LOUISIANA PLANT PATHOLOGY
DISEASE IDENTIFICATION AND MANAGEMENT SERIES
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Fusarium Wilt of Canary Island Date Palm

Fusarium oxysporum* f. sp. *canariensis

In Louisiana, Canary Island date palm *(Phoenix canariensis* Hort. Ex *Chabaud)* is a signature palm planted in New Orleans and nearby cities.

In 2009, a lethal disease called Fusarium wilt was detected on Canary Island date palms in Louisiana. The disease, which is caused by a soil-borne fungus called *Fusarium oxysporum* f. sp. *canariensis,* previously had been known to occur in California, Florida and Nevada.

The pathogen colonizes the water-conducting tissue of the trees and obstructs the movement of water. The characteristic symptoms of Fusarium wilt include one-sided death of the fronds or palm leaves (Figure 1). Initially, the leaflets on the other side of the infected frond stay green (Figure 2), but eventually the whole frond dies and desiccates.

Reddish-brown streaks appear on the rachis of affected fronds (Figure 3). Longitudinal sections of affected fronds also show internal reddish-brown discoloration of vascular system (Figure 4). The symptoms first appear on the lower older or mature fronds and then move up into the canopy as the disease progresses (Figure 5). Severely affected trees eventually die in a relatively short period of time (Figure 6).

The pathogen is introduced to new locations by movement of diseased nursery stock. In landscape, the pathogen spreads through poor pruning practices and contaminated soil. Pruning tools used to remove diseased fronds easily get contaminated and aid in spread of the pathogen.

There are no effective chemical treatments available for this disease. If the infected palms are left unchecked, they may serve as a disease reservoir, and the fungus can spread to healthy palms. Once infected, there is no cure and the only solution is to remove the infected tree, including roots from the soil, and destroy it – preferably by burning. Avoid processing the infected trees for mulch.

Figure 1. One-sided death of Canary Island date palm frond caused by *Fusarium oxysporum* f. sp. *canariensis.*

Figure 2. Dead leaflets on one side of Canary Island date palm frond affected by Fusarium wilt.

In the absence of an effective chemical control, good sanitation and cultural practices should be followed to minimize the disease spread from infected to healthy palms.

Clean pruning tools, such as hand saws, in 25 percent Pine Sol (1 part Pine Sol to 3 parts water), 25 percent chlorine bleach or 50 percent rubbing alcohol between uses on trees. Soak the tools in any of these solutions for a minimum of five minutes. Remember to rinse the tools with fresh water after soaking. Make fresh cleaning solution each time and replace it frequently during each use.

Figure 3. Presence of reddish-brown streak on affected rachis of Canary Island date palm.

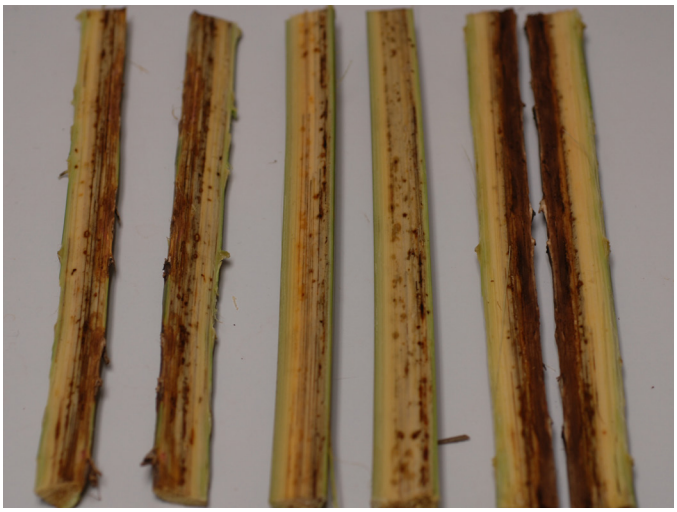

Figure 4. Internal reddish-brown discoloration of frond caused by *Fusarium oxysproum* f. sp. *canariensis*.

Figure 5. Death of lower mature fronds of Canary Island date palm caused by *Fusarium oxysporum* f. sp. *canariensis*.

Figure 6. Death of Canary Island date palm caused by *Fusarium oxysporum* f. sp. *canariensis*.

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