PEST RISK MANAGEMENT
–The Belize Experience

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Brief Overview

In Belize there has been a recent increase in the interest of coconut cultivation for the production of coconut water and coconut oil for export as well as local consumption.

The shortage of coconut planting material locally to establish large commercial plantations has prompted investors to seek importation of such material.
Brief Overview (cont’d)

• Belize has a breeding program for the production of the Maypan variety but not enough planting material available

• Importers needed high yield varieties which are also resistant to Lethal Yellowing

• Importers are able to acquire land for the planting of coconut
An example of such interest was the request for importation of coconut seedlings from Mexico, but due to the fact that the importer could not comply with the risk management measures for these seedlings, it was suggested they import the ungerminated nuts.
All importations of Plant and Plant Products are directed to the Plant Health Department of the Belize Agricultural Health Authority (BAHA) which is the NPPO of Belize.
The clients applied for the importation of the ungerminated coconut seed nuts.
PRA conducted for coconuts from Mexico revealed a total of 15 pests of concern including the red palm mite (*Raoiella indica*) known to attack many palm species including the coconut palm and known to be present in the Caribbean and Mexico amongst other countries. This pest is also a threat to Belize’s important Banana Industry.
Quarantine pests of concern to Belize for coconut seedlings from Mexico:

**Hemiptera** (Aleurodicus cocois, Aonidiella orientalis, Pinnaspis strachani, Chrysomphalus aonidum, Chrysomphalus dictyospermi, Pulvinaria psidii, Hemiberlesia lataniae, Parasaissetianigra, Pseudococcus longispinus), **Acariform** (Raoiella indica), **Thysanoptera** (Heliothrips haemorrhoidalis), **Nematoda** (Hemicriconememoides mangiferae), **Phytoplasma** Aster Yellows Phytoplasma
Management Options That Were Required for the Coconut Seedlings:

- Seedlings must be free of soil
- Seedlings must be thoroughly submerged in or drenched with either of 3 miticides at least three days prior to shipping…
- Seedlings must be treated with fungicide e.g. metalaxyl against the presence of fungi.
- After treatment with miticide and fungicide, seedlings must be fumigated for two (2) hours with methyl bromide at rates indicated.
- The fumigation process with methyl bromide is to be witnessed by a BAHA Plant Health Officer.
- Seedlings must be transported to Belize in a sealed container.
• Upon arrival in Belize consignment will be inspected by BAHA Quarantine and Plant Health personnel.

• Seedlings will be placed under strict quarantine for a period of one and a half months during which time they should be treated with a registered miticide on a weekly basis and inspected periodically by Plant Health personnel.

The importer was unable to comply with the fumigation of the seedlings with methyl Bromide!
Final Decision

The Importers Decided to Import the Ungerminated Dried Nuts – Less Risk – Less stringent risk Management Measures
Management Options That Were Required for Ungerminated Seeds:

- Ungerminated coconut seeds must be free of soil

- Ungerminated seeds must be treated (dipped) in a solution of either of the following chemicals at least three days prior to shipping: …. or any other effective pesticide which must first be accepted for the treatment by the NPPO of Belize.

- After dipping, the ungerminated seeds must be fumigated with phostoxin at the rate of 150 pellets/1000 cubic feet.

- Any support material used for transport only (i.e sawdust /wood shavings) must be treated with a fumigant prior to shipment and disposed of by burning upon arrival at the destination of the consignment.

- Ungerminated seeds must be transported to Belize in a sealed container.
• Upon arrival in Belize, the container used in the transport of the consignment must be sealed after inspection by BAHA Quarantine Personnel at the port of entry and opened by BAHA Plant Health personnel at its destination.

• A certification of treatment for support material cited above must be provided along with valid Phytosanitary Certificate for the consignment.

• The plants resulting from the planted seeds should remain accessible to BAHA for periodic inspection once every three months for the next twelve months subsequent to their importation.
Minimizing Negative Trade Effects

Belize Agricultural Health Authority being aware that there was the need for planting material to grow the fledgling industry that has great potential and can improve the standard of living of many citizens:

- Conducted the Pest Risk Analysis to determine the level of the risk
- Conducted verification at point of origin to the areas of origin
- Determined the importation conditions under which the product could be imported according to the risks
- Gave options to the importer rather than prohibit the importation
- Facilitated the importation under an importation protocol
- The planting material is now in Belize and growing while being monitored by Plant Health
Overall Challenges Faced:

• Conducting the Pest Risk Assessment i.e. gathering necessary information for the assessment esp. on pests.

• A unit dedicated to PRA with additional personnel needed.

Lessons Learned:

• It is important to conduct risk assessments in order to know the extent of risks and justify the appropriate levels of protection.

• Communication with the parties involved is important so all can understand their role in risk management and protecting the country’s agriculture.