

NUECES COUNTY RECORD STAR

AT THE GARDEN GATE

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Palm Woes Not Critical for Western Nueces County

Date palms along Ocean Drive have been diagnosed with Lethal Yellowing, a devastating disease which could kill hundreds of Canary Island Date Palms in Nueces County. Luckily the disease seems to be isolated at this time.

Lethal yellowing is caused by a phytoplasma-like organisms (PLOs), single-celled organisms that have characteristics of both viruses and bacteria. This disease-causing agent is transferred from palm to palm by a flying planthopper (*Myndus crudus*) that feeds on palm sap. When the insect feeds on palm sap, the disease is transferred into the phloem, the sugar conducting tissues of the plant, and is then distributed throughout the palm. The PLOs can only be spread by the insect since the insect's body metabolizes the organism into a transferable state. The disease has never been seen in healthy palms that scientists have directly injected with the lethal yellowing phytoplasmas, bypassing the insect. Their findings demonstrate that lethal yellowing cannot be transmitted mechanically through pruning equipment.

Trunk shavings were collected from Canary Island date palms (*Phoenix canariensis*) near the intersection of Hewit and Ocean Drive. Dr. Nigel Harrison, a plant pathologist from the University of Florida's Fort Lauderdale Research and Education Center, ran DNA tests and has

confirmed the presence of the PLOs in Corpus Christi date palms. One interesting finding has been that preliminary tests show the disease causing organism to be a different strain than the PLOs commonly found in Florida coconut palms with lethal yellowing. Consequently, this disease will probably be renamed Texas Phoenix Palm Decline in the future.

This is a devastating disease that attacks not only Canary Island date palms, but also other Phoenix species including true date palms (*P. dactylifera*), Senegal date palms (*P. reclinata*) and wild date palms (*P. sylvestris*). Chinese fan palms (*Livistonia chinensis*) and windmill palms (*Trachycarpus fortunei*) are slightly to moderately susceptible.

Most fan palms found in the Coastal Bend including Mexican fan palm (*Washingtonia robusta*), California fan palm (*W. filifera*) and all sabal palms are resistant; pygmy date palms (*Phoenix roebellinii*) are also resistant.

The first symptom is fruit or nut drop followed by browning and death of the fruiting structures. In the Canary Island date palms, the brightly colored orange branches that are usually covered with dates would turn brown and die. The next stage is characterized by browning and drying of lower leaves in date palms that quickly progress until all of the leaves are dead. These symptoms in date palms are slightly different than the characteristic yellowing of leaves from which the disease gets its name in coconut palms.

The dead leaves will initially collapse against the tree trunk producing a “closed-umbrella” effect. Later, they will fall leaving only the trunk of the trees as they enter the final, “telephone pole” stage. The entire process typically takes three to six months.

A delay of six to eight months may be present between infection and onset of symptoms. Local date palms are thought to be infected several months earlier and harsh weather conditions such as high temperatures and low precipitation have resulted in the appearance and rapid progression

of symptoms in recent weeks.

Once a tree is infected, there is no cure. Repeated treatments of the antibiotic oxytetracycline hydrochloride (OTC) will usually result in remission of symptoms if applied in the early stages of the disease. These injections must be repeated every three to four months or the symptoms will return. OTC is actually considered to be more effective as a preventative measure in regions where lethal yellowing has been identified.

The preventative successes of OTC are attributed to observations made over twenty years ago in Florida according to Richard Maxwell, owner of TreeSaver, Inc. of Royal Palm Beach, Florida. He noticed that planthoppers did not feed on fronds of OTC injected palms. He believes the observation might be attributed to the sap possibly becoming undesirable, but admits that scientific testing has not confirmed this belief.

The Treesaver® injection process was specifically developed to effectively deliver antibiotics to monocot plants such as palms. Other injection systems were originally developed for use on dicotyledonous trees and have not proven as effective on palms, thus making the Treesaver® system the industry standard in Florida and the Caribbean basin. Maxwell, owner of Treesaver, Inc. informed me that Pest Fog is the only company in the Texas Coastal Bend currently using his system.

The only part of Nueces County where symptomatic trees have been identified to date has been the Ocean drive region from Furman Avenue to Dodridge with the greatest concentration near the intersection of Hewit Drive. Homeowners with susceptible trees in that area are encouraged to treat with the OTC injections in the near future to limit the spread of the disease.

The disease may still be seen in surrounding area, but has not been spotted at this time. More distant regions including Flour Bluff, North Padre Island, Port Aransas, Portland, Corpus Christi

Beach and western parts of Nueces County are currently free of symptomatic trees at this time.

If you have a date palm, you might consider having a preventative treatment sometime in the future, but time is not as critical to those living in western Nueces County. Palm owners near the infected area are encouraged to begin treatments immediately.

This disease was detected in Brownsville in 1979 and has nearly wiped out the Canary Island date palm population in the lower Rio Grande Valley according to Dr. Marvin Miller, plant pathologist with the Texas Agricultural Experiment Station in Weslaco.

Hopefully, we have caught this disease early enough that it will be controlled before it hits the devastating proportions seen in the Brownsville area. If we are successful, then these majestic palms will continue to grace the skies of Nueces County for years to come.

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