

Bogia coconut syndrome in Papua New Guinea: developing biological knowledge and a risk management strategy



Key details

Location

Papua New Guinea

Duration

Start Jun 2014

End Feb 2020

Budget

AUD 615,757

Commissioned organisation

Charles Sturt University

Partners

National Agricultural Research Institute; National Agriculture Quarantine and Inspection Authority; New Britain Oil Palm; PNG Oil Palm Research Association Inc; University of Southern Queensland

Project Leader

Geoff Gurr - Charles Sturt University

Program

Horticulture

Project code

HORT/2012/087

wilt associated phytoplasma disease), with a view to developing an appropriate and evidence-based response, based on a realistic assessment of the threat to coconut and other crops.

Earlier work (PC/2011/056) suggested that a type of bacterium termed a *phytoplasma* caused Bogia coconut syndrome. Phytoplasma multiply in the phloem of plants and are transmitted by phloem-feeding sucking insects such as planthoppers. A related pathogen, Banana wilt associated phytoplasma (BWAP), affects bananas in the same region.

This project developed a clear understanding of the biology of BCS and related phytoplasmas. At the start of this project in 2014, it was not known which host plants were affected by Bogia coconut syndrome and Banana wilt associated phytoplasma, whether other phytoplasmas were involved, how the pathogen spread, and how best to contain it and limit losses.

The work has great significance to Papua New Guinea because coconuts, other palms and bananas are major crops. The International Coconut Genebank of coconut germplasm for the whole Pacific region is located in Madang Province. If the disease spreads, it will threaten the genebank, so a rescue plan is being implemented. Bogia coconut syndrome is the first recorded coconut lethal yellowing disease in Oceania, making it regionally significant.

The project produced a technical report describing the biology of Bogia coconut syndrome. This information

Overview

This project aimed to better understand the biology of Bogia coconut syndrome, a plant disease that has killed hundreds of coconut palms in Madang Province, Papua New Guinea, (and associated banana

quantifies the risk to different crops, industry sectors,
and smallholders.



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