

Fusarium Wilt of Canary Island Palm

Canary Island palms, *Phoenix canariensis*, are the signature trees of many southern California landscapes. They have become the most desirable and sought-after palm species in the last decade and often cost in excess of \$10K each to install or replace. Fusarium wilt is one of the most destructive diseases of palms in California landscapes and is easily spread tree to tree by pruning practices. There is currently no chemical treatment for this disease.

Fusarium oxysporum f. sp. *canariensis* first appeared in southern California in the mid 1970's. It is characterized by one-sided frond death and vascular streaking along the rachis of the symptomatic frond. Lower leaves wilt and die while eventual death of the bud can kill the entire palm.

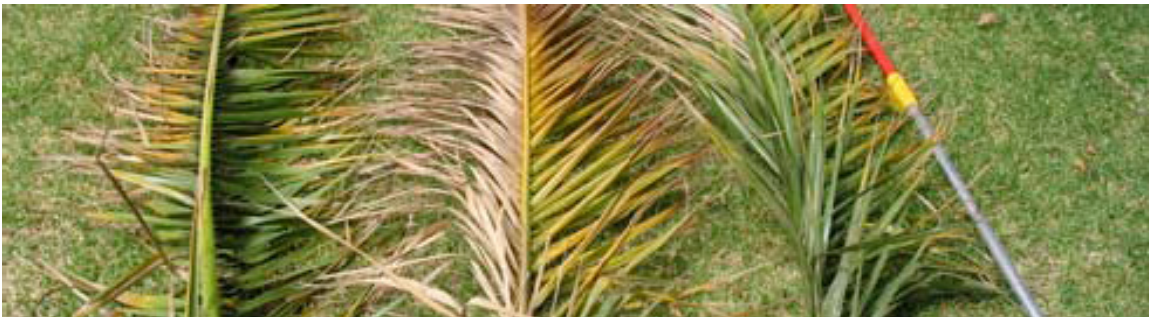
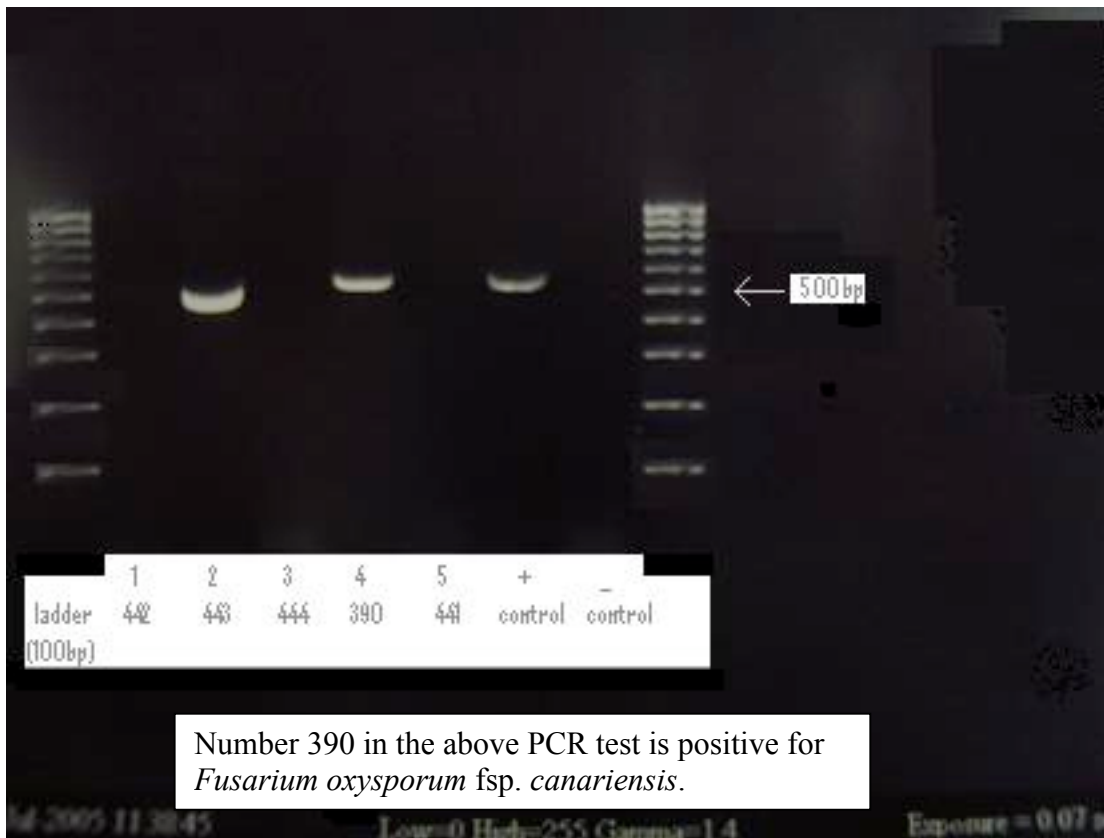


Figure 4. Discoloured vascular bundles of *P. canariensis* due to Fusarium Wilt (image: Brett Summerell).

Researchers at the University of California, Riverside (Feather, Ohr, and Munnecke 1979) characterized the disease on Canary palm and determined that it is spread mechanically by contaminated pruning saws. They also demonstrated that this pathogen will infect the date palm, *Phoenix dactylifera*, which is often substituted for the Canary palm as it is a less expensive alternative and looks similar in the landscape.

Not all *Fusarium* fungi found in association with palm decline are the same species that cause palm wilt. It is recommended that a species specific PCR test (Simone, et al. 1999) be performed on *Fusarium* isolates prior to finalizing a diagnosis for palm wilt. See the photo below.



There are also other fungi that can infect palm fronds, *Gliocladium vermoeseni* and *Dothiorella* spp. (Downer 2003) so initial field inspections should be followed by a laboratory isolation and PCR test. *Gliocladium vermoeseni* is the cause of Pink rot and is often found associated with *F. oxysporum* and rarely is the primary cause of decline.

References

Downer, James. 2003. The Palm Disease and Disorder Issue, In 'Landscape Notes', Vol. 17 (1), Ventura County, 669 County Sq Dr, #100, Ventura, CA 93003

Feather, T.V., Ohr, H.D., Munnecke, D.E., 1979. PhD Dissertation "Occurrence, Etiology, and Control of Wilt and Dieback of *Phoenix canariensis*". University of California, Riverside, 119 pp.

Plyler, T.R., Simone, G.W., Fernandez, D., and Kister, H.C. 1999. Rapid Detection of the *Fusarium oxysporum* Lineage Containing the Canary Island Date Palm Wilt Pathogen. *Phytopathology* 89: 407-413.