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Western bean cutworms captured

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Western bean cutworms captured

Abstract

The western bean cutworm is a mid-season pest of field corn that was rarely seen in Iowa before 2000. But during the past two summers injury has become more obvious and widespread. Most of the historical infestations have occurred in northwestern Iowa. In 2001, the injury was more widespread, occurring not only throughout the northwestern counties but also in the southwestern counties (Harrison, Pottawattamie, and Mills) and northeastern counties (Bremer and Butler). Some fields had approximately 95 percent of the ears heavily damaged from the larvae.

Keywords

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INTEGRATED CROP MANAGEMENT

Western bean cutworms captured

The western bean cutworm is a mid-season pest of field corn that was rarely seen in Iowa before 2000. But during the past two summers injury has become more obvious and widespread. Most of the historical infestations have occurred in northwestern Iowa. In 2001, the injury was more widespread, occurring not only throughout the northwestern counties but also in the southwestern counties (Harrison, Pottawattamie, and Mills) and northeastern counties (Bremer and Butler). Some fields had approximately 95 percent of the ears heavily damaged from the larvae. Kernels in the ear tips, plus along the side of the ear, were destroyed. In addition, many plants were invaded by ear molds, which reduced the quality of the yield at harvest.

This year an insect blacklight trap north of Correctionville in western Iowa collected western bean cutworms on June 28 and 30. Because of the significant damage that has been caused by this insect during the past 2 years, I recommend that it is important to scout fields and consider management options if the population reaches the economic threshold.

The western bean cutworm is a common pest in western Nebraska and the following information on biology and scouting procedures was provided by University of Nebraska entomologists Bob Wright and Ron Seymour.

Females lay eggs on corn or dry edible field bean leaves. Cornfields in the late-whorl stage are most attractive to the females for egg laying. Eggs are laid in masses of 5 to 200, usually on the upper surface of the top leaves. The eggs are about the size of a pinhead. When first laid, the eggs are white. As the eggs develop they turn tan and then purple just before the larvae hatch. Newly hatched larvae are approximately 1/4 inch in length and are dark brown. Young larvae are tan with a darker, faint diamond-shaped pattern on their backs. As the larvae mature, they become a pinkish tan or pale brown and reach a body length of 1 1/2 inches. When the larvae hatch, they first feed on pollen and then move to the corn ears. The larvae feed there for several weeks before they drop to the soil to form a subterranean overwintering chamber. By the end of the five instars, considerable feeding damage can occur. In corn, one larva per plant usually does not cause severe damage but the ears may contain up to 10 larvae, which can substantially reduce yield, because western bean cutworms are not cannibalistic, compared with corn earworms.

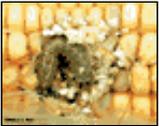


Western bean cutworm eggs.

[Enlarge](#) [1]

Start scouting for the western bean cutworm with the beginning of moth flight in early July. In corn check 20 consecutive plants at five locations. If 8 percent of the plants have an egg mass or young larvae are found in the tassel, consider applying an insecticide. Timing of the application is critical. If the tassel has not emerged when the larvae hatch, they move into the whorl and feed on the developing pollen grains in the tassel. As the tassel emerges, the larvae move down the plant to the green silks and then into the silk channel to feed on the developing ear.

Once the larvae reach the ear tip, control is nearly impossible. If an insecticide is needed, time the application so that 90-95 percent tassel emergence has occurred. If the tassels have already emerged, the application should be timed for when 70-90 percent of the larvae have hatched.



Western bean cutworm feeding on corn ear.

[Enlarge](#) [2]

If an insecticide application is needed, cornfields should be checked for the presence of spider mite colonies. If mites are found, select a product that does not stimulate mite reproduction. Products that contain permethrin (Pounce and Ambush) or esfenvalerate (Asana) have been associated with increased mite reproduction in western corn production states. Other products labeled for western bean cutworm control on corn include Capture 2EC, Sevin XLR Plus, Lorsban 4E, Mustang, PennCap-M, and Warrior.

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[1] http://www.ent.iastate.edu/imagegal/lepidoptera/wbcutworm/western_bean_cutworm_eggs.html

[2] http://www.ent.iastate.edu/imagegal/plantpath/corn/wbcw/wbean_cutworm_on_ear.html

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