

DO I NEED TO APPLY AN INSECTICIDE TO MANAGE EARLY-SEASON CORN INSECTS SUCH AS CUTWORMS?

In the Corn Belt there are many species of cutworms that can attack corn in the early season. Perhaps the most well-known is the black cutworm, but there are other species including: dingy cutworm, sandhill cutworm, claybacked cutworm, glassy cutworm, army cutworm, darksided cutworm, and spotted cutworm. Of these species, the dingy cutworm is perhaps the second most common found attacking corn in the Corn Belt. The behavior of these species is considerably different. For example, the black cutworm cuts the corn seedling whereas the dingy, army, darksided, and spotted cutworm are climbing cutworms and rarely cut the plant or cause economic injury. The sandhill cutworm is found exclusively in sandy or coarse textured soils and feeds underground as does the glassy cutworm.

Because the black cutworm, while sporadic, is the most common pest, management tactics have been developed to minimize economic injury.

What is the biology of the black cutworm?¹

The black cutworm moth overwinters in South Texas and Mexico and migrates northward on storm fronts. Therefore, the moths go in the direction of the wind. The female moth is attracted to fields with winter annual weeds, in which she deposits eggs. Destruction of the weeds with tillage or herbicide eliminate the larval food source and the larvae move to the emerging corn. Initial feeding is limited to small holes on the plant but as the larvae grow they will cut plants at the soil line. Commonly the larvae will drag the plant under ground where it will feed on the seedling. Once the plant reaches the V6 stage it is too large to cut, and larvae may tunnel inside the plant. The larvae complete five growth stages before pupating and emerging as a moth.

What fields are at higher risk of injury by the black cutworm?²

Fields with winter annual weeds, such as henbit and purslane, are highly attractive to the female black cutworms. In years with wet springs that delay the control of these weed hosts and if females are in the area, the risk of economic injury is increased. Therefore, no-till or strip-till production systems may be more conducive for black cutworm oviposition because of the presence of the winter annual weeds.

How to identify the black cutworm larvae?

The black cutworm larvae are pale gray to dark black, with a rough and gritty cuticle (skin), a pale narrow strip down

the back, and unequal sized spots on the back line, with the outside spot being larger than the inside spot. They can be confused with the dingy cutworm, but the dingy cutworm has a very smooth cuticle and the spots along the back line are of equal size. Additionally, the injury that the dingy cutworm causes is limited to leaf feeding without cutting so it very infrequently causes economic injury.

What are the control tactics for the black cutworm?

Since the chance of an economic infestation cannot be reliability predicted, many producers rely on corn products containing Herculex® I or Agrisure Viptera® technology, such as SmartStax® technology or Trecepta® technology, to provide control of the black cutworm.² Additionally, Acceleron® Seed Applied Solutions for corn provide control of black cutworm. Foliar insecticides can also be used if an economic infestation is found to exist.²

Is there a sampling program to assess the need to apply a control tactic?

When scouting for black cutworm, focus on fields that contained winter annual weeds, low spots in fields, and border areas next to areas that had winter annual weeds. Consult with local state extension offices to obtain information on sampling protocols, treatment guidelines, and foliar insecticides.

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Sources

¹ Black cutworm. 2009. Purdue University Extension. <https://extension.entm.purdue.edu/fieldcropsipm/insects/black-cutworms.php>

² Ostlie, K. and Potter, B. 2020. Black cutworm. University of Minnesota Extension. <https://extension.umn.edu/corn-pest-management/black-cutworm>

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