

Laurel wilt

What is Laurel wilt?

Laurel wilt is a fungal disease (*Raffaelea lauricola*) of redbay (*Persea borbonia*) and other trees in the Lauraceae (Laurel) family. Avocado was first recognised as a host in 2006 and the disease is now a huge threat to avocado trees in Florida.

Laurel wilt is spread by the Redbay ambrosia beetle (*Xyleborus glabratus*) which attacks healthy trees.

What does it look like?

After fungal infection, trees wilt rapidly, often in only a portion or one branch of a tree. Leaves become oily green and then dry brown as they die. Defoliation usually occurs within 3–4 months. Symptoms spread throughout the canopy, and although trees may re-sprout, they often die. Internally, affected sapwood is a reddish brown colour with greyish caste.

The Redbay ambrosia beetle is cylinder shaped, brown to black in colour and 2 mm long. Female adults can fly and are much more numerous than the smaller, flightless adult males.

What can it be confused with?

Symptoms resemble those of Verticillium wilt (caused by *Verticillium dahliae*). However, complete recovery of trees from Verticillium wilt is common, whereas those affected by Laurel wilt usually do not.

The Redbay ambrosia beetle is similar in appearance to other ambrosia beetles (*Xyleborus* spp.) present in Australia; however, these ambrosia beetles do not cause Laurel wilt. The death of smaller branches can be similar to damage caused by the Black twig borer (*Xylosandrus compactus*), but these beetles are not present in Australia. Any abnormal death or wilting of outer branches should be reported and inspected by a pathologist.



Andrew Geering, DEEDI Qld

Redbay ambrosia beetle spreads the disease



Andrew Geering, DEEDI Qld

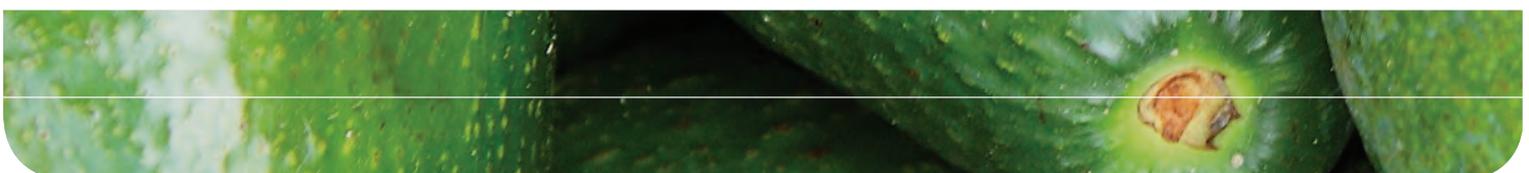
Randy Ploetz, University of Florida

(Left) External damage from the beetle – note strings of ejected wood fibre (frass). (Right) Internal damage from Redbay ambrosia beetle – note bore holes



Andrew Geering, DEEDI Qld

Early symptoms on avocado





What should I look for?

The first obvious symptoms of Laurel wilt are likely to be wilted leaves. Leaf drop may soon follow. A diagnostic feature of Laurel wilt is a black to brown vascular discolouration of the xylem (the sapwood beneath the bark), which runs parallel to the grain of the wood.

Following wilting, beetles often attack the dying tree in larger numbers. Small strings of ejected wood fibre may be seen protruding from bore holes on the trunk and branches.

How does it spread?

The fungus is carried by the Redbay ambrosia beetle which carries fungal spores. When the beetles bore into trees, they inoculate the tunnels with the fungal spores. The beetle is likely to be dispersed over large distances in infested wood or wood products. The disease is also capable of moving to healthy trees via root grafts.

Where is it now?

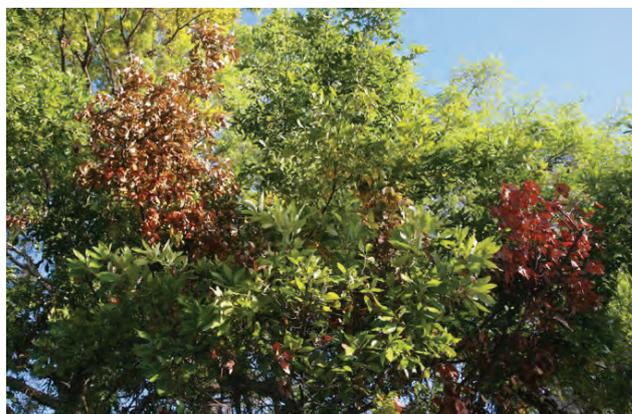
The disease is only known to occur in the USA. The fungus is presumed to have been introduced to the USA with the beetle. The beetle is native to India, Japan, Myanmar, and Taiwan.

How can I protect my orchard from Laurel wilt?

Source plant material only from clean, accredited suppliers, and preferably material that is certified. Check your orchard frequently for the presence of new pests and unusual symptoms.

If you see anything unusual, call the Exotic Plant Pest Hotline

**EXOTIC PLANT PEST HOTLINE
1800 084 881**



Defoliation of upper canopy and symptoms developing in lower portions of the tree

Randy Floetz, University of Florida



Internal vascular discolouration of an avocado stem

Randy Floetz, University of Florida



Development of laurel wilt on part of a tree

Jonathan Crane, University of Florida

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