



BUG BIZ

Pest Management and Insect Identification Series



Blackberry (Raspberry) Crown Borer

Lepidoptera: Sessidae
Pennisetia marginata (Harris)

Blackberries are a favorite springtime fruit in Louisiana. The blackberry (raspberry) crown borer is a serious pest of blackberry plantings and causes loss of plant vigor, loss of yield and plant destruction. The adult is a thick-bodied, clear-winged moth resembling a yellow jacket because of its black and yellow coloring (Fig. 1). The female moths are slightly larger than the males. The eggs are reddish-brown and 1/16 inch in diameter. The larvae (Fig. 2) are soft, thick-bodied, dirty white and reach a length of more than 1 inch. The pupae are reddish-brown, and pupation occurs in the crown or in the canes just above the crown.

Damage

Initial indication of the girdling by the larvae is the wilting or dying of all foliage on the primary canes in May or June. Cane tips may form a shepherd's crook and are easily broken at the base by strong winds. Those not killed outright by the larvae become susceptible to other stress factors.

Life Cycle

The blackberry (raspberry) crown borer has a two-year life cycle. Eggs are laid on the foliage of blackberry plants from late June to late October. Newly hatched larvae crawl down the cane to below the soil surface. They eat out small cavities on the cane or root crown covered with a piece of bark and overwinter in this protected area. In spring, they enter and feed on the fleshy part of the root crown or roots. In summer, the larvae tunnel the roots and crown (Fig. 3) enough to reduce vigor.

The second spring, the larvae tunnel upward and enter the canes, eating out the pith. Larval development is completed in early June, and pupation occurs in the hollowed canes. The adults emerge in late June through October, leaving the pupal skin projecting from the emergence hole (Fig. 4). The females begin calling males, using a sex pheromone shortly after emergence. They mate and eggs are laid singly on the underside of leaves, primarily in the morning.

Monitoring and Control

To check for infestations, scout fields during mid to late summer for wilting or dying canes. Inspect stressed and wilted plants for presence of holes with sawdust at the base of affected canes and for hollow or tunneled canes.

Dig out affected canes and roots, and burn them in late fall or early spring. In addition, insecticidal sprays such as permethrin and rotenone can be used to manage this pest. During the first year of infestation, apply during mid to late October to kill larvae as they crawl down the canes to overwinter in the crowns. The following spring, apply in April to kill larvae as they become active. Apply a full spray to completely drench plants and saturate the soil around the base into the root zone. Because of the two-year life cycle of the insect, successful control requires both fall and spring applications for at least two or more consecutive years. Once control has been achieved, apply once a year as a preventive measure. For additional information on recommended materials, contact your county agent or see the LSU AgCenter Pest Management Guide on the Internet.



Figure 1. The adult blackberry (raspberry) crown borer moth.



Figure 2. The crown borer larva.



Figure 3. The larvae tunnel the roots and crown.



Figure 4. The adults emerge leaving the pupal skin projecting from the emergence hole.

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