

Lethal Yellowing, a relatively new disease to Florida, has been recognized by other names in various Caribbean islands for close to 100 years. Jamaica's "west end bud rot," which appeared in the 1890's was a typical example.

What causes Lethal Yellowing?

Lethal Yellowing is carried by a flying planthopper that feeds on palm sap. It is when the bug feeds that the disease is transmitted. There is no effective cure for the disease and the palm will die within 3 to 6 months after the appearance of the first symptoms. The first visible sign that a coconut has been infected is the dropping of all of its fruit, irrespective of their size. Over the next two months or so, the new flowers produced by the palm wither and blacken. Then the leaves progressively turn yellow and hang, starting from the lower leaves and finishing with the top leaves. Once the top leaves have gone, the palm is dead and all which is left is something resembling a telephone pole.

Where is Lethal Yellowing found in Florida?

Lethal Yellowing is found in most of the Florida areas where coconuts can be grown and affects the Christmas palm, Fiji fan palm and Canary Island Date palm. Other palms such as the Chinese fan palm and Cabada palm appear to be highly resistant.

The disease occurs in discrete areas known as foci. These foci slowly grow larger, gradually taking in more palms. Once lethal yellowing becomes established in an area, most of the coconut palms will die within the next 3 years. The disease may also jump over several kilometers to establish new foci.

Is there a cure for Lethal Yellowing?

There is no cure for lethal yellowing, but the disease can be effectively controlled by trunk injections of the antibiotic palm formula every 3 1/2 to 4 months. **The Treasure Island Public Works Groundskeeping Division has begun a palm tree inoculation program, injecting over 150 palms to date with an Oxytetracycline based formula.** The formula was originally tested and proven by the University of Florida in conjunction with Phizer pharmaceuticals and the State of Florida's Department of Agriculture.

Can I treat my palm trees myself?

The control of lethal yellowing in disease susceptible palms has proven to be very successful, however in order to accomplish this, three things must occur.

- 1.)** The proper chemical, oxytetracycline hydrochloride - (OTC), must be used. Tree Saver® is the only company that is licensed for the sale of the OTC Tree Injection Formula, in the State of Florida, for use in palms for the control of Lethal Yellowing.
- 2.)** Injections must be made on a timely basis. Three or four times per year depending on the degree of current infection or future protection desired.
- 3.)** The injections must be made in a good, sincere workmanship like manner.

The water based antibiotic, oxytetracycline hydrochloride (OTC) combats the disease in two ways: 1.) The OTC makes the sap "taste very bad", so the bug finds feeding on treated trees undesirable. 2.) The presence of the OTC seems to greatly retard the bacteria's ability to live and or "prosper". Being a water based antibiotic in a water based

organism, the half life of it's presence in the tree is only 4 months, thus the need for a minimum of 3 injections per year. This is a long term, ongoing project and needs to be continued once it is started.

What does tree treatment cost?

The cost of this preventative injection program is surprisingly affordable, especially when considering the retail replacement value of the trees you are protecting. The cost, based on treating small numbers of trees (5 to 30 trees), would be approximately \$1.50/tree per treatment. This is based on an ongoing program, the reuse of needles and syringes, and utilizing the casing for 2 treatments. Tree Saver® is the only company that is licensed for the sale of the OTC Tree Injection Formula, in the State of Florida, for use in palms for the control of Lethal Yellowing. Their website is www.palmtreesaver.com

Lethal Yellowing history

The disease was not considered a serious problem until the 1950's when it began to spread rapidly in Jamaica and the Florida Keys. In Key West, 75% of the coconut palms were destroyed.

Little attention was given to Lethal Yellowing in Florida during the 1960's as the disease gradually died out in Key West. In 1969 Lethal Yellowing appeared in Key Largo and in late 1971 several trees in Coral Gables were diagnosed as having Lethal Yellowing. Within months the disease had killed a thousand trees in Miami. In 1972, Lethal Yellowing was reported in Broward County, and in Collier and Martin Counties during 1974.

Palm Beach County, largely because of the success of antibiotic injection programs, had lost only 35-40% of their coconut palms by 1981. Replanting of resistant coconut varieties and the survival of some 'Jamaica Tall' palms have all but restored the tropical atmosphere of the Florida Keys). The west coast of Florida still has most of its 'Jamaica Tall' coconut palms but Lethal Yellowing is a continuing threat to this area.

What's the solution?

To restore the tropical beauty lost to Lethal Yellowing, a renewed program of replanting with resistant palm varieties must be undertaken. In the past, the only available coconut palm resistant to Lethal Yellowing was the 'Malayan Dwarf'. The new hybrid 'Maypan' appears to require less care and grows more robustly than the commonly available 'Malayan Dwarf'. An increasing number of the horticulturally superior Green 'Malayan Dwarf' have become available. As with most ornamental plants, provide the best conditions at transplanting and a regular fertilization program for optimum growth.