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Black Cutworm Monitoring Network Update 2010

Adam Sisson

Iowa State University, ajsisson@iastate.edu

Laura C.H. Jesse

Iowa State University, ljesse@iastate.edu

Erin W. Hodgson

Iowa State University, ewh@iastate.edu

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Abstract

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Black Cutworm Monitoring Network Update 2010

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

Monitoring for black cutworm, an occasional corn pest in Iowa, has begun. Cooperators in the black cutworm monitoring network are observing the arrival of adult moths (Figure 1) throughout the state. Since April 1, reports of moths captured in pheromone traps are coming from a number of counties, but most captures have been below peak flight levels.

The black cutworm monitoring network helps growers determine when they should start scouting. Scouting fields is important in determining if cutting larvae are a problem in a specific field. Adult moth trap captures alone are not enough to justify an insecticide treatment. Scouting should be done before treating for black cutworm is considered.



Figure 1. The black cutworm adult life stage

Biology

The black cutworm, a pest of corn in Iowa, causes damage early in the season. The insect does not overwinter here. Instead, adult moths migrate on the wind from southern states near the beginning of spring, mate and lay eggs. Approximately 1300 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 (Figure 2) injure corn plants by feeding on leaf tissue and older larvae can cut seedlings (Figure 3). Once corn reaches the V5 stage, it becomes harder for the pest to cut plants. Three generations of black cutworm occur per year.

Black cutworms 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 such as skin type and tubercle size which are outlined in detail in ICM News article [Blacks and Dingys: Confusing Cutworms](#).



Figure 2. Black cutworm larva



Figure 3. Damage to corn plant from the black cutworm

Monitoring network

After checking pheromone traps for the presence of the male moths, monitoring network cooperators enter the number of captured moths on the network website. The arrival of moths indicates egg laying will soon take place. Once a large number of moths are recorded in a particular region in Iowa, we use degree days to estimate insect development. Degree days are based on temperature which is a better way to estimate insect development than calendar days – if it is warm insects will grow faster than when it is cold. We use past temperature data combined with this year's temperature information to determine when hatched larvae will begin cutting corn (cutting date). Cutting dates are projected to occur at about 300 accumulated base-51 F degree days from a peak flight.

As the season progresses, we will keep you posted about the status of the black cutworm in Iowa. Keep your eyes open for the black cutworm predicted cutting dates article on the Integrated Crop Management News website. If you wish to join the monitoring effort in coming years, please send an email to bcutworm@iastate.edu with your name and address and we will add you to the list for 2011.

Adam Sisson is with the Department of Plant Pathology. He can be reached at ajsisson@iastate.edu or 515-294-0581. Laura Jesse is an entomologist with the Iowa State University Extension Plant and Insect Diagnostic Clinic. She can be reached by email at ljesse@iastate.edu or by phone (515) 294-5374. Erin Hodgson is an assistant professor of entomology with extension and research responsibilities. She can be contacted by email at ewh@iastate.edu or phone (515) 294-2847.

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