



Pacific Horticultural
& Agricultural Market
Access Plus Program

Supported by Australia & New Zealand

CASE STUDY

Fiji's Green Kava Innovation

THE CHALLENGE

Maintaining kava quality is essential for sustained market access. This is one of the biggest challenges faced by processors and exporters that are dependent on accessing raw materials from a large number of small growers working across wide ranging conditions and a large geographic area.

Kava quality is affected by: cleanliness (dirt and debris); purity of source material (other parts of the kava plants mixed with stems and roots) and micro-biological contamination (existence of bacteria, yeast and mould). As part of the quality control process, kava is thoroughly washed with clean water and meticulously peeled to get rid of unsuitable parts of the plant, dirt and contamination. It is properly dried before being processed, packed and placed on the market. The diversity of raw materials and variations in on-farm kava drying practices, can translate into significant variations in the quality of dried kava being available at the farm gate.

The variation can be caused by:

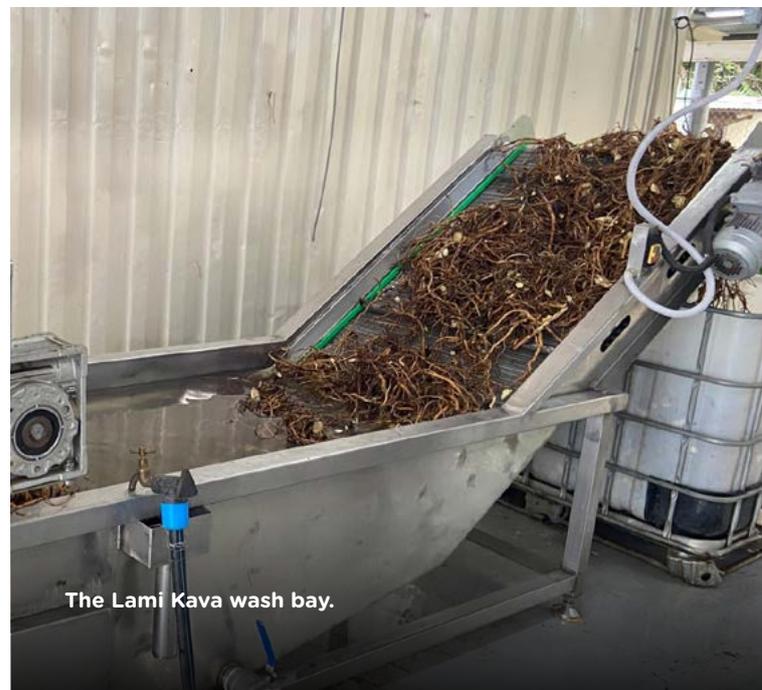
1. Unpredictable weather and seasonal variations in rainfall which makes on-farm kava drying difficult. The Fiji Kava Standards 2017 require dried kava moisture levels to be below 12%. This is hard to achieve on-farm and many farmers are not aware of this standard.
2. A range of drying practices that includes air, smoke or solar drying, with the majority of farmers drying their kava roots on the ground and on rooftops. These various on-farm drying approaches deliver product quality variation and risk of contamination that can affect the safety, taste and aroma of the kava. Sun drying kava is also time consuming, taking up to four weeks, which has a knock on effect on rural household income and cashflow.

3. Washing of kava in contaminated or untreated sources such as rivers, creeks and water stored in drums introduces a range of microbiological hazards and other contamination risks.

THE INNOVATION

CONVERSION TO GREEN KAVA SOURCING AND A MODERN WASH BAY

PHAMA Plus, through the support of Australia and New Zealand, co-invested with Lami Kava Ltd. to establish a green kava washing, cleaning and grading facility. By changing its procurement practice from 'farm-gate green' to 'factory dried', Lami Kava established greater control over the quality of its raw material supply chain.



The Lami Kava wash bay.

ABOUT LAMI KAVA

Established in 1982, Lami Kava is a growing and innovative kava exporter, servicing wholesale, export and online markets. The company is one of the largest exporters and retailers of locally grown kava and is widely viewed as a leading producer of premium quality Fijian kava.



THE TRANSITION

OLD BUSINESS MODEL: LONG PROCESSING TIME, INCONSISTENT QUALITY DRIED KAVA

Depending on weather conditions, it takes several days, and sometimes up to a month, before kava can be dried on-farm and ready for dispatch. Kava transport is organised by the farmers and may involve a transport agent.

This business model is associated with:

- Risk of contamination at several critical points along the supply chain from harvesting, drying aggregation and transport;
- Lengthy and unpredictable time from kava harvest to sale of dry product to processor;

with a knock-on impact on rural household income and the opportunity cost of farmers not being able to work on other income-generating activities;

- High variation in dry kava quality due to lack of consistency in post-harvest practices;
- Risk of contamination from use of non-potable water in the on-farm washing process; and
- Additional costs incurred by the factory in attempting to address the quality issues, such as rewashing and drying.

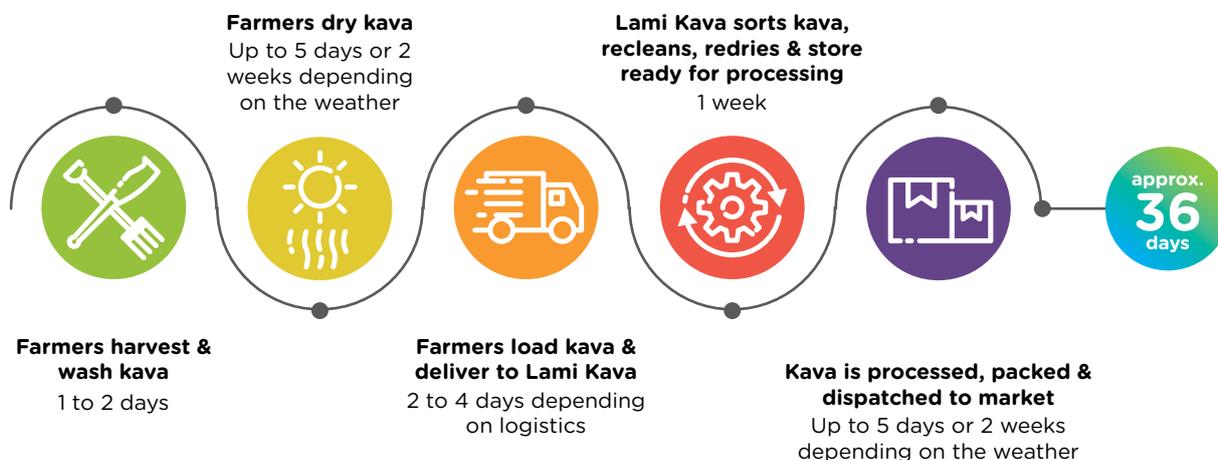


Figure 1: Existing Business Model - Procurement of dried kava by processors

NEW BUSINESS MODEL: MODERN WASH-BAY, GREATER QUALITY CONTROL AND INCREASED THROUGHPUT

In response to this challenge, Lami Kava decided to explore an alternative business model that would involve buying green kava from growers and moving the washing and drying process in-house. Adopting this new practice involved experimentation with various water jet systems and pressures to allow for efficient workflow and the delivery of a consistently,

clean and safe raw material. Lami Kava approached PHAMA Plus to consider the technologies and investment required to move from a manual washing process to an automatic workflow. The result was an agreement to co-invest in a new wash bay facility.

With the establishment of the new wash bay, there has been a significant improvement in the control that Lami kava has over product quality and the efficiency with which green kava can be washed. The company is now confident in its ability to comply with requirements of the Fiji Kava Standards and supply consistently high-quality product to

consumers. The new model allows farmers to harvest green kava and sell it directly to Lami Kava either at a selling point or at their factory in Suva. All post-harvest activities have been transferred from the farmer to Lami Kava.

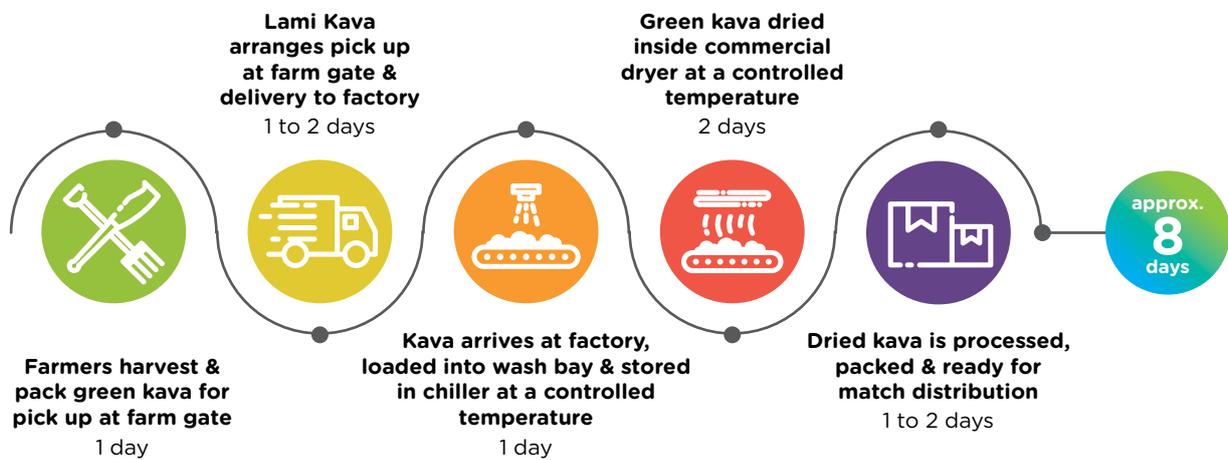


Figure 2: New Business Model - Procurement of green kava by the processors

BENEFITS TO LAMI KAVA

WASH BAY ESTABLISHMENT

BEFORE	AFTER
 <p>Lami Kava would take 10 days to clean one tonne of green kava.</p>	 <p>Lami Kava has reduced the washing and cleaning time by 80%.</p>
<p>85%  The wash bay has reduced the factory's labour costs by 85% to wash one-tonne green kava.</p>	

As a result, over the last two years (2020-2021), Lami Kava has switched to almost exclusively buying green kava, now procuring **98%** green kava.



COVID-19 CHALLENGES

Since establishing the wash bay facility in 2021, the logistical disruption of COVID-19 has made it difficult for Lami Kava to leverage the greater efficiencies and output to increase its export sales. Notwithstanding, Lami Kava expects that the wash bay facility will continue to help the company improve its processing of kava and powder quality. These improvements enable the company to introduce new value-added products and generate new market opportunities, ultimately increasing demand and providing a flow-on benefit to farming households across Fiji.



Lami Kava staff at their factory in Veisari.

THE IMPACT

BENEFITS OF GREEN KAVA MODEL TO FARMING HOUSEHOLDS

In May 2022, PHAMA Plus conducted an impact assessment to understand any changes in kava farming practices, production, quality, sales, and financial and non-financial benefits from its partnership with Lami Kava. The study showed that kava farmers earned AUD 295 additional income per annum by shifting from dry kava sales to green kava. At the same time, they reduced their harvest by 87% (FJD 1.15 per kg from FJD 9.37 per kg). Among surveyed farmers, 97% of respondents said that post-harvesting processing activities (like drying, cleaning, peeling, etc.) are no longer required. As a result, farmers can save time and engage in other income generating activities. A total of 91% of farming households confirmed that they had earned additional income by doing this.

The survey findings were used to estimate the total number of beneficiaries and net attributable income change:

- The partnership has enabled **300** kava farming households to sell green kava.
- The total number of beneficiaries is **766** (**419** men and **347** women).
- Among the beneficiaries **95%** are aged **15 to 24** years old.
- Across households, **97%** or **291** households saved time, which they utilised on other income generating agricultural activities and earned more income.
- About **274** households generated additional income of **AUD 300** per household.
- The total additional income earned by all beneficiaries is **AUD 82,199**.

WHAT THE COMPANY SAYS

Lami Kava has been in the kava business for more than 40 years. Over that time as the market demand for kava of consistent quality has increased and the Fiji Kava Standards established, the company has been searching for viable and sustainable ways to address the inconsistent quality of kava processed and dried on farms.

The new business model is also generating greater demand for green kava which means the company is buying more product direct from farmers.



“

With the wash bay, our factory throughput has increased and normal volumes that initially took up to three days for washing are now completed in under three hours. This is a positive flow-on effect for our farmers in terms of time saved on post-harvest related work which translates into reduced farm costs. They can now focus more on planting and managing their kava plantations and less on drying kava - while we manage and control the quality issues associated with the washing, drying and storage of kava.

”

Lami Kava Managing Director,
Donny Yee

Production and sales trends	2020	2021	Change
Average annual production of dry kava	271 kg	218 kg	↓ (53.24)
Average annual production of green kava	571 kg	761 kg	↑ 189.90
Average annual sales of green kava to Lami Kava	316 kg	671 kg	↑ 354.54
Average annual sales of green kava to other buyers	203 kg	31 kg	↓ (172.05)
Average annual sales of dry kava	231 kg	194 kg	↓ (36.72)

Source: PHAMA Plus Impact Study 2022



Green kava being loaded into the wash bay.

SIGNS OF SYSTEMIC CHANGE

The impact assessment shows that Lami Kava is already adapting new business practices as a result of its partnership with PHAMA Plus. In addition to investing in the wash bay facility, Lami Kava has introduced the following initiatives:

a) Providing embedded agriculture information to the farmers:

Lami Kava has started conducting regular meetings with farmers who come to the factory to supply green kava. The procurement team at Lami Kava informs the farmers about the kava market, price, and reasons for price fluctuations. This practice helps the company to retain the farmers' trust. Lami Kava also communicates with farmers about the company's requirements,

such as green kava needing to be a minimum of three years old, the plant should be two nodes above the ground before it can be cut off and the fact that Lami Kava does not purchase Kasa (stem).

b) Providing transportation service to the farmers:

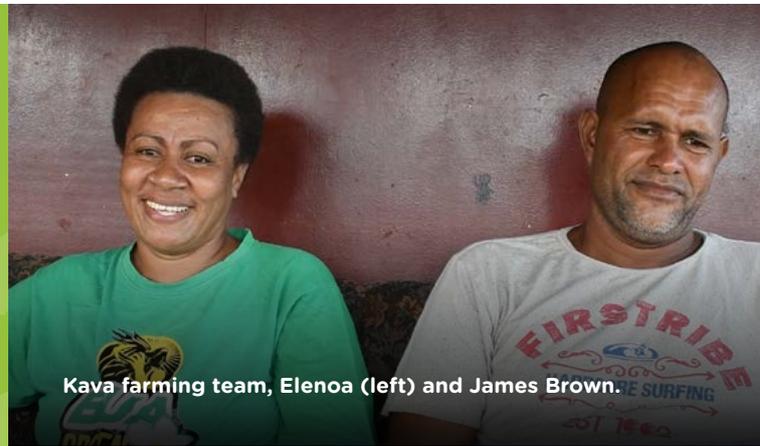
Lami Kava now provides transportation services in Wainunu Bua with trucks collecting green kava at the farm. Lami Kava has also recently begun to use CDP (a local courier service) trucks to pick up the kava from farmers in Vanua Levu. The CDP trucks return with green kava instead of coming back empty after delivering packages.

FARMER'S STORY: THE BROWN FAMILY IN WAINUNU BUA

For Fiji kava farming team, James and Elenoa Brown, most days start before dawn. Elenoa rising early to prepare breakfast before shepherding their seven children towards school, and managing the household for the day. James setting off on foot for the hour-long commute from their village of Batinvurewai to the family's kava farm nestled in the hills of Davutu, Wainunu Bua – northern Fiji.

There, James puts his team to work, tending to over 10,000 kava plants. Once harvested, it used to take James and his 150 plus casual workforce of youths drawn from nearby communities, anything from a few days up to a few weeks – depending upon the weather – to process the green kava. This involved washing the kava in nearby water sources and drying it in the sun – at least on the days that weren't too wet. Only then would the dried kava be ready to sell to buying agents such as Lami Kava and James able to realise something of his investment of time and energy.

All that changed in 2021 when PHAMA Plus supported Lami Kava to procure and install a new wash bay and drying facilities, shifting the entire post-harvest process from farmer to the factory. In part, the move was prompted by an increasing market demand for consistent high-quality kava, but it has also benefited farmers like James who have found a ready buyer for their freshly harvested unprocessed green kava.



Kava farming team, Elenoa (left) and James Brown



When Lami Kava started buying only green kava, I've found it much easier for me. I can harvest, sell and get paid all in the same day.



James Brown, kava farmer

Apart from the quick field-to-pocket turnaround in income generation, letting go of the time-consuming, labour-intensive and weather-dependent post-harvest processing has also meant considerable savings for the family's business.

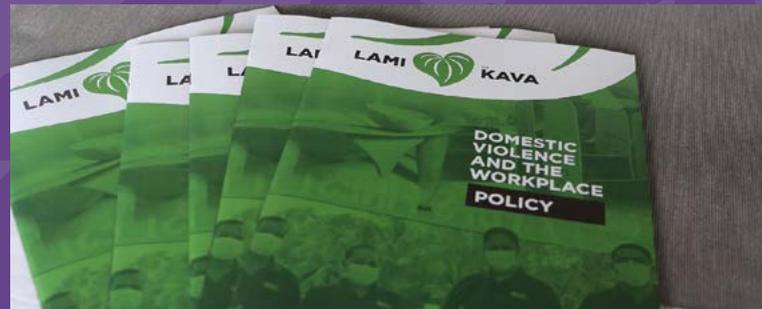
Now with all the benefits of being able to sell their green kava direct to the factory on harvest day, the Browns expect to be able to generate more opportunities for their family.



GEDSI IN ACTION

Australian High Commissioner to Fiji, John Feakes (far left) with Lami Kava staff during the launch of the policy on International Women's Day, 8 March 2022.

With PHAMA Plus' strong commitment to Gender Equality, Diversity and Social Inclusion (GEDSI), Lami Kava reached out to PHAMA Plus for support to review and update its workplace policies. In March 2022, Lami Kava launched its **Domestic Violence and the Workplace Policy**, reflecting the company's commitment to build a more respectful and supportive work environment for its women staff who make up 62% of the workforce across production, retail and distribution chains. As part of the policy roll-out, staff and management took part in educational sessions with the Fiji Women's Crisis Centre (FWCC) on the different types of violence and their impact. Two support staff members were also identified and coached by FWCC on the process and protocols for providing staff referral. Lami Kava has also taken part in PHAMA Plus Family Farm Teams training of the trainers which encourages effective, sustainable and gender equitable farming and business practices.



PHAMA Plus is committed to supporting our partners to do this. You can read more about this important initiative here:

<https://phamaplus.com.au/media/lami-kava-launches-domestic-violence-and-workplace-policy-on-iwd22/>

CONCLUSION

The partnership between PHAMA Plus and Lami Kava has helped the company establish a dedicated kava wash-bay facility, enabling the company to focus on buying green kava from farmers, and to manage the entire post-harvest process in a controlled environment within the factory. It has enabled the company to save time, save labour cost and enhance consistency of production.

Farmers who supply Lami Kava have saved time and cost involved in drying kava, they have a better understanding of market requirements for quality and are adopting practices to improve their production. Farmers have used the time saved to invest in other income generating activities, increasing their household incomes.

Other kava processors and exporters are now seeking guidance about Lami Kava's green kava processing method and some have already started procuring green kava direct from farmers, adopting the model pioneered by Lami Kava.



PHAMA Plus Country Manager - Fiji, Navitalai Tuivuniwai (left) and Lami Kava Managing Director, Donny Yee.



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CONTACT US

info@phamaplus.com.au