Western Bean Cutworm

CROP BULLETIN

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KEY POINTS

- Western bean cutworm has historically been a secondary pest of corn; however, in favorable environments, it can cause significant economic damage.
- In addition to yield loss, a major consideration for areas with higher ear rot pressure is the risk of reduced grain quality resulting from a western bean cutworm infestation.
- Pheromone trapping, the most common and economical adult monitoring method, provides a highly valuable resource for tracking moth flight.

PEST FACTS AND IMPACT ON CROP

- Species name: Striacosta albicosta
- Major larval feeding coincides with the ear development
- Direct feeding on the ears reduces grain yield
- Infestations of several larvae per ear can reduce grain yield up to 15-20%
- Feeding may allow mold and other fungal spores to colonize the ear, further reducing grain quality and potentially producing mycotoxins
- Larvae are pests of dry beans in the western U.S. and Great Lakes region, and of corn in the Corn Belt

APPROXIMATE RANGE OF WESTERN BEAN CUTWORM

Figure 1. Western bean cutworm historically occurred in cornfields of the Great Plains but has moved into the central and eastern Corn Belt.

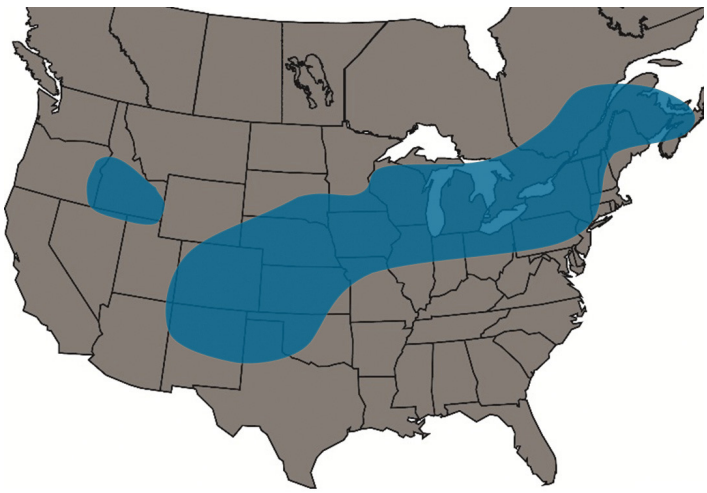

Figure 2. Damage from western bean cutworm

PEST SYMPTOMS

- Leaf and whorl feeding by small stage larvae
- Ear penetration and kernel damage by large stage larvae
- Secondary infestation by ear molds after protection from shuck covering has been breached

Figure 3 & 4. Feeding by western bean cutworm and damage

PEST IDENTIFICATION

- Western bean cutworm: No straight, lateral lines or black tubercles (warts) along the sides
- Fall armyworm: Thin white lines down middle of back and four large, dark tubercles on “tail” section

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- Corn earworm: Lateral, thick pale stripe and dark tubercles.

western bean cutworm

fall armyworm

corn earworm

INTEGRATED PEST MANAGEMENT

- **Populations:** Several factors may contribute to increased populations, including mild winters, reduced use of foliar insecticides in corn, and reduced or no tillage.
- **Trapping:** Use pheromone traps to determine when to start scouting for eggs; usually during VT-R2 stages.
- **Scouting:** Check the upper flag leaf for egg masses after traps indicate moth flight; check 40 plants per field.
- **Ear molds:** If ear molds are a problem, timely harvest and drying may be desirable to prevent mycotoxin formation.

IN-PLANT PROTECTION

- Corn products with Optimum® Leptra® and Optimum® AcreMax® Leptra® insect protection provide an effective mode of action for in-plant protection against western bean cutworm.

INSECTICIDES

- Time application to coincide with egg hatch.
- Larvae must come into contact with the insecticide before entering the ear. When larvae enter the ear, they are less likely to encounter the insecticide and control will be reduced.
- Protection is most effective when egg hatch occurs during pollination.
- When egg hatch occurs at brown silk stage or later, the larvae can move quickly to the ears since fresh pollen is not available on which to feed.

INSECTICIDE TREATMENT THRESHOLD

- Multiple extension organizations recommend treatment when 5% of plants have egg masses and/or young larvae.
- Growers may consider treatment at lower infestation levels if:
  - The field has a history of economic damage from western bean cutworm.
  - DON levels in grain are a concern for the grower.

WESTERN BEAN CUTWORM ANNUAL LIFE CYCLE IN CORN

Adults emerge from soil in late June, mate and lay eggs

Larvae feed on pollen and foliage, then move to ear

At grain maturity, larva moves to soil, and overwinters

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