

PEST ALERT

Lethal Yellowing of Coconuts

Has not been reported in Trinidad

What is it?

Lethal yellowing is a fatal disease of palms, including coconuts. It is caused by a phytoplasma.

What plants are affected?

Over 38 species of palms are susceptible to lethal yellowing. There are no resistant coconut varieties.

How is it spread?

- Lethal yellowing spreads from one country to another by moving infected palm plant material.
- The flying plant hopper, *Myndus crudus* (Fig.1), spreads the disease from tree to tree as it feeds on the coconut sap. This insect is present in Trinidad and Tobago.



Fig.1. Plant hopper, *Myndus crudus*, that transmits the phytoplasma causing lethal yellowing.

Credits: F.W. Howard, Univ of Fda

Where is it found?

In this region lethal yellowing is found in:

- Central America (Belize, Honduras, and Guatemala)
- North America (Mexico and USA), and
- Caribbean (Cuba, Cayman Islands, Dominican Republic, Haiti, Jamaica, and Nevis).

DO NOT BRING <u>ANY</u> LIVE PALM PLANTS OR SEEDS FROM THESE COUNTRIES.

Why should I care?

Lethal yellowing can kill 90% of our coconut trees within 3 - 18 months!

What do I look for?

- Premature drop of most or all the nuts, regardless of their size.
- ➤ Reddish —brown or brown to black water-soaked appearance at the stem end of the nut (Fig.2)



Fig.2. Reddish-brown or black to brown water-soaked appearance at the stem end of the nut.

Credits: (a) Doug Caldwell, Univ of Fda Collier County Exten Service
(b) Joseph Boscaglia, Community Services Department, Naples, FL

> Browning and later blackening of young flower spikes after emergence (Fig. 3).



Fig.3. Blackened flower spikes due to lethal yellowing. Credits: N. A. Harrison Univ. Fda, Inst of Food and Agricultural Sciences

> Yellowing and drooping of fronds (branches), beginning from the oldest and progressing to the crown (Fig.4).



Fig.4. Typical symptoms of lethal yellowing: yellowing and drooping progresses from the older to younger fronds.

Credits: N. Nejat, Univ Putra Malaysia

A characteristic "flag" appearance when one frond in the center of the canopy turns yellow first (Fig.5).



Fig.5. Characteristic lethal yellowing symptoms of a solitary yellow frond (flag) in the middle of the canopy. Credits: T.K. Broschat, Univ Fda, Inst of Food and Agricultural Sciences.

Collapse and hanging of the newly emerged heart frond when the bud dies (Fig.6).

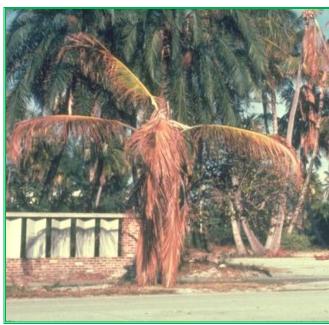


Fig.6. Death of the bud from lethal yellowing causes the inner frond to collapse.

Credits: USDA Forest Service - Region 8

A bare trunk or "telephone pole" as the crown falls off (Fig7).



Fig.7. Toppling of the crown leaving a 'telephone pole' appearance. Credits: Dr. Maria Mercedes Roca de Doyle, Pan-American College of Agriculture, Zamorano, Honduras

BE VIGILANT!

KEEP LETHAL YELLOWING OUT OF TRINIDAD & TOBAGO.

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