Entomology 156 (L.D.*)

Soybean Stem Borer

"*Dectes texanus texanus* LeConte, an occasional pest of soybeans"

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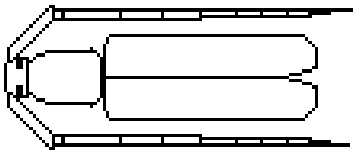
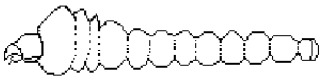


General Shape of Adult Beetle

Description

Soybean stem borer is the common name of a small, long-horned beetle that attacks soybeans. The **adult beetle** is pale gray in color and is about 3/8 inch long with antennae that are longer than the body. **Eggs** are deposited singly in cavities that female beetles chew into leaf petioles and stems.

When the eggs hatch, the larvae tunnel into the stalk and feed on the pith. If eggs are laid in leaf petioles, the larvae will feed in the petioles for several days and then tunnel into the main stem. The trifoliolate leaf and the petiole then wilts, turns black, and eventually drops from the plant. After the petiole drops from the plant, reddish scar tissue develops around the entrance hole and is a characteristic feature of the infestation.



Larva of Soybean Stem Borer

Larvae are legless with small, brown heads. Their bodies are elongated with accordion-like ridges. Fully grown larvae are creamy white and 1/2 to 5/8 inch long.

Life History

The soybean stem borer overwinters as a larva in the base of hollowed-out, girdled stems. Larvae pupate in early summer and adults begin to emerge in July. Adults lay eggs during July and August. Larvae tunnel up and down the stems until September, when they move to the base of the plant. Larvae are cannabalistic and only one larva survives per plant. About the time plants are mature and ready for harvest, the larvae girdle stems an inch or two above ground level. These weakened stems are then very susceptible to lodging.

Chemical Control

Control of this pest is difficult because the insect spends most of its life inside plant stems, where it is protected from standard chemical controls. Planting time insecticides have been ineffective due to the length of time between planting and emergence of the beetles. Lay-by soil insecticides, while showing some reduction in larval infestations, generally have not been effective enough to be economical.

The only exposed stage of this pest is the adult. However, adults are active for several weeks in the summer, making insecticide timing difficult. Insecticides aimed at adult beetles may show promise when more is learned about the exact egglaying period of the beetles and accurate scouting procedures are developed. Currently, infestations usually go unnoticed until the plants begin to lodge.

Cultural Control

Since chemical controls for this insect are not currently available, cultural controls are the only means of reducing losses from the soybean stem borer.

Crop rotation would be one way to reduce beetle numbers. These beetles are not strong flyers and most reports of serious damage have been from continuous soybeans. Avoid planting soybeans in fields or adjacent to fields that were infested with soybean stem borer the previous year.

Fall tillage also has been shown to reduce winter survival. Stubble should be destroyed and buried 2 to 3 inches deep in the fall by disking or bedding.

Weed control may be another way to reduce stem borer problems. Stem borers are known to use wild annual sunflower, ragweed, and cocklebur as alternate hosts. Good weed management in fallow fields and fence rows also may help reduce soybean stem borer losses.

Losses from this pest can be reduced by avoiding short-season soybean varieties. These varieties often mature very rapidly and appear to have more lodging before harvest than longer season varieties.

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