



Pacific Islands
Trade & Invest



Pacific Islands

EXPORTING TARO TO NEW ZEALAND



market brief

ABOUT THIS PAPER

This market brief has been prepared by the Pacific Islands Trade & Invest (PT&I) office in Auckland as part of a partnership project with the Food & Agriculture Organization of the United Nations (FAO).

This market report aims to give Pacific Island exporters (or potential exporters) an overview of the New Zealand market; key market trends; market requirements; and market opportunities. This report examines the taro market in New Zealand.

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Photo credit: PT&I



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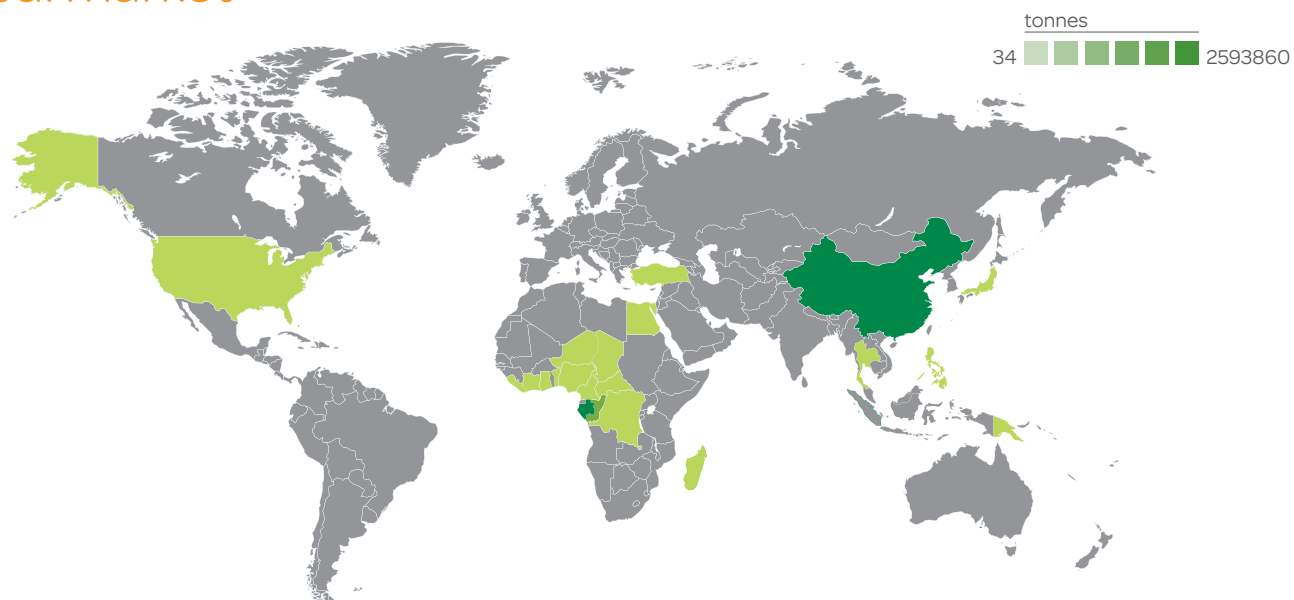
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Map 1: Global taro production by country (tonnes)

Source: FAOSTAT

GLOBAL PRODUCTION

Taro is the world's 14th ranked staple food crop by production. There are thousands of types of taro grown around the world.

In 2010, an estimated 9 million metric tonnes of taro was grown and consumed worldwide. The majority of the global taro production is consumed locally. Table 1 shows the main producers of taro globally which was largely comprised of West African countries. It is estimated that West African countries alone consumed 4 million tonnes of taro in 2010.

Global taro production increased steadily from 2001-2008 peaking at 12,242,303 tonnes before falling to 9,554,121 tonnes in 2009 and declining further to 9,006,116 tonnes in 2010.

Root crops are a mainstay of food consumption in many countries, mainly in sub-Saharan Africa region, generally characterized by overall low food consumption levels and food insecurity¹. Several government and international donor agency initiatives focused on food security in these regions have aided in the production and local consumption of root crops.

In terms of regional production, the Africa region was the largest producer of taro. It produced about 6.4 million metric tonnes which accounted for approximately 72% of the world's production. Production in the Asia region that year was about 2.1 million metric tonnes about 23% of global production. The Oceania region which includes Australia and New Zealand produced about 5% of world taro production (about 416,000 tonnes). Refer to Graph 1 for Pacific Island production statistics over the last 10 years.

Table 1: Global production of taro, 2010

Top producers	Tonnes
WORLD	9,006,116
Nigeria	2,593,860
China	1,768,512
Cameroon	1,470,000
Ghana	1,354,800
Papua New Guinea	271,100

Source: FAOSTAT

¹Food & Agriculture Organization of the United Nations. (2012). *FAO Statistical Yearbook 2012*. Retrieved May 25, 2012,

Graph 1: Taro production in the Pacific Islands, 2001-2010



Graph 1 shows that the production of taro in the Pacific Islands region has gradually increased with Papua New Guinea the largest producer in the Oceania region and the 5th largest producer of taro in the world, producing 271,000 tonnes in 2010. Fiji and the Solomon Islands are the next largest taro producers in the Pacific Islands, producing 60,283 tonnes and 46,000 tonnes respectively.

Table 2: Global taro trade, 2009

Top global importers	Tonnes
WORLD	86,496
United States of America	47,034
Japan	35,743
Trinidad & Tobago	1,719
China	1,455
American Samoa	236

Top global exporters	Tonnes
WORLD	133,676
China	115,364
Fiji	9,957
United States of America	7,416
Dominica	618
Samoa	199

Source: FAOSTAT





GLOBAL TRADE

World trade in taro is relatively small and estimated to be less than 2% of production. According to FAOSTAT approximately 133, 676 tonnes of taro was exported internationally which accounted for approximately 1.4% of total production in 2009.

Global imports of taro decreased by 5% from 90,752 tonnes in 2005 to 86,496 tonnes in 2009. Similarly taro was traded less during this period as global exports fell dramatically by about 19% from 164,723 tonnes in 2005 to 133,676 tonnes in 2009.

In 2009, global importation of taro was valued at US\$ 116.5 million while the value of international taro exports was about US\$126.7 million.

Table 2 shows the top 5 global importers and exporters of taro. Statistical trends show that from the list of top global importers there was a 22% drop in Japan's taro imports over the 5 year period. In 2009, imports of taro into Japan accounted for about 41% of the total global figure. China and Fiji were the largest exporters of taro in 2009 comprising of 86% and 7% of the world's taro exports respectively. Exports from both countries over the five year period declined.

GLOBAL OUTLOOK

FAO (2012) outlined the consumption trends in the root crops sector which showed a rapid decline in China's consumption of sweet potatoes, and the parallel increase in potatoes in China and other developing countries. Potato consumption in developed countries continues to exhibit declining rates of production as well².

Information on the outlook for the taro market is limited. The main root crop expected to yield positive growth in the future is cassava given its role as an alternative to the expensive imported cereal and an industrial crop. Cassava is one of the fastest growing staples in Africa in quantity terms.

The high dependency on roots and tuber as food will remain in several developing countries. The expectation for the future is that the food consumption per capita for all root tubers and plantains in developing countries will increase gradually - from the present 67 kg to 75 kg in 2030 and to 77 kg in 2050.³

²Food & Agriculture Organization of the United Nations. (2006). *World agriculture: towards 2030 / 2050*. Food and Agriculture Organization of the UN, Rome.

³*Ibid.*



key global trends

A recent Deloitte's (2010) report highlighted some key global trends and their effect on business. The points are summarized in Table 3 with additional references to New Zealand and the Pacific Islands exporters.

Table 3: Key global trends affecting businesses

	NEW CONSUMER REALITIES	FOOD SAFETY CONCERNS
TREND	<p>Consumers continue to be wary of economic recovery. Reassessing their spending habits and priorities</p> <ul style="list-style-type: none"> • Shift in spending to private label goods, searching for discounts and better value • Value aligned with personal values such as quality, sustainability, health and etc. 	<p>Increasing demand for transparency into the product's origin, nutrition and quality.</p> <p>Industries have responded by adopting more rigorous, globally accepted standards</p> <ul style="list-style-type: none"> • The importance of traceability
NEW ZEALAND MARKET TRENDS	<p>New Zealand consumers more aware of extending their credit line. Saving schemes such as Kiwisaver are enticing consumers to save¹.</p> <p>Online shopping continues to alter consumer behaviour and expectations.</p>	<p>Greater interest in the product ingredients and the process.</p>
PIC EXPORTERS OF TARO	<p>Research the market and develop your marketing plan and strategy.</p> <p>Examine your price structure and strategy.</p>	<p>Emphasis on product quality, packaging and labelling as well as traceability in the supply chain.</p> <p>Certification and quality assurance programmes will be important. E.g. HACCP</p> <p>Marketing: promote the origin story of our product</p>

¹New Zealand Retailers Association. (2012). *The Retail Market in New Zealand: An Analysis 2011/12*.

MANUFACTURERS SEEK SECURITY IN SUPPLY CHAIN

Growth in global population, expansion of middle class in key developing countries, depletion of food stocks, volatility in food prices.

NZ buyers have vertically integrated some operation in the Pacific Islands to strengthen the links in its operations. E.g. Turners & Growers has established operations in Fiji and recently exported pineapples to New Zealand.

NZ buyers have expressed a willingness to build long term relationships therefore communication and coordination particularly during the trial period will be important.

Schedule market visits to meet with your buyer face to face to discuss opportunities for improvement.

SOCIAL MEDIA

Online changing consumer behaviour – consumer is savvier and taking charge of their shopping experience

Some companies have been cautious given the possibility of a backlash regarding a perceived lack of sincerity or authenticity by corporations selling products

Online – Consumers are becoming savvier and taking charge of their shopping experience by making price comparisons, peer reviews and credit/debit card on smart phones.

E.g. Countdown supermarket launched their shopping iPhone app. in 2012.

Nearly half NZ adults made at least one online purchase in the last year and, on average, purchasing through this channel three times

Emphasis on marketing and promotion. What is your point of difference?

Organic/Fair Trade certification

PRICE STRATEGIES TO IMPROVE PROFITABILITY

High cost of raw materials and input costs such as oil which are squeezing margins across industries

Consumers have learnt to wait for sales, expect every-day-low-prices, chase bargains and even expect discounts on luxury items

A growing emphasis on offering value beyond price only therefore more about value and less about cheap.

Retailers giving serious consideration to the brands they offer as they also seek to establish a point of difference in the market..

Develop a point of difference. Consideration should also be given how you will promote in the stores.

Supermarkets are also interested in what supplier will do to support product launch and in store promotion. Factors to consider include product range, price, terms of trade, quantities and etc.

Source: Deloitte (2009), NZ Retailers Association (2010)

market overview

Taro is a key export product for the Pacific Islands, one that has successfully penetrated the market by targeting the Pacific Islands communities in New Zealand. The taro market largely refers to the Auckland market where most Pacific Island people reside. This market is said considered to be mature but unstable. Furthermore key market trends suggest that the consumption habits of Pacific Island consumers particularly the younger generation are changing, affected by primarily consumer choice and technology. There is a need to expand the market.

This research has identified growth opportunities in the New Zealand market for taro:

- (1) tapping into the mainstream market,
- (2) value added products, and (3) developing the market outside of Auckland.

MARKET STRUCTURE

The structure of the New Zealand market for fresh produce can be segmented into three-tiers based on commercial size⁵:

• LARGE COMMERCIAL IMPORTERS

Examples of large commercial importers of fresh produce include Turners & Growers Ltd, MG Marketing, Freshmax and Fresh Direct. These companies place great emphasis on consistency of supply and quality given that they handle large orders for various customers including the supermarket chains and independent retailers. Large commercial buyers have the established infrastructure and systems in place to supply customers on a national basis.

For the Pacific Islands, the large commercial importers only import Pacific Island produce in high demand such as taro, coconuts, ginger, papaya, eggplants and watermelons. Speciality Pacific Island lines such as okra, sugar cane are often supplied to the large importers as well as small retail buyers and restaurants.

• MEDIUM COMMERCIAL IMPORTERS

There are several small-to-medium sized companies such as Tropical Fresh Ltd that specialise in importing and distributing Pacific Islands produce. Limited by their size, these companies deal only in limited quantities and carry out any necessary sorting and repacking economically.

Medium commercial importers may also align with supermarket chains to supply some specialty lines or have their own retail outlets. Some also sell through the 'flea market' systems on the weekends.

• SMALL IMPORTERS

This tier consists of small family and church networks or referred to as the 'informal channel'. Generally products are imported directly from their home countries (such as the Pacific Islands) through to family connections and supplied to their own local buyers.

The informal trade of taro within the Pacific Island communities in New Zealand is estimated to be significant. Taro imported through this channel is often supplied direct to consumers on family or church group basis. Often containers of taro are supplied by the community or church groups in the Pacific Islands to community or church groups in New Zealand. Products are sold at the local flea markets of Mangere and/or Otara.

Informal channels are used primarily due to their relative simplicity and relatively lower transaction costs. Compared to the commercial distribution system (or the formal distribution channel), goods transferred through the informal distribution channel generally passes through relatively shorter channels before reaching the consumer. However its main disadvantage is the poor revenue collection which is largely due to the informal nature of the relationship which lacks the institutional mechanisms that traditionally govern business transactions. While commercial trade can be lengthy and relatively complex, a successful model ensures a reliable revenue stream for Pacific Island growers and exporters.

⁵Grandison, G. (2003). *Exporting Fruits and Vegetables to New Zealand: A Guide for Pacific Island Producers*.

PRODUCT TYPES

FROZEN TARO

The market for frozen taro is secondary to fresh taro in its popularity with the Pacific Island and Asian communities in New Zealand. Frozen taro products are available in several retail outlets in South Auckland as well as several Asian supermarkets such as Tai Ping and T-Mark.

Demand for this product is driven by:

- Convenience: the product has been peeled and prepared so it is easy to use;
- Taste: the taste and texture is similar to fresh taro;
- Shelf life: the ability to store the product longer for future consumption

Frozen taro sold in retail stores from the Pacific Islands are generally packed in 2 kg bags and sold alongside frozen cassava. However New Zealand buyers have noted that frozen cassava generally sells better than frozen taro⁶. It is a price driven market. Frozen taro from the Pacific Island appears to differ from product size of the frozen taro found in the Asian supermarkets which tends to be smaller but more expensive.

Frozen taro products such as taro fries and ready-to-cook meals provide a good prospect for expanding the market. Taro fries were identified as a potential value added product for the Pacific Islands as the development of the kumara French fries by McCain Foods is being watched with interest. From a recent trial of frozen taro fries from Fiji, the product appeared to crumble and needed to improve in packaging.

There is an opportunity to make further inroads in the existing market. Frozen taro is also imported through the informal market in large bags. There is a trend toward 'family size' retail bags (e.g. 5kg bags) to cater for special Pacific Island celebrations such as weddings. The 2 kg bags are considered to be small for these occasions.

TARO CHIPS

The present research did not locate any taro chips in the market. Taro chips are generally found in the small retail stores such as the local corners stores rather than stocked in the large supermarket chains. The trend in the snack market is toward health products notably no salt/sugar. Packaging and promotions are areas that require further improvement⁷. Product development opportunities include nutritionally rich products such as flours, crisps and noodles.

⁶Giam, A (2012, April 17) J. Fuavao, Interviewer

⁷Ibid

Pink Taro on sale at the supermarket

Credit: PT&I



market overview

DEMAND FACTORS

The New Zealand market for taro is largely confined to the Pacific Island population residing in West and South Auckland as well as the Wellington suburb of Porirua. A market for taro also exists with the Asian communities in New Zealand however further research is required to gain a better understanding of their consumption patterns.

According to 2006 statistics⁸, there were 265,974 people of Pacific ethnicity living in New Zealand which accounted for about 7% of the total population. The seven largest Pacific ethnic groups in New Zealand were:

- Samoans were the largest Pacific Island group represented (49%);
- Cook Island, Maori (22%); Tongans (19 %); Niueans (8%); Fijians (4%); Tokelauans (3%); and Tuvaluans (1%).

A recent study on the shopping habits of New Zealand consumers, specifically examining the where and how often consumers were shopping found that that most people purchased their food and drinks from the supermarkets weekly or more often⁹. The Health Promotions Agency (2012) found that most people (86.9%) said that their households purchased food and drinks from supermarkets weekly or more often.

The Health Promotions Agency (2012) found that Pacific Island and Maori households tended to shop for food and drinks more frequently at green grocers, convenience stores and takeaways than European/Other households. Similarly, younger people tended to buy their food and drinks at convenience stores (e.g. petrol stations, dairies) and takeaways more than older people.

“The New Zealand market for taro is largely confined to the Pacific Island population”



⁸The following demographic statistics relate to the 2006 census. The 2011 census was postponed due to the Christchurch earthquakes. The census is now scheduled to take place in 2013.

⁹Health Promotions Agency. (2012). *Shopping behaviours of New Zealand households*. Wellington.

Health Promotions Agency (2012), key findings include:

- Pacific Island and Asian people tended to shop more than once a week at green grocers such as small fruit and vegetable stores, and farmers markets. Asian (27.6%), Pacific Island (25.4%), Maori (18.7%) were more likely to buy food and drink 'more than once a week' from green grocers compared with European/Other people (9.7%).
- People who were more likely to say that their household purchased food and drinks at convenience stores 'more than once a week' were Pacific Islanders (37.8%) and Maori (37.4%) compared with European/Other people (17.9%). Additionally, this was found to be the case more with younger people than older people.
- People of Pacific and Asian ethnic background tended to spend less than European/Other people at grocery locations but not at non-grocery locations .
- The survey found that price was the main determinant of purchase. Other factors were (in descending order of importance): specials, freshness, quality, healthiness and taste.

Consumption of taro per capita amongst the Pacific Island population in New Zealand is only about 20 kg per annum – relatively lower than some consumption levels in the Pacific Islands. McGregor et al (2011) found that consumption¹¹ per capita has fallen as a result of the low income levels of Pacific Island population, the relatively higher price of taro when compared to other starch sources such as potatoes and rice. Poor quality resulting from excessive fumigation was also note to affect consumption .

KEY MARKET TRENDS

New Zealand buyers have expressed concern about the future of the taro market, highlighting the need to expand the market beyond Auckland and develop value added products that can target the changing consumer habits of young Pacific Islanders.

Consumer choice is an important factor. The consumption patterns of young Pacific Islanders in New Zealand are greatly influenced by western lifestyle. They are exposed to a wide range of substitute products such as rice, potato and bread which have replaced the preference for traditional crops such as taro. Taro is also considered to be an expensive product when compared to these substitutes¹².

- Similarly changing lifestyles have seen an increase in demand for convenience food. Food that is on-the-go, tailored to suit the busy individual. For the taro market this could see a shift toward frozen prepared meals.
- The growing emphasis on healthy living is further supported by a number of Government sponsored programmes such as the 5+ a Day and Vegetables New Zealand website which educate consumers about the nutritional benefits of fruits and vegetables. There is an emphasis on healthy diets and reducing the consumption of sugars, salt and fats.
- Traceability in the supply chain is critical. Given the increasing concerns around food safety and present economic operations, commercial importers of taro are seeking established long terms relationship with its suppliers. Buyers are tightening their processes and seeking more control of their supply chain to instil confidence in consumers that quality and food safety measures are implemented in every phase of the process.

Importers, wholesalers, distributors and retailers alike are placing more emphasis on certification and standards. In the case of the supermarket chains, Progressive Enterprise (owned by Woolworths Australia) currently implement their own, the Woolworths Quality Assurance (WQA). New Zealand GAP and Hazard Analysis & Critical Control Points (HACCP) are considered to be the baseline in the market.

¹²Ibid

market overview

NUTRITION & HEALTH BENEFITS

Attributes such as nutrition, health, aesthetic values, and convenience all have a major impact in the success of fresh produce in a competitive market.

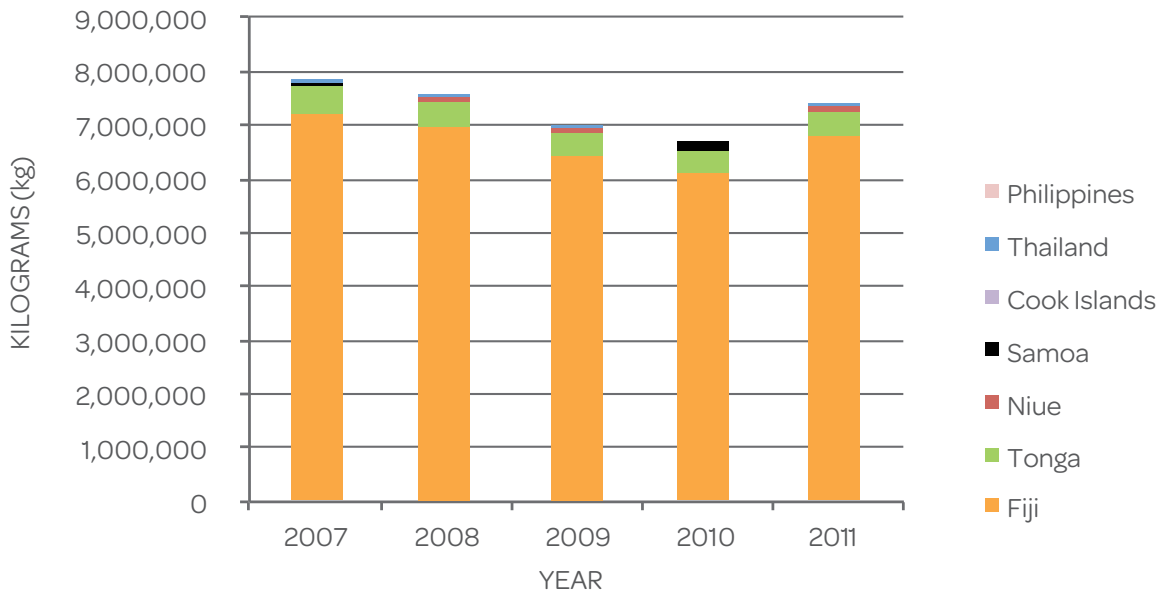
Taro is high in starch and consequently, it is an excellent source of energy. It is a good source of fibre and contains potassium, a little Vitamin C and some zinc, thiamine and folate¹³. Fibre is said to help control blood sugar in diabetics and can reduce blood lipids, which are a risk factor for heart disease¹⁴. Other health benefits associated with taro include facilitating the proper function of intestines and bowel.

Taro is also said to be a natural source of fluoride¹⁵. It contains calcium which helps strengthen bones and teeth. It is promoted as a vegetable for older babies from 7-8 months – “To get your baby used to a wide range of vegetables and textures¹⁶.”

Taro nutritional value is retained when it is cooked whole and in its skin. The product must be cooked before it is consumed as it contains calcium oxalate which cause mouth and throat itching. Taro can be used instead of potato or kumara in recipes. The broader nutrition profile of taro, which beyond simply starches, should be promoted more¹⁷.



Graph 2: New Zealand importation of fresh taro from 2007 - 2011



Source: Statistics NZ

Taro is available all year round. It is not commercially grown in New Zealand therefore all supplies are imported mainly from the Pacific Islands.

Based on the current approved market access, the Cook Islands, Fiji, New Caledonia, Niue, Papua New Guinea, Philippines, Samoa, Thailand, Tonga and Vanuatu are the only countries permitted to export fresh taro to New Zealand. The above data has been adjusted accordingly¹³.

Graph 2 shows the total quantity of taro imported into New Zealand by country of origin from 2007 – 2011. From 2007-11, the quantity of fresh taro imported into New Zealand fell by 14% from approximately 7,791 tonnes in 2007 to 6,712 tonnes in 2010 before climbing back to approximately 7,440 tonnes last year.

Over the past five years Fiji has been the main supplier of taro to the New Zealand market, typically possessing about 90% of the market. The second largest supplier of fresh taro to the New Zealand market by quantities was Tonga.

Note that in 2010, there was a decline in imports from all sources except Samoa and the Philippines. Samoa exported approximately 57 tonnes a significant increase compared to other years, indicating a return to commercial taro exports. The data shows that the Philippines exported a small volume, the only exports to New Zealand undertaken in the last five years.

In 2011, New Zealand imported around 7400 tonnes of taro at a total CIF value of approximately NZD\$10 million. New Zealand imported about 6,871 tonnes from Fiji and 506 tonnes from Tonga, accounting for 92% and 7% of the total taro market respectively.

¹³Horticulture NZ. (n.d.). *Fruit and Vegetable Facts: Taro*.

¹⁴South Pacific Commission. (1992). *Leaflet No. 1 - Revised 1992 - Taro*. Retrieved July 11, 2012, from Food and Agriculture Organization website.

¹⁵Wood, M. (2012, April 27). J. Fuavao, Interviewer.

¹⁶Horticulture New Zealand. (n.d.). *Fresh New Zealand Grown Vegetables for babies and young children*. Retrieved May 20, 2012, from Vegetables New Zealand.

¹⁷Manner, H. I., & Taylor, M. (2011, February). *Farm and Forestry Production and Marketing Profile for Taro*. Retrieved May 20, 2012, from http://www.agroforestry.net/scps/Taro_specialty_crop.pdf.

¹⁸Original data contains imports from China and Vietnam however this could attributed to frozen taro imports rather than fresh.

import statistics & information

VARIETIES

The two main varieties of taro on the New Zealand market are generally distinguished as either 'pink taro' or 'white taro'. The pink taro is the preferred variety of the market. New Zealand buyers estimate the total market share for the pink taro to be about 80% and 20% for the white taro. There is only so much pink and white taro that the market can take. Buyers have stressed the importance of sticking to the exact orders.

Anecdotal information suggests that the pink taro is primarily consumed by the Samoan community, who prefer its taste and firm texture. Whereas, the white taro's main market is the Tongan community, who prefer its taste and soft texture¹⁹.



TRANSPORTATION

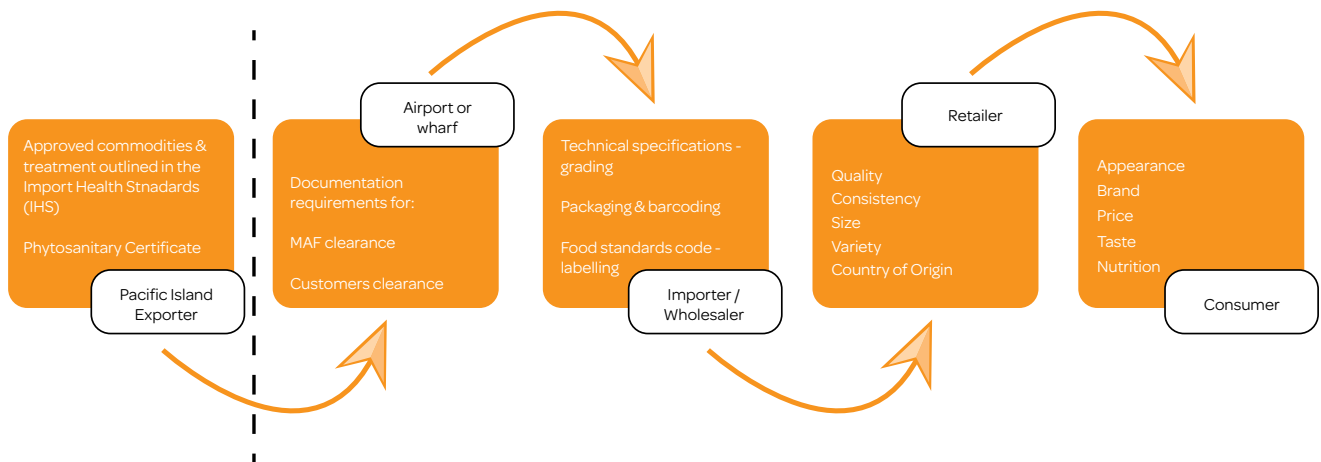
Fresh taro is currently transported by sea freight on a weekly basis. New entrants into the market would have to consider matching weekly shipments if it is to compete effectively.

Taro is packed into refrigerated containers and is maintained at a temperature of 4-7°C and can store for up to 21 days²⁰. Storage times of 6-8 weeks are possible using polyethylene bags, which maintain relative humidity and prevent dehydration²¹.

¹⁹Yip, S. (2012, April 17). J. Fuavao, Interviewer.

²⁰PITIC NZ. (2008). *Market Insights: Taro Destined for the New Zealand Market. Market Report*, Auckland.

²¹Ibid.



Graph 3: An overview of the general export process from the Pacific Islands to New Zealand.

QUARANTINE REQUIREMENTS

All fresh fruit and vegetables are prohibited entry into New Zealand unless they are covered by a valid Import Health Standard (IHS)²². An IHS sets out the certain conditions for a specific product that must be met before it can be imported into New Zealand.

Fresh taro is permitted entry into New Zealand provided that they adhere to treatment as specified by the Standard Conditions for importation of fresh produce by the exporting country. Prior to its exportation to New Zealand, there are several quarantine requirements that exporters of fresh taro in the Pacific Island countries must follow.

The consignment of fresh taro must:

- Be inspected by the exporting country's national plant protection organization (NPPO) in accordance with the appropriate official procedures, ensuring that the consignment is free of any visually detectable regulated pests as specified by New Zealand Ministry of Agriculture and Forestry.
- Undergo the pest control activities prior to export;
- Be accompanied by a valid and completed Phytosanitary Certificate - a certificate issued by the authority of an exporting country, in accordance with the requirements of the International Plant Protection Convention (IPPC), which verifies that the requirements of the relevant import health standard have been met;
- Be in clean packaging – free from soil and other contaminants;
- Not have soil contamination in excess of 25 g per 600 units²³;
- Not be contaminated with foliage in excess of one leaf per 50 units

Market access for the importation of fresh taro into New Zealand is permitted from the Cook Islands, Fiji, New Caledonia, Niue, Papua New Guinea, Philippines, Samoa, Thailand, Tonga and Vanuatu.

Any foliage or soil contamination found to be above the acceptable level of tolerance, shall be washed (soil contamination); or resorted (foliage contamination); reshipped or destroyed all at the importer's option and expense.

Graph 4 presents an overview of the clearance process for fresh fruits and vegetables imported into New Zealand²⁴. Importantly, failure to comply at any stage of the clearance process can be costly for the importer and ultimately affect the product's value on the market.

²²MAF Biosecurity New Zealand Standard: 152.02: Importation and Clearance of Fresh Fruit and Vegetables into New Zealand. (May, 2012).

²³Onus will be on the NZ importer to decide whether to wash it free of the soil, reship or destroyed

²⁴Diagram adapted from MAF Biosecurity New Zealand Standard: 152.02: Importation and Clearance of Fresh Fruit and Vegetables into New Zealand.

Graph 4: An overview of the clearance process for fresh produce



INSPECTION & SAMPLING

Inspection carried out on individual unit & packaging, for the presence of pests, seeds, signs or symptoms of disease, soil or any other contamination.

A sample is taken from any part of the lot including selection of cartons /packages from different areas of the lot.

Proceed to biosecurity clearance process.


YES

Was the consignment free of contamination?

NO


If a live organism found, importer has the option of:

- Pest identification,
- Treat,
- Reship, OR destroy

BIOSECURITY CLEARANCE

A written biosecurity clearance shall be issued by an inspector for each consignment/lot of imported fresh fruit and/or vegetables cleared for entry into New Zealand.

Final document check including a Treatment Certificate if the shipment was treated before cleared for entry into NZ.



PEST ID / TREATMENT

Is the pest, a regulated pest?

• YES: Treat, reship or destroy

• NO: Proceed to final clearance process

• 'Unlisted': unlisted organism will be reported to MAF for advice on the fate of the consignment.

market requirements

DOCUMENTATION REQUIREMENTS

Discrepancies in the paperwork was been highlighted as one of the issues at the border with consignments from the Pacific Islands which delayed the clearance of shipments from the Pacific Islands. The document must match what is in the container this issue is particularly prevalent with informal consignment²⁵.

Upon arrival in New Zealand, MAF inspectors will check the relevant documents. If incorrect or incomplete documentation is presented, the consignment will be held in a transitional facility until the correct documents are presented.

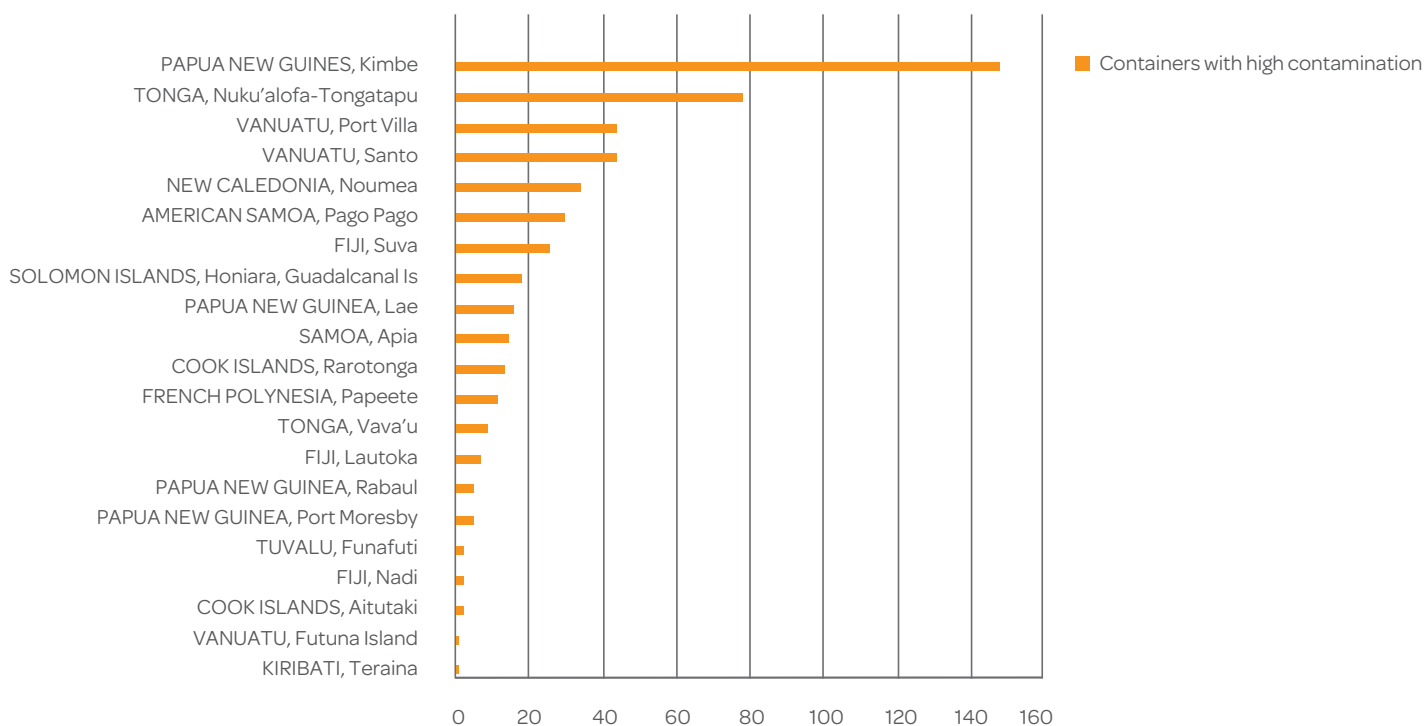
To ensure that there are no delays upon arrival, it is important that the correct documents are presented, such as the Phytosanitary certificate, quarantine declaration, bill of lading, airway bill or invoice to the satisfaction of the MAF inspector.

INSPECTION

Some importers have MAF approved inspection facilities onsite where the consignment will be sent to after the initial clearances at the border. Importers usually book times with the MAF for these inspections to come onsite. Shipment delays can result in the need to rebook a MAF inspector, which will cost the importer as well as delay the availability of the product on the market. This can be a delay of up to 24 hours²⁶.

Graph 5 shows the number of sea containers from the Pacific Islands that were inspected by MAF and found to be highly contaminated. The data shows that the containers inspected from the ports of Kimbe (Papua New Guinea), Nukualofa (Tonga), Port Vila and Santo (Vanuatu) were found to have the highest number of containers with contamination. The main type of contamination found on containers from the Pacific Islands was soil on the exterior of the container. In addition to soil, plant products and insects was found on containers from Nukualofa, Tonga. Straw was found on the exterior of containers from Kimbe, Papua New Guinea.

Graph 5: Sea containers from the Pacific Islands inspected and found to be highly contaminated, 2011



Source: Ministry of Primary Industries, 2012

²⁵Tohovaka, S., Barker, R., & Roberts, B. (2012, April 27). J. Fuavao, & T. Mato, Interviewers.

²⁶Hogg, G. & Coombes, P. (2012, April 19). J. Fuavao, Interviewer.

A six-sided inspection is conducted on the container if the exterior is found to be contaminated then the importer has to organize the transportation and washing of the container at their cost. The cost of washing was estimated to be about NZD\$75. This does not include the cost of transport.

TREATMENT PATHWAYS FOR PACIFIC ISLAND COUNTRIES

New Zealand quarantine requirements stipulate that fresh taro imported into the country must be free from regulated pests. Regulated pests commonly found on imported taro in New Zealand are mites (*Rhizoglyphus minutus*) and nematodes which require fumigation with methyl bromide if found²⁷.

It is estimated that 90% of fresh taro shipments into New Zealand are fumigated²⁸. Normally the fumigation process will take 4 hours however if it does not successfully destroy the nematodes it can take up to 24 hours²⁹. It is a costly process that can delay the availability of the consignment to the importer and subsequently reduces the shelf life of the product³⁰. It is critical that the exporter makes every effort to ensure that the shipment is free from any quarantine pests.

Fumigation with methyl bromide is currently the only quarantine treatment approved in New Zealand for the eradication of nematodes. However the methyl bromide treatment is known to reduce the quality and shelf life of taro.

An alternative treatment known as 'hot water dipping' was examined in 2006 by Biosecurity New Zealand. The study tested the thermal tolerance of taro to a hot water dip as a potential replacement for fumigation. These trials showed promising results, not only did the hot water dipping treatment have the potential as an alternative quarantine treatment to Methyl bromide, but the tests did not decrease the quality of the taro. Results suggested that quality was actually improved³¹.

An alternative quarantine treatment may be proposed to MAF by an importer. The full details that prove 'equivalence of efficacy' must be presented before it can be approved. The principle of equivalence falls under WTO SPS, an international standard for commodity pathways.

The challenge for taro is that an international standard pathway has not been established therefore it is difficult to prove equivalence of efficacy³². According to the Approved Biosecurity Treatments report (2012), alternative quarantine treatments for nematodes on root crops specifically 'hot air' and 'hot water' treatments are being investigated further³³.



²⁷Ministry of Agriculture and Forestry. (2012). *Approved Biosecurity Treatments: MAF-STD-ABTRT*.

²⁸Tohovaka, S., Barker, R., & Roberts, B. (2012, April 27). J. Fuavao, & T. Mato, Interviewers.

²⁹Yip, S. (2012, April 17). J. Fuavao, Interviewer.

³⁰PITIC NZ. (Revised, 2005). *Exporting Fruit and Vegetables To New Zealand: A Guide for Pacific Island Producers*.

³¹Glassey, K. (2006, September 15). *Hot dip for taro*. A publication of Biosecurity New Zealand, 70, 16.

market requirements

PACKAGING FOR EXPORT

Biosecurity NZ requires the packaging of fresh fruits/vegetables must be clean, free from soil and other contaminants. All packages must be sealed with a destructible sticker/label identifying the authority in the exporting country and directly traceable to the Phytosanitary Certificate.

The package and seal must be intact on arrival in New Zealand.

- If the seal(s) or package(s) are insecure or have been tampered with, the fresh fruit/vegetables shall be reshipped or destroyed.
- If consignments are not packaged correctly or are not covered by correct certification, Biosecurity New Zealand is to be advised of details within two working days³⁴.

Taro is easily bruised and can breakdown during storage and transport therefore the packing and loading of taro have direct impact on the quality of the crop. It is imperative that taro is packed in clean and strong packaging ready for transport. Once packaged the taro should be kept cool before being shipped.

Taro is typically packed in 30kg polypropylene bags for export – an economical option for exporters. However New Zealand buyers have highlighted a shift toward 20 kg bags or less to comply with Occupational Safety & Health (OSH) regulations particularly in servicing the supermarkets where the policy is nothing over 20kgs. While taro still comes in 30kg bags typically they are re-graded and repacked. For the supermarkets, the taro is repacked into specialized plastic crates.

PACKAGING FOR RETAIL

In terms of packaging for retail, all value added food must comply with the packaging and labelling regulations in New Zealand. Packaging for retail must effectively address:

FOOD SAFETY ISSUES

It must protect its contents from deteriorating from heat and moisture and etc. It must be able withstand rigorous distribution and handling. Reliable packaging will be able to prolong the shelf life of the product;

CONVENIENCE

The product must be easy to use. Consumers should be able to gain access to its contents;

AFFORDABILITY

Consumers must be able to afford it;

VISUAL APPEAL

The package design must be attractive in order to compete with the other products on the shelves.



Image : Taro chips from Thailand were seen on the shelf of a high-end retailer, David Jones (AUD \$5.00) in Sydney Australia, June 2012. It was marketed as a natural snack that is gluten free with no preservatives. Although this example comes from the Australian market, this product exhibits the integration of the criteria outlined above.

³¹ Glassey, K. (2006, September 15). Hot dip for taro. A publication of Biosecurity New Zealand, 70, 16.

³² Waqa, N. (2012, April 26). Market Access. J. Fuavao, Interviewer.

³³ Ibid.

³⁴ MAF Biosecurity New Zealand Standard: 152.02: Importation and Clearance of Fresh Fruit and Vegetables into New Zealand. (May, 2012).

LABELLING FOR RETAIL

Information that must be labelled on a packaged product includes³⁵:

- A use by or packing date
- Product name or description
- Name and physical address of the manufacturer / importer / distributor:
(A postal address alone is not enough)
- Warning and advisor statements: are required if certain ingredients have been used in the product³⁶. The warning statement need to have specific words and must be at a height of 3mm or more. Certain ingredients such as eggs, gluten and nuts need to be declared as they can cause severe adverse reactions in some people.
- A list of ingredients: listed from the greatest amount to the smallest amount of ingoing weight including water.
- Use and storage instructions
- Nutritional information panel
- Country of origin
- Labelled in English – the information may be presented in other languages however it must not be different from the information presented in English.

Importantly the information presented on the labels must be legible and prominently displayed in contrast to the background. The information on the label must also be clear and accurate.



Photo credit: PT&I ©

³⁵New Zealand Food & Safety Authority. (n.d.). Guide to comply with labelling requirements. Retrieved July 2012, 1, from New Zealand Food & Safety Authority. www.foodsafety.govt.nz/elibrary/industry/labelling-guide.pdf

³⁶Ingredients such as aspartame, quinine, guarana, caffeine, unpasteurised milk and egg products etc.

competitive landscape

COMPETITION

The New Zealand taro market largely refers to Auckland where the majority of the Pacific Island population reside. The market is said to be mature where the companies competing for existing market share and price is the basis of competition.

It is difficult to get a true sense of the size of the taro market due to: (1) the significant informal market and (2) the 'fly-by-night' businesses who enter the market to simply exploit the exchange rate advantage³⁷. Both factors introduce uncertainty in the market for commercial importers who are unable to get a true sense of the size of the taro market³⁸.

The retail market for taro is dominated by the small fruit and vegetable stores rather than the supermarkets. New Zealand importers have estimated that more than 50% of taro retail sales are from independent retailers, while the supermarkets and informal market account for approximately 20-25% of taro sales each³⁹. Generally supermarkets account for 60-65% of produce retail sales with the remaining share from independent retailers⁴⁰.

The supermarkets generally sourced taro from importers or wholesaler rather than importing direct given the risks involved in importing taro. These were identified as delays at the border as a result of quarantine issues; inconsistency in supply and quality.

MARKET PLAYERS

The number of commercial buyers competing in the market can vary. It was indicated that there can be up to 10 players in the market including Turners & Growers, Fresh Direct Ltd, Mellow Foods Ltd, MG Marketing, Onix International and Tropical Fresh Ltd. Some small players own retail stores and import one container of taro a week where about half to a third of this stock is sold other people/buyers and the rest is sold in the store. Mellow Foods is the largest commercial buyer of fresh taro in New Zealand.

PRICES

The New Zealand wholesale price of fresh taro is based on 30 kg bags. This year the wholesale price was noted to be about:

- NZ \$80.00 – 82.00 per 30 kg for the Pink taro variety; and
- NZ \$64.00 – 66.00 per 30 kg for the White variety of taro

Prices observed on the shelves are determined by the size of the taro. The retail price of fresh taro, pink is currently about NZ \$2.50 - NZ \$4.00. Pink taro of medium size was selling for NZ \$2.99 and the large size was about NZ \$3.79. A medium sized 'white taro' was selling for about NZ \$1.99 per kg and NZ \$2.99 for the large size⁴¹.

KEY SUCCESS FACTORS

PRODUCT QUALITY: Throughout the discussions with New Zealand buyers, product quality was highlighted as an area that can be improved. One importer noted that about 30% of the taro it sends to the supermarket chains is rejected.

Table 4: Fresh taro grading guide Grade

Grade	Weight
Minimum req.	>750g
Taro #1	≥ 800g
Taro #2	≥770 – 790g

The key quality indicators importers look for are primarily based on visual appearance, size and shape.

Table 4 presents a general guide to the quality parameters (size & weight) for taro, based on a collated

³⁷Fly-by-nighters refer to companies that enter the market selectively to simply exploit the exchange rate advantage and generally undercut the market.

³⁸Lange, P. (2012, May 29). J. Fuavao, Interviewer.

³⁹Ibid.

⁴⁰Ibid.

⁴¹PT&I Informal Retail Price Survey, (2012, 15 March). Mangere, Auckland, New Zealand.

competitive landscape

-response from various importers, wholesalers and distributors. Slight differences were recorded in the second grade taro ratings.

Any taro less than 750g is considered to be too small for the market. The best grade is considered to be no less than 800g, while the preference for second grade taro is typically between 770 – 790g.

Two key observations in the market were recorded:

(1) Quality assessments can be conducted more than once. For example, importers have advised that while they undertake a quality assessment onsite, a secondary assessment is conducted at the supermarket distribution centres against their quality standards. Progressive Enterprises, a subsidiary of Woolworths Australia, implements its own quality standard called the Woolworths Quality Assurance (WQA) standard. The table does not distinguish the quality parameter differences that may exist between retailers, such as the supermarkets and the small fruit and vegetable stores.

(2) There is an amount of wastage to be considered. Taro is often trimmed at the ends before it is sold on the retail shelves. This is due to damage as result of its dry and grey colour end.

INFORMATION-READY: For businesses seeking to export to New Zealand for the first time it is important to structure the approach to the market, and have the relevant information ready prior to discussions with a potential buyer.

Work out the price, identify the relevant target market and be ready to present the company (background, export history). Key information includes the capacity to supply the market (the quantities that the company can supply the market and how regular you can supply), processes, packaging, price and marketing.

RELATIONSHIP BUILDING: Building a relationship with the buyer is critical factor for success. Advice from New Zealand importers is to establish a relationship and gradually build your exports, seeking to improve with every shipment. New Zealand buyers have expressed their preference to coordinate with one main person and maintain this line of

communication particularly in the case of large groups such as cooperatives, where one person acts as the main liaison between the buyer and growers.

A common point of disagreement is the state in which the product arrives in the market. It leaves the port in good condition and arrives in New Zealand in poor quality. As means of improvement, one importer immediately takes a picture on his smart phone and immediately sends the image to the exporter. From there, the parties discuss how they can improve with the next shipment.

Constant communication and regular market visit can help strengthen the relationship and ensure that a quality product reaches the consumer.





STRATEGIC OPTIONS

Growth opportunities for the taro market were identified in:

(1) Targeting the mainstream market. The general public continues to view taro with uncertainty, therefore consumer education about where to access the product; how to use taro cooking; and what the nutritional and health advantages are for using this product remains an area in need for further improvement.

This will require a significant investment of resources and skilful marketing to entice new customers. Recent marketing and promotions for taro in the New Zealand market have centred on promoting the nutritional benefits namely the product as an energy source using Pacific Island athletes.

(2) Changing lifestyles have led to the growing demand for frozen or microwave meals. With consumers increasingly looking for convenient food, there may be opportunity to expand the market by developing value added products such as taro chips. If produced at a high quality, it may be suitable for the hospitality sector as a potential substitute for some potato-based dishes.

(3) Pacific communities outside of Auckland in particular areas where the Recognized Seasonal Employers Scheme (RSE). Areas such as Hawkes Bay, where the Pacific Island population is small, the opportunity is in these communities who cannot get access to taro. There is a need to get buy in from the local retailers. However, they are not comfortable with risk as they are not familiar with the product. It will need time and effort exerted into sales trials. This is an attractive option for future market expansion.

MARKET ENTRY OPTIONS

New Zealand is a suitable market to test Pacific Island market given its proximity, Pacific Island communities and the small size of the market. Exporting is an expensive and can be a complex process.

One of the challenges highlighted in discussions with New Zealand importers is the ad hoc approach to exports. There is a need to develop

market entry strategies

process and procedure around systems such as payments systems. While there are differences between exporting to New Zealand and other countries such as Australia, the New Zealand market is a good setting for a Pacific Island exporter to get its systems right before it can springboard into other international markets.

1. INFORMAL MARKET ENTRY

Some informal trade setups operate in the form of a sales office relationship, where a member of the family is selected to promote the product in the community. In some cases, nearby retailers purchase taro from the informal buyer and repack the product under its own brand and sell in store.

With the significant volume of taro traded informally, there is an opportunity to utilize the informal market as a platform for establishing a presence in the market, more specifically transition into commercial. The exporter can familiarize itself with the New Zealand market, as well as develop a better understanding on the process and costs involved in exporting. The strategy is to leverage the strengths at the established at community level to promote the product, whilst making the transition into the formal retail sector.

2. ESTABLISHING A RELATINSHIP WITH A COMMERCIAL IMPORTER

Entry into the New Zealand market for fresh produce is effective through an importer with the established systems and infrastructure required to handle and distribute the product effectively in the market.

A structured approach to the market is recommended. Research the market prior to engaging in discussions, to identify the opportunity and understand the process required for export. When approaching potential importers, it is useful to have the information on your company and product readily available such as:

- Company profile
- Product range and profile
- How long you've been in business
- Export experience: current export markets if any

- Product specifications covering different varieties available
- Supply capacity: what quantities are available
- Frequency of supply including seasonal variations
- Packaging
- Terms of trade (minimum orders etc.)
- Shipping/Freight schedules
- Price of your product range: include any discounts for large orders etc.
- Business card with a list of all contact details

Once a relationship has been established it is important to build on it by keeping the buyers informed of what is happening.



KEY REGIONAL ORGANIZATION CONTACTS

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