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Black Cutworm Scouting 2015

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Abstract

The black cutworm (BCW) is a migratory pest that cuts corn seedlings and feeds on leaf tissue. Scouting for BCW larvae helps to determine if an insecticide application will be cost effective. When to scout for BCW caterpillars is based on the peak flight of moths and accumulating degree days after the peak flight. A peak flight occurs when eight or more moths are caught over two nights in a wing style trap.

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Black Cutworm Scouting 2015

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

The black cutworm (BCW) is a migratory pest that cuts corn seedlings and feeds on leaf tissue. Scouting for BCW larvae helps to determine if an insecticide application will be cost effective. When to scout for BCW caterpillars is based on the peak flight of moths and accumulating degree days after the peak flight. A peak flight occurs when eight or more moths are caught over two nights in a wing style trap.

Adult moths migrate from southern states each year, and it can be difficult to determine when moths arrive in the spring. To find out when moths arrive in Iowa, a volunteer network of farmers, agronomists, extension employees, etc. monitor black cutworm traps. Traps have been placed in about two-thirds of Iowa's 99 counties in 2015, with many counties having multiple traps.

Volunteers were asked to start checking traps at the beginning of April, and the first BCW moth was recorded in Woodbury County on April 2. However, many trappers are reporting low or no moths; about 40 of the 106 active traps have reported two or less moths and there have been few recorded peak flights. As a point of comparison, total moths captured in cooperated traps in 2015 is less than half of what was reported at approximately the same time in 2011. Several surrounding states may not be capturing high amounts of moths either. Over the past four years, we have generally started degree day accumulation from peak flights in April.

So what does this highly variable BCW trap capture mean for predicting cutting dates in corn? We have limited moth activity to generate scouting recommendations for many parts of the state. However, some experienced crop consultants notified us of caterpillar feeding in vegetative corn this week. For example, we just received a report of dingy and sandhill cutworm feeding in a field around southeastern Iowa. It may be that peak flights of BCW moths occurred earlier and before traps were out this year; late March peak flights were observed in Iowa in 2012. As you are out in fields assessing stands, be on the lookout now for early season insect injury in corn – BCW or otherwise. The map (Figure 1) shows predicted BCW cutting dates for the nine Iowa climate divisions, based on actual and historical degree day data and peak flights during early May.

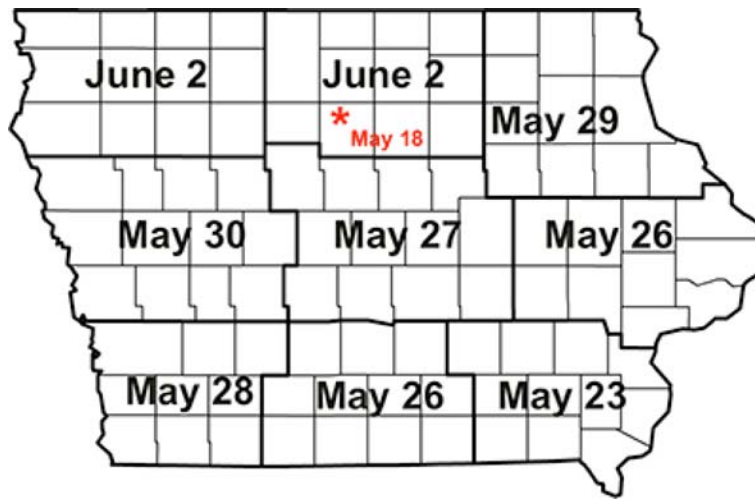


Figure 1. Estimated black cutworm cutting dates for each Iowa climate division based on peak flights of moths occurring early May 2015. However, trap captures have been highly variable this year and we encourage you to scout all corn fields for potential pest insect issues. *Wright County had a peak flight recorded about two weeks earlier than the other peak flights, thus earlier cutting may be possible in this area.

Scouting. Poorly drained, low lying, or weedy fields, as well as those next to natural vegetation or with reduced tillage, may have higher risk of BCW damage. Late-planted corn can be smaller and more vulnerable to larval feeding. Some Bt hybrids provide suppression of BCW, but larvae can still cut young plants.

Scouts are encouraged to start looking for any activity during early season stand assessments currently taking place, or at least several days before the estimated cutting dates. This is because local larvae development may be different due to weather variation within a climate division. Fields should be scouted for larvae weekly until corn reaches V5. Examine 50 corn plants in five areas in each field for wilting, leaf discoloration and damage, or those that are missing or cut (Figure 2). Flag areas with suspected feeding and return later to assess further injury. Larvae can be found by carefully excavating the soil around a damaged plant.



Figure 2. Black cutworm larval damage usually begins above the soil surface. Leaf feeding (left) may be observed. As larvae mature, they can do more serious damage to plants (right). Photos by Marlin Rice.

Identification. BCW larvae have grainy, light grey to black skin and four pairs of fleshy prolegs on the end of the abdomen (Figure 3). There are pairs of dark tubercles, or bumps, along the side of the body. The pair of tubercles nearest the head is approximately 1/3 to 1/2 the size of the pair closest to the abdomen (Figure 4). BCW larvae can be confused with other cutworms and armyworms. Certain characteristics can be used to tell species apart and are summarized in this [article on cutworm identification](#).



Figure 3. Black cutworm larvae have grainy and light grey to black skin. Photo by Adam Sisson.



Figure 4. Black cutworms can be distinguished from other larvae by the dark tubercles on the middle of the back. Photo by Adam Sisson.

Thresholds. Common thresholds for seedling, V2, V3, and V4 stage corn plants are 2, 3, 5, and 7 plants cut out of 100, respectively. A dynamic threshold for BCW may be useful with corn price and input fluctuations. An Excel spreadsheet with calculations built in can be downloaded [here](#) and can be used to help with black cutworm management decisions.

Preventive BCW insecticide treatments applied as a tank-mix with herbicides are a questionable practice. BCW is a sporadic pest and every field should be scouted to determine insect presence before spraying insecticides.

If you see any fields with BCW larvae while scouting, please let us know by sending a message to bcutworm@iastate.edu. This information could help us to refine future predictions.

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