]

## Degree days and migration

We are approaching the dates for southern Iowa when stalk borers will move out of grass and into corn. Approximately 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 on page 82), scout to determine whether the larvae are moving into corn. These dates predict when 10 percent of the larvae will move into corn.



*January 1, 2000 through May 21, 2000 Base-41 degree days and projected migration dates.*

## Scouting border rows

Scout corn adjacent to grass terraces, waterways, ditches, and fencerows; and especially those areas where stand loss has occurred in previous years. Stalk borers don't crawl very far from grass, so only the first four rows of corn next to grass would need to be sprayed. Look for small larvae resting inside the whorls or for new leaves with feeding holes.

Larvae 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.

## Fields with ragweed

An exception to the border row problem is when weedy grasses or giant ragweed are growing throughout a cornfield. If these weeds are killed with herbicides, the stalk borers move out of the weeds and into the corn. Stalk borers can destroy a corn stand under these circumstances. To prevent this destruction, 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 approximately 7 days after the herbicide (if it is a slow burndown herbicide). Be sure to read the insecticide label before mixing pesticides.

## Bt corn

In some of our experiments, we have found that Bt corn suppresses or slows down stalk borer injury. Bt corn does not have the same effect on stalk borers as it does on European corn borers, so don't expect complete control of this pest in Bt corn.

## Economic thresholds

The economic thresholds can help in deciding whether to apply an insecticide (Table 1). These 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 is not necessary beyond the V7 developmental stage.

**Table 1. Stalk borer economic thresholds at \$2 per bushel of corn.**

Leaf Stage	% Infested Plants
1	10
2	12
3	15
4	16
5	17
6	34
7	100

## Labeled insecticides

Products 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.

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### Source URL:

<http://www.ipm.iastate.edu/ipm/icm//ipm/icm/2000/5-29-2000/stalkincorn.html>

### Links:

[1] <http://www.ipm.iastate.edu/ipm/icm//iborderrow.html>

[2] <http://www.ipm.iastate.edu/ipm/icm//istalklarv.html>

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