Livestock

Improving smallholder beef supply and livelihoods through cattle-palm system integration in Indonesia

Indonesia

Overview

Rapid income, population growth and urbanisation have contributed to the increase in demand for beef in Indonesia, but domestic production of beef cattle is not increasing to match consumer demand.

Availability of land for growing cattle and access to economically viable feed, effective reproduction processes, efficiencies of scale and access to markets are all part of this beef supply issue. Indonesia's 11 million ha of oil palm plantations are identified as an area of potential for integration with beef cattle.

While industry and government programs support and promote the introduction of cattle into palm plantations, neither the necessary scale of palm-cattle integration, nor the increased cattle flow from smallholders have been achieved.

Palm-cattle integration would bring benefits to palm plantation and smallholder cattle producers, and improve incomes and employment opportunities.

KEY FACTS

ACIAR Project No. LPS/2015/048
Duration: May 2018 to June 2021 (3 years)
Target areas: Indonesia
Budget: A$4,762,911

Project Leader
Dr John Ackerman, University of New England

Key partners
- Northern Territory Department of Primary Industry and Fisheries
- The Indonesian Centre for Animal Research and Development
- BPTP Riau
- BPTP South Sumatera
- BPTP East Kalimantan

ACIAR Research Program Manager
Dr Anna Okello

Objective

The project's overall aim is to improve smallholder beef supply and livelihoods through the successful integration of cattle into oil palm plantations.

The project's specific objectives are to:

- Identify constraints and opportunities for improving beef cattle productivity and profitability in association with palm systems.
- Develop strategies to address constraints to successful palm-cattle integration.
- Identify potential business models for improving smallholder beef cattle productivity and profitability in palm systems.
- Provide a strategy for scaling out palm-cattle integration.

Expected scientific results

- Financial and value chain analysis of smallholder systems and palm-cattle integration.
- Identification of cost-efficient business models and other improvements across the market chains to provide scientific evidence for practice change in integrated farming systems.
- Development of a land capability index to assess the suitability and predict the carrying capacity of a plantation area for grazing with cattle, and to monitor impacts of grazing cattle on the land condition.
- Strategies for growing and grazing improved forages and existing understory in plantations for optimised pasture utilization, weed control and animal productivity without degradation of land condition or compromising long-term productivity of cattle or oil palm enterprises.
- Documentation of the incidence of calf mortality in palm-cattle systems, to identify the main causes and test interventions to improve this key aspect of business model performance.

Expected outcomes

- Improved animal productivity, improved system efficiency, reduced feed costs (or new feed resources) and access to improved business models.
- Increased profits from palm production through weed control, improved management of nutrients and possibly improved production.
- Increased profits for smallholders by improved productivity, production efficiency, marketing efficiency and equity.
- Increased profits to palm plantations due to weed control, improved management of nutrients and possibly improved production.
- Augmented and stabilised incomes to smallholders and palm plantations due to improved management of the replanting phase of plantations
- Increased conception rates and improved calf mortality rates.
- Diversification of income sources at household and community level.

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