



Government of Trinidad and Tobago
Ministry of Food Production

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 ANY 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.**