Livestock

Increasing the productivity and profitability of smallholder beekeeping enterprises in PNG and Fiji

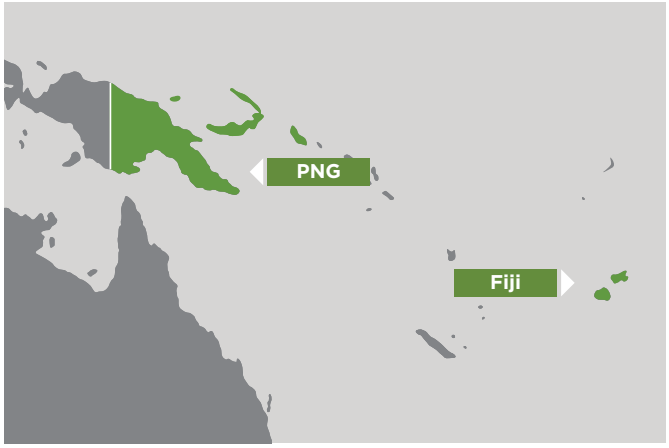
Australian Government
Australian Centre for International Agricultural Research

Overview

Beekeeping enterprises offer many opportunities for smallholder farmers in Papua New Guinea (PNG) and Fiji, with strong domestic demand for honey in both countries, and the potential to export honey and beeswax.

Technical problems include pest and disease control, lack of queen rearing or genetic improvement programs, poor understanding of bee nutrition principles and poor access to materials and effective techniques. Other challenges include limited market access, limited shelf-life of bee products and no organised marketing of bee products.

This project seeks to: provide appropriate guidelines for the entry of smallholders into beekeeping and honey production; test non-chemical methods of control for invasive mites in PNG and American foul brood disease (AFB) in Fiji; improve the productivity and profitability of new and established bee-based businesses; improve pest and disease management techniques to increase smallholder uptake and enhance trade potential, and improve the effectiveness of current apicultural extension services in PNG and Fiji.



KEY FACTS

ACIAR Project No. LS/2014/042
Duration: July 2019 to June 2023 (4 years)
Target areas: PNG and Fiji
Budget: A$1,400,000

Project Leader
Associate Professor David Lloyd, Southern Cross University

Key partners

- Coffee Industry Corporation, PNG
- Department of Agriculture and Livestock, PNG
- Ministry of Agriculture, Fiji
- Biosecurity Authority of Fiji
- Fiji Beekeepers Association
- Bee Biosecurity Officer State Advisory (NSW Department of Primary Industries)

ACIAR Research Program Manager
Dr Anna Okello

Objective

The goal of the project is to improve the productivity and profitability of smallholder beekeeping production and create opportunities for the participation of women and families in PNG and Fiji.

The objectives are to:

- Develop and test appropriate technical and business practices for new and established bee-based businesses.
- Improve control of diseases that constrain production and trade of bees, honey and other bee products.
- Build capacity of extension and development agencies to support beekeeping as a platform for sustainable small enterprises.

Expected scientific results

- Development of cultural control methods for managing mites (specifically Tropilaelaps mercedesae and Varroa jacobsoni) for smallholder beekeepers in PNG.
- Increased understanding of the potential for beekeeping to support rural livelihoods in PNG's Eastern Highlands.
- A strategy to eradicate the bacterial disease AFB in Fiji.
- Development of floral resource databases for beekeepers in developing countries, and a case study of apiary industries in Fiji and PNG.
- Development of case studies of apicultural development programs in PNG and Fiji, including the identification of common factors determining their successes and failures. This information will be available to agribusinesses, investors and development agencies looking to create new, or scale-up existing enterprises across the Pacific Island Countries, and will include opportunities and constraints for markets on the periphery.
- Identification of emerging constraints to beekeeping development.

Expected impact/outcomes

- Measurement of social and economic benefits to participating farmers over the life of the project. This information will be used to assess potential future impacts.
- Extension workers will have improved skills, and will have their skills measured against a newly developed standard.
- Increased resources for development agencies to deliver beekeeping as a livelihood option in poor communities.
- Provided Biosecurity Authority of Fiji's eradication programs are successful, Fiji will attain increased certainty that its potential export markets will not be compromised by the presence of AFB and mites.
- Diversification of smallholder farmers' income streams, providing increased resilience to market-related shocks.
- Increased social and economic wellbeing of smallholder households due to increased income and wellbeing achieved through beekeeping and related agribusiness opportunities.
- Increased desire, particularly among youth and women, to participate in beekeeping enterprises, including value-adding agribusinesses.

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