

## PEST PREVENTION TRAINING

An advanced education program for those on the front lines protecting Hawai'i

# **Lethal Palm Yellowing**

Candidatus Phytoplasma palmae

Not known to be present in Hawai'i

Phytoplasma that kills a large variety of palms.





Dead palms where the crown has fallen



### **Impacts**

- Affects coconuts and other palms
- Has a long asymptomatic phase, it can take 3-9 months before symptoms can be seen.
- Leads to eventual crown death



## **High-risk Commodities**

- Planthopper (Myndus crudus) is a vector of the lethal yellowing phytoplasma. Spreads the bacteria as it feeds and moves from plant to plant.
- Planthoppers can hitchhike on imported live plants



Planthopper (Myndus crudus)







# **Lethal Palm Yellowing**

Candidatus Phytoplasma palmae

#### Not known to be present in Hawai'i



#### Distribution

 Africa, Caribbean, Mexico, Jamaica, Puerto Rico, Dominican Republic, Guadeloupe, Guatemala, Haiti, Honduras, Cuba, Belize, Florida





#### **Identification**

- Premature drop of most/all fruits. In coconuts, the calyx end of the nut will develop a brown/black, water soaked appearance
- Flower necrosis
- Leaves turn yellow, starting with the oldest leaves first. As the yellowing advances the youngest leaves (spear), collapses and hangs from the crown.
- Death of the apical meristem when ½-¾ of the crown is yellow. Eventually, the entire crown dies and leaves a standing trunk.
- Crown dies 3-5 months after symptoms show.

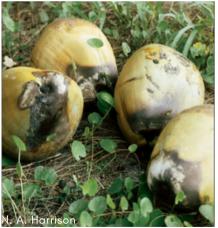


Crown turning yellow



## **Best Managment Practices**

- Do not import live palm materials from areas known to have the disease
- Report suspected trees to 643pest.org, or by phone to 643-PEST (7378).



Coconut with black caylx damage.

#### **Selected References:**

- https://www.cabi.org/isc/datasheet/38647
- https://www.apsnet.org/edcenter/disandpath/prokaryote/pdlessons/Pages/LethalYellowing.aspx
- https://edis.ifas.ufl.edu/publication/pp146



