Cutworm a threat to cornfields

Farmers will begin to harvest corn in the next two to three weeks. Sitting high in the combine, they can often see things that were not visible before harvest, such as ear damage caused by insects and disease.

One pest farmers will be looking for at harvest is the western bean cutworm. The larvae of this moth has the potential to cause severe yield loss from ear feeding. At this time, reports of this larva have been low, but moth counts in traps earlier in the year were higher than previous years.

Do not be confused by the word “bean” in its name. The crop most threatened by it in our area is corn. It is also a serious pest in dry beans and other legumes but not soybeans.

Historically, western bean cutworms were found in the corn and dry bean fields of the Great Plains. The pest decided to migrate eastward at the end of the last century. It was first detected in Iowa in 2000 and made its way to Indiana by 2005. In 2006, the very first moth was detected in Ohio.

Like most moths, the western bean cutworm is rather dull and plain in color. It is grayish-brown with a wingspan of about 1½ inches.

The western bean cutworm can be distinguished from other gray moths by three distinct features on their forewings:
- A broad white band on the leading edge of the forewing.
- A white “period” or dot.
- A crescent-shaped “comma.” The dot and comma are both adjacent to the white band.

The western bean cutworm completes a single generation per year. Adult moths fly in midsummer and females lay eggs on the upper surfaces of corn leaves. Females will lay between 20 and 200 eggs per mass, generally on leaves that are emerging the last few weeks before tasseling.

Eggs will be at first white, then changing to tan as they mature. A week before hatching, they will become a brilliant purple.

Larvae are tan in color, and can be identified by two broad stripes immediately behind the head. Characteristics that distinguish western bean cutworm larvae from corn earworms are the lack of microspines on the body and the lack of net-like marks on the head capsule.

Larvae may enter the corn ear through the tip, or by chewing through the side of the husk and feeding directly on kernels. Ear damage is often more severe than other ear-feeding larvae, such as the European corn borer and earworms.

Ear and kernel damage often provides an entryway for fungal infections that may allow mycotoxins to later develop.

Chemical control can be a challenge because larvae spend considerable time inside the husk, limiting the effectiveness of insecticides. The spray has to be applied when larvae are small and feeding on pollen and have not entered the ear. For better and systemic control, farmers may use a granular hybrid.

In cooperation with agronomists from Legacy Farmers Cooperative, the Ohio State University Extension Office has been monitoring the migration of the western bean cutworm, Striacosta albicosta, into Hancock County since 2012. Hancock County is part of a larger state program that is monitoring cutworm activity.

To monitor cutworm activity, pheromone traps are set up by cornfields in late June to attract and capture male moths. The presence of male moths is a good indicator that female moths are also present.

Until 2016, monitoring showed limited western bean cutworm activity in our area. However, in mid-July of 2016, 62 moths were captured in the McComb trap, the most ever caught in Hancock County. Traps near Arcadia and Arlington had less than half this number.

In 2017, trap counts peaked in early to mid-July. All sites had increased numbers compared to 2016. The trap near McComb had 93 moths; Arcadia, 43; and Arlington, 33. However, compared to other counties, such as Fulton and Defiance, these numbers are relatively low.

Male moths in the traps do not necessarily mean that females are laying eggs in nearby cornfields. Counties along the Michigan border have found egg masses but little feeding damage in the past. This changed in 2016, with Fulton County reporting ear damage in every fifth ear in certain fields.

Hancock County also detected, for the first time, a field in 2016 near Van Buren with ears damaged from larval feeding. We have not had any reports this year of ear damage, but reports may come in once harvest begins. It has been reported in sweet corn.

The concern is that larvae may overwinter and establish an indigenous population that may increase numbers down the road. In previous years, moths had to migrate into the area from the north.

Still, Hancock County soils are not preferred by the western bean cutworm. They prefer sandy-type soils, which are not common in the county. Eastern Fulton County is known for its highly productive black sands. The “sandy” type soils in Hancock would be on the “ridge” along Ohio 613 in the northern part of the county and along Ohio 12 west of Findlay.

We will continue to monitor the western bean cutworm in 2018. In the meantime, farmers need to be aware that its populations are increasing in the county and certain fields may be more vulnerable. Farmers may need to consider planting Bt corn hybrids.

Overall, monitoring has shown that the western bean cutworm has not become a major pest in Hancock County and that our county may be the southern edge of its range in the state.


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