



## Pacific Pests, Pathogens & Weeds - Mini Fact Sheet Edition

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### Coconut Bogia disease (229)



Photo 1. Dying and dead coconut palms with Bogia coconut syndrome, Madang Province, Papua New Guinea.



Photo 2. Coconuts showing signs of Bogia syndrome, whereas the betel nuts are mostly healthy.



Photo 3. Yellowing of fronds is an early symptom on palms with Bogia coconut syndrome, Madang Province, Papua New Guinea.



Photo 4. In many plantations in Madang Province, Papua New Guinea, coconut palms have been killed by Bogia coconut syndrome.



Photo 5. Streaks and bands of rots in the vascular tissues of a banana with banana wilt associated Bogia phytoplasma disease.

### Summary

- Narrow distribution. Only found in the Madang area of Papua New Guinea. On coconut, betel and banana. A major disease.
- Coconuts with yellowing, drooping leaves, early nutfall, and rapid death. Banana plants with yellow leaves and dark streaks in the vascular tissues.

- Spread by insect is presumed, but not yet identified.
- Biosecurity: To contain the disease, there are restrictions on plant movements from the Province to elsewhere in Papua New Guinea, unless it passes through a period of quarantine.
- Cultural and chemical control: none recommended.

## Common Name

Bogia coconut syndrome

## Scientific Name

There is no scientific name of the disease; it is known by its common name. Analysis of diseased coconuts (and bananas) have found phytoplasmas associated with diseased plants. Analysis of ribosomal RNA of the phytoplasma has shown that they belong to a group code named 16SrIV.

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Information (and Photo 5) Kelly *et al.* (2011). First report of a phytoplasma identified in coconut palms (*Cocos nucifera*) with lethal yellowing-like symptoms in Papua New Guinea. *New Disease Reports* 23:9 (doi: 10.5197/j.2044-0588.2011.023.009); and Davis *et al.* (2012) A new wilt disease of banana plants associated with phytoplasma in Papua New Guinea (PNG). *Australasian Plant Disease Notes* 7: 91-97. (<https://www.researchgate.net/publication/257801469>); and from Pilotti *et al.* (2014) Putative vectors of a phytoplasma associated with coconut (*Cocos nucifera*) in Madang Province, Papua New Guinea. *International Journal of Agriculture and Forestry* 4: 365-372 (doi: 10.5923/j.ijaf.20140405.04). Photos 1&3 Luigi Guarino Global Crop Diversity Trust, Bonn. Photo 2 Richard Markham, ACIAR, Canberra. Photo 4 Geoff Gurr, Charles Sturt University, Orange, Australia.

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