

Lethal Bronzing in Palm

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Lethal Bronzing

In the late 1970s, a lethal disease of palm trees first appeared in the Rio Grande Valley. The symptoms resembled those of the phytoplasma-caused Lethal Yellowing Disease already well-documented in Africa, the Caribbean, and Florida. Electron microscopy showed phytoplasma cells in the phloem (vascular) tissues of the infected palms, which led to the presumption that the disease was caused by the lethal yellowing phytoplasma.

In 2001, many palms in the Corpus Christi area exhibited the same symptoms and began declining. In 2002, the disease was identified as a phytoplasma distinct from, but related to, the lethal yellowing phytoplasma. Lethal Bronzing Disease (LB), formerly known as Texas Phoenix Palm Decline (TPDD), is the only known phytoplasma disease of palms in Texas. It affects *Phoenix spp*, *P. canariensis*, *Syagrus romanzoffiana*, and *Sabal palmetto* and is present in Cameron, Hidalgo, Nueces, and Willacy counties, as well as portions of Kleberg County.

Phytoplasmas are a specialized group of bacteria that infect only plants. They belong to the class Mollicutes, have no cell wall, and cannot survive outside of a living host. Phytoplasmas cause disease on a wide range of plant hosts and are typically transmitted by leafhoppers and/or planthoppers. The vector of Lethal Bronzing is the American Palm cixiid, *Haplaxius crudus*.

Symptoms

The disease symptoms progress in chronological order. Both the combination of symptoms and their progression are important in evaluating the possible presence of the disease, since other diseases and stress factors can cause many of the same symptoms.

1. Typically, the first symptom on mature, fruit-bearing trees is the dropping of most or all of their fruit within a few days (Fig. 1).
2. A red to brown necrosis (death of the plant tissue) of the oldest leaves can occur simultaneously or follow next, progressing from leaf tips to the base of the leaves.
3. On Phoenix palms, after the first set of oldest leaves die, the central spear leaf dies. This is the most indicative symptom associated with this disease.



Figure 1. The spear leaf has died and is hanging down below the canopy of this *Phoenix sylvestris*.

Photo by Monica Elliot, Symptoms of Palm Diseases and Disorders, USDA APHIS PPQ, Bugwood.org

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4. Although it may often go unnoticed, moderate to extensive root necrosis and decay typically occurs by this time, sometimes to the extent that the tree can be rocked back and forth by pushing on the trunk. Trees affected by this pathogen have more extensive root decay than trees affected by Lethal Yellowing Disease.
5. The remaining leaves will continue to die progressively from the lower crown upward—older leaves to younger leaves (Fig. 2).
6. The tree will die completely within a year.

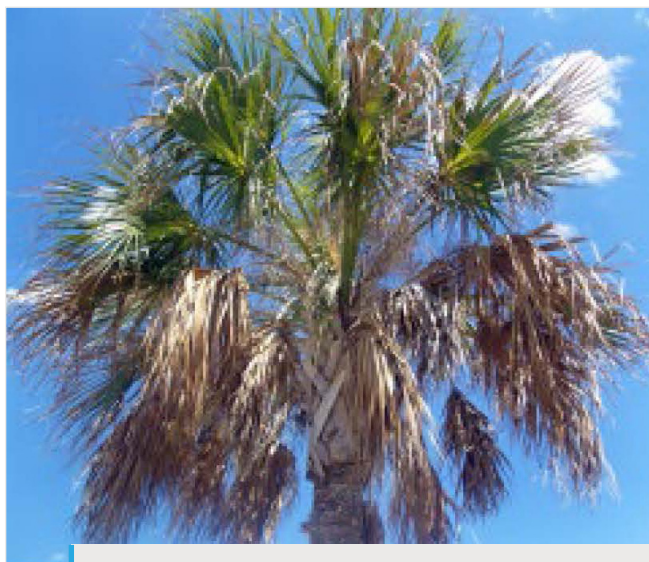


Figure 2. Death of the lower leaves of a *Sabal palmetto* infected by date palm. Photo by Jorge Lozano

Phoenix canariensis, *P. dactylifera*, *P. sylvestris*, *P. reclinata*, *P. roebelenii*, *Sabal palmetto*, and *Syagrus romanzoffiana* palms can host this disease. In Texas, the most frequently affected species is the Canary Island Date Palm (*Phoenix canariensis*), as it is widely used in landscape plantings and is particularly susceptible to this disease. When and if suspected symptoms are observed, samples from the affected palm tree can be taken and submitted for diagnosis. It is recommended for homeowners to utilize a certified arborist for onsite evaluation and/or sample collection. A guide to sampling a suspected tree can be found at the [Texas Plant Disease Diagnostic Lab website](#). Send the sample to the Texas Plant Disease Diagnostic Lab for testing. The laboratory uses molecular methods to determine the presence of phytoplasma.

Management

Lethal Bronzing Disease is a regulated plant disease in Texas. For more information, please visit the [Texas Department of Agriculture website](#).

Trees that test positive for this disease should be removed and destroyed to prevent or limit spread. Confirmed positive should be reported to Texas Department of Agriculture, whereby action may be taken to quarantine the affected locations.

Quarantines are established in areas where the disease is prevalent and around confirmed infected trees to restrict moving susceptible host tree species out of these areas. As of June 2025, infested portions of Galveston, Cameron, Hidalgo, and Kleberg Counties are under quarantine, as well as Nueces and Willacy County.

Current as of July 2025, state quarantine regulation for Lethal Bronzing states that:

- ▶ Susceptible trees within a 1-mile radius of an infected tree remain stationary for 6 months and are treated with insecticides for vector control for 3 months after the quarantine begins.
- ▶ Quarantined palms are allowed to move after 6 months if no other infected trees are found within a mile radius, and the tree has been inspected for LB symptoms 24 hours before moving.
- ▶ Quarantined palms must be treated with a pesticide labeled by the U.S. Environmental Protection Agency (EPA) and approved by TDA, using the label directions for leafhopper control for a period of 3 months prior to shipment, as well as treatment 48 hours before moving.
- ▶ Susceptible host trees outside of the 2-mile radius around the infected tree(s) but within the established quarantine zone must be treated for vector control for 6 weeks before being moved, treated within 48 hours of being moved, and inspected within 24 hours after being moved.
- ▶ Tools used in pruning and handling of host plants may be moved from quarantined areas after disinfection with one part liquid household bleach to four parts water or another suitable disinfectant.

Visit the websites below for more detailed information on regulations regarding this disease.

- ▶ [Texas Department of Agriculture Regulatory Programs: Quarantines](#)
- ▶ [Texas Department of Agriculture Regulatory Programs: Pest and Disease Alerts](#)