

# Papaya (Carica papaya)



## 1. Offer Analysis

### 1.1 General Description: Production, end-use, and market

Papaya is a tropical fruit widely appreciated for its sweet flavour, appealing colour and health-promoting properties. The terms “papaya” and “pawpaw” are often used interchangeably; however, in New Zealand and Australia, “pawpaw” typically refers to papaya (*Carica papaya*), whereas in North America, “pawpaw” refers to a different fruit (*Asimina triloba*). Papaya is a highly valued tropical fruit known for its versatility, nutritional benefits, and broad range of applications. Originating in Central America and now cultivated in tropical and subtropical regions worldwide, papaya thrives in the warm climates of the Pacific. It is a significant crop for many Pacific Island countries, where it is cultivated on both smallholder farms and larger plantations. Papaya is rich in vitamins A and C, antioxidants, and dietary fibre, contributing to its reputation as a health-boosting fruit.

Papaya is primarily consumed fresh, but its uses extend to numerous processed products, including juices, purees, dried snacks, and fermented products. The fruit is also used in traditional medicines due to its papain enzyme, which aids digestion and has anti-inflammatory properties. Beyond food, papaya extracts are incorporated into skincare products for their exfoliating and brightening effects.

Papaya’s cultivation in the Pacific benefits from the region’s year-round growing conditions. However, challenges such as pests, diseases, and post-harvest losses require effective management. Efforts to standardise quality and expand market access are critical to the industry’s growth.

In New Zealand, papaya is commonly available as a fresh fruit in supermarkets, where it is appreciated for its vibrant colour, sweet taste, and health benefits. While fresh papaya remains the primary form, demand for processed variants such as dried papaya, juices, and fermented products like papaya wine is growing due to convenience and longer shelf life. The market for functional foods has also enhanced interest in papaya for its digestive health properties.

The Pacific Island papaya industry is expanding its reach into New Zealand’s market, leveraging its natural advantages, sustainable agricultural practices, and proximity. Key exporting countries include Fiji and Samoa, which produce papayas renowned for their flavour and quality. Sustainable cultivation practices and value-added products like dried papaya or organic-certified options are helping exporters differentiate their offerings.

The industry’s growth also aligns with consumer trends towards natural, minimally processed foods with added health benefits. As a result, papaya has the potential to increase its market share in New Zealand, supported by its nutritional appeal and versatility.

PAPAYA NUTRITIONAL CONTENT	
Nutrient	Amount (per 100g)
Calories	43 kcal
Water	88g
Carbohydrates	11g
Fibre	1.7g
Sugars	8g
Vitamin C	60.9mg
Vitamin A	950 IU
Niacin	0.357mg
Folate	37mcg
Calcium	20mg
Magnesium	21mg
Potassium	182mg

**Table 1: Papaya nutritional content**  
(Source: U.S. Department of Agriculture. FoodData Central. Published 2019)

## 1.2 Uses & Benefits

Here is a showcase of the various value-added products that have been identified as present or having high potential in the New Zealand market based on the offerings of leading retailers.

### Processed Products:

- **Papaya Juice and Concentrates** - Papaya juice and blended fruit drinks featuring papaya are available in health food stores and supermarkets.
- **Papaya Puree** - Used in baby food, desserts, and smoothies, papaya puree is commonly found in processed food aisles.
- **Dried Papaya** - Sold as a healthy snack option in supermarkets and organic food shops.



- **Papaya Jam and Chutneys** - Specialty stores and local markets often stock papaya-based jams and chutneys, catering to niche tastes.
- **Papain Extracts** - Papain enzyme, extracted from papaya, is available in health stores as a natural digestive supplement.

**Convenience and Ready-to-Eat Options:**

- **Fresh-cut Papaya** - Pre-packaged papaya cubes are available in supermarket produce sections as a ready-to-eat fruit option.
- **Frozen Papaya Chunks** - Available in some supermarkets and specialty stores for use in smoothies and desserts.
- **Papaya-based Smoothies** - Ready-to-drink smoothies featuring papaya are sold in health food stores and juice bars.

- **Papaya-flavoured Yoghurts** - Found in both dairy and non-dairy options in major New Zealand supermarkets.
- **Papaya Sorbet and Ice Cream** - Papaya-flavoured frozen desserts are available in specialty stores and health-focused retail outlets.

**Other Value-Added Products:**

- **Papaya Skincare Products** - Papaya enzyme-based face masks and exfoliators are sold in beauty and personal care stores across New Zealand.
- **Papaya Soap** - Papaya-infused soaps are marketed for their exfoliating properties and are available in health and beauty stores.

Papaya's appeal in New Zealand stems from its nutritional benefits and tropical flavour profile, making it an attractive ingredient across various product categories.

### 1.3 Overall Market Insights

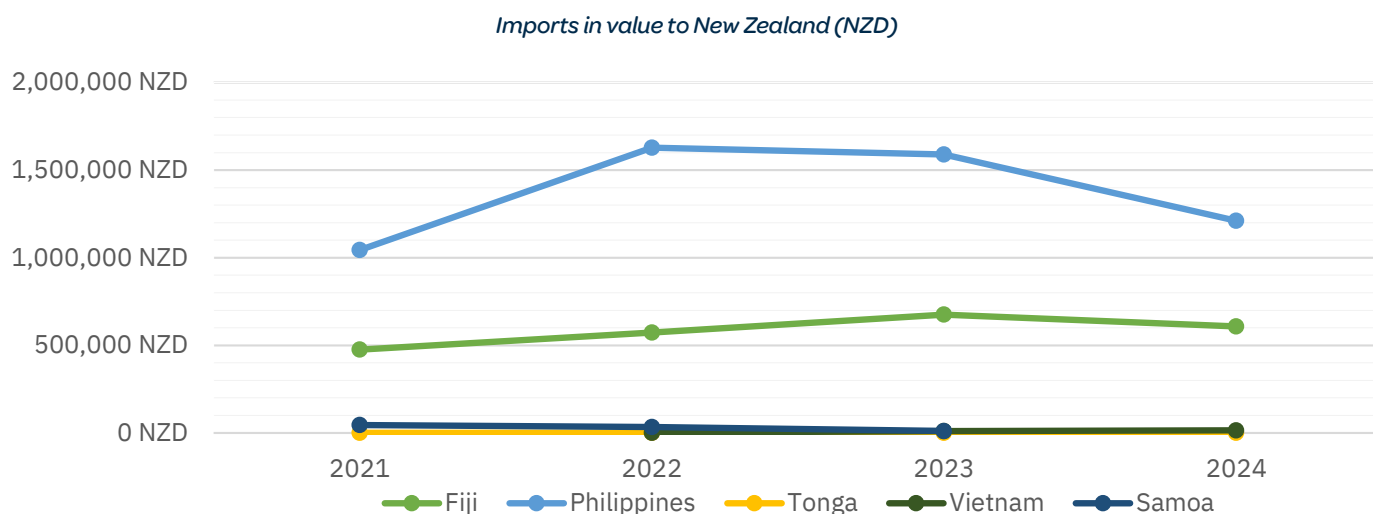
**Table 2: Imports of fresh papaya in value to New Zealand**

(The grand total includes all countries importing to New Zealand. Only the Top 5 countries are displayed. \*Some countries may not have an IHS, and small quantities may appear in this table. This represents sample size commodities recorded at the border.)

	2021		2022		2023		2024	
	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total
Philippines	\$1,043,754	66.72%	\$1,628,314	71.99%	\$1,589,798	69.50%	\$1,212,177	66.03%
Fiji	\$475,530	30.40%	\$572,408	25.31%	\$675,367	29.52%	\$608,547	33.15%
Samoa	\$45,094	2.88%	\$33,160	1.47%	\$11,647	0.51%		0.00%
Vietnam		0.00%	\$1,808	0.08%	\$10,715	0.47%	\$15,133	0.82%
United States		0.00%	\$26,204	1.16%		0.00%		0.00%
<b>Grand Total</b>	<b>\$1,564,378</b>	<b>100.00%</b>	<b>\$2,261,894</b>	<b>100.00%</b>	<b>\$2,287,527</b>	<b>100.00%</b>	<b>\$1,835,857</b>	<b>100.00%</b>

**Figure 1: Imports of fresh papaya in value to New Zealand**

(Only the Top 5 countries are displayed.)



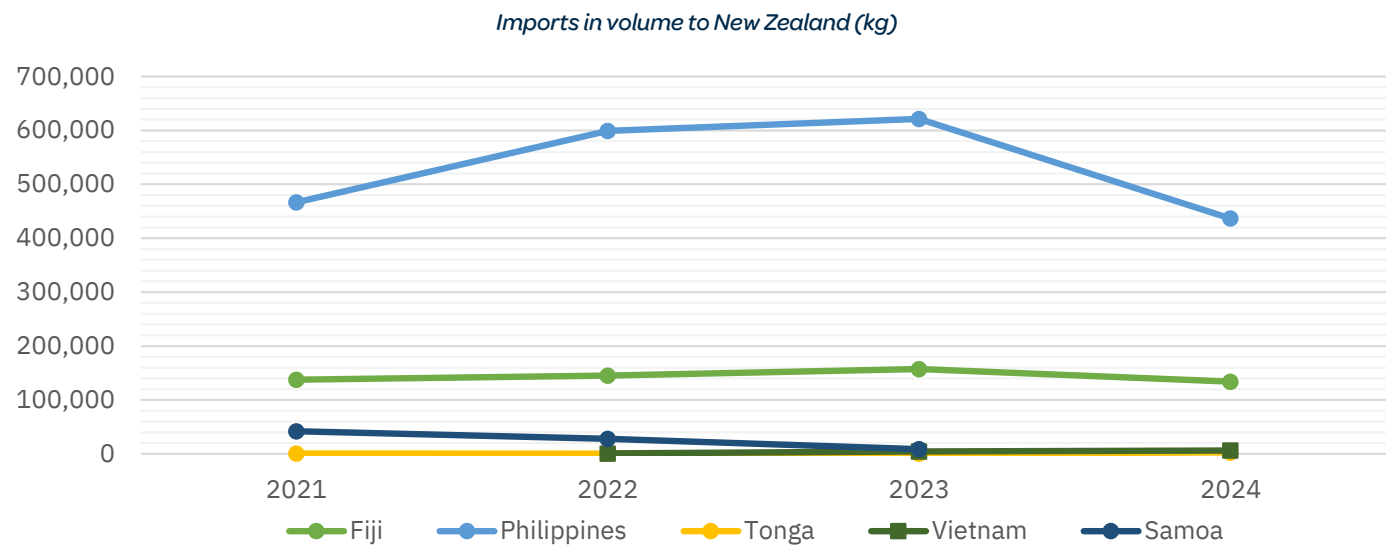
**Table 3: Imports of fresh papaya in volume to New Zealand**

(The grand total includes all countries importing to New Zealand. Only the Top 5 countries are displayed. \*Some countries may not have an IHS, and small quantities may appear in this table. This represents sample size commodities recorded at the border.)

	2021		2022		2023		2024	
	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total
Philippines	466,743	72.2%	599,397	76.7%	621,393	78.5%	436,520	75.7%
Fiji	137,550	21.3%	145,483	18.6%	157,346	19.9%	133,994	23.2%
Samoa	41,935	6.5%	27,973	3.6%	8,659	1.1%		0.0%
Vietnam		0.0%	806	0.1%	4,392	0.6%	6,161	1.1%
United States		0.0%	7,337	0.9%		0.0%		0.0%
<b>Grand Total</b>	<b>646,228</b>	<b>100.0%</b>	<b>780,996</b>	<b>100.0%</b>	<b>791,790</b>	<b>100.0%</b>	<b>576,675</b>	<b>100.0%</b>

**Figure 2: Imports of fresh papaya in volume to New Zealand**

(Only the Top 5 countries are displayed.)

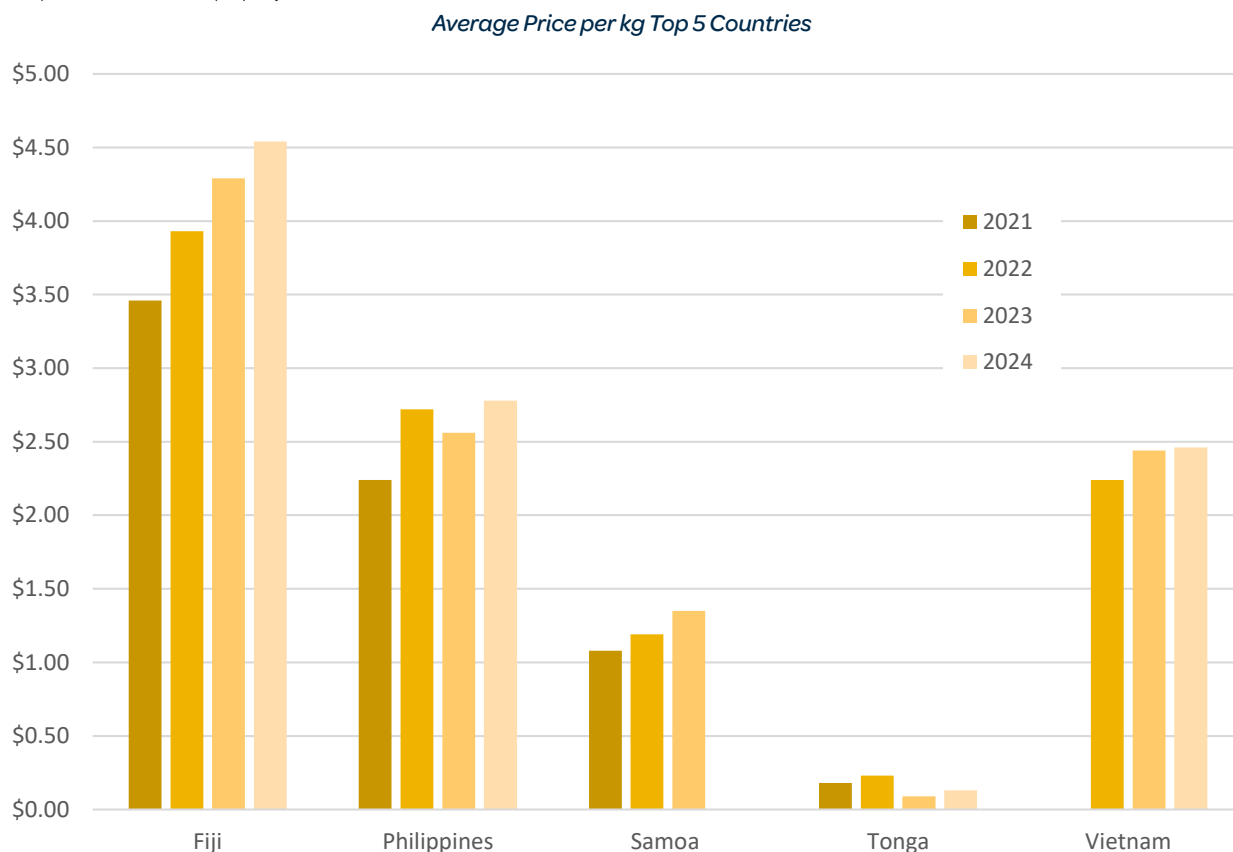


**Table 4: Average price per kg of fresh papaya as declared at New Zealand's border**

	2021	2022	2023	2024
Fiji	3.46 NZD	3.93 NZD	4.29 NZD	4.54 NZD
Philippines	2.24 NZD	2.72 NZD	2.56 NZD	2.78 NZD
Samoa	1.08 NZD	1.19 NZD	1.35 NZD	
Tonga	0.18 NZD	0.23 NZD	0.09 NZD	0.13 NZD
Vietnam		2.24 NZD	2.44 NZD	2.46 NZD



**Figure 3: Average price per kg of fresh papaya as declared at New Zealand's border**  
(Only the Top 5 countries are displayed.)

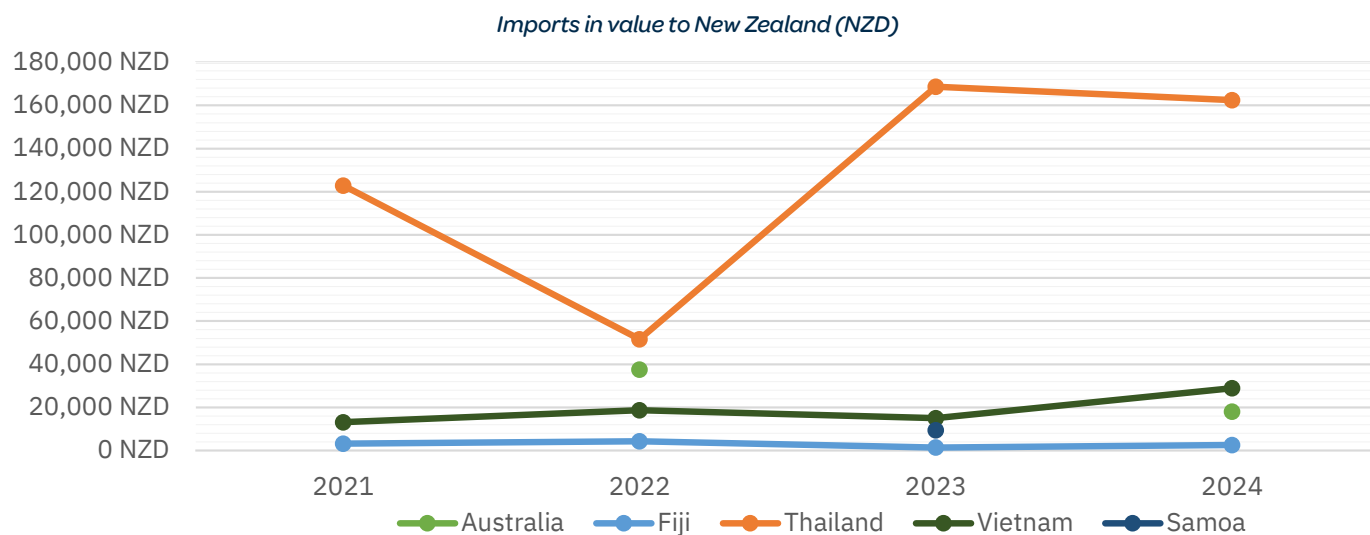


**Table 5: Imports of preserved papaya in value to New Zealand**

(The grand total includes all countries importing to New Zealand. Only the Top 5 countries are displayed. \*Some countries may not have an IHS, and small quantities may appear in this table. This represents sample size commodities recorded at the border.)

	2021		2022		2023		2024	
	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total
Thailand	\$122,845	83.23%	\$51,623	38.83%	\$168,678	91.18%	\$162,449	71.40%
Vietnam	\$13,154	8.91%	\$18,648	14.03%	\$14,941	8.08%	\$28,891	12.70%
Australia	-	0.00%	\$37,604	28.29%	-	0.00%	\$18,130	7.97%
Samoa	\$8,341	5.65%	\$20,770	15.62%	-	0.00%	\$15,421	6.78%
Fiji	\$3,253	2.20%	\$4,296	3.23%	\$1,381	0.75%	\$2,630	1.16%
<b>Grand Total</b>	<b>\$147,593</b>	<b>100.00%</b>	<b>\$132,941</b>	<b>100.00%</b>	<b>\$185,000</b>	<b>100.00%</b>	<b>\$227,521</b>	<b>100.00%</b>

**Figure 4: Imports of preserved papaya in value to New Zealand**  
(Only the Top 5 countries are displayed.)



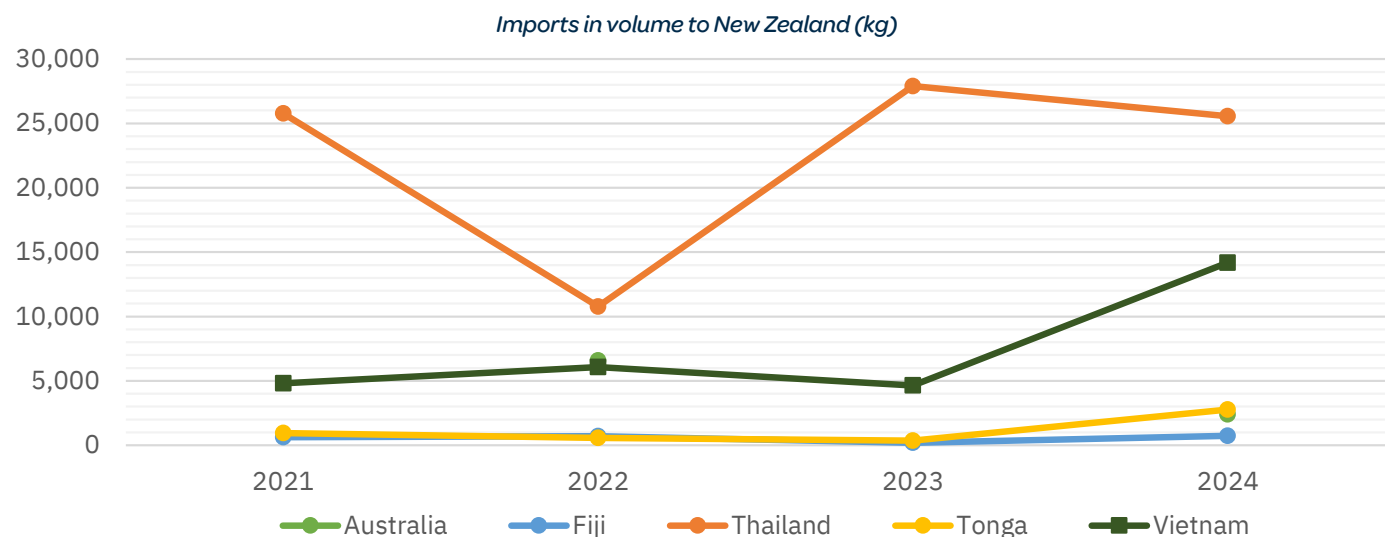
**Table 6: Imports of preserved papaya in volume to New Zealand**

(The grand total includes all countries importing to New Zealand. Only the Top 5 countries are displayed. \*Some countries may not have an IHS, and small quantities may appear in this table. This represents sample size commodities recorded at the border.)

	2021		2022		2023		2024	
	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total
Thailand	25,761	65.3%	10,780	30.4%	27,900	84.8%	25,560	42.8%
Samoa	7,944	20.1%	11,445	32.3%		0.0%	14,753	24.7%
Vietnam	4,800	12.2%	6,080	17.1%	4,640	14.1%	14,185	23.8%
Tonga	950	2.4%	580	1.6%	360	1.1%	2,773	4.6%
Australia		0.0%	6,580	18.6%		0.0%	2,400	4.0%
<b>Grand Total</b>	<b>39,455</b>	<b>100.0%</b>	<b>35,465</b>	<b>100.0%</b>	<b>32,900</b>	<b>100.0%</b>	<b>59,671</b>	<b>100.0%</b>

**Figure 5: Imports of preserved papaya in volume to New Zealand**

(Only the Top 5 countries are displayed.)



**Table 7: Average price per kg of preserved papaya as declared at New Zealand's border**

	2021	2022	2023	2024
Australia		5.71 NZD		7.55 NZD
Fiji	5.13 NZD	6.18 NZD	7.23 NZD	3.59 NZD
Samoa	1.05 NZD	1.81 NZD		1.05 NZD
Thailand	4.77 NZD	4.79 NZD	6.05 NZD	6.36 NZD
Tonga	0.21 NZD	0.18 NZD	0.21 NZD	1.32 NZD
Vietnam	2.74 NZD	3.07 NZD	3.22 NZD	2.04 NZD

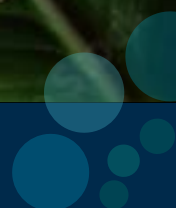
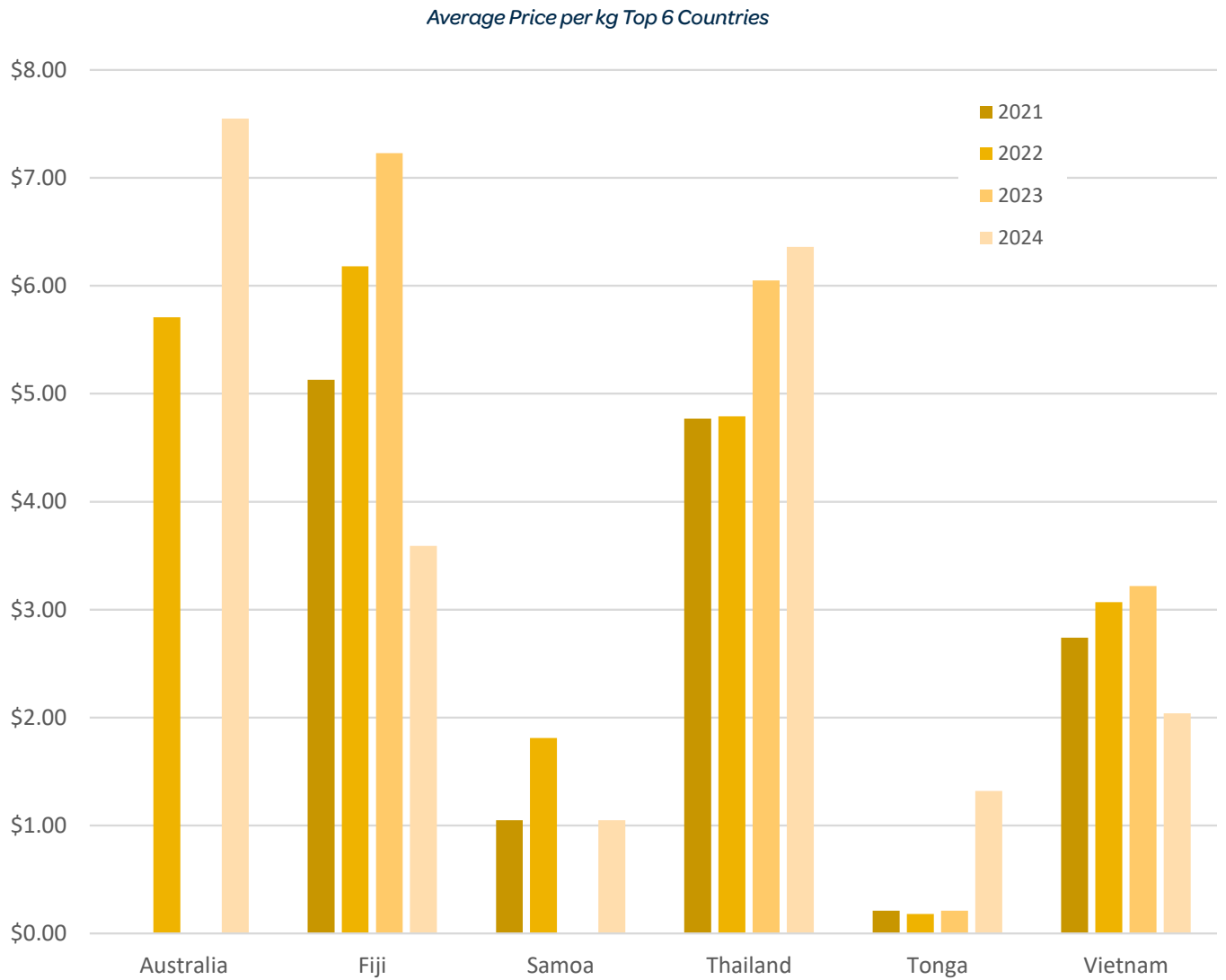


Figure 6: Average price per kg of preserved papaya as declared at New Zealand's border  
(Only the Top 6 countries are displayed)



## 2. Market Access

### 2.1 Biosecurity Requirements and Advice

Fresh Papaya imported into New Zealand from any country must follow the [Import Health Standard \(IHS\)](#). The IHS outlines the specific conditions that must be satisfied before a product can be brought into the country. The complete list of fresh fruits, herbs, and vegetables authorised by countries for import into New Zealand is available via this link: [Importation and Clearance of Fresh Fruit and Vegetables 152.02 \(mpi.govt.nz\)](#)

When papaya is authorised for import into New Zealand from a specific country, exporters must comply with particular quarantine requirements before shipping. These include:

- Papaya must be grown following commercial production requirements specified by New Zealand Ministry for Primary Industries (MPI).
- Control measures must be implemented to target pests of economic importance (regulated) to New Zealand.
- Papaya should be the primary content and inspected in accordance with appropriate official procedures and found to be free from visually detectable quarantine pests, as specified by the New Zealand Ministry for Primary Industries.
- Inspection by the exporting country's quarantine/ biosecurity agency to ensure the absence of regulated pests.
- Fresh papaya is a basic measure commodity, meaning it requires to be commercially produced using standard cultivation, pest control, harvesting, inspection, and packing activities.
- Papaya powder, if imported, should be clearly labelled and packaged in airtight containers to retain freshness.

Importers must follow the clearance process diligently, as failure to comply at any stage can result in refusal to enter the New Zealand border. Non-compliance reduces the willingness of New Zealand importers to source commodities from the Pacific and has financial implications for exporters.

### 2.2 Biosecurity Clearance in New Zealand for imported Papaya

Countries approved to export fresh Papaya to New Zealand can be found via the [PIER Search tool](#).

#### Step 1: Provision of Documents

- ✓ Importers must submit detailed information to MPI before goods arrive.
- ✓ Electronically issued phytosanitary certificates are sent to MPI.
- ✓ MPI reviews all accompanying documents for compliance with Import Health Standards (IHS).

#### Step 2: Non-compliant Documentation

- ✓ Clearance is refused for consignments without valid phytosanitary certificates and those detected with regulated pests.
- ✓ Correct documentation must be provided within 48 hours if missing.
- ✓ Consignments detected with regulated pests are treated before they are released.
- ✓ A consignment may fail clearance if:
  - the number of goods exceeds those stated on the phytosanitary certificate (within reason)
  - the consignment contains unmanifested goods

#### Step 3: Transit Requirements

- ✓ Consignments that are shipped in phases (short-shipped) must comply with the IHS.
- ✓ Transit consignments must meet requirements for importing or transit countries.

#### Step 4: Transport to the Approved Inspection Facility

- ✓ Consignments are transported to an approved transitional facility under an MPI inspector's direction, using pest-proof containers for inspection.

#### Step 5: Phytosanitary Security Before and After Inspection

- ✓ Consignments not inspected within 4-6 hours are securely stored.
- ✓ Non-compliant consignments are securely stored until biosecurity requirements have been satisfied.

#### Step 6: Inspection

- ✓ MPI conducts risk profiling activities before or upon arrival.
- ✓ Visual inspections verify the absence of pests or contaminants and compliance to the IHS.
- ✓ Sampling plans determine inspection quantity based on lot size.
- ✓ Biosecurity clearance is granted when all IHS requirements are met.

#### Step 7: Reconciliation

- ✓ Compliance checks validate phytosanitary certificates, frequency varies based on importer history.

### 2.3 Food Safety Requirements

In New Zealand, food safety regulations are primarily governed by the Food Act 2014 ([Available here](#)), the Food Regulations 2015, and the Australia New Zealand Food Standards Code. These regulations apply to all foods sold in New Zealand, including imported foods like Papaya.

## General Requirements

- **Traceability:** Businesses must be able to trace where their food products came from and where they are going to ensure that any products that are found to be unsafe can be quickly removed from sale.
- **Hygiene:** All aspects of food handling, from production to harvesting, processing, storage, and sale, must adhere to strict hygiene standards.
- **Labelling:** Food items must be correctly labelled, including ingredients and allergens, and may need to have nutritional information displayed.

Please note this information may be subject to change; it is crucial to consult New Zealand's [Ministry for Primary Industries | NZ Government \(mpi.govt.nz\)](https://www.mpi.govt.nz/) or similar authorities for the most current guidelines. They are country-specific and product-specific. *\*Failure to adhere to these regulations can result in rejection at the New Zealand border, additional treatment costs, fines, or other penalties.*

## 2.4 Overview of the export process from the Pacific Islands to New Zealand



## 3. Market Specification

### 3.1 Quality

Quality needs may vary between importers, so exporters and growers of Papaya (fresh and processed) should be aware of any importer specifications regarding size, colour, and general quality of the commodity. Contact your relevant biosecurity and food safety authorities for further information on market specifications. [\(See Foodstuff North Island full requirements\)](#)

#### Fresh Whole Papaya

Fresh whole papayas must have clean, smooth, and waxy skin, free from cuts, cracks, or bruises. The colour should transition from green-yellow to vibrant orange or salmon pink, depending on the variety, indicating proper ripeness. The fruit should have a firm texture with soft, juicy flesh and a Brix level of  $\geq 10^\circ$  to ensure natural sweetness. Proper storage at  $14\text{--}16^\circ\text{C}$  is essential to maintain freshness and prevent spoilage during transportation and display.

#### Fresh Cut Papaya

Fresh cut papayas must be handled with strict hygiene standards to prevent contamination and oxidation. The pieces should retain their vibrant colour, firm texture, and characteristic sweetness. They should be uniformly cut and free from blemishes or discolouration. Modified Atmosphere Packaging (MAP) is often used to extend freshness and maintain visual and sensory appeal.

#### Frozen Papaya

Frozen papayas should maintain their vibrant colour and firm texture after thawing. The fruit must be free from freezer burn, excessive ice crystals, and moisture loss, which can compromise quality. Proper airtight, food-grade packaging ensures the retention of flavour and texture, with consistent quality when used in cooking or processed applications.

#### Dried Papaya

Dried papaya should exhibit a uniform, natural colour, a slightly chewy texture, and a sweet, concentrated flavour. It must be free from excessive sugar (unless specified), foreign matter, and signs of over-drying, such as brittleness. Proper moisture control is critical to prevent spoilage and maintain product integrity over extended shelf life.

#### Papaya Pulp or Puree

Papaya pulp should have a smooth consistency, vibrant colour, and a fresh, natural aroma. It must be free from seeds, skin, and any contaminants. Consistency in flavour and sweetness is essential, with no artificial additives unless required. Storage at low temperatures is crucial to prevent microbial growth and preserve quality.

#### Papaya Juice

Papaya juice should display a vibrant and consistent colour, smooth texture, and natural sweetness characteristic of the fruit. It must be free from sediment, off-flavours, or odours. Pasteurisation or fortification may be required for shelf stability, and any additives must be clearly specified.

#### Papaya-Based Products

- **Jams and Preserves:** These should have a smooth texture, vibrant colour, and balanced sweetness, with no crystallisation or separation.
- **Confectionery Items:** Candied papaya must be uniformly coated, free from stickiness, and maintain a pleasant chewiness.

- **Powdered Papaya:** The powder must have a fine texture, uniform colour, and natural flavour, free from clumping or foreign matter.

For all forms of papaya, stringent quality control, proper packaging, and adherence to transportation and storage standards are crucial to ensure freshness, taste, and appearance, meeting both consumer expectations and market requirements.

## 3.2 Certifications

Several certification standards have to be considered for the New Zealand market:

- HACCP (Hazard Analysis and Critical Control Points)** is a preventive food safety management system that identifies, evaluates, and controls potential hazards throughout the food production process. For papaya, this involves monitoring critical points such as harvesting, cleaning, packaging, and storage to eliminate risks of contamination or spoilage. Adherence to HACCP ensures that the papaya meets strict food safety standards and maintains consumer confidence in the product.
- New Zealand GAP (Good Agricultural Practices)** is a voluntary certification program that ensures sustainable and safe agricultural practices. For papaya growers and exporters, compliance involves addressing environmental conservation, worker welfare, and food safety standards. This certification demonstrates commitment to sustainable farming practices and ensures that the papaya meets the quality and safety expectations of both local and global markets. The NZGAP standard often includes additional add-ons such as Social Practice standards, which focus on ethical labour practices, and environmental modules that promote sustainable resource use.
- BioGro Certification (for Organic Papaya)** is mandatory for suppliers targeting the organic segment in New Zealand. This certification verifies that the papaya has been grown and processed according to strict organic principles, including the prohibition of synthetic chemicals and genetically modified organisms. BioGro certification is a recognised standard that assures consumers of the authenticity and quality of organic produce.
- GLOBALG.A.P (Good Agricultural Practices)** certification is widely recognised in international markets, including New Zealand. It ensures that papaya production adheres to globally accepted standards for food safety, environmental sustainability, and worker welfare. This certification is particularly critical for exporters targeting both New Zealand and other international markets, providing assurance that their practices align with stringent global requirements.

## 3.3 Volume

New Zealand's demand for papaya has shown consistent growth over the past four years, as evidenced by the steady increase in import volumes, with the total reaching 791,790 kg in 2023. The Philippines remains the dominant supplier, accounting for 78.5% of total imports in 2023, followed by Fiji at 19.9%. Samoa, Vietnam, and the United States contribute smaller volumes, indicating niche or emerging roles in the market.

This highlights New Zealand buyers' preference for reliable and large-scale supply sources, especially from the Philippines and Fiji, which together account for the vast majority of imports. For exporters, this shows the importance of maintaining consistent supply and the ability to scale production to meet rising demand. Orders can vary significantly, from smaller quantities for niche markets and boutique retailers to several metric tons for major retailers or food manufacturers.

Exporters should also consider the competitive landscape, where maintaining volume and consistency is vital to sustaining market share. Furthermore, diversification of sourcing countries, as seen with emerging suppliers like Samoa, suggests opportunities for smaller producers to penetrate the market by focusing on high-quality, niche offerings or unique varieties.

## 3.4 Packaging and Labelling

Papaya should be packaged appropriately, taking care of biosecurity and food safety requirements. All products should have clear labels indicating the product name, country of origin, net weight, packaging date, expiration date, and other relevant certifications.

### Fresh Whole Papaya

- **Packaging:** Fresh whole papayas are typically packed in loose cartons or sanitised returnable crates made from new food-grade materials. Packaging should minimise handling damage, ensure proper ventilation to prevent moisture build-up, and support even ripening. Pallets must be stabilised and stacked as per transport guidelines.
- **Labelling:** Cartons or crates must include clear labelling with product description, variety, size or count, supplier and grower/packer details, packed-on date, and expected shelf life. If organic, certification labels (e.g., BioGro or equivalent) must be displayed. Labelling must adhere to legislative requirements and include traceability information.

### Fresh Cut Papaya

- **Packaging:** Fresh cut papayas are packaged in modified atmosphere packaging (MAP) to maintain freshness and prevent oxidation. Food-grade, resealable plastic containers or pouches with tamper-evident seals are commonly used. These should be transparent for product visibility and include moisture-absorbing pads to manage excess liquid.
- **Labelling:** Labels must include the product name, net weight, packed-on date, best-before date, and storage instructions (e.g., "Keep Refrigerated"). Nutritional information, allergens (if applicable), and traceability codes should also be included, alongside organic certification if relevant.

### Frozen Papaya

- **Packaging:** Frozen papayas are packed in airtight, food-grade polyethylene bags or laminated plastic pouches designed to prevent moisture ingress and freezer burn. Bulk orders may use large poly-lined cartons. Packaging must withstand low temperatures and remain intact during transit.
- **Labelling:** Labels should indicate the product name, net weight, storage instructions (e.g., "Store at -18°C or

below”), production and expiration dates, and batch numbers. Nutritional and allergen information, along with any relevant certifications (e.g., HACCP or organic standards), must also be displayed.

#### Dried Papaya

- **Packaging:** Dried papaya is packaged in resealable plastic pouches, vacuum-sealed bags, or laminated foil packs to maintain freshness and prevent contamination. Transparent sections may be used for product visibility. Bulk shipments are often packed in poly-lined cartons or kraft paper bags with moisture barriers.
- **Labelling:** Labels must clearly state the product name, net weight, nutritional information, and storage instructions (e.g., “Store in a cool, dry place”). Best-before or expiration dates and traceability details are mandatory. Organic and food safety certifications should be displayed prominently

#### Papaya Pulp or Puree

- **Packaging:** Papaya pulp or puree is typically packaged in sterilised, food-grade containers such as aseptic bags, glass jars, or tin cans for retail markets. Industrial supply often uses large aseptic drums. Packaging must ensure airtight conditions to preserve freshness.
- **Labelling:** Labels should provide the product name, net weight or volume, production and expiration dates, storage instructions (e.g., “Refrigerate after opening”), and certifications such as HACCP or GLOBALG.A.P. Nutritional information and allergen statements must also be included.

#### Papaya Juice

- **Packaging:** Papaya juice is usually packaged in glass or PET bottles with tamper-evident seals for retail, or in aseptic Tetra Paks for extended shelf life. Bulk orders are stored in large food-grade plastic or stainless-steel tanks.
- **Labelling:** The label must display the product name, net volume, ingredient list, storage instructions, production and expiration dates, nutritional facts, and allergen information. Any fortification or additives should be clearly specified, and certifications like organic or food safety compliance must be included.

#### Papaya-Based Products

- **Jams and Preserves:**
  - **Packaging:** Typically packed in sterilised glass jars with airtight metal lids. For larger-scale distribution, plastic tubs with tamper-evident seals are used.
  - **Labelling:** Labels should include product name, net weight, ingredient list, allergen warnings, storage instructions, production and expiration dates, and traceability codes.
- **Confectionery Items:**
  - **Packaging:** Candied papaya is packaged in resealable food-grade pouches or plastic containers with moisture-absorbing inserts to retain texture.
  - **Labelling:** Include product name, net weight, storage instructions, ingredient list, and traceability details. Any use of artificial additives should be disclosed.
- **Powdered Papaya:**
  - **Packaging:** Sold in sealed, laminated foil or vacuum-

sealed bags to protect from moisture. For bulk supply, large poly-lined kraft paper sacks are used.

- **Labelling:** Labels must detail the product name, net weight, ingredient purity, best-before date, and storage instructions (e.g., “Store in a cool, dry place”). Certifications for organic or food safety compliance are essential.

## 3.5 Transport recommended and precautions

Papaya should be transported using conditions that will minimise contamination risks for biosecurity and food safety requirements.

For fresh whole papayas, transportation requires refrigerated conditions maintained at 14–16°C with 85–90% relative humidity to ensure freshness and prevent spoilage. Use strong, moisture-resistant ventilated cartons or crates (typically 4–8 papayas per box) to withstand stacking and transport. This ensures the fruit arrives store-ready without the need for repacking. Proper cushioning should be used to prevent bruising and manage ripening. Stabilised pallet stacking is essential to avoid bruising or crushing. Temperature fluctuations should be minimised to prevent chilling or heat injury. Fresh cut papayas, on the other hand, demand stricter cold-chain management at 0–4°C to retain freshness and prevent microbial growth. Careful handling and airtight packaging are critical during transit to avoid contamination or oxidation. Frozen papayas must be transported at a constant temperature of 18 °C or below to preserve texture and prevent freezer burn. Airtight packaging protects against moisture ingress and ice-crystal formation.

Dried papayas should be transported in dry, well-ventilated conditions at 15–25 °C with low humidity to prevent moisture absorption and ensure packaging remains sealed and contamination-free. Papaya pulp or puree requires either refrigerated transport at 0–4°C for fresh products or frozen conditions at -18°C for extended shelf life. Airtight, aseptic containers must be handled with care to prevent punctures or microbial contamination. Similarly, papaya juice transportation depends on its processing method, with chilled juice requiring 0–4°C refrigerated storage while shelf-stable variants are transported at ambient temperatures, protected from sunlight and extreme conditions.

For papaya-based products, jams and preserves can be transported at ambient temperatures between 15–25°C, provided the packaging prevents contamination and breakage. Confectionery items require storage at 15–20°C with low humidity to preserve texture and prevent melting. Powdered papaya needs dry conditions at 15–25°C with sealed packaging to avoid clumping or spoilage. Across all products, maintaining appropriate temperature and packaging standards is crucial to ensuring product quality and shelf life during transit.

#### General Transport Precautions:

- **Moisture Control:** For all papaya products, controlling moisture is critical to prevent mould and spoilage.
- **Temperature Management:** Maintaining an optimal temperature range is vital, especially for products like papaya oil and papaya water.
- **Protection from Contamination:** Products should be

stored away from goods that might contaminate them with odours or pests.

- **Proper Packaging:** Ensuring that the packaging is secure and intact is crucial to prevent damage and contamination during transit.
- **Documentation and Compliance:** Adequate documentation for customs and adherence to international food safety standards is necessary for smooth transportation.

### 3.6 Mixed Loaded Consignments

Mixed-loaded consignments must be issued with the correct documentation and loaded and transported appropriately to minimise any risk of contamination and/or damage risk.

## 4. Types Buyers/Distributors

**Fresh Produce Importers:** Turner & Growers (a major player in fresh produce distribution, handling a wide variety of fruits and vegetables), MG New Zealand Fresh Produce Group (exclusive importer and marketer of Dole products, including papayas and other tropical fruits), Fresh Direct (specialising in sourcing and distributing premium-quality fresh produce).

**Beverage Industry:** Charlie's Drinks (Asahi Beverages; known for its natural and tropical fruit juice blends, including exotic fruit combinations), Phoenix Organic (offering organic juices and sparkling beverages, potentially incorporating papaya for its

health benefits).

**Processed Food Industry:** Wattie's (produces a wide range of frozen and canned fruits, sauces, and baby foods, where papaya could feature in fruit blends), Goodman Fielder (a leader in processed foods, including baked goods and pantry staples that could utilise papaya puree or dried papaya), OOB Organic (specialising in organic frozen fruits and berries, with papaya aligning with their portfolio).

**Frozen and Dried Food Suppliers:** Cedenco Foods (a key producer of fruit pulps and purees, with a focus on tropical and exotic fruits like papaya), Fresh to Go (supplies frozen and ready-to-eat fruits, ideal for smoothies or desserts), Pure Delight (renowned for high-quality dried tropical fruits, including papaya).

**Organic and Niche Markets:** Ceres Organics (a prominent brand in the organic market, offering dried and packaged organic products, including papaya).



## 5. Key Success Factors



## Acknowledgments

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