Reducing pest and disease impact on yield in selected PNG sweetpotato production systems CP 2004/071

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Origins of the project

- May 2003 concept note put forward at PGR network meeting
- Early 2004 concept note generated by QUT team
- May 2004 Aiyura workshop
- Nov 2004 Meeting QUT
- March 2004 pre project trip
- Nov 2005 ACIAR phase 2 submitted

Evidence for the project

- Paul Van Wijmeersch
- Worldwide phenomenon of yield decline
- Recent Australian experience
- Pre project trip March 2005 general acceptance of yield decline
  - *There is a problem!*

The Question?

Is the solution genetic *or* distribution of pathogen tested plant material?

Our Hypothesis

Genetic variability and lack of access to clean planting material is the problem

Why use PT approach?

PT plant material provides plant material with:

- low levels of viruses and phytoplasmas
- free of other pathogens like scurf and scab
- free of insect particularly sweetpotato weevil
- true to type genetics

Project Objectives

- ***Objective 1: To develop and test sweet potato pest and disease control strategies***

- ***Objective 2: To increase dissemination and adoption of the PT scheme in an IPM strategy for pest and disease control***

Objective 1: *To develop and test sweetpotato pest and disease control strategies*

- Identify commercial cultivars relevant to PNG market.
- Identify pests, diseases and disease vectors
- Determine impact of viruses on sweet potato yield through PT and non PT comparison studies.
- Determine impact of weevil on sweet potato yield through experimentation

Objective 2: *To increase dissemination and adoption of the PT scheme and an IPM strategy for pest and disease control*

- Develop collection of PT sweetpotato.
- Develop extension network
- Develop PT sweet potato distribution capability
- Implement PT and IPM strategies for viruses, sweetpotato weevil and other insect pest management.
- Train extension staff and lead-farmers through participatory research.