UT Extension
W197

Soybean Insects

Dectes Stem Borer

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Classification and Description: The Dectes stem borer, *Dectes texanus texanus*, is a long-horned beetle (Coleoptera: Cerambycidae) whose larva tunnels in the stem of soybean and wild host plants. This insect was first reported in soybeans in Tennessee during the early 1970s. The adult beetle is gray and approximately 3/8 inch in length. Eggs are yellowish, shiny, elongated and darken to an amber color prior to hatching. The legless larva is creamy white or yellowish with brown mouthparts. It is less than 1/16 inch long when it hatches from the egg, but reaches a length of 1/2 to 5/8 inch when full grown. The pupa is yellowish-white, turning to dark brown before the adult emerges.



Hosts, Life History and Distribution: Dectes stem borer are native to the United States east of the Rocky Mountains. Besides soybean, giant ragweed and cocklebur are known hosts. It is believed that Dectes stem borer has only one generation annually. Mature larvae overwinter in the stem at the base of infested plants, near or just below the soil level. Pupation occurs in the spring. The pupal stage lasts 10-15 days, with emergence of adults beginning in late June and continuing through August. Mating takes place approximately five days after adults emerge from the pupal stage. The female beetle chews a small hole in the leaf petiole, or less commonly in stems, where she lays a single egg. An adult female can live 4-8 weeks and lay as many as 50 eggs.

Pest Status and Injury: It is not clear whether the Dectes stem borer causes direct yield loss. Fields can have 90 percent or more of plants infested by larvae. Some defoliation occurs from larval tunneling in leaf petioles that eventually causes leaf abscission. As it grows, a larva moves into the main stem from an infested leaf petiole where it tunnels within the pith of the main stem until the plant matures. More than one larva may infest a soybean plant, but only one individual survives to maturity. In preparation for overwintering, older larvae girdle the stem from the inside at 2-5 inches above the soil. Recent evidence suggests that tunneling in leaf petioles or







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in the main stem has little effect on yield. However, girdling in preparation for overwintering can cause lodging, particularly during high winds. Lodging has been reported to cause yield loss or slow harvesting operations.

Management Considerations: Dectes stem borer has become increasingly common in Tennessee. Widespread adoption of reduced tillage systems has undoubtedly increased the occurrence of this insect. Foliar insecticides are not recommended for control of Dectes, in part because they are not very effective, and also because recent data suggest that even severe infestations cause little economic damage. However, infested fields should be harvested as soon as possible to reduce any lodging associated with girdling activity. Dectes appear to prefer reproductive-stage plants for oviposition. Late-planted soybeans may sometimes be less infested by missing the peak oviposition activity of adult females. However, late-planted soybeans are more likely to have other pest problems such as stink bugs and loopers.

References:

Handbook of Soybean Insect Pests. L. G. Higley and D. J. Boethel (eds.), Entomological Society of America, 1994.

Dectes Stem Borer in Tennessee, C. Patrick, G. Lentz, S. Stewart and A. Thompson. University of Tennessee Extension, SP503-F.



Larva in stem



Girdle caused by overwintering larva



Wilted leaf petiole caused by larva tunneling

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