



Project details

Key Focus Area:

Pest, disease and weed management

Project name

Securing Australia from PNG biosecurity threats

Project number

2015/046

Principal provider

SRA

Project leader

Dr Rob Magarey

Project end date

2017

PNG: a long-term sugarcane research partner

A research collaboration with Papua New Guinea is helping to put the Australian industry on the front foot and prepare for biosecurity risks. By Dr Rob Magarey, SRA, Tully

Papua New Guinea is where the first sweet sugarcane was located (world-wide), and it was from PNG that this useful plant species was transferred around the world, including across paddocks across North Queensland.

In the early part of the 20th century, the common garden sugarcane variety 'Badila' was our most important commercial variety.

It came originally, not from a plant breeding program, but from a garden near Alotau (Milne Bay) in the late 1890s. Badila was first grown at Kamerunga, near Cairns, having traversed the short distance across the Torres Strait with Henry Tryon – a sugarcane collector.

Visiting the country is eye-opening as it is immediately obvious to the discerning eye that sugarcane is growing everywhere – including roadsides, creek banks, backyard gardens, and in grasslands. Commercial crops have now also been growing there for over 30 years; these crops are harvested and milled as in Australia. If you want to see sugarcane in all its forms, go to New Guinea!

It comes as no surprise therefore that many sugarcane pests and diseases are also located in PNG. With some Australian islands located within 3-4 kilometres of the PNG coastline, the Australian industry is very dependent on good quarantine strategies to keep these pests and diseases out of our country and our commercial crops.

SRA (and its predecessor organisations) have been working closely with the PNG industry to research the PNG pests and diseases of greatest concern to our industry. PNG scientists have been very cooperative and provided much needed assistance with the research required, so that we can understand more about how to keep these threats out and how to manage them should they arrive in Australia.

Australian researchers provided consultancy services to the PNG industry from the early 1980s to 2009 and we have conducted collaborative research with Ramu Sugar Limited (PNG) since 2000.

SRA has just started a new research project that is dealing with the important diseases downy mildew and Ramu stunt

– plus sugarcane moth borers (a major sugarcane pest group not present in Australia and of great concern for commercial cropping).

SRA scientist, Dr Rob Magarey is leading the project, which aims to gather important varietal resistance information for our major commercial varieties. Better diagnostic techniques for identifying the diseases and pests present in PNG is also a focus.

We hope the collaborative arrangement with the PNG industry, and scientists, will continue well into the future so that our industry remains secure in the midst of these important pest and disease threats located close-by. SRA acknowledges the funding contribution from the Queensland Department of Agriculture and Fisheries towards this research activity.

Above (left): Downy mildew is one aspect of a current collaboration with PNG researchers. **Above (right):** The collaboration is also looking at moth borers, which are a major pest of sugarcane globally but are not present in Australia.