

New Diseases of Palms in Florida

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Texas Phoenix Palm Decline Summary (<http://edis.ifas.ufl.edu/PP163>)

- Texas Phoenix palm decline is a new disease in Florida. It is caused by a phytoplasma, which is a bacterium without a cell wall.
- The phytoplasma is similar to, but genetically distinct from, the phytoplasma that causes lethal yellowing (LY).
- Texas Phoenix palm decline is a systemic disease, and the phytoplasma is probably transmitted by a planthopper.
- Palms with greater than 25% discoloration or a dead apical meristem (bud) due to this disease should be removed immediately.
- Management of Texas Phoenix palm decline includes trunk injections of oxytetracycline HCl (OTC) every four months, and planting of palm species that are not hosts of this phytoplasma.
- To date, the primary hosts of this phytoplasma are *Phoenix canariensis* (Canary Island date palm), *Phoenix dactylifera* (edible date palm) and *Phoenix sylvestris* (wild date palm).

Lethal Yellowing Summary (<http://edis.ifas.ufl.edu/PP146>)

- 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 because the primary planthopper vector is not cold hardy. In 2007, the disease was observed for the first time in Sarasota and Manatee Counties on the west coast of Florida.
- 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.
- *Cocos nucifera* (coconut), *Adonidia merrillii* (Christmas palm), *Phoenix dactylifera* (date palm) and *Pritchardia* spp. are highly susceptible and are not recommended for widespread landscape use in areas where LY is known to occur.

Directions for trunk sampling if you suspect a phytoplasma disease:

<http://flrec.ifas.ufl.edu/pdfs/LY-TPPD-Trunk-Sampling.pdf>

Do not attempt to obtain a sample until you have read the directions completely!

Fusarium Decline of Palms

Text: http://flrec.ifas.ufl.edu/palm_prod/pdfs/New-Disease-Queen-Palms-Mexican-Fan-Palms-July.pdf

Photos: http://flrec.ifas.ufl.edu/palm_prod/fusarium.shtml

- The quick-killing disease of queen palms (*Syagrus romanzoffiana*) has spread to another host, the Mexican fan palm (*Washingtonia robusta*).
- The disease has been observed in landscapes, a container nursery and a field nursery.
- The disease has been documented thus far only in the southern two-thirds of the state (north of Orlando to Tampa to Cocoa Beach and all areas south – inland and coastal). However, it is quite likely the disease will spread further north over time.
- Infected palms die quickly, often within a few months of the initial symptoms.
- There is no cure once a palm is infected, and no preventive fungicide treatments are recommended.
- The disease is probably spread by wind into new sites. Once established, it could also be spread by pruning tools. Pruning tools should be sterilized after each palm is trimmed.
- Palms, especially queen palms and Mexican fan palms, should not be replanted into a site where a palm with this disease was removed.
- The disease is tentatively called Fusarium decline of palms. A new subspecies of the fungus *Fusarium oxysporum* appears to be the pathogen.

Table 1. Suggested materials and soaking times for disinfecting pruning tools. Information developed for managing Fusarium wilt of Canary Island date palm (<http://edis.ifas.ufl.edu/PP139>).

Material ^z	% Solution	Soaking time
Household bleach (ex: Chlorox)	25% (1 part bleach + 3 parts water)	5 minutes minimum
Pine oil cleaner (ex: Pine Sol)	25% (1 part cleaner + 3 parts water)	5 minutes minimum
Rubbing alcohol (70% isopropyl)	50% (1 part alcohol + 1 part water)	5 minutes minimum
Denatured ethanol (95%)	50% (1 part alcohol + 1 part water)	5 minutes minimum

^zThe above materials were shown to be effective in eliminating the fungus from the wood dust or palm sap trapped on pruning tools (Simone, 1998). It is suggested that the solution be replaced after ten trees or every two hours. Rinse the tool with fresh water after disinfecting. Other potential disinfectants would be trisodium phosphate or quaternary ammonium salts. The latter is recommended as a 5% solution, soaking for 5 minutes (Smith et al., 2003).