

## Palm Phytoplasma Diseases

Monica L. Elliott, Ph.D.

University of Florida, IFAS, Fort Lauderdale Research and Education Center  
melliott@ufl.edu

### 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 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.
- 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. It is caused by a cell wall-less bacterium known as 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 greater than 25% foliar discoloration or a dead spear leaf due to the disease should be removed immediately.
- Management of Texas Phoenix palm decline includes protection of susceptible palms in disease active areas by trunk injection with oxytetracycline HCl (OTC) every four months, and by planting palm species that are not known to contract this disease.
- To date, the palm species most severely affected by TPPD are *Phoenix canariensis* (Canary Island date palm), *Phoenix dactylifera* (edible date palm), *Phoenix sylvestris* (wild date palm) and *Sabal palmetto* (cabbage palm). The disease has been observed in *Syagrus romanzoffiana* (queen palm), but this has been rare compared to the other palm species.
- Internet site for Texas Phoenix Palm Decline bulletin: <http://edis.ifas.ufl.edu/pp163> (update currently in progress – Jan. 2009)