Laurel Wilt Disease

Redbay, Sassafras, Pondberry, Pondspice, Avocado and Camphor Trees

Photo, top right: Laurel wilt symptoms on an avocado in Florida. **Above:** Foliar symptoms of Laurel Wilt include wilted, brown leaves that persist on the tree for a year or more. (Albert (Bud) Mayfield, USDA Forest Service, Bugwood.org) **Below, top:** Egg masses are visible in the cracks of tree bark and on stationary structures from mid-summer through spring the following year. **Below, bottom:** Destruction from gypsy moth feeding can defoliate thousands of trees in a single outbreak. (Mark Robinson, USDA Forest Service, Bugwood.org)

What is Laurel Wilt Disease?

Laurel wilt is a deadly vascular wilt disease of red bay and other trees in the *Lauraceae* family, caused by the fungus *Raffaelea lauricola*. This fungus is carried by a recently-introduced ambrosia beetle, *Xyleborus glabratus*. The ambrosia beetle bores into the sapwood of stems and branches, and transmits the fungus into the tree where it moves systemically. Plugging up the water conducting cells, the tree begins to wilt. This invasive disease has caused widespread mortality of trees in parks, forests, and residential landscapes on the coastal plains of South Carolina, Georgia, and Florida.

Biology

The red bay ambrosia beetle relies on the laurel wilt fungus for its survival. It is their primary source of food, and they use susceptible trees to "farm" the fungus. Red bay ambrosia beetles carry the laurel wilt fungus in their mouth. After infecting a healthy tree, the ambrosia beetle returns to lay its eggs once the tree begins to die. When the beetle larvae hatch, they feed on the fungus for approximately 40-50 days. Once they become adults, they leave the tree and the cycle of death repeats itself.

Susceptible Trees

Redbay, sassafras, pondberry, pondspice, avocado and camphor trees.

Signs and Symptoms

- **Drooping, wilted leaves with reddish to purplish discoloration occurs on branches and progresses throughout the entire canopy.**
- **Leaves eventually turn brown and may stay on the tree for up to a year or more.**
- **A dark, blackish discoloration can be seen in the sapwood when removing the bark from wilted trees or by cutting cross sections of the stem.**
- **Wilt symptoms on camphor tree may not progress through the entire crown.**
- **String-like tubes or piles of fine sawdust may be seen on the bark of trees that have wilted. These are produced by potentially multiple species of ambrosia beetles (including the redbay ambrosia beetle) or other secondary wood borers.**

Laurel Wilt Disease Treatment Strategies

Photo, above: Root flare injections utilizing **Alamo®** can protect trees from laurel wilt for 12-14 months.

Treatment Strategy

The treatment of laurel wilt involves protecting high value trees with a fungicide called **Alamo®**. Targeting the beetle that transmits the disease is of limited value because the fungus will be transmitted regardless of the beetle's survival.

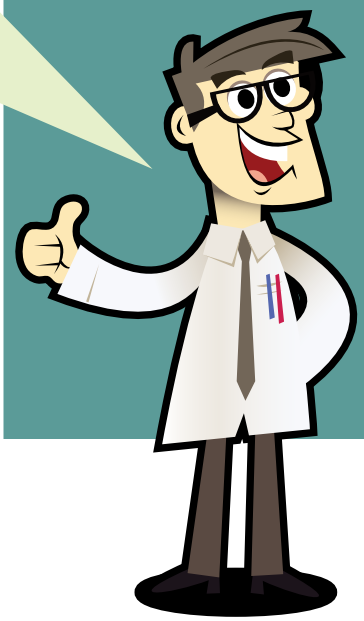
Trial data suggests that preventive treatments with Alamo® injected by a process called macro-infusion will protect trees for at least 12 months. Based on current research, re-treatments are recommended every 12-14 months. Infected trees, if treated promptly, can recover; however if more than 25% of the crown of the tree is wilted, there will be little chance of success.

DIY Shopping List

Option 1:

Application Type –
Low Volume Macro Infusion
DIY Product/Equipment Needed

- ☐ **Alamo®**
- ☐ Low Volume Macro Infusion Kit
- ☐ Stiff bristled hand brush
- ☐ Drill
- ☐ Shovel
- ☐ Gloves



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