

LOUISIANA PLANT PATHOLOGY

DISEASE IDENTIFICATION AND MANAGEMENT SERIES



Sweet Olive Leaf Scorch

(*Xylella fastidiosa* Wells et al.)

Sweet olive (*Osmanthus fragrans* Lour.) is an evergreen upright shrub native to Asia. It is a small ornamental tree that can grow up to 20 feet tall. Sweet olive's dark, shiny green leaves and white fragrant flowers make it a popular choice of gardeners and landscape professionals.

Sweet olive is susceptible to a bacterial disease called leaf scorch, which is caused by *Xylella fastidiosa*. Different strains of this bacterium are known to cause several economically important diseases, including Pierce's disease of grapevine, plum leaf scald and leaf scorch of almond, coffee, pear, pecan, oak, oleander and several other landscape trees.

The bacterium resides in the xylem vessels (water-conducting channels) of the plant, where it multiplies and blocks these channels and eventually obstructs the flow of water and nutrients within the plant. The bacterium is transmitted and spread by xylem-feeding insects, such as sharp shooters, leaf hoppers or spittle bugs.

Symptoms of sweet olive leaf scorch include chlorotic mottling of the leaves that starts from the tips and margins and progresses toward the midribs (Figure 1). As disease develops, leaf tips and margins become necrotic (Figures 2 and 3). Severely infected plants defoliate and die (Figure 4).

There are no chemicals available to manage sweet olive leaf scorch. Cultural practices that improve plant vigor, such as proper watering and fertilization, may help infected plants live longer. Pruning symptomatic branches will not save the plant. Detection and removal of infected plants at early stages may help reduce subsequent spread of the pathogen.

Symptoms of marginal leaf scorch often are attributed to other causes, such as salt injury or water and heat stress. Positive diagnosis of bacterial leaf scorch requires specialized testing of infected plants. The LSU AgCenter Plant Diagnostic Center is equipped with serological tests to diagnose this disease. Visit our website at www.LSUAgCenter.com/plantdiagnostics to find information on submitting samples.



Figure 1. Chlorotic mottling of leaves caused by *Xylella fastidiosa*.



Figure 2. Necrosis of leaf tips and margins caused by *Xylella fastidiosa*.



Figure 3. Sweet olive exhibiting necrotic leaf tissue caused by *Xylella fastidiosa*.



Figure 4. Defoliation caused by *Xylella fastidiosa*.

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