



Rapid 'Ōhi'a Death

Recommendations for Tree Care Workers & Landscapers

www.rapidohiadeath.org

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Keep An Eye Out

'Ōhi'a trees infected by *Ceratocystis*, the fungus that causes Rapid 'Ōhi'a Death (ROD), show a quick decline of the crown from green to yellow then brown within a few days or weeks. A tree may be infected for months or longer before infection becomes apparent. The fungus grows within the sapwood of the tree, so it cannot be seen from the outside. Cutting into infected wood will typically reveal dark streaks or spots, but disease is confirmed by laboratory testing.

Avoid Wounding 'Ōhi'a

Wounds serve as entry points for the fungus and increase the odds that the tree will become infected and die from ROD. Pruning wounds, broken branches, holes caused by climbing spikes, and injuries caused by impacts of heavy equipment can all be enough for a tree to become infected. Currently, no recommendations are available as to the potential effectiveness of wound-sealing paints.

Clean Tools & Gear

Any tools used to cut 'ōhi'a should be disinfected both before and after use, especially when used on infected 'ōhi'a. Soil and sawdust should be brushed off tools and gear then surfaces sprayed with 70% rubbing alcohol and allowed to dry. Shoes should be cleaned of all soil after working with 'ōhi'a and can be sprayed with 70% rubbing alcohol as a precaution. Work clothes should be washed with hot water and soap. Larger machines such as chippers can be disinfected with a steam pressure washer, as heat kills the fungus.

Wash Your Vehicle

Ceratocystis spores can spread through soil from infected 'ōhi'a stands. Vehicles used off-road in infected areas should be cleaned with a pressure washer and soap after use, taking care to wash the tires, wheel wells and undercarriage. Interiors should be vacuumed to clean out any infected soil. If possible, vehicles should be washed in the same area where soil or mud was picked up.

Don't Move 'Ōhi'a

Moving 'ōhi'a wood, firewood, or posts, especially from an area known to have ROD, can spread the disease. To prevent spreading the disease, wood should be kept on site and not brought to Hawai'i County green-waste stations, where it could contaminate mulch. While kiln-drying will kill the fungus in 'ōhi'a lumber or flooring, there are currently no economic treatments available for posts or firewood.

Cut Down Infected Trees

Landowners may want dead 'ōhi'a trees to be cut down for safety, aesthetic or forest health reasons. Standing dead trees attract boring beetles that play a role in spreading ROD. If possible, trees should be cut on misty, low wind days to avoid spreading sawdust. Tarps may be spread around the base of a tree before cutting to catch sawdust. Once on the ground, the tree may be cut up and burned safely in a fireplace, imu, smokehouse, or barbecue pit, or at least stacked, and fully covered with a tarp or weed mat to reduce beetle activity. All equipment and clothing should be decontaminated after disposing of trees and material.

So far, **ROD has only been confirmed on Hawai'i Island**. Contact the local Invasive Species Committee for assistance, or contact us through rapidohiadeath.org if you live on another island and suspect that that you see a tree infected with ROD. **Updates and new information are available at rapidohiadeath.org.**

Kauai Invasive Species Committee: 808-821-1490, kisc@hawaii.edu

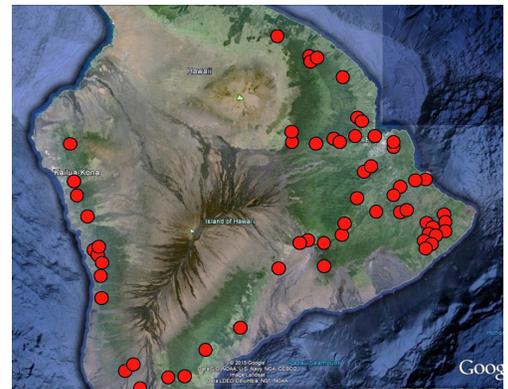
Oahu Invasive Species Committee: 808-266-7994, oisc@hawaii.edu

Maui Invasive Species Committee: 808-573-6472, miscpr@hawaii.edu

Molokai/Maui Invasive Species Committee: 808-553-5236 ext. 6585, lbuchanan@tnc.org



Above: Crown of infected tree, and ROD fungus staining patterns on 'ōhi'a cross-section lateral slashes.



Locations of confirmed ROD. For the latest map, visit rapidohiadeath.org.