

Improving smallholder farmer incomes through strategic market development
in mango supply chains in southern Vietnam

Annual Workshop
December 2020

Activity 2.5
Intervention feasibility analysis and validation study

Dinh Hoang
SCAP

Alec Zuo
University of Adelaide

Implementing Agency



SIAEP



Funding Agency



Australian Government
Australian Centre for
International Agricultural Research

Aim & objective

Activity 2.5

- ▶ To evaluate options to overcome selected barriers to competitiveness in fresh and processed mango value chains

Focus

- ▶ Undertake financial, economic and business feasibility analysis on selected trial interventions

Research questions

- ▶ What on-farm, post-harvest, marketing and processing innovations are likely to generate the most significant impacts to reduce losses, increase productivity and quality outputs that will improve returns directly related to smallholder incomes?
- ▶ What innovations have the most cost-effective and positive impacts on productivity, losses, quality and harvest timing, leading to improved price and farmer incomes?
- ▶ What is the potential to increase farmer incomes from further developing access to processed fruit chains in the domestic market?

To answer the three above mentioned research questions, **impact evaluations** were undertaken for the following interventions:

- ▶ *On-farm intervention: fertilising and flowering experiments => IE*
- ▶ *Post harvest: Sap burn and primary processing => IE*

Farm economic analysis will also be undertaken for each of the interventions.

Sample and data collection:

- ▶ 4 households for fertiliser
- ▶ 4 households for flowering intervention
- ▶ 4 households for sap burn experiment
- ▶ 2 households in Tien Giang and 2 in Dong Thap for each intervention
- ▶ Each intervention will be implemented on 30 trees
- ▶ Semi-structured in-depth interviews

Impact evaluation (note some of the technical variables will be collected by the intervention team)

- ▶ Impact evaluation of the technical intervention (both on-farm and post-harvest):
 - ▶ General info: area, density, cultivar, age
 - ▶ Input (what type, when, how much/unit price): labour, fertiliser, water, pesticides, weeding, thinning
 - ▶ Process change: dormancy, flowering, fruit development, harvesting (how and to what extent)
 - ▶ Output: yield, quality (size, colour), price
- ▶ Applying the intervention: usefulness (strength, pitfall), level of difficulty, success in applying intervention, whether households continue (and what need to be improved if continue), suitable to households' resources (labour, financial, accumulation), willing to introduce to other households in the commune/ district. How household capacity improved after the intervention?
- ▶ Household income: percent yield/price increase/decrease (to what extent and why). Extent of income gain/lose/diversify (to what extent and why). Household bargaining power, level of overall satisfaction, perception?
 - ▶ To what extent and why income change?
 - ▶ How much is the change can be attributed to the intervention?
- ▶ Social and environmental impact of the intervention?

Activity results are expected to reveal:

- ▶ whether each intervention achieves the desired outcomes (i.e. cost reduction, loss reduction, productivity increase, quality improvement and the ultimate mango income increase)
- ▶ impact pathways (if any) generated and why the interventions result (or do not result) in (any) desired impacts.

Farm economic analysis will:

- ▶ assess costs and revenue associated with each intervention and conclude whether an intervention generates net revenue over different time periods.

Sensitivity analysis provides:

- ▶ how net revenue changes under selected scenarios.

Outputs and outcomes

The activity will report the following :

- ▶ Intervention context
- ▶ Existing literature on mango orchard practices related to the interventions
- ▶ Evaluation design
- ▶ Data collection
- ▶ Impact analysis
- ▶ Farm financial analysis
- ▶ Conclusion & recommendations

Outcomes

Results will assist in opportunity evaluation to implement the interventions in the wider farming community.