

Objective

The project aims to improve soil management in smallholdings with crop diversification by evaluating nutrient management strategies and their effects on cocoa.

The objectives are to:

- Evaluate opportunities and the social, environmental and economic impacts in smallholder cocoa production of improving green waste management as a source of soil nutrients.
- Evaluate opportunities and the social, environmental and economic impacts of managing soil condition towards future cocoa crop nutrition in diversified cocoa farming systems.
- Build capacity through research, training and extension in the development and dissemination of region-specific soil management strategies for smallholder cocoa production systems.
- Through the Family Farms Team approach disseminate knowledge on soil management strategies and support the equitable distribution of benefits from cocoa production systems.

Expected scientific results

- Better understand of nutrient flows in diversified cocoa-based farming systems.
- Develop methods for measurement and monitoring of soil nutrient capability and condition.
- Develop methods for soil biological assessment.
- Develop models for decomposition and nutrient release of compost components.
- Knowledge of the gendered roles in cocoa production and soil management in smallholder cocoa production.
- Increased understanding of the resource base of smallholder cocoa producers in PNG, and the potential to improve the sustainability of their production systems
- Increase soil health research conducted in PNG institutions, and improve methods of extension and research outcome delivery.

Expected impact/outcomes

- Improved soil health and sustainable management of soils and farming systems supporting resilient and profitable cocoa production.
- Increased incomes for smallholder farmers through increased cocoa yields.
- Diversification of cocoa farming systems will improve cocoa farming household access to a diverse range of food crops.
- Broader increase in profitable enterprises through enhanced production of cocoa and other food crops.
- Efficient uses of nutrient and water resources through diversification of cocoa farming systems.
- Reduced requirement for mineral fertiliser inputs and more efficient and sustainable use of natural resources.

