

# AGRONOMIC Spotlight



Technology  
Development  
by MONSANTO®

## Treatment Options for Western Bean Cutworm (*Striacosta albicosta*) in Corn

Western bean cutworm (WBC) larvae decrease yield potential and grain quality by feeding on corn kernels. WBC has been a severe pest of corn in the western states and is now a serious pest of corn in parts of the Corn Belt as well. Properly identifying WBC and understanding its thresholds can help determine if control options are needed.

### Life Cycle

Corn fields in the late-whorl stage are target locations for females to begin egg laying. Egg masses of 5 to 200 are usually laid on the upper surface of the top leaves. The eggs, about the size of a pinhead, are white when first laid. The eggs turn tan and then purple (Figure 1 (A)) just before the larvae hatch. Newly hatched larvae are approximately 0.25 inch in length and are dark brown. Most eggs are laid during peak moth flight, which usually peaks in early to mid-July<sup>1</sup>. Timing of moth flights must be compatible with the corn stage for ear feeding.

Larvae first feed on pollen. Then they feed on corn ears for several weeks before they drop to the soil, where they overwinter.

### Identification

Young larvae are tan with a darker, faint diamond-shaped pattern on their backs (Figure 1 (B)). This insect can be distinguished from the corn earworm by dark stripes immediately behind the head, and the absence of small dark spines or stripes on the side of the body. As the larvae mature, they become a pinkish tan or pale brown and reach a length of 1.5 inches.

### Management

WBC larval feeding damages corn through reduced grain yield and quality. Pollination may be poor if silks are damaged from feeding. Once the ear is formed, WBC feed on developing kernels and can destroy as much as 50% to 60% of the kernels<sup>3</sup>. Losses due to direct larval feeding may be compounded by

subsequent fungal and mold infections associated with larval waste products.

Scouting for WBC should start when moth flights begin, usually in mid-July. Check 20 consecutive corn plants in at least five different locations of the field to make sure that all areas of the field are represented<sup>1</sup>. An insecticide application has historically been recommended if 8% of the evaluated plants contain an egg mass or if young WBC larvae are found in the tassel<sup>1,2</sup>.

If needed, there are several insecticides labeled for control of WBC larvae. Timing of insecticides is critical for WBC. Insecticides target early WBC larvae prior to ear entry because effectiveness decreases once the larvae enter the ear. When an insecticide is used, apply it when 95% tassel emergence has occurred<sup>1</sup>.

Insecticide application by airplane or chemigation can provide control of WBC. The University of Nebraska–Lincoln indicated the following insecticides and their generic versions have good control of WBC: Asana® XL, Ambush®, Baythroid® XL, Pounce® 25WP, Lorsban®-4E, Capture®, Mustang® MAX EC, Penncap-M®, Proaxis®, Warrior with Zeon Technology®, and Sevin® XLR Plus<sup>1</sup>. One important note is that synthetic pyrethroids can cause spider mite populations to increase or flare. Therefore, if spider mites are present, a miticide can be added to the insecticide mixture to help prevent a spider mite outbreak.



Figure 1. (A) Western bean cutworm egg mass shortly before hatching. (B) Western bean cutworm larva. (C) Western bean cutworm adult captured in pheromone trap.

Sources. <sup>1</sup>R. Wright et al. July 8, 2011. Western bean cutworm flights have begun in Nebraska—start scouting. University of Nebraska Extension. Crop Watch; <sup>2</sup>F.B. Pairs. 2010. Western bean cutworm: characteristics and management in corn and dry beans. University of Colorado Extension. Pub. No. 5.538; <sup>3</sup>R. Seymour et al. 2004. Western bean cutworm in corn and dry beans. Univ. of Nebraska Ext. NebGuide G1359; Additional references used in publication; K.L. Steffey et al. 1999. Handbook of Corn Insects. Entomological Society of America.

Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

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