



PARDI FACT SHEET

South Pacific canarium poised to become more than just nuts

Pacific Agribusiness Research for Development Initiative

The PARDI four-year canarium nut research project ‘Developing markets and products for the Pacific Island and PNG canarium nut industries’ was established in July 2011 to build on domestic and export markets in Vanuatu and Solomon Islands and to investigate how communities in these countries and Papua New Guinea (PNG) can value add one of their most important commodities.

From market stalls to a sustainable global industry

Canarium indicum is indigenous to Melanesia (including Vanuatu, Solomon Islands and PNG) and produces edible fruit, nuts and timber. Canarium nut producers are typically smallholders, principally female, who hand pick and sell nuts as nut-in-shell or dried kernels at roadside or village markets. Local demand for the nut across Vanuatu and Solomon Islands often exceeds supply, while in PNG large-scale plantings are underway.

World trade in nuts has boomed in recent years with a value of around US \$2 billion per annum. Most of the trade involves the sale of walnuts, pistachios, almonds and hazelnuts. With world sales of nuts predicted to climb, there are great opportunities for quality supplies of canarium nuts and canarium-based products.

Canarium nuts also offer smallholders and industry stakeholders the opportunity to map out a sought-after international brand. A coordinated and vibrant industry that is owned and driven by locals, will meet fair-trade standards. Additionally, the mode of farming and suitability of canarium trees to local conditions lend the commodity to certified organic status.

PARDI research is designed to help South Pacific Islands and PNG people, including canarium smallholders, food processors, retailers and other stakeholders, to tap into these unique and exciting opportunities, to enable their local industries grow and work towards a sustainable and prosperous future.

The research runs concurrently with similar work in PNG by the National Agricultural Research Institute (NARI) and University of the Sunshine Coast (USC, Australia) to support the growth of the canarium industry in PNG. The Vanuatu and Solomon Islands components involve Maraghoto Holdings from Solomon Islands, the Vanuatu Department of Forests and processors such as Lapita Cafe and Kava store. All work is performed in close consultation with local canarium smallholders and stakeholder groups.

Project goal and activities

PARDI researchers will help position and evolve the South Pacific Islands canarium industries and canarium production in PNG. Research activities are summarised below.

Conduct consumer and customer research to understand canarium markets according to market segments.

This activity includes value-chain industry maps, containing the key participants in those chains, constraints and opportunities according to target markets (Vanuatu and Solomon Islands).

National and international consumer preferences will be analysed through a series of market research initiatives. Export market opportunities and their attractiveness will also be analysed across a range of markets for commercially manufactured canarium products.

Develop processing techniques tailored to each country’s market, consumer and supply-chain circumstances with capacity for expansion.

This area of research will examine industry best-practice recommendations and protocols and a range of potential flavour-enhanced (i.e. nut paste) products and by-products (i.e. confectionery made from broken nut pieces) for testing. PARDI researchers will work with industry champions from partner countries to determine the best methods of processing and value-adding.



Australian Government
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Determine the drivers, benefits and barriers to stakeholder industry participation and capacity.

This activity is about helping individual countries to develop their industry and form reliable benchmarks for the future. It will involve analysis of the capacity of each country to supply products to meet different markets. Studies will look at the main factors and barriers to stakeholder participation in market and product development.

Outcomes from this work will include information sharing, publishing recommendations (various education materials and training packages) that will lead to opportunities to build on individual country stakeholder strengths and help boost the capacity to overcome existing constraints to participation.

Future industry profile

By 2015 it is predicted that South Pacific Islands canarium industries will have established foundations to evolve a reliable and consistent supply of canarium nuts and potential canarium nut products to domestic markets and plans to target export markets. Some of these foundations are likely to include:

- proven information (i.e. facts and recommendations that have been tested and approved by locals) on how to achieve industry efficiencies and meet various markets requirements
- strong smallholder and stakeholder networks across the islands with a shared goal of boosting industry performance while maintaining environmentally sustainable practices
- business plans to reach export industry status with niche market credibility that meets new customer demands for organic and fair-trade products.

Canarium facts

- *Canarium indicum* is one of about 75 species of tropical and subtropical trees in the Burseraceae family. It is a large, evergreen tree that grows to 20–30 m tall with a 15–20 m canopy.
- Canarium is native to Melanesia (which takes in Indonesia, PNG, Vanuatu and the Solomon Islands) and is widely planted around villages and other settlements.
- The *Canarium indicum* tree is among the most important nut-bearing trees across Melanesia — its history dating back thousands of years and depicted in tribal stories, songs and dances.
- Fruit are ripe when purple. The fruit contains a nut with one or two kernels inside the shell. Kernels have very good nutritional value and contain up to 75% oil and 14% protein.
- Mature trees can produce up to 100 kg of fruit in a season. Peak fruit production is annually between May and November.

For further information

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About PARDI

PARDI: 'Pacific Agribusiness Research for Development Initiative' commenced in February 2010. The project is coordinated by The University of Queensland and funded by the Australian Centre for International Agricultural Research (ACIAR).

PARDI seeks to create sustainable livelihood development outcomes for the South Pacific forestry, fisheries and crop-based sectors. PARDI scientists undertake supply-chain and market-driven research to identify constraints that impede local economic development. Their research involves working towards tangible solutions such as new skills for locals, new technologies and product options.

PARDI is a partnership involving The University of Queensland under the Queensland Alliance for Agriculture and Food Innovation (QAAFI), the University of the South Pacific, the Secretariat of the Pacific Community, University of Adelaide, James Cook University, University of the Sunshine Coast, the Queensland Government's Department of Employment, Economic Development and Innovation (DEEDI) and Southern Cross University.