

**Laurel Wilt and the Redbay
Ambrosia Beetle**
Threat to trees in the Laurel Family



Laurel wilt is an exotic disease caused by the fungus, *Raffaelea lauricola*. The disease is spread (vectored) by the exotic redbay ambrosia beetle, *Xyloborus glabratus*.

Laurel wilt

- **Kills** trees in the Laurel Family including:
 - Native trees – redbay (*Persea borbonia*), swampbay (*P. humilis*), pondspice (*Litsea aestivalis*), etc.
 - Fruit tree – avocado (*Persea americana*)

The redbay ambrosia beetle

- First detected in Port Wentworth, Georgia in 2002. Probable introduction on infested wooden packaging material.
- In 2004 the link between the beetle and laurel wilt was established. Laurel wilt detected in Georgia and South Carolina.
- In 2005 laurel wilt first detected in redbay trees in Duval County, Florida. Now in 23 Florida counties are infested.
- In 2007 laurel wilt documented to kill avocado trees in Duval and Brevard counties.
- 2006-2010 The redbay ambrosia beetle and laurel wilt continues to spread south and west.
- **Attacks healthy trees.**
- **The beetle naturally moves 15-34 miles per year.**
- **Once the beetle and disease are in an area, over 92% of the redbay trees are dead within 18 months.**

Why is this important?

- Redbay trees are a component of the natural forests and several butterfly species (Palmedes swallowtail butterfly) rely on redbay as a food source.
- Pondberry (*Litsea aestivalis*) and pondspice are listed as threatened or endangered species.
- Loss of the native trees will affect the natural environment.
- Redbay is a commercial residential and park landscape tree in north and central Florida.
- Avocado is the number two fruit industry in Florida.
 - Worth: \$14-15 million per year (farm gate); wholesale, \$30 million per year; \$54 million regional economic impact annually; would cost >\$216 million and >\$206 million to replace the commercial and residential avocado trees in Florida, respectively.

Symptoms of an ambrosia beetle and vascular wilt infestations include:

1. Leaves and young stems wilting.
2. Leaf color changing from light green to dark purplish-green, greenish-brown.
3. Dead leaves hanging on the tree.
4. Stem and limb dieback.
5. Inspection of the trunk and major limbs may show dried sap (white, crystalline powder-like material). Below the bark look for dark streaking. Dark streaks in the sapwood may indicate fungal infection. Normally this

sapwood should be white to yellowish with no dark staining or streaking. In addition, small, dark holes in the sapwood indicate wood boring beetles are present.

Relevant issues

- What is being done to stop the insect and disease?
 - Joint effort: UF/IFAS, USDA-ARS, FDACS, and other institutions are working on control tactics and management systems.
- Who to contact if you see symptomatic trees?
 - Division of Plant Industry (1-888-397-1517) and/or your local forester through the Division of Forestry (<http://www.fl-dof.com/>)

Recommended treatment and disposal of diseased/dead trees?

- Each municipality and county may handle this issue differently.

Who to contact for more information

University of Florida/IFAS –

- Local County UF/IFAS Cooperative Extension Service offices, <http://solutionsforyourlife.ufl.edu/map/>
 - <http://solutionsforyourlife.ufl.edu/>
 - <http://edis.ifas.ufl.edu>
 - <http://trec.ifas.ufl.edu>

FDACS-Division of Plant Industry websites

- Division of Plant Industry - <http://www.doacs.state.fl.us/pi/>

- DPI – Laurel Wilt - http://www.doacs.state.fl.us/pi/enpp/pathology/laurel_wilt_disease.html
- DPI – Save the Guac - <http://www.savetheguac.com/>
- USDA Forest Service, Forest Health Protection, Southern Region - <http://www.fs.fed.us/r8/foresthealth/laurelwilt/latest.shtml>



Redbay ambrosia beetle



Redbay

Avocado

Symptoms of laurel wilt and redbay ambrosia beetle infestation.