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2013 Black Cutworm Scouting Advisory

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2013 Black Cutworm Scouting Advisory

Abstract

We asked black cutworm monitoring participants to start watching traps at the beginning of April. The first moth was recorded in Ringgold County on April 3 this year. Our predictions of cutting dates (the date when black cutworm larvae are likely to be damaging corn) are based on peak flights that took place beginning April 8 in the southwestern corner of the state. Estimated peak flights for other climate divisions occurred towards the end of April and beginning of May. The map (Fig. 1) shows the predicted cutting dates for the nine Iowa climate divisions. Predictions are based on actual and historical degree day data accumulated from the dates of peak flights.

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2013 Black Cutworm Scouting Advisory

By Adam Sisson, Integrated Pest Management; Laura Jesse, Plant and Insect Diagnostic Clinic; and Erin Hodgson, Department of Entomology

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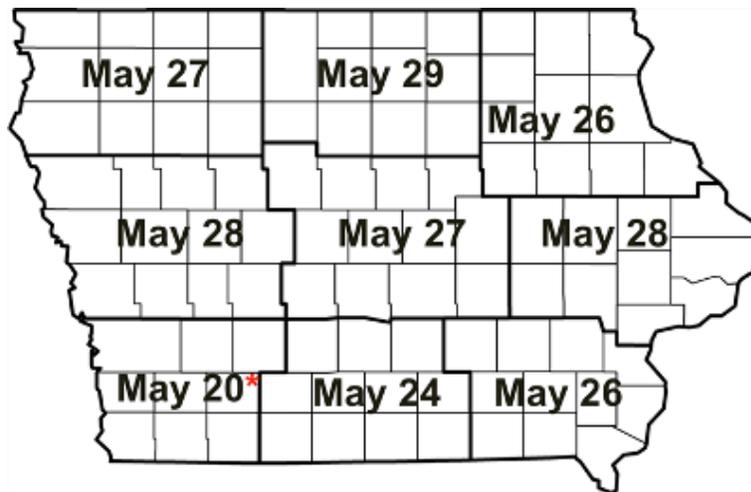


Figure 1. Estimated black cutworm cutting dates for each Iowa climate division based on peak flights of moths occurring in 2013. *The first peak flight in this climate division took place about three weeks before other parts of Iowa, and several other peak flights occurred here throughout April.

Scouting

Black cutworms are light grey to black with granular-appearing skin and four pairs of fleshy prolegs on the hind end (Fig. 2). They can be confused with another insect that may be found in fields during spring, the dingy cutworm. However, there are some characteristics that can help to set species apart, which are outlined further in this [article on cutworm identification](#).



Figure 2. Black cutworms are best identified by the dark tubercles found along the middle of the back. On each body segment, the pair of tubercles closest to the head is about one-third to one-half the size of the pair nearest to the abdomen.

Certain fields may be at a higher risk for black cutworm damage than others. These fields include those that are poorly drained and low lying, those next to areas of natural vegetation and those that are weedy or have reduced tillage. Black cutworm may be more troublesome in fields in which corn is planted late, as plants are smaller and more vulnerable to damage. Also, if high numbers of larvae exist in a cornfield, they may cause problems despite the use of Bt hybrids.

Scouts are encouraged to start looking several days before the estimated cutting dates as local development may be sped up (or slowed down) by localized weather. Larvae from later or yet to occur peak flights can continue to damage corn so it is important to continue scouting, especially with the later planted corn in 2013. Fields should be scouted for larvae weekly until the corn reaches V5 by examining 50 corn plants in five areas in each field. Look for plants with wilting, leaf discoloration and damage, or those that are missing or cut (Fig. 3). Note areas with suspected damage (with a flag) and return later to assess further damage. Larvae can be found by carefully excavating the soil around a damaged plant.



Figure 3. Black cutworm larval damage usually starts above the soil surface. Leaf feeding (left) can occur. As larvae mature, they can cut plants (right). Photos copyright Marlin Rice.

There is [evidence](#) to suggest that black cutworm eggs are able to survive for at least one night of sub-freezing temperatures. So it may be that eggs laid before frost will still produce cutting larvae; however, scouting a field is the only way to tell if an economic infestation is occurring in an emerged crop.

Thresholds

With corn price and input fluctuations, a dynamic threshold may be useful. An Excel spreadsheet with the calculations built in can be downloaded [here](#) and can be used to help management decisions regarding black cutworm.

Preventive black cutworm insecticide treatments applied as a tank-mix with herbicides are of questionable worth. Black cutworm is a sporadic pest; therefore, every field should be scouted to determine the presence of the insect prior to spraying insecticides.

Biology

Adult moths migrate on the wind from southern states near the start of spring, then mate and lay eggs. Around 1,300 eggs are laid by a single mated adult female. Eggs are laid in crop stubble, low spots in the field and in weedy areas. Younger larvae injure corn plants by feeding on leaf tissue and older larvae can cut seedlings.

Trap catches in Iowa

In 2013, traps have been established in 43 Iowa counties, with several counties having multiple traps. The moths trapped in Iowa so far can be viewed by going to www.ncipmpipe.org, selecting "View all maps" and clicking on "Iowa Black Cutworm Monitoring 2013." Please consider that adult moth trap captures do not necessarily mean there will be economically significant black cutworm infestations in a particular location. Field scouting is essential to determine if an economically damaging infestation exists.

If you see any damage from black cutworm larvae while scouting, please let us know by sending a message to bcutworm@iastate.edu. This information could help us to refine our prediction efforts in coming years.

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