

5-28-2001

## 2001 stalk borer migration is upcoming

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### Recommended Citation

Rice, Marlin E. and Pope, Richard O., "2001 stalk borer migration is upcoming" (2001). *Integrated Crop Management News*. 1980.  
<http://lib.dr.iastate.edu/cropnews/1980>

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### **Abstract**

Stalk borers are notorious for killing or stunting the corn row next to fences, grassed 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 larvae have already hatched in Iowa and most of the larvae are now inside bromegrass 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 grass. Eventually, the stalk borers in the grass get too large for the grass stems and they disperse in search of larger diameter plants, often corn.

### **Keywords**

Entomology

### **Disciplines**

Agricultural Science | Agriculture | Entomology

# INTEGRATED CROP MANAGEMENT

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Stalk borer larvae have already hatched in Iowa and most of the larvae are now inside bromegrass 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 grass. Eventually, the stalk borers in the grass get too large for the grass stems and they disperse in search of larger diameter plants, often corn.

**Stalk borer economic thresholds at \$2/bushel of corn.**

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

## Degree days and migration

Early June is the predicted time 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), scout to determine whether the larvae are moving into corn. These dates predict when 10 percent of the larvae will move into corn.

## 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

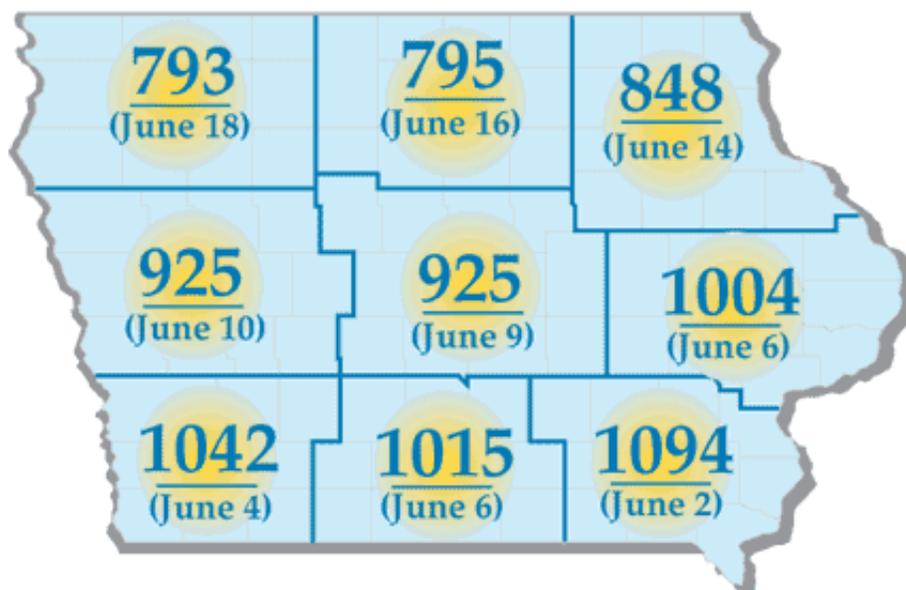
In some of our experiments, we have found that Bt corn suppresses or slows down stalk borer injury. Bt corn does not have the same effect on stalk borers as it does on European corn borers, so don't expect complete control of this pest in Bt corn.

## Economic thresholds

Economic thresholds can help in deciding whether to apply an insecticide (see table). 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, 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 in corn.

## Labeled insecticides

Common products and rates per acre include Ambush (6.4-12.8 ounces), Asana XL (5.8-9.6 ounces), Lorsban 4E (2-3 pints), Pounce 3.2EC (4-8 ounces), or Warrior (2.56-3.84 ounces). Always read and follow label directions.



*January 1 through May 20, 2001. Base-41 degree days. Degree days and projected migration dates are shown.*

This article originally appeared on pages 91-92 of the IC-486(11) -- May 28, 2001 issue.

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<http://www.ipm.iastate.edu/ipm/icm//ipm/icm/2001/5-28-2001/upcomingstalkb.html>

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