

# Texas Phoenix Palm Decline

**INTRODUCTION** : Texas Phoenix palm decline (TPPD) is a disease of palms that is caused by a phytoplasma. The phytoplasma is in the taxonomic group of organisms that produce lethal yellows or palm decline in palms (16 SR IV group of phytoplasmas). This group of organisms is vast and varied in host range and vector associations. This disease is known to cause decline in *Phoenix sylvestris*, *Phoenix dactylifera*, *Phoenix canariensis* and *Syagrus romanzoffiana*. The same pathogen also is the suspected cause of decline in *Sabal palmetto*, the cabbage palm. The entire host range of the pathogen is uncertain at this time. The disease was first noticed in Florida in the Ruskin area in late 2006 and has been observed since then in Hillsborough, Manatee, Sarasota, Pinellas and Polk counties.

**DESCRIPTION**: The earliest symptom is a discoloration of the lower (oldest) leaves of the palms. Discoloration begins at the tips of the leaflets. Subsequently, reproductive parts of the plant will die, resulting in dropping of fruits and flowers. In Phoenix palms, the spear leaf dies after approximately 1/4 to 1/3 of the lower canopy has turned brown. In cabbage palms, the spear leaf may or may not die. Suspect TPPD in cabbage palms if there are more dead leaves than usual at the bottom of the canopy, or if the leaf death in the canopy is asymmetrical. The disease can be difficult to recognize in the field, because nutritional problems (potassium deficiency, for example) and certain fungal diseases can look similar to the effects of the phytoplasma infection. If it is not the season for fruits and flowers, the diagnostic characteristics involving those parts cannot be used. In taller Phoenix palms, it can be difficult to impossible to see the spear leaf.



**Sabal palm decline**



**Sabal palm decline. Note the red color on dying leaves**

**TRANSMISSION:** The disease is thought to be transmitted by an insect vector, probably a planthopper or leafhopper. The species is not known. The suspected vector in Texas does not occur in Florida. *Haplaxius* (=Myndus) *crudus*, the vector of lethal yellows in South Florida, is scarce in Texas, but it does occur in the Tampa Bay area in reasonable numbers. Further research is needed to determine the vector species.

**REPORTING AND SAMPLING:** Homeowners who suspect TPPD should contact their local UF/IFAS County Extension Office. Telephone numbers and addresses can be found at the following website: <http://solutionsforyourlife.ufl.edu/map/index.html>. Samples can be sent to the Fort Lauderdale Research and Education Center. Information on sampling protocol and applicable fees can be found at the links listed below in the references.

**HOSTS:** *Phoenix sylvestris*, *Phoenix canariensis*, *Phoenix dactylifera*, *Syagrus romanzoffiana*, *Sabal palmetto*.

**DISTRIBUTION:** Texas and Florida, USA.

**FLORIDA DISTRIBUTION:** Hillsborough, Manatee, Sarasota, Pinellas and Polk counties.



Dying *Phoenix sylvestris*. Note that the spear leaf has died. This indicates that the apical meristem is dead



Infected cabbage palm. Note diseased, dead spear leaf



Subtle early symptoms of Texas Phoenix palm decline in a nursery setting