

Lethal Yellowing Disease Situation at Jolly Harbour

Introduction

Lethal Yellowing Disease was first noticed in the Caribbean 100 years ago. However it was not until the 50s that a devastating outbreak in Jamaica resulted in great economic damage.



Lethal Yellowing attacks many species of palm mainly coconut and date palms. There is no cure for this disease although it can be controlled in valuable palm trees with regular injections (four times annually of oxytetracycline).

Lethal Yellowing was first confirmed in Jolly Harbour in early 2012 as a result of a survey carried out by the Grounds Department with the assistance of the Plant Protection Unit (a division of the Government of Antigua and Barbuda).

Symptoms

Lethal Yellowing gets its name from the yellowing and drooping of the palm fronds beginning with the lower fronds and advancing up to the crown. The disease characteristically has the following progression:

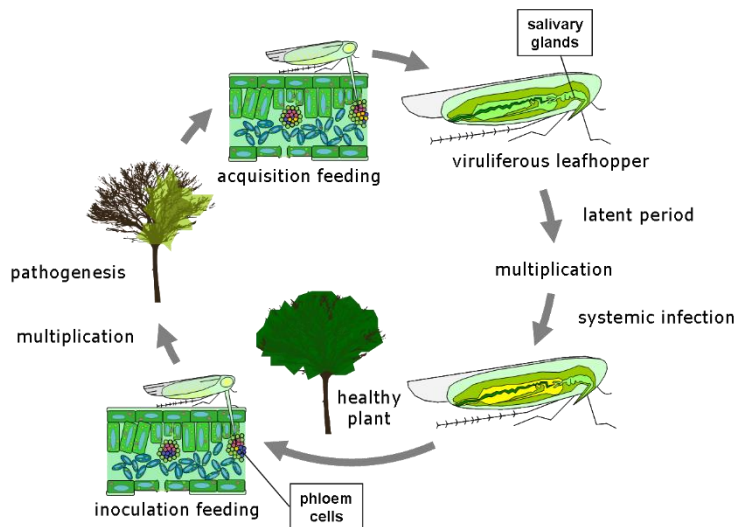
- Coconuts mature and immature begins to drop from the coconut palms.
- Flower stalk begins to blacken
- Palm fronds start to yellow or in some cases of some species turn greyish brown beginning with the older lower fronds and progressing through the fronds
- The sparse leaves collapse and the bud dies. By the time this happens, the tree is already dead
- The entire crown falls from the tree resulting in a “telephone pole” stack



What Causes Lethal Yellowing

The cause of Lethal Yellowing is believed to be a bacteria like organism called Phytoplasma.

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 symptom. At Jolly Harbour, Lethal Yellowing affects mainly the coconut palms, Fiji fan palms and date palms. Other palm such as the Dwarf Coconut palms and Areca Palm appears to be relatively resistant.



Steps to be taken to Control Lethal Yellowing

To date there is no cure for Lethal Yellowing disease. Quarterly injections of the antibiotic Oxytetracycline can keep the disease in check and this may be an option for extremely valuable residential landscape palms.

The Injecting of palms has commenced and is presently ongoing at Jolly Harbour in a limited capacity due to its cost. Some property owners have suggested that an “Adopt a palm” programme should be started. Treating all palms is estimated to cost approximately US\$80,000 per annum.



Possible Long Term Solutions

To restore and maintain the tropical beauty lost to Lethal Yellowing, a program of replanting with resistant plant variety should be undertaken. In the past the only available coconut palm resistant to Lethal Yellowing was the “Malayan Dwarf”. The new high breed “Maypan” appears to require less care and grows more robustly than the common available “Malayan Dwarf”. An increasing number of horticultural superior Green and Yellow Malayan Dwarf have become available.

Palms Lost At Jolly Harbour Due To Lethal Yellowing (January 2014)

Approximate total palm population	2400
Dead palms removed to date	36
Infected and dying (to be removed immediately)	60
Additional Infected palms showing early signs	120
Total visibly affected palms	216