



BUG BIZ

Pest Management and Insect Identification Series



Black Pecan Aphid

Distribution

The black pecan aphid, *Melanocallis caryaefoliae* (Davis), is found throughout Louisiana and most pecan-producing states.

Description and Life Cycle

The nymphs of the black pecan aphid are yellowish to olive green with dark gray legs and antennae (Fig. 1). The adults are dark green to black and can be either wingless or winged. If winged, the wings are folded back and held rofflike over the body (Fig. 2).

The abdominal tubercles (knob-like projections) present on the upper surface of the abdomen on both nymphs and adults are a distinguishing feature.

Black pecan aphids overwinter as eggs under the bark of the tree. The eggs hatch in the spring, and the nymphs begin feeding on the leaves. Black pecan aphids are not abundant during the spring, however, and leaf damage is limited. Higher populations capable of causing severe defoliation generally occur from mid-September until frost.

Black pecan aphids have a high reproductive rate – with each aphid capable of producing up to 35 offspring. There are approximately 20 to 30 generations per year.

Damage

The feeding of both adult and immature black pecan aphids causes rectangular to multi-angular spots to form between the veins of the leaflets (Fig. 3). These spots range from yellow to yellow-orange to brown.

High numbers of black pecan aphids can cause severe defoliation from late-summer into fall. But black pecan aphids do not produce honeydew.



Fig. 1. Black pecan aphid nymph.



Fig. 2. Winged adult.

Control

Because of their ability to cause severe defoliation and their rapid rate of reproduction, the treatment threshold for black pecan aphids is one aphid per compound leaf.

Trees need to be inspected on a regular basis from late summer through the fall (until first frost), since this is when black pecan aphid populations can quickly reach damaging levels. To scout for black pecan aphids, inspect both the upper and lower leaf surfaces of 10 compound leaves on at least 10 trees throughout the orchard.

Control measures need to be taken if the number of aphids spotted reaches or exceeds the treatment threshold of one aphid per compound leaf. Spot treatments can be made if black pecan aphid populations are localized within a small area of the orchard.

For a listing of insecticides that can be used for black pecan aphid control, refer to the Louisiana Recommendations for Control of Pecan Insects. This can be found at www.lsuagcenter.com.

When using insecticides, be sure to check the pH of the water being used for spraying. The pH needs to be between 5.5 and 6.5 for optimum insecticide efficacy. Use of a buffering agent will help maintain the desired pH once pesticides have been added to the solution.



Fig. 3. Black pecan aphid damage

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