

MOST COMMON

PALM TREE DISEASES IN FLORIDA

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Palms have been a feature in Florida landscaping for generations, but they are constantly under attack by disease. There are dozens of palm diseases, but the majority of issues in Florida are caused by only five. They are Bud Rot, Petiole Blight, Ganoderma, Lethal Yellowing and Lethal Bronzing.

At the top of the palm in the center of the fronds is where the bud is located. It is the growth engine for the plant and where Bud Rot is found. Bud Rot is caused two pathogens or fungi.



The most common of the two is *Phytophthora palmivora* and the other is *Thielaviopsis paradoxa*. The spores from the hosts can be spread via water, insects and air, or they can stay dormant in the soil for years. The first symptom of Bud Rot is a discoloration at the top and very center of the palm. This is followed by the top fronds dying and a strong odor. The lower fronds can stay alive for months after the bud is dead.



Bud Rot can affect all palm varieties and is difficult to manage in mature palms. Fungicides are rarely effective, except to stop the spread to nearby palms. Once diagnosed the diseased palm should be removed immediately and the crown or top of the palm should be destroyed off-site. A tissue test should be performed to determine if the fungal infection is soil-borne, which will impact replacement options.

Figure 1 T.K. Broschat & M.L. Elliot, UF/IFAS

At the other end of the palm, Butt Rot or Ganoderma can cause palm death. Ganoderma is caused by the fungus *Ganoderma zonatum*, a soil-borne pathogenic fungus that works slowly. It attacks the lowest five feet of the palm's trunk or butt. The fungus does not soften the exterior of the trunk, so the trunk appears normal. The only visual sign a palm has Ganoderma is the presence of conchs or solid white to brown structures that are a bit soft. A conch starts out as a whiteish, round protuberance and then flattens into brownish, shelf like growth. Mature conchs produce the new spores that will in turn infect other palms and should be removed and disposed of off-site.



Figure 2 M.L. Elliot, UF/IFAS

There are no known cures for this disease, it appears in every soil type and in native palms. Once infection is detected, the palm should be removed immediately as Ganoderma causes the internal structures of the palm to degrade and can result in the palm falling. After removal, a palm should not be replaced in the same location, as the new palm will be infected through the soil.

The petiole of a palm is the section of each frond between the trunk and leaf. The petiole stores the nutrient supply for the palm while supporting the leaf. The first signs of Petiole Blight of Palm and a similar disease, Fusarium Wilt found mostly in Canary Island Palms, will be found in the petiole. You will see only one side of the petiole turn reddish-brown or have a dark brown streak down the center from trunk to tip. The lower fronds will be affected first with die-off working towards the crown of the palm. The damage to the petiole from the fungus will cause one-side of the leaf of the frond to die off first. This is due to a lack of nutrients to the leaf from the damaged petiole.



Figure 3 M.L. Elliot, UF/IFAS

Petiole Blight of Palm is caused by numerous pathogens with the fungi *Neodeightonia*, *Cocoicola*, and *Serenomyces* being the main three. It attacks most palm species and fungicides have limited effect. A preventative treatment with systemic or “sticky” fungicides has seen some positive effects. Once a palm shows symptoms, removal and disposal is the best control measure.

The last two palm diseases, Lethal Yellowing and Lethal Bronzing, are caused by the same culprit. In August of 2021, University of Florida and IFAS researcher, Brian Bahder isolated and



Figure 4 B. Bahder, UF/IFAS

traced the establishment in Florida of the phytoplasmas, bacteria without cell walls, that cause Lethal Yellowing and Lethal Bronzing to the *Haplaxius crudus* from Jamaica. The *Haplaxius crudus* is an insect commonly known as the American palm cixiid and is present throughout the Southeastern United States, Texas, and the Caribbean Basin.

Lethal Bronzing is the more common disease and affects a larger area of Florida than does its counterpart, Lethal Yellowing. Lethal Bronzing was originally named Texas Phoenix Palm Decline or TPPD. It was first discovered in the United States in Hillsborough County in 2006 and has spread rapidly across Florida, since. Lethal Bronzing is projected to be present state-wide in

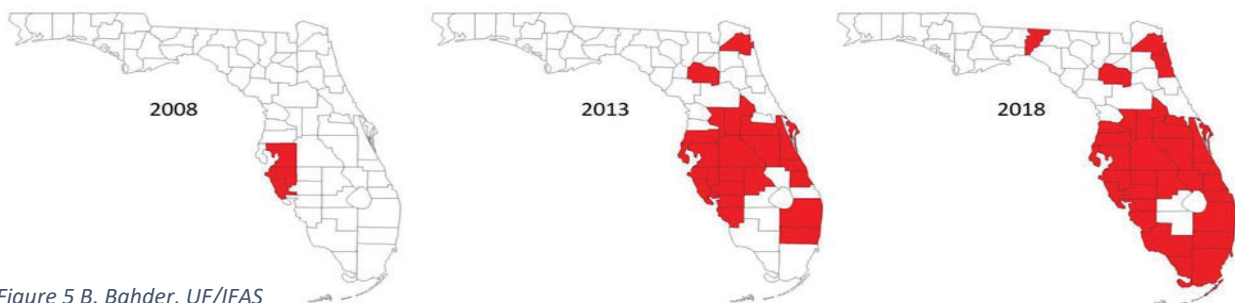


Figure 5 B. Bahder, UF/IFAS

the near future. Lethal Bronzing and Lethal Yellowing now affect over 19 palm species with

each disease having variable symptoms. An early, common sign of both Lethal Yellowing and Lethal Bronzing is fruit discoloration leading to fruit drop. This is usually followed by browning fronds that will die off from the bottom up, resulting in the death of the palm.

Lethal Yellowing and Lethal Bronzing can be prevented with oxytetracycline HCl (OTC) injections every three to four months, but this becomes cost prohibitive when the cost of the injections reach the price of replacing the palm. Once, infected there is no cure for either disease with prompt removal as its only control.

Palm diseases can dramatically affect our community's landscaping and have many associated costs. Each disease presents its symptoms a bit differently and there are few treatments or cultural controls available. Regular inspections, tissue testing, and prompt removals are the best practices for managing the effects of these various diseases.

If you have noticed any of these symptoms in trees on your property, our ***Landscaping Inspection Services*** professionals can help you to determine if your tree is suffering from disease or not. Call us at **813-559-1011** or e-mail Lucianno Mastrionni, Director, Community Services at **lmastrianni@rizzetta.com** for more information. We look forward to serving you.



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