Australian Government
Australian Centre for International Agricultural Research

Horticulture

Improved postharvest management of fruit and vegetables in the Southern Philippines and Australia

Overview

Vegetable consumption in the Southern Philippines is very low, averaging less than 30kg annually and resulting in increased rates of heart disease, hypertension and diabetes.

While this low consumption is partly due to cultural preferences for meat and rice, price and availability are also significant barriers.

Fruit and vegetable prices are inflated by large losses through the supply chain – waste between harvest and retail is commonly 20–30%, while losses at retail could account for another 10–40% of total volume produced.

Reduced waste would benefit farmers, many of whom earn less than $2,000 per year, and increase the availability and affordability of fresh, healthy produce for consumers.

KEY FACTS

ACIAR Project No. HORT/2012/098
Duration: December 2013 to August 2019 (6 years)
Target areas: Southern Philippines
Budget: A$1,264,863

Project Leader
Jenny Ekman, Applied Horticulture Research, Australia

Key partners
- University of Queensland (UQ)
- University of the Philippines, Mindanao
- Visayas State University, Philippines
- Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development

ACIAR Research Program Manager
Irene Kernot

Objective

The project's overall aim is to reduce product losses and maintain quality of fruit and vegetables after harvest to increase farmer incomes and encourage increased retail purchases. The project also aims to develop physical facilities and research skills for postharvest advancement in the Southern Philippines.

This project's specific objectives are to:

- Determine where and why postharvest loss occurs in supply chains for selected fruit and vegetables.
- Reduce losses and improve quality of fruit and vegetables through development of effective postharvest intervention strategies.
- Develop active, profitable and sustainable linkages between farmers and retailers.
- Build postharvest research capacity in the Southern Philippines.

Expected scientific results

- Adaptation of existing research and knowledge to the specific needs and conditions of the Southern Philippines.
- Increased knowledge of the relationship of biotic (disease) and abiotic (physical damage) to specific handling practices.
- Increased knowledge of the influence of postharvest handling on storage and eating quality of key Philippine fruit and vegetables.
- Increased knowledge of postharvest treatments such as short duration heat treatments, coatings and packaging for tropical vegetable crops.
- Increased knowledge of pre and postharvest factors affecting under-skin browning in mango.
- Increased knowledge of postharvest physiology and biology of a variety of tropical fruit.
- Increased knowledge of release kinetics and practical application of Ripestuff™ encapsulated ethylene for ripening mangoes.

Expected outcomes

- Increased purchase and consumption of fresh, healthy produce, due to increased availability and affordability.
- Increased economic returns to growers, wholesalers and retailers due to reduced postharvest wastage.
- Rapid return on investment in improved postharvest handling, through simple interventions that cost less to implement than the initial returns received.
- Increased farm productivity could potentially reduce the need for further land clearing.
- Project benefits extended beyond project participants through "train the trainer" activities.
- Opportunities for women to benefit from involvement in vegetable marketing opportunities, including development of new supply chains, training in new techniques and sharing of market information.

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