

## Landscape Palm Diseases

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### **Ganoderma Butt Rot**

- Ganoderma butt rot is caused by the fungus *Ganoderma zonatum*. This fungus degrades or rots the lower 4-5 feet of the trunk.
- All palms are considered hosts of this fungus. This fungus is not a primary pathogen of any other plant species.
- Symptoms may include wilting (mild to severe) or a general decline. The disease is confirmed by observing the basidiocarp (conk) on the trunk. This is a hard, shelf-like structure that will be attached to the lower 4-5 feet of the palm trunk. However, not all diseased palms produce conks prior to death.
- A palm cannot be diagnosed with Ganoderma butt rot until the basidiocarp (conk) forms on the trunk, or the internal rotting of the trunk is observed after the palm is cut down.
- The fungus is spread by spores, which are produced and released from the basidiocarp (conk).
- Conditions that are conducive for disease development are unknown.
- There are currently no cultural or chemical controls for preventing the disease or for curing the disease once the palm is infected.
- A palm should be removed as soon as possible after the conks appear on the trunk. Remove as much of the stump and root system as possible when the palm is removed.
- Because the fungus survives in the soil, planting another palm back in that same location is not recommended.
- Internet site for Ganoderma Butt Rot of Palms bulletin: <http://edis.ifas.ufl.edu/pp100>.

### **Fusarium Wilt of Canary Island Date Palm**

- As the name implies, Fusarium wilt of Canary Island date palm is primarily observed on *Phoenix canariensis* (Canary Island date palm).
- The disease is caused by the fungus *Fusarium oxysporum* f. sp. *canariensis*.
- The leaf symptoms include a one-sided death, wherein the leaflets on only one side of the rachis are desiccated or dead. This is often accompanied by a reddish-brown or dark-brown streak on the petiole and rachis on the same side as the desiccated or dead leaflets. Eventually, the entire leaf dies.
- The disease symptoms normally appear first on the oldest (lowest) living leaves, and then progressively move upward in the canopy until the palm is killed.
- The only other disease that these symptoms could be confused with is petiole/rachis blight.
- Transmission of the fungus from palm to palm is primarily by contaminated pruning tools.
- There is no cure for this lethal disease. Fungicides have not been effective against Fusarium wilt.

- Since there is no cure, disease management is aimed at disease prevention. A new hand saw or a disinfected pruning tool should be used for pruning leaves from each individual Canary Island date palm.
- A laboratory diagnosis using molecular techniques is required to confirm Fusarium wilt.
- Internet site for Fusarium Wilt of Canary Island Date Palm bulletin:  
<http://edis.ifas.ufl.edu/pp139>.

### **Fusarium Wilt of Queen and Mexican Fan Palms**

- As the name implies, Fusarium wilt of queen palm and Mexican fan palm is primarily observed on *Syagrus romanzoffiana* (queen palm) and *Washingtonia robusta* (Mexican fan palm or Washington palm). When this disease first appeared, it was called "Fusarium decline." That disease name is no longer valid.
- The disease is caused by the fungus *Fusarium oxysporum* f. sp. *palmarum*.
- This disease is similar to Fusarium wilt of Canary Island date palm, but the pathogen subspecies and host range are different.
- The leaf symptoms include a one-sided chlorosis (yellowing) or necrosis (brown due to death) of the leaf blades, with a distinct reddish brown or dark brown stripe on the petiole and rachis. The internal petiole and rachis tissue is discolored. Eventually, the entire leaf dies.
- The disease symptoms normally appear first on the oldest (lowest) living leaves, and then progressively move upward in the canopy until the palm is killed. Palms often die two to three months after initial symptoms are observed. Due to the quick decline, the necrotic leaves do not droop or break and bend down around the trunk, but remain relatively rigid (as if freeze-dried).
- The only other disease that the leaf symptoms could be confused with is petiole (rachis) blight.
- It is not known exactly how the fungus spreads so widely in the landscape, but wind-blown spores are strongly suspected as a primary method. Local transmission of the fungus from palm to palm is possibly caused by contaminated pruning tools.
- There currently is no cure for this lethal disease.
- Laboratory confirmation of this Fusarium wilt pathogen requires molecular techniques.
- Internet site for Fusarium Wilt of Queen and Mexican Fan Palm bulletin:  
<http://edis.ifas.ufl.edu/pp278>.

### **Thielaviopsis Trunk Rot**

- Thielaviopsis trunk rot is caused by the fungus *Thielaviopsis paradoxa*.
- Due to this disease, the palm trunk either collapses on itself or the canopy suddenly falls off the trunk, both without warning. The palm canopy often appears healthy prior to collapse.
- Except for "stem bleeding," which is common in *Cocos nucifera* (coconut), there may be no symptoms prior to collapse of the palm.
- Only fresh trunk wounds will become infected by the fungus, so disease management includes limiting man-made wounds to the palm trunk, especially the upper third of the trunk.
- If the disease is detected early, cutting out the rotted, infested wood followed by spraying the wound site with a fungicide may be useful.
- There are no other methods to prevent or cure this disease. The palm should be removed immediately, and the diseased trunk portion destroyed but not recycled.

- Internet site for Thielaviopsis Trunk Rot of Palm bulletin: <http://edis.ifas.ufl.edu/pp143>.

### **Lethal Yellowing (LY)**

- Lethal yellowing (LY) is a systemic disease caused by a phytoplasma transmitted by a planthopper.
- Historically, LY has occurred only in the southern one-third of Florida. The disease was observed for the first time in Sarasota and Manatee Counties on the west coast of Florida in 2007 and in Indian River County on the east coast in 2012.
- LY symptoms are highly variable among *Cocos nucifera* (coconut) cultivars and among other palm genera.
- Palms with greater than 25% leaf discoloration or a dead apical meristem (bud) due to LY should be removed.
- Management of LY includes trunk injections of oxytetracycline HCl (OTC) every four months, and planting of palm species that are not hosts of LY.
- Very few palm species native to Florida and the Caribbean Basin appear to be susceptible to LY.
- Internet site for Lethal Yellowing (LY) of Palm bulletin: <http://edis.ifas.ufl.edu/pp146>.

### **Texas Phoenix Palm Decline (TPPD)**

- Texas Phoenix palm decline (TPPD) is a new disease in Florida. This disease is caused by an unculturable bacterium that has no cell wall -- a phytoplasma.
- The TPPD phytoplasma is similar to, but genetically distinct from the phytoplasma that causes lethal yellowing (LY) disease of palms.
- Texas Phoenix palm decline is a fatal, systemic disease that kills palms quickly. The TPPD phytoplasma is spread naturally to palms by sap-feeding insects, such as planthoppers.
- Palms showing symptoms of more than 25 percent foliar discoloration or a dead spear leaf due to the disease should be removed immediately.
- Management of TPPD includes protection of susceptible palms in disease-active areas by trunk injection with oxytetracycline HCl (OTC) every four months and planting palm species that are not known to contract this disease.
- As of February 2009, palm species known to be most severely affected by TPPD were *Phoenix canariensis* (Canary Island date palm), *Phoenix dactylifera* (edible date palm), *Phoenix sylvestris* (wild date palm) and *Sabal palmetto* (cabbage palm).
- Internet site for Texas Phoenix Palm Decline bulletin: <http://edis.ifas.ufl.edu/pp163>