Functional Food & Beverage

1. Offer Analysis

Description & Market Trends

Functional foods, which are everyday foods and beverages enhanced with additional health benefits beyond essential nutrition, are becoming increasingly popular in New Zealand. Claims made by functional foods, such as reducing the risk of certain conditions, must be backed by scientific evidence and comply with specific nutritional content requirements. For instance, a product claiming to reduce osteoporosis risk must contain a scientifically supported amount of calcium. Shelves in New Zealand supermarkets are filled with functional foods, including breakfast cereals fortified with vitamins, gluten-free bread and biscuits, immunity-boosting teas and beverages, or yoghurts with probiotics. Innovations continue with ingredients like Turmeric, Moringa and Noni, offering new health benefits and unique selling propositions.

The potential nutritional benefits of functional foods remain a topic of debate, with no clear consensus on whether their health claims are substantive or primarily driven by marketing strategies. In New Zealand, the opportunity for functional foods to address nutritional gaps is significant, as many consumers fail to meet the recommended intake of fruits and vegetables.[1] The "Five Plus A Day" guideline serves as a benchmark for healthy eating, yet findings from a 2019 study by Bayer, NZ Nutrition foundation and AUT indicate persistent shortfalls. Only 40% of respondents reported consuming the recommended three or more daily servings of vegetables (excluding root and starchy varieties), while 46% met the guideline for two or more servings of fruit. When all categories—vegetables, fruit, and root/starchy vegetables (e.g., potatoes, kumara)—were combined, compliance increased to 58%.[2] These insights highlight a gap in traditional dietary patterns that functional foods could potentially address.

However, achieving nutritional balance through diet alone, without relying on fortified foods, is also possible and often recommended. The effectiveness of fortified foods depends on the bioavailability of the added nutrients, which might not always match the natural variety found in unfortified foods. Moreover, the interaction between different nutrients in whole foods can enhance absorption, an aspect that might be lost in fortified products.

Five main categories distinguish functional foods, which are as follows:

- **Fortified** food or beverages with added vitamins, minerals, or amino acids.
- **Enriched** food or beverages with added nutrients that may have been lost during processing.
- **Altered** food or beverages from which a component has been removed, reduced, or replaced with another substance with more beneficial effects.
- **Non-altered** food or beverages naturally contain increased nutrients or components that may support health benefits.
- **Enhanced** food or beverages in which one of the components has been naturally enhanced through special growing conditions, new feed composition, genetic manipulation or otherwise.

The primary focus in the following pages of this research will be on functional food and beverages under the non-altered category. We will highlight products that can be produced within the Pacific Islands Countries and have the potential for substantial growth in the New Zealand market.

[1] Figure.NZ, "Proportion of People Meeting the Recommended Daily Servings of Vegetables and Fruits in New Zealand," last updated 2019 https://figure.nz/chart/kdUo4pv0s5xaJ6l4-YdJ14AC8W5RaplOt

[2] New Zealand Nutrition Foundation, Bayer Survey Report: New Zealanders' Attitudes to Nutrition and Health https://nutritionfoundation.org.nz/sites/default/files/Bayer_Survey%20Report_v10.pdf

1.2 Product trends

For the consumer, functional foods often come at a higher price point, allowing the whole value chain to add value to the product along the way. This market research will focus on four non-altered functional products that are known to contribute to enhanced health benefits:

1.2.1 Gluten-Free Flour
(Taro, Cassava, Breadfruit, Plantain)

- Flours made from taro, cassava, breadfruit, and plantain are steadily gaining popularity in New Zealand, particularly among individuals with **gluten intolerance or celiac disease**. Gluten-free flours are versatile, used as alternatives to wheat in baking, cooking, and food manufacturing. The increasing demand for gluten-free products is driven by growing consumer awareness of gluten-related disorders, as well as a broader preference for **healthier, minimally processed food options**. Additionally, these flours' exotic and unique nature, coupled with their rich nutrient profiles (high in vitamins, minerals, and fibre), makes them particularly attractive to the health-conscious and foodie markets.

- Among these alternatives, **cassava flour** is notable for its **neutral flavour, easy digestibility**, and versatility, making it suitable for products ranging from **breads and pastries** to **thickening agents** in sauces. Similarly, **taro flour** offers a distinct texture and flavour, lending itself to niche markets in ethnic cuisines and gourmet recipes. **Breadfruit flour** and **plantain flour** also stand out for their unique profiles, which contribute to the appeal of diverse, nutrient-rich options in the gluten-free segment.

- **From our interviews**, a flour specialist highlighted receiving a **client request for cassava flour** to be used in a **new product development** project. This request signals promising potential for **cassava flour** to penetrate the market further, especially if such developments materialise into commercially viable products. Furthermore, this interest from product manufacturers indicates a shift towards **innovative applications** of gluten-free flours in areas such as snacks, baked goods, and even protein bars.

- **Emerging trends** in gluten-free flours include:
  - **Blended gluten-free flours:** Manufacturers are combining flours like cassava and breadfruit with other gluten-free ingredients (e.g., almond flour or rice flour) to enhance both functionality and flavour.
  - **High-protein flours:** Innovations targeting sports and fitness enthusiasts are incorporating plantain or cassava flour into high-protein baking mixes and meal replacements.
  - **Ethical sourcing:** There is growing demand for sustainably produced flours, with consumers appreciating products that support fair trade practices and local economies in producing regions such as the Pacific Islands.
  - **Convenience formats:** Ready-to-use baking mixes or single-serve packets of gluten-free flour are gaining traction among home bakers and on-the-go consumers.

These trends suggest that the market for **gluten-free flours** is not only growing but also evolving to meet diverse consumer needs. The **exotic appeal and functional benefits** of taro, cassava, breadfruit, and plantain flours position them well in both **mainstream health markets** and niche food innovation sectors. Strategic partnerships with growers in regions like the Pacific Islands and educational campaigns to increase consumer awareness could further enhance the visibility and adoption of these flours in New Zealand.

1.2.2 Spices

(Ginger, Turmeric, Black Pepper, Chilli Pepper)

- Spices such as ginger, turmeric, black pepper, and chilli pepper are increasingly recognised for their **functional health benefits**, including **anti-inflammatory, antioxidant, and digestive properties**. Their versatility makes them popular in supplements, teas, fortified foods, and beverages. In the New Zealand market, innovative products like turmeric latte mixes, ginger-infused health drinks, and spice-based supplements are gaining traction, driven by consumer demand for natural remedies and wellness-enhancing ingredients.

- **Turmeric**, in particular, has seen heightened interest due to curcumin, which is linked to anti-inflammatory and antioxidant effects. Insights from interviews indicate a growing preference for high-quality turmeric sourced from Fiji, which is noted for its superior quality compared to existing supply from Sri Lanka. This aligns with broader trends in consumer preference for sustainably and ethically sourced ingredients. Another New Zealand business owner highlighted the potential for further differentiation in the market through turmeric with **high curcumin content**, which adds both functional health value and premium market appeal.

- **Ginger** is another highly sought-after spice due to its association with digestive health and immune support. During an interview with a beverage producer, the challenges of sourcing seasonal harvests from countries such as Vietnam and Fiji were discussed. The interviewee emphasised the importance of ginger's provenance, as New Zealand consumers increasingly enquire about product origins and sustainability credentials. This underscores the growing demand for **transparency and traceability** in supply chains, which is driving stronger partnerships with growers and a push towards **organic certification**. The beverage producer's relationship with **Fijian ginger growers** serves as an example of the collaborative efforts required to address supply chain complexities while ensuring quality.

- **Emerging trends** in spice-based products include:
  - **Ready-to-drink beverages:** Ginger and turmeric are prominently featured in health drinks such as detox waters and immunity-boosting shots, catering to on-the-go consumers.
  - **Culinary innovations:** Black pepper and chilli pepper are increasingly incorporated into gourmet food products such as spiced chocolate or functional snack bars, broadening their appeal.
  - **Combination products:** Blends like golden milk powders (featuring turmeric, ginger, and black pepper) are becoming popular, offering both convenience and functional health benefits.
  - **Premium organic options:** Organic-certified spices are in demand among health-conscious consumers, highlighting the importance of sustainable farming practices.

Future opportunities for spices in the New Zealand market include expanding consumer education on their functional benefits, introducing **premium and novel spice varieties** and strengthening **regional supply chains** with Pacific Island producers. By focusing on quality, sustainability, and transparency, spice-based products are well-positioned to meet the growing consumer demand for natural, functional foods.

1.2.3 Moringa
(Powder, Leaves, and Oil)

- Moringa, derived from the *Moringa oleifera* tree, is often sold in **powder form, as dried leaves, or as an oil extract**. Known for its versatility, it is widely used in smoothies, dietary supplements, and even skincare products due to its exceptional nutrient profile, which includes high levels of **vitamins, minerals, antioxidants, and amino acids**.

- Moringa is gaining significant attention globally for its designation as a "superfood." Its dense nutrient composition has made it popular among **health-conscious consumers** and those seeking plant-based nutrition options. The growing demand for **sustainable and functional health ingredients** further supports Moringa's rise in the wellness market.

- The product also benefits from its association with environmental sustainability, as the Moringa tree is highly resilient and can be cultivated in diverse climates with minimal environmental impact. This aligns with increasing consumer awareness around **ethical sourcing** and **eco-friendly production**.

- During our interviews, a New Zealand wholesaler expressed interest in **Moringa powder**, identifying it as a potential addition to their product offering. This opportunity stems from a **pre-existing business relationship** with a grower in Fiji who already produces Moringa alongside other commodities currently purchased. This connection highlights the potential for **strengthening Pacific supply chains** and promoting regionally sourced products in the New Zealand market.

- **Emerging trends** in Moringa products include:
  - **Functional blends:** Moringa is increasingly incorporated into health-focused product mixes, such as protein powders, energy bars, and teas, enhancing its appeal to active and wellness-focused consumers.
  - **Skincare and beauty applications:** The use of Moringa oil in skincare is expanding due to its anti-ageing and hydrating properties, positioning it as a premium ingredient in clean beauty products.
  - **Plant-based protein alternatives:** With growing interest in vegan and vegetarian diets, Moringa's high protein content is being marketed as a natural, plant-based protein source.
  - **Convenience formats:** Single-serve sachets and ready-to-drink Moringa beverages are gaining traction, addressing consumer demand for portable and on-the-go nutrition solutions.

While **Moringa** is still an emerging product in New Zealand, it could represent growing opportunity. Leveraging its "superfood" status and aligning with **global wellness trends** could further enhance its market potential. Consumer education on Moringa's benefits, along with innovative product positioning, will be key to its success in both local and international markets.

1.2.4 Noni

(Juice, Powder, and Capsules)

- **Noni**, a traditional Polynesian medicinal fruit, is gaining attention for its potential health benefits, including **anti-inflammatory, antioxidant, and immune-boosting properties**. There is a growing trend towards **exotic and traditional health remedies**, and Noni fits well within this category due to its unique heritage and established use in traditional medicine. Additionally, the fruit's positioning as a "superfood" aligns with consumer interest in natural, functional health products.

- Globally, Noni is primarily marketed in **juice, powder, and capsule forms**, appealing to health-conscious consumers seeking convenient ways to incorporate wellness-enhancing products into their daily routines. Noni juice, for instance, is promoted as a general tonic, while powders and capsules are often positioned as dietary supplements with targeted health benefits.

- Despite these trends, challenges remain for Noni products in the **New Zealand market**. During our interviews, one business owner specialising in honey, who previously sold Noni products, highlighted the **volatility of this niche market**. They noted that while Noni experienced a significant boom period driven by **export demand from Asian countries** (notably China and Japan), the market eventually declined due to foreign demand dying off and the **lack of domestic consumption**. However, another interview with a New Zealand distributor mentioned his long-standing business relationship with the Cook Islands since 1995 in Noni production, emphasising the trust and support from local officials. He highlighted the steady demand for Noni juice in Australia and the slight decline in New Zealand. These examples illustrate the importance of cultivating broader consumer interest within New Zealand to sustain niche products like Noni.

- Emerging trends in Noni product development include:
  - **Premiumisation:** The development of high-quality, organic-certified Noni products that appeal to affluent consumers prioritising quality and sustainability.
  - **Blended products:** Noni increasingly features in functional blends with other superfoods (e.g., turmeric, ginger, or coconut water), enhancing both taste and health appeal.
  - **Local sourcing and traceability:** There is rising demand for products that highlight their Pacific origin, leveraging the fruit's cultural story as a differentiator in the competitive health market.
  - **Targeted health claims:** Manufacturers are refining their marketing to focus on specific benefits, such as gut health, immunity, and anti-ageing, tailoring products to consumer concerns.

While the international market for Noni remains promising, the New Zealand market presents opportunities for **strategic repositioning and education** to tap into local health and wellness trends. Future growth will likely depend on diversifying the product range, investing in consumer awareness campaigns, and developping collaborations to strengthen Noni's visibility and credibility.

1.3 Uses and Benefits

1.3.1 Gluten-Free Flour
(Taro, Cassava, Breadfruit, Plantain)

Gluten-free alternative flours could attract significant interest from consumers with various dietary needs and preferences. Even though these flour alternatives are still niche products within the New Zealand offering landscape, they have growth potential. According to Southern Cross, in New Zealand, **coeliac disease may affect 1 in 100 of the general population**. However, the rate may be higher because many people will be undiagnosed, or their condition incorrectly diagnosed as irritable bowel syndrome. Furthermore, the popularity of Paleo and grain-free diets has created a strong demand for alternative flour.

Gluten-free flours cater perfectly to these segments, offering a suitable substitute for wheat-based products. The potential for gluten-free flours lies in their **unique culinary applications**. Each flour provides a **distinct flavour profile, ranging from plantain's subtle sweetness to breadfruit's earthy richness**. This versatility allows them to elevate culinary creations, adding depth and dimension to dishes or convenience food. Understanding consumer preferences is crucial for navigating the market effectively.

Please find below a detailed list of the uses and benefits of each type of flour:

Taro flour is derived from the root of the taro plant, a staple in many tropical regions. It is increasingly popular in baking due to its unique nutritional profile and functionality. Taro flour can seamlessly integrate into various recipes, offering a slightly nutty flavour that complements sweet and savoury dishes. When used in baking, it contributes to a moist, dense texture, making it ideal for cakes, breads, and cookies. It is also an excellent thickener for soups and stews without altering the flavour profile significantly. Nutritionally, taro flour is rich in fibre and potassium, supporting heart health and digestion. It also contains a significant amount of vitamin C, boosting the immune system, and is relatively low in calories and fat, making it a healthier alternative to conventional flour.

Cassava flour comes from the cassava root, a staple crop in tropical climates. Its versatility as an all-purpose flour makes it a gluten-free and grain-free cooking favourite. Cassava flour's neutral flavour and fine texture allow it to be used in various dishes, from baked goods like bread and cakes to tortillas and flatbreads. It is especially popular in gluten-free recipes due to its similar consistency to wheat flour. Cassava flour is notable for its resistant starch content, which aids in blood sugar control and promotes a healthy gut microbiome. Additionally, it offers a good dose of vitamin C and essential minerals, contributing to overall health and well-being.

Breadfruit flour is made from the dried and ground fruit of the breadfruit tree, known for its role in food security and sustainability. This flour is gaining attention for its use in baking and cooking, providing a gluten-free alternative to traditional flours. It is excellent for making bread, cakes, cookies, and pancakes, adding a subtle sweetness and boosting the nutritional value of dishes. Breadfruit flour is also helpful as a thickener in soups and stews. It is packed with fibre, potassium, and vitamin C, alongside complex carbohydrates that offer sustained energy release. This makes it a nutritious choice and beneficial for long-lasting satiety and energy.

Plantain flour is produced from green plantains, offering a nutritious and versatile flour option. It is a staple in many diets where plantains are abundant and serve as an excellent all-purpose flour in gluten-free baking and cooking. Plantain flour is used to create a variety of dishes, including tortillas, flatbreads, cakes, and cookies, providing a rich source of dietary fibre, potassium, and vitamin B6. Its resistant starch content is particularly beneficial for gut health and regulating blood sugar levels. Plantain flour's mild taste and high nutrient content makes it a popular choice for those looking to enhance the nutritional profile of their meals while accommodating dietary restrictions.

1.3.2 Spices
(Ginger, Turmeric, Black Pepper, Chilli Pepper)

New Zealand's growing appetite for functional spices like ginger, turmeric, black pepper, and chili peppers reflects a broader shift towards health-conscious choices. This trend is driven by mounting scientific evidence highlighting these spices' anti-inflammatory, antioxidant, and other potential health benefits. A 2021 study published in the "Journal of Functional Foods" found that turmeric consumption was associated with improved inflammatory markers and overall well-being in participants. Similarly, another study was conducted in 2007 on black peppers. Furthermore, the rise in plant-based diets and a desire for flavourful, nutrient-dense alternatives further propels the demand for these multifaceted spices. This growing demand matches New Zealand's dynamic demographics and appreciation for diverse cuisines. The country's multicultural population champions the use of these spices in traditional dishes, making them more commonplace in everyday cooking. Additionally, consumers are increasingly seeking ethically sourced spices that align with sustainability principles and fair trade. Furthermore, there is a growing consumer preference for organic and sustainably sourced food products, including spices. This confluence of factors highlight the favourable conditions for the functional spice market in New Zealand, presenting opportunities for producers, suppliers, and retailers who prioritise both quality and ethical practices.

One of our interviewees adds valuable context regarding the sourcing and quality of ginger. The interviewee emphasised that Fijian ginger has better flavour, richness, and depth than other sources, enhancing its market appeal. They also detailed the relationship with growers in Fiji, noting efforts to push for organic certification, which is crucial for meeting consumer demands for sustainably sourced and organic products. This effort to build long-term, sustainable relationships with growers is a key factor in maintaining a consistent supply of high-quality ginger.

Please find below a detailed list of the uses and benefits of each spice:

Ginger is a widely used spice with a long history in culinary and medicinal practices worldwide. Known for its distinctive spicy and slightly sweet flavour, ginger is a versatile ingredient in dishes ranging from sweet desserts to savoury meals. It is particularly famous for its digestive benefits, helping to alleviate nausea, reduce inflammation, and improve gastrointestinal health. Ginger contains gingerol, a potent anti-inflammatory and antioxidant compound, making it beneficial in managing pain and protecting against disease. Its incorporation into teas, soups, stir-fries, and baked goods enhances flavour and contributes to its status as a functional food, promoting overall health and well-being.

Turmeric's vibrant yellow colour and earthy, bitter flavour is a staple in many culinary traditions, especially in South Asian and Middle Eastern cuisines. It is highly regarded for its active compound, curcumin, which has been extensively studied for its anti-inflammatory and antioxidant properties. Turmeric contributes to the healing and prevention of various conditions, including heart disease, Alzheimer's, and cancer. Its therapeutic potential extends to improving joint health and mitigating depressive symptoms. Turmeric is commonly used in curries, rice dishes, and teas, and its health benefits can be maximised when paired with black pepper, which increases its bioavailability.

Black pepper, known as the "king of spices," is ubiquitous in kitchens worldwide, prized for its sharp and mildly spicy flavour. Beyond its culinary uses, black pepper is also recognised for its health-promoting properties. Black pepper exhibits antioxidant and anti-inflammatory effects, supports digestive health, and may have cholesterol-lowering properties. Its universal presence in seasoning blends, marinades, and virtually all savoury dishes underscores its dual role as a flavour enhancer and a functional food.

Chilli pepper adds heat and depth to dishes, with its capsaicin content responsible for its fiery taste. Capsaicin has been linked to various health benefits, including pain relief, weight loss, and improved heart health. It boosts metabolism, promotes fat burning, and may reduce the risk of chronic diseases such as heart disease and diabetes. Chilli peppers are a staple in cuisines worldwide, used in everything from salsas and sauces to curries and stews.

1.3.3 Moringa
(Powder, Leaves, and Oil)

Moringa, a nutrient-rich "superfood," is a niche in New Zealand's thriving health food market. Globally there is a surge in demand for natural health products, a trend confirmed in New Zealand's market. A growing consumer preference for natural, nutrient-dense options aligns perfectly with Moringa's profile.

Moringa has a **complete nutritional profile, containing 92 nutrients, 46 antioxidants, and all 9 essential amino acids**. Popularly referred to as the "Miracle Tree," it has potential health benefits, including boosting energy levels, immunity, and brain health. When combined with organic cultivation practices, this unique combination of benefits could position Moringa as a strong commodity in the competitive superfood and dietary supplement market. However, overcoming challenges like limited public awareness and navigating the complex regulatory landscape for health products will be crucial for businesses looking to capitalise on this emerging market opportunity.

Please find below a detailed list of the uses and benefits of each Moringa's form/presentation:

Moringa powder is made by grinding the dried leaves of the Moringa oleifera tree. This bright green powder is rich in vitamins A, C, and E, calcium, potassium, and protein. Moringa powder has a mild, earthy flavour that can easily be added to smoothies, soups, and sauces or sprinkled over salads. It is renowned for its antioxidant properties, which can help protect cells from damage, and its high nutrient content supports immune system health. Additionally, moringa powder has been linked to reduced inflammation, improved heart health, and enhanced energy levels, making it a valuable addition to a health-conscious diet.

Fresh Moringa leaves are a versatile and nutritious green, similar in appearance to spinach but with a more peppery flavour. They can be used in a wide range of dishes, from salads and soups to stir-fries and curries. Moringa leaves are an excellent source of vitamins, minerals, and essential amino acids, contributing to a balanced diet. They are particularly rich in vitamin C, which aids in iron absorption, improving energy levels and reducing fatigue. The leaves also contain anti-inflammatory and antibacterial properties, promoting overall health and well-being. Including moringa leaves in meals can enhance nutritional intake, support immune function, and offer protective benefits against various health issues.
Extracted from the seeds of the Moringa oleifera tree, moringa oil is a highly valued functional food due to its nutritional and medicinal properties. It is rich in oleic acid, a monounsaturated fatty acid, which is beneficial for heart health and can help to lower bad cholesterol levels. Moringa oil has a unique antioxidant profile, including vitamin E, contributing to its stability, shelf life, and benefits of skin and hair. This light, non-greasy oil can be used in cooking, as it has a high smoke point, making it suitable for frying and sautéing. Its pleasant, slightly nutty flavour complements a variety of dishes. Beyond culinary uses, moringa oil is also applied topically for its moisturising and healing properties, making it a multipurpose product supporting internal and external health.

1.3.4 Noni
(Juice, Powder, and Capsules)

Noni, a fruit native to Southeast Asia and the Pacific Islands, has traditionally been consumed as a juice. Today, it is available in various forms like powder and capsules, making it more accessible and convenient for modern consumers. Each form—juice, powder, and capsule—offers unique advantages, from the nutrient-rich and flavourful juice to the versatile powder and the convenience of capsules, making Noni accessible to a wide range of preferences and lifestyles. Noni contains antioxidants and other compounds that are believed to support a healthy immune system, with some studies suggesting it may help manage pain and inflammation. While there are claims that Noni boosts energy levels and promotes general well-being, the scientific evidence remains limited. **The interview with a New Zealand business owner reveals that the Noni market has gone through significant shifts in demand, largely influenced by the Asian market, particularly in China and Korea**. Initially, a brand drove much of the interest by making bold health claims, which made Noni powder popular in duty-free shops and triggered a price war. However, negative publicity, including concerns around heavy metal contamination, contributed to the market's eventual decline.

Despite its cultural significance in Polynesian communities and its potential health benefits, Noni's market growth has been challenging. The interview suggests that consumer interest in Noni is harder to sustain with local consumption. New product development could support the product through extra marketing spend or endorsement from a major influencer or celebrity. The volatile nature of health trends means that popular products can have a short lifespan, and Noni is no exception. To revive the Noni market in New Zealand, a substantial marketing and branding effort would be required, coupled with transparency regarding the current state of scientific evidence and a cautious approach to health claims.

Noni's potential still aligns well with New Zealand's increasing health consciousness and diverse culinary landscape, allowing brands to cater to a niche consumer segment. However, navigating the regulatory landscape for health claims and supporting those claims with robust research will be critical for Noni's broader acceptance and long-term success in the health food market.

Noni juice is derived from the fruit of the Noni tree, known scientifically as Morinda citrifolia, which is native to Southeast Asia and the Pacific Islands. This juice has been used traditionally for centuries due to its medicinal properties and is now gaining popularity worldwide as a health supplement. Noni juice is rich in antioxidants, which help combat oxidative stress and may reduce the risk of chronic diseases such as heart disease and diabetes. It is also noted for its anti-inflammatory properties, making it beneficial for individuals suffering from conditions like arthritis. Additionally, Noni juice supports immune health and has been reported to improve energy levels, making it a popular choice for those looking to enhance their overall well-being.

Noni powder is made by drying and grinding Noni fruit, offering a concentrated form of all the nutrients found in Noni juice but in a more versatile form. This powder can be easily incorporated into smoothies, juices, or even water, making it a convenient option for those seeking to include Noni in their diet without the strong taste of the juice. Noni powder is an excellent source of vitamins and minerals, including vitamin C, potassium, and beta-carotene, which support the immune system, improve skin health, and aid digestion. Its high fibre content promotes a healthy gut microbiome, improving digestion and nutrient absorption.

Noni capsules provide a convenient and taste-neutral way to consume Noni, making it accessible for individuals who may not enjoy the flavour of Noni juice or powder. These capsules are filled with either Noni powder or extract, giving the consumer a concentrated dose of Noni's beneficial compounds in a form that is easy to incorporate into their daily routine. Noni capsules are known for their anti-inflammatory and antioxidant effects, supporting immune health, reducing the risk of chronic disease, and promoting overall wellness. They are particularly favoured by people looking for a straightforward and efficient way to benefit from Noni's health-promoting properties without the need to prepare drinks or meals.

1.4 Overall Market Insights[3]

1.4.1 About the market

- **Natural Health Category Growth:** 13% year-on-year increase across grocery and pharmacy sectors. This significant growth reflects a booming interest in health and wellness products, indicating a shift towards prioritising health in purchasing decisions.
- **Food as Medicine:** Nearly 60% of New Zealanders believe in this concept, leading to a market shift where groceries are used for sustenance and health benefits. This shift drives product innovation and changes in consumer purchasing patterns.
- **FMCG Suppliers' Response:** 30% intend to make products healthier within the next 12 months. This proactive stance by suppliers aims to meet the growing consumer demand for healthier food options, indicating a shift towards more health-conscious product formulations.
- **Immunity Products Growth:**
  - Immune-boosting supplements: There has been 46% growth in the past year, highlighting increased consumer focus on immunity amid health challenges.
  - Foods with immunity claims: 20% growth in sales revenue over the past 12 months and 31% since 2021, underscoring the importance of immune health in consumer choices and the rising demand for functional foods.
  - Digestive Health Supplements: Sales grew 15.5% annually, driven by trends such as apple cider vinegar for weight loss. This reflects the influence of social media on health trends and the increasing consumer interest in digestive health.

A New Zealand beverage producer provided insights into the motivations behind sourcing from the Pacific Islands, emphasising the importance of sustainability and bringing as much produce from the islands as possible. The interviewee's focus on turmeric with high curcumin and exploring other functional ingredients showcases the potential for these products to tap into the growing demand for natural and authentic health solutions.

1.4.2 About consumers' beliefs and behaviours

- **94% of New Zealanders prioritise health and wellness** in some way.
- **Common wellness goals** include improving physical fitness, weight management, reducing stress, improving sleep, and enhancing diet.
- **80% of New Zealanders actively seek health benefits** from specific foods, beverages, vitamin supplements, or OTC medications, with **37% taking vitamins or supplements daily**.
- **Holistic approaches to immunity** involve an average of 3.8 methods, including regular exercise, sleep hygiene, stress minimisation, nutrient-dense food consumption, and supplementation.
- **46% of New Zealanders aim to improve their wellness quality**, emphasising natural health categories like sleep aids and stress/anxiety supplements, which are experiencing notable market growth.
- **40% believe food can be as powerful as medicine**, with 85% following a specific diet approach.
- **Healthy eating and functional foods** are becoming mainstream, with significant growth in products labelled for immunity, probiotics, and collagen-enhanced offerings.
- The **evolution of self-care** has been accelerated by the pandemic, with notable trends, including the use of technology for health management, increased focus on hygiene, preventive care over sick care, and self-reliance in health and wellness.

[3] According to an IRI Health & Wellbeing Survey conducted over 1000 people, 2021

1.4.3 Overall Market Insights

Table 1: Imports flours of roots or tubers in value to New Zealand

	2021		2022		2023		2024	
	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total
China	$193,931	37.19%	$144,159	29.63%	$123,699	26.78%	$271,537	54.72%
India	$28,897	5.54%	$28,879	5.93%	$47,228	10.22%	$93,275	18.80%
Peru	$152,518	29.25%	$174,917	35.95%	$159,648	34.56%	$33,400	6.73%
Taiwan	$106,640	20.45%	$89,536	18.40%	$80,344	17.39%	$47,717	9.62%
Thailand	$39,449	7.57%	$49,103	10.09%	$51,063	11.05%	$50,331	10.14%
Grand Total	**$521,435**	**100.00%**	**$486,594**	**100.00%**	**$461,982**	**100.00%**	**$496,260**	**100.00%**

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

Figure 1: Imports of flours of roots or tubers in value to New Zealand

(Only the Top 5 countries are displayed.)

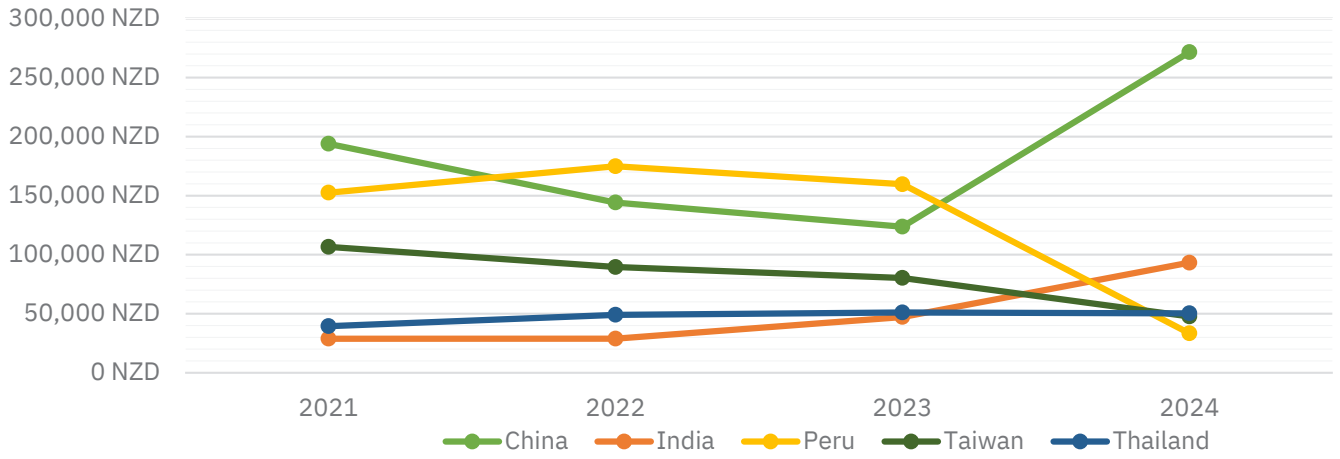


Table 2: Imports flours of roots or tubers in volume to New Zealand

	2021		2022		2023		2024	
	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total
China	37,679	34.3%	27,739	30.1%	31,159	31.9%	31,281	29.0%
India	11,896	10.8%	12,172	13.2%	17,382	17.8%	35,931	33.3%
Peru	6,611	6.0%	7,104	7.7%	5,308	5.4%	2,280	2.1%
Taiwan	21,654	19.7%	13,749	14.9%	13,574	13.9%	8,258	7.6%
Thailand	31,998	29.1%	31,495	34.1%	30,190	30.9%	30,275	28.0%
Grand Total	**109,838**	**100.0%**	**92,259**	**100.0%**	**97,613**	**100.0%**	**108,025**	**100.0%**

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

Figure 2: Imports flours of roots or tubers in volume to New Zealand

(Only the Top 5 countries are displayed.)

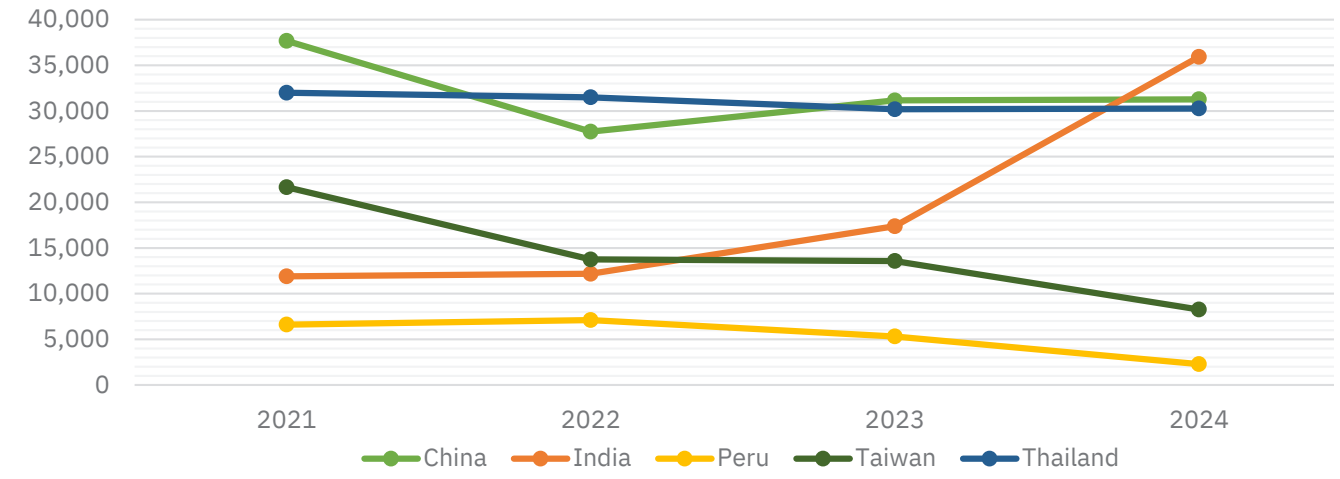


Table 3: Imports of Ginger in value to New Zealand

	2021		2022		2023		2024	
	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total
Australia	$336,414	3.77%	$345,978	5.89%	$209,192	2.43%	$204,010	2.34%
China	$2,888,149	32.34%	$1,792,232	30.51%	$1,335,460	15.49%	$1,598,966	18.35%
Fiji	$425,323	4.76%	$344,106	5.86%	$190,971	2.21%	$141,029	1.62%
India	$523,552	5.86%	$472,631	8.05%	$495,134	5.74%	$695,324	7.98%
Thailand	$4,757,925	53.27%	$2,919,413	49.70%	$6,392,099	74.13%	$6,075,864	69.72%
Grand Total	**$8,931,363**	**100.00%**	**$5,874,360**	**100.00%**	**$8,622,856**	**100.00%**	**$8,715,193**	**100.00%**

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

Figure 3: Imports of Ginger in value to New Zealand

(Only the Top 5 countries are displayed.)

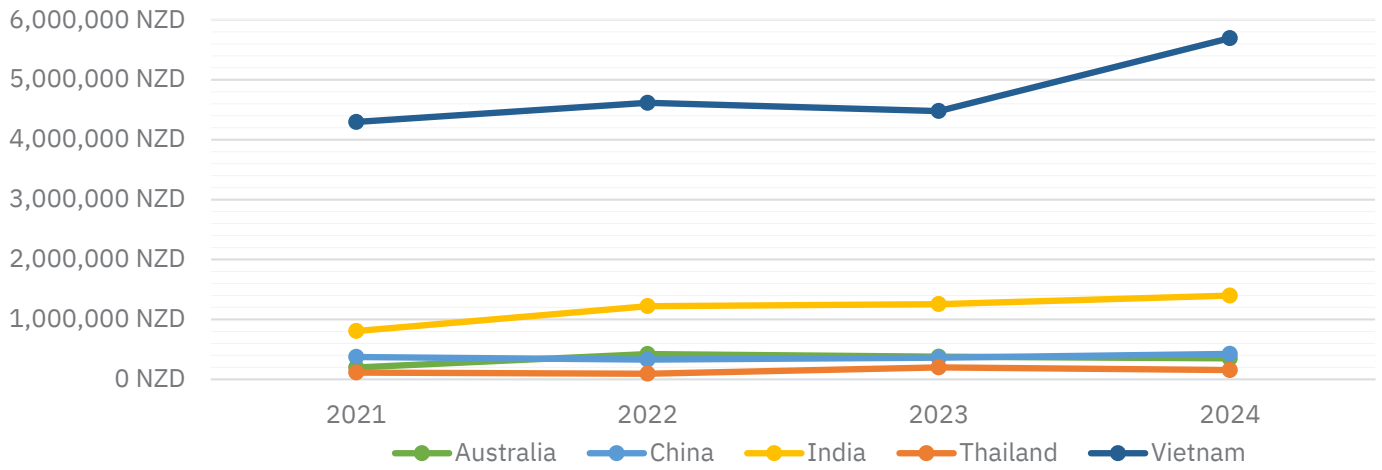


Table 4: Imports of Ginger in volume to New Zealand

	2021		2022		2023		2024	
	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total
Australia	26,616	1.1%	27,333	1.4%	20,734	1.0%	19,666	0.9%
China	864,083	35.9%	594,611	29.6%	336,872	16.0%	409,201	18.4%
Fiji	134,715	5.6%	79,297	3.9%	47,111	2.2%	36,167	1.6%
India	102,562	4.3%	92,601	4.6%	100,406	4.8%	104,054	4.7%
Thailand	1,281,191	53.2%	1,214,548	60.5%	1,605,543	76.1%	1,654,059	74.4%
Grand Total	**2,409,167**	**100.0%**	**2,008,390**	**100.0%**	**2,110,666**	**100.0%**	**2,223,147**	**100.0%**

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

Figure 4: Imports of Ginger in volume to New Zealand

(Only the Top 5 countries are displayed.)

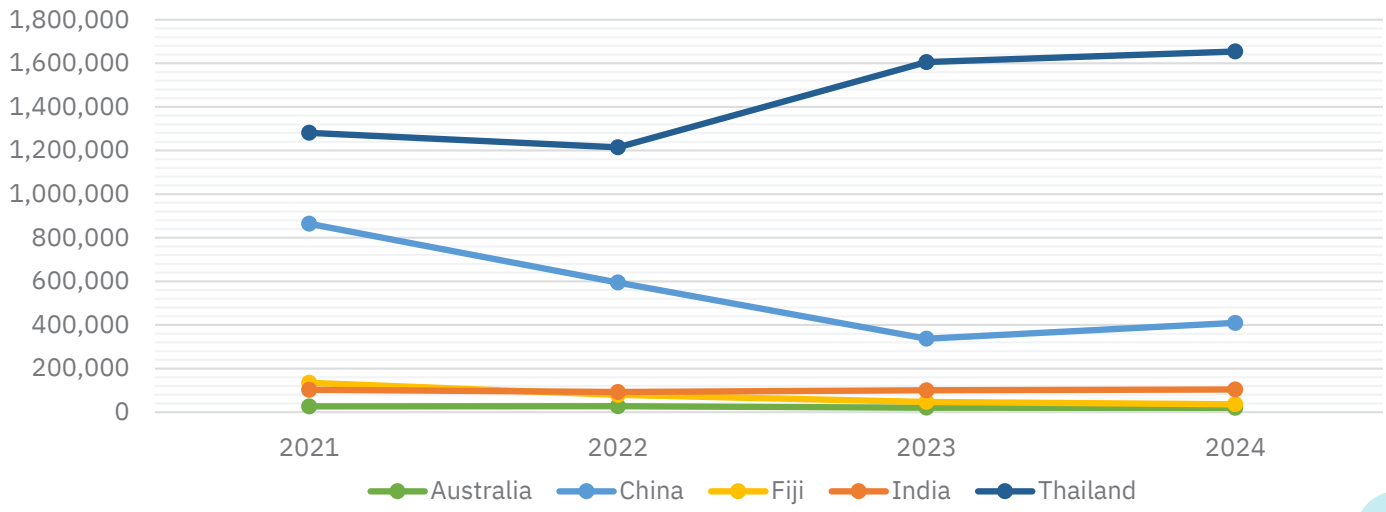


Table 5: Imports of Turmeric in value to New Zealand

	2021		2022		2023		2024	
	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total
Australia	$60,101	6.42%	$58,232	6.54%	$50,518	5.63%	$34,255	2.51%
China	$82,736	8.84%	$8,092	0.91%	$11,441	1.28%	$5,195	0.38%
Fiji	$228,631	24.43%	$234,718	26.36%	$224,601	25.04%	$303,625	22.22%
India	$533,134	56.96%	$581,020	65.25%	$602,259	67.13%	$1,013,346	74.17%
Thailand	$31,360	3.35%	$8,360	0.94%	$8,290	0.92%	$9,756	0.71%
Grand Total	**$935,962**	**100.00%**	**$890,422**	**100.00%**	**$897,109**	**100.00%**	**$1,366,177**	**100.00%**

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

Figure 5: Imports of Turmeric in value to New Zealand

(Only the Top 5 countries are displayed.)

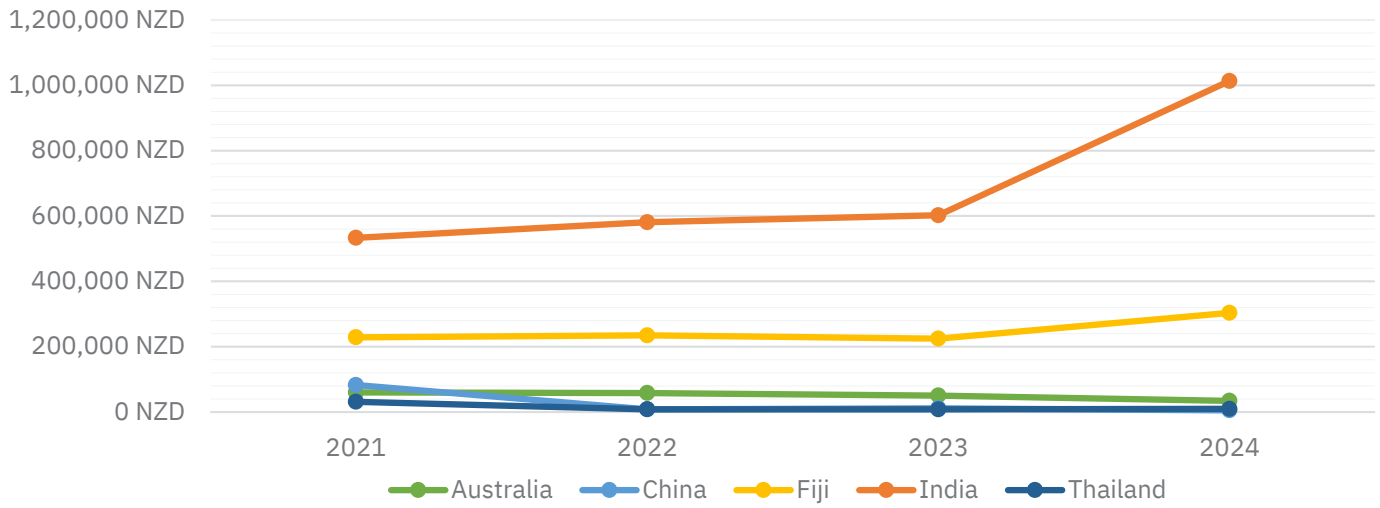


Table 6: Imports of Turmeric in volume to New Zealand

	2021		2022		2023		2024	
	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total
Australia	1,440	1.4%	619	0.8%	430	0.5%	257	0.3%
Bangladesh	16	0.0%	66	0.1%	1,360	1.5%	101	0.1%
Fiji	46,981	45.9%	27,358	36.3%	25,167	27.8%	29,455	30.5%
India	53,549	52.3%	46,705	61.9%	63,011	69.7%	66,432	68.8%
Vietnam	441	0.4%	680	0.9%	446	0.5%	298	0.3%
Grand Total	**102,427**	**100.0%**	**75,428**	**100.0%**	**90,414**	**100.0%**	**96,543**	**100.0%**

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

Figure 6: Imports of Turmeric in volume to New Zealand

(Only the Top 5 countries are displayed.)

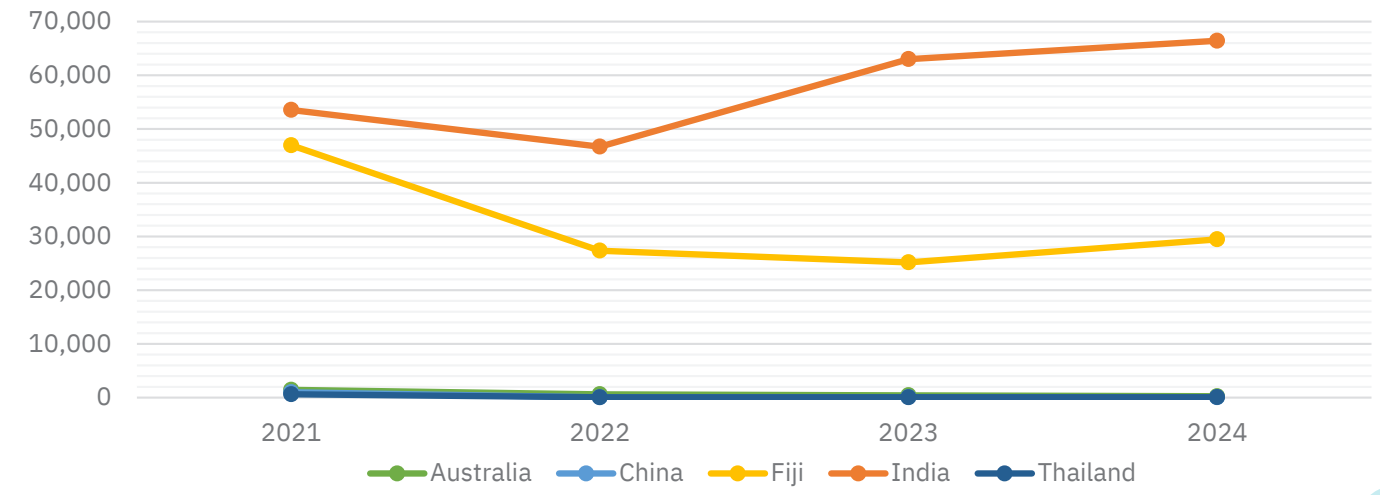


Table 7: Imports of Pepper in value to New Zealand

	2021		2022		2023		2024	
	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total
Australia	$198,181	3.42%	$422,019	6.31%	$377,292	5.66%	$350,196	4.37%
China	$373,856	6.46%	$329,670	4.93%	$360,571	5.40%	$425,077	5.30%
India	$806,556	13.93%	$1,222,265	18.29%	$1,255,945	18.82%	$1,398,381	17.43%
Thailand	$114,033	1.97%	$93,777	1.40%	$199,520	2.99%	$154,109	1.92%
Vietnam	$4,296,322	74.22%	$4,615,657	69.06%	$4,478,385	67.12%	$5,694,872	70.99%
Grand Total	**$5,788,948**	**100.00%**	**$6,683,388**	**100.00%**	**$6,671,713**	**100.00%**	**$8,022,635**	**100.00%**

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

Figure 7: Imports of Pepper in value to New Zealand

(Only the Top 5 countries are displayed.)

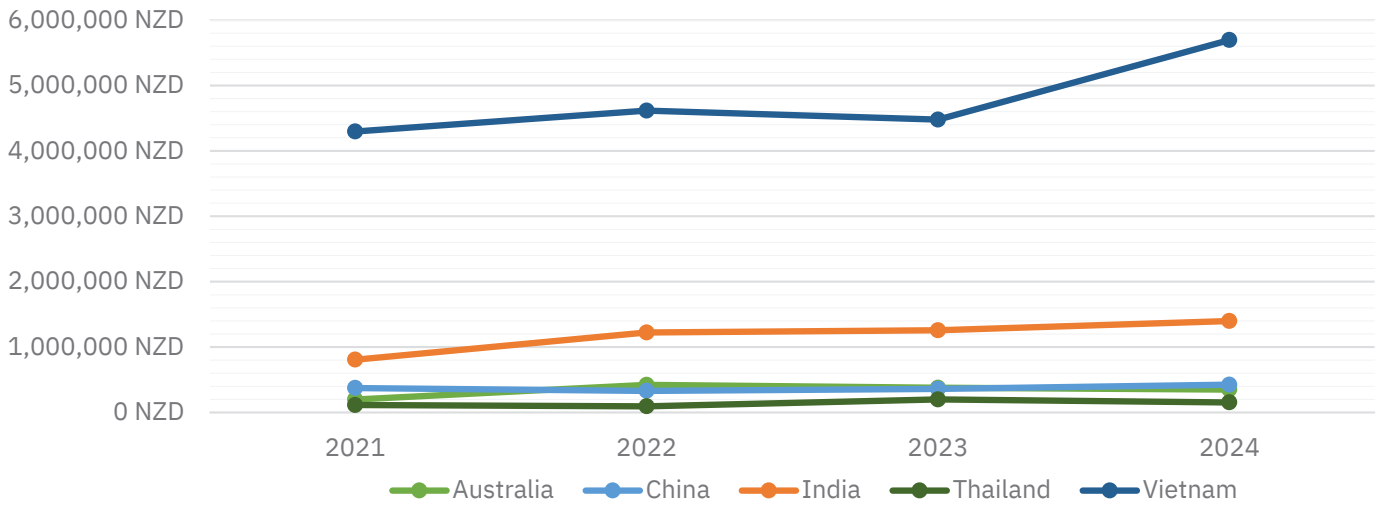


Table 8: Imports of Pepper in volume to New Zealand

	2021		2022		2023		2024	
	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total
Australia	17,187	2.2%	32,664	4.7%	30,764	4.2%	24,023	3.2%
China	50,326	6.4%	27,692	4.0%	34,883	4.7%	31,570	4.3%
India	101,625	12.9%	130,414	18.8%	133,884	18.2%	136,839	18.5%
Korea, South	12,029	1.5%	8,136	1.2%	8,626	1.2%	9,699	1.3%
Vietnam	606,066	77.0%	493,319	71.3%	527,001	71.7%	537,857	72.7%
Grand Total	**787,233**	**100.0%**	**692,225**	**100.0%**	**735,158**	**100.0%**	**739,988**	**100.0%**

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

Figure 8: Imports of Pepper in volume to New Zealand

(Only the Top 5 countries are displayed.)

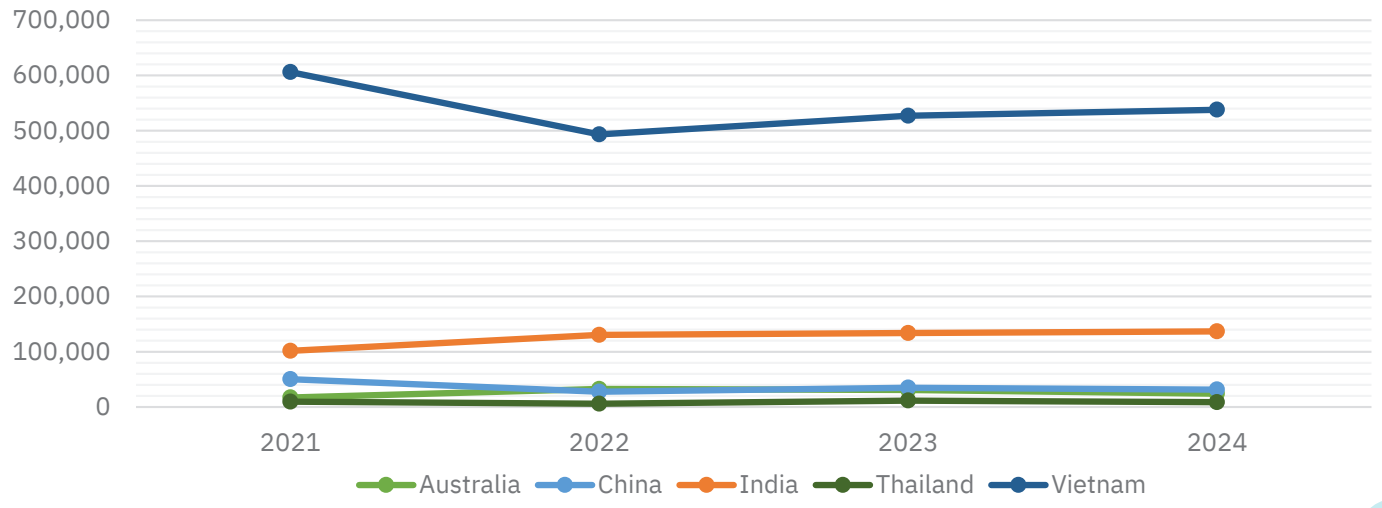


Table 9: Imports of dried Chilli in value to New Zealand

	2021		2022		2023		2024	
	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total
China	$149,204	25.45%	$154,621	33.99%	$299,310	38.28%	$322,727	39.16%
Thailand	$153,189	26.13%	$127,967	28.13%	$208,716	26.69%	$164,800	20.00%
India	$164,682	28.09%	$108,484	23.85%	$135,229	17.29%	$194,119	23.56%
Australia	$79,344	13.53%	$53,627	11.79%	$79,768	10.20%	$58,521	7.10%
Mexico	$39,812	6.79%	$10,200	2.24%	$58,888	7.53%	$83,919	10.18%
Grand Total	**$586,231**	**100.00%**	**$454,899**	**100.00%**	**$781,911**	**100.00%**	**$824,086**	**100.00%**

(Only the Top 5 countries are displayed above. *Some countries may not have an IHS, and small quantities may appear in this table. This represents sample size commodities recorded at the border.)

Figure 9: Imports of dried Chilli in value to New Zealand

(Only the Top 5 countries are displayed.)

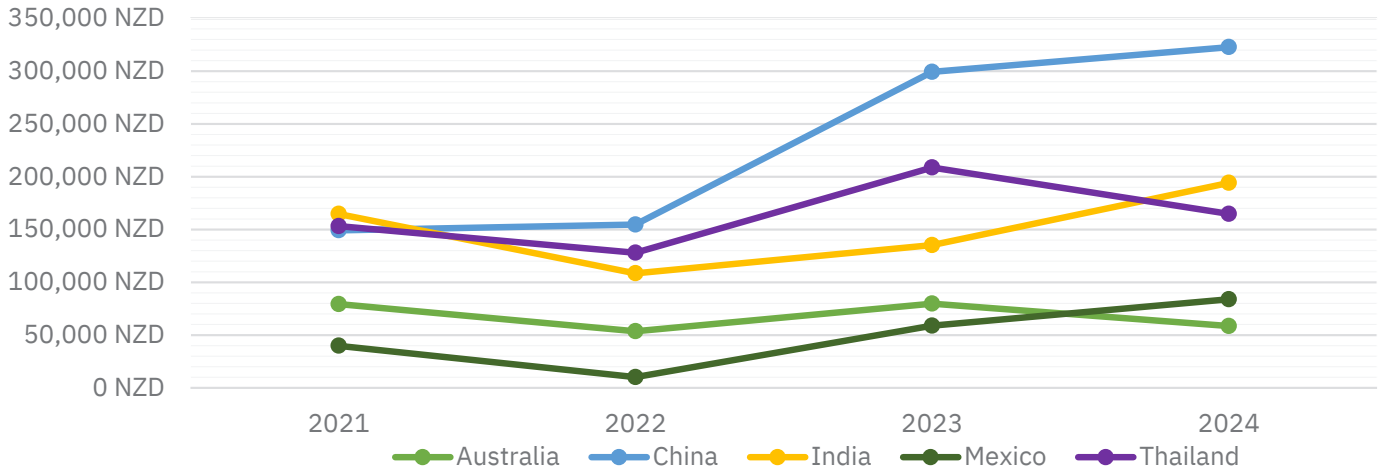


Table 10: Imports of dried Chilli in volume to New Zealand

	2021		2022		2023		2024	
	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total
China	18,041	26.1%	14,770	32.7%	28,254	43.1%	32,823	43.0%
Thailand	14,728	21.3%	11,461	25.4%	14,218	21.7%	12,246	16.1%
India	27,153	39.3%	14,362	31.8%	13,819	21.1%	22,070	28.9%
Australia	6,289	9.1%	4,035	8.9%	5,810	8.9%	4,763	6.2%
Mexico	2,967	4.3%	569	1.3%	3,420	5.2%	4,392	5.8%
Grand Total	**69,178**	**100.0%**	**45,197**	**100.0%**	**65,521**	**100.0%**	**76,294**	**100.0%**

(Only the Top 5 countries are displayed above. *Some countries may not have an IHS, and small quantities may appear in this table. This represents sample size commodities recorded at the border.)

Figure 10: Imports of dried Chilli in volume to New Zealand

(Only the Top 5 countries are displayed.)

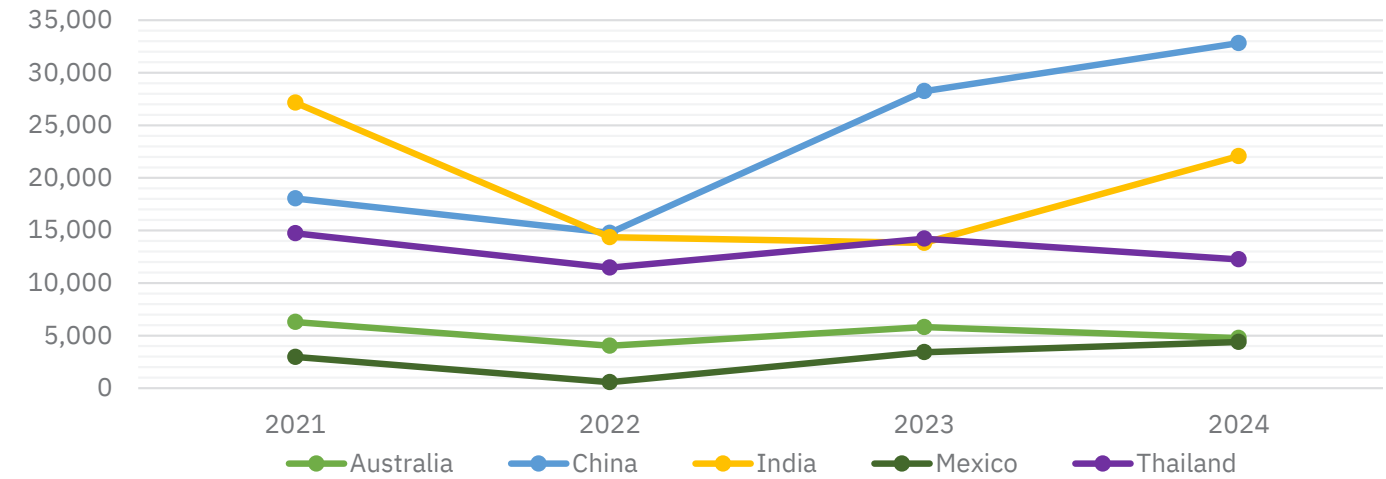


Table 11: Imports of Vegetable Products; N.E.C. In Chapter 12, fresh, chilled, frozen or dried, whether or not ground in value to New Zealand, (HS Code: 1212990039), including Moringa, Noni and Breadfruit.

	2021		2022		2023		2024	
	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total	Value (NZD)	% Total
China	$3,519,333	55.59%	$4,964,942	65.20%	$4,551,185	66.64%	$5,960,712	69.89%
Fiji	$2,377,679	37.56%	$2,240,434	29.42%	$2,100,769	30.76%	$2,291,281	26.87%
Vietnam	$112,521	1.78%	$74,284	0.98%	$69,153	1.01%	$141,430	1.66%
Korea, South	$91,759	1.45%	$135,299	1.78%	$80,509	1.18%	$76,812	0.90%
Australia	$229,377	3.62%	$199,950	2.63%	$28,095	0.41%	$58,194	0.68%
Grand Total	**$6,330,669**	**100.00%**	**$7,614,909**	**100.00%**	**$6,829,711**	**100.00%**	**$8,528,429**	**100.00%**

(Only the Top 5 countries are displayed above. *Some countries may not have an IHS, and small quantities may appear in this table. This represents sample size commodities recorded at the border.)

Figure 11: Imports of Vegetable Products; N.E.C. In Chapter 12, fresh, chilled, frozen or dried, whether or not ground in value to New Zealand, (HS Code: 1212990039), including Moringa, Noni and Breadfruit.

(Only the Top 5 countries are displayed.)

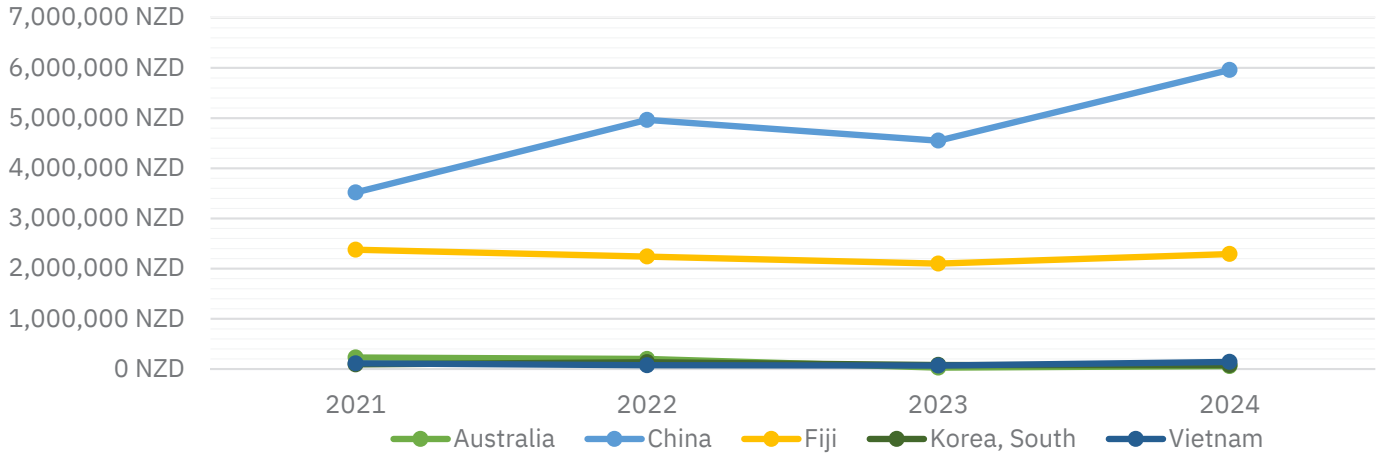


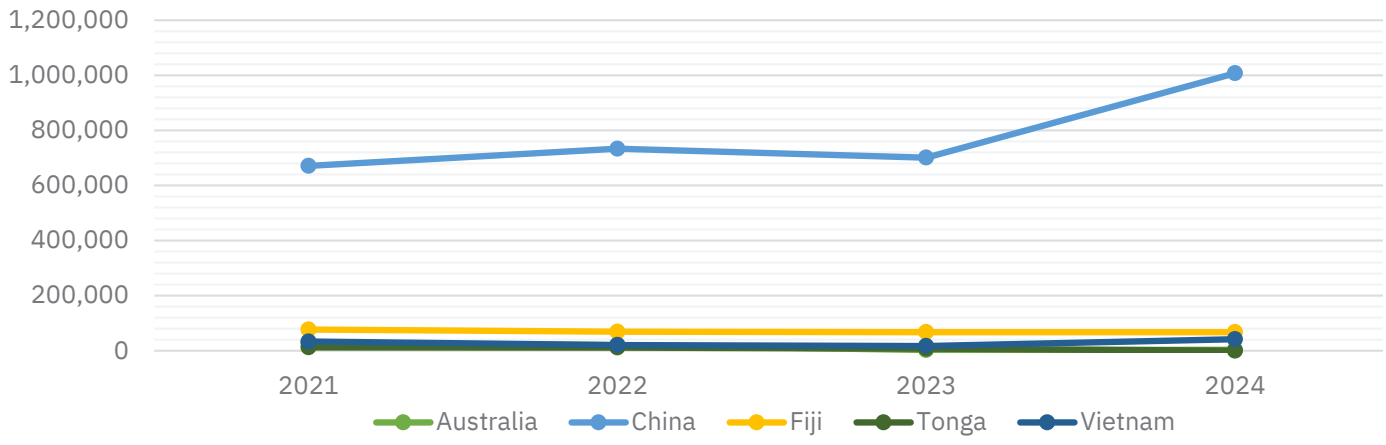
Table 12: Imports of Vegetable Products; N.E.C. In Chapter 12, fresh, chilled, frozen or dried, whether or not ground in volume to New Zealand, (HS Code: 1212990039), including Moringa, Noni and Breadfruit.

	2021		2022		2023		2024	
	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total	Quantity (Kg)	% Total
Australia	27,328	3.3%	20,735	2.4%	2,671	0.3%	3,583	0.3%
China	671,207	81.7%	733,590	85.7%	701,261	88.1%	1,007,455	89.9%
Fiji	77,018	9.4%	69,180	8.1%	67,486	8.5%	67,341	6.0%
Tonga	12,052	1.5%	11,453	1.3%	7,401	0.9%	25	0.0%
Vietnam	33,448	4.1%	20,683	2.4%	17,099	2.1%	41,760	3.7%
Grand Total	**821,053**	**100.0%**	**855,641**	**100.0%**	**795,918**	**100.0%**	**1,120,164**	**100.0%**

(Only the Top 5 countries are displayed above. *Some countries may not have an IHS, and small quantities may appear in this table. This represents sample size commodities recorded at the border.)

Figure 12: Imports of Vegetable Products; N.E.C. In Chapter 12, fresh, chilled, frozen or dried, whether or not ground in volume to New Zealand, (HS Code: 1212990039), including Moringa, Noni and Breadfruit.

(Only the Top 5 countries are displayed.)



In our analysis of functional food imports into New Zealand, we encountered limited data on trade volumes, specifically for moringa and noni. The two products are likely imported in small quantities and are aggregated under broader import categories, making precise tracking challenging. To address this, we interviewed industry experts to gain qualitative insights into their trade patterns and market demand. This approach has provided valuable perspectives that supplement the quantitative data and offer a clearer picture of market dynamics for moringa and noni in New Zealand.

2. Market Access

2.1 Nutrition and Health Claims

New Zealand and Australia have a common regulation for nutrition and health claims called "Standard 1.2.7 – Nutrition, Health and Related Claims". Standard 1.2.7 states the requirements for making a health claim. **Functional foods are distinct from therapeutic goods, which aim to prevent or treat diseases and are highly regulated**; they can market their health benefits on labels. However, such claims are controlled to ensure they only relate to general health or nutrition without suggesting any therapeutic advantage. This regulation applies to any claims made on labels or in advertising. Advertising includes online, social media, television, radio, and print.

A 2022 survey of nutrition and health claims on food labels in New Zealand conducted by the Ministry for Primary Industries looked at 700 food products from 16 categories. They compared their findings to similar surveys conducted in 2014 and 2016. The total number of products with claims decreased from 56% in 2016 to 44% in 2022. However, the number of claims per product increased. Claims about vitamins, minerals, and protein became more common, while claims about dietary fibre and sodium decreased. The proportion of claims that met the requirements of the Food Standards Code increased slightly from 82% to 85%. Many claims still needed to meet the criteria, primarily due to missing information or incorrect nutrient levels.

2.2 Biosecurity Requirements and Advice

Countries approved to export fresh products 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 enclosed 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 with 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.

Note: Pepper, paprika, and chilli must get food safety clearance. Dried pepper, paprika, and chilli are high regulatory interest foods, requiring food safety clearance at the border. This is due to the potential for *Salmonella* contamination, which can cause food poisoning. Learn about Salmonela. According to New Zealand's food safety standards, **spices must be tested for heavy metals, pesticides, and prohibited dyes**. The "As Low As Reasonably Achievable" (ALARA) principle applies to contaminants, and certain dyes and pesticides are strictly prohibited, consult Chemical Contaminants in Imported Dried Spices, MPI 2012 for full details.

2.3 Food Safety Requirement

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 functional foods and beverages.

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 harvesting to processing, storage, and sale, must adhere to strict hygiene standards.

- **Pesticide residues:** Imported food must comply with Codex MRLs or the MRLs listed in the MRL Notice (including the 'default' MRL of 0.1 mg/kg where no specific MRL is listed). Codex MRLs are developed by member countries of the Codex Alimentarius Commission (CAC).

- **Labelling**: Food items must be correctly labelled, including ingredients and allergens, and may need to have nutritional information displayed.

Please note that this information may be subject to change; it is crucial to consult New Zealand's Ministry for Primary Industries | NZ Government (mpi.govt.nz) or similar authorities for the most current guidelines. They are country specific and product specific. **Please note that failure to adhere to applicable regulations can result in fines, business closure, or other penalties.*

2.4 Nutraceuticals Requirements

The development and regulation of nutraceutical products, which are food-derived products that offer health benefits beyond basic nutrition, are subject to specific requirements to ensure their safety, efficacy, and quality. Nutraceuticals encompass a range of products, including health supplements, functional foods, and those containing prebiotic, probiotic, and novel food ingredients. These products can come in various forms such as powders, tablets, capsules, and liquids. The development of nutraceutical products requires careful consideration of ingredient purity, sustainability, scientific evidence of efficacy, and product quality assurance.

Labelling plays a crucial role in ensuring consumer safety and providing transparency. Key labelling provisions, likely reflective of international standards, include the clear identification of the product type (e.g., Health Supplement, Nutraceutical, Functional Food), the intended consumer age group, product usage instructions, warning statements about potential side effects or contraindications, detailed nutritional information, quantity of active compounds, health benefits, and compliance with mandatory food labelling requirements. Such labelling is not just for domestic compliance but is crucial for export products, which must meet the labelling regulations of the importing countries. Furthermore, implementing Good Manufacturing Practices (GMP) for nutraceutical products ensures that these supplements meet high quality and safety standards. It involves rigorous control over manufacturing processes to prevent contamination and errors and ensure product consistency. GMP compliance helps nutraceutical companies adhere to legal requirements and boosts consumer trust and confidence in their products. This is particularly important in a health-conscious market where safety and efficacy are paramount. Additionally, GMP standards facilitate operational efficiency and cost savings by streamlining production processes and minimising waste. Ultimately, adherence to GMP standards is fundamental for the nutraceutical industry to maintain product integrity, comply with regulatory demands, and uphold consumer trust and market competitiveness.

3. NZ Buyers' Requirements

3.1 Quality

Quality needs may vary between importers, so exporters and growers of functional foods must be aware of any importer specifications regarding the size, colour, and general quality of the commodity. Contact your relevant biosecurity and food safety authorities for further information on market specifications.

Gluten-free Flour
A trial was conducted using Fiji pink taro to produce taro flour, highlighting both opportunities and challenges. The high cost of Fiji taro in New Zealand may limit its economic viability for large-scale production, though it could be suited for special orders. The process involved peeling, grating, and drying taro at 41°C for 12–14 hours, yielding 33.55% taro flour after sifting. Efficiency improvements, such as reducing drying time to under eight hours by increasing the temperature, were identified. From an initial 1,225g of fresh taro, the trial produced 411g of fine taro flour and 14g of coarse flour, with minimal waste of 14.2g. The flour exhibited excellent shelf stability, with a water activity of 0.20, suggesting a preservation potential of five years or more. This trial underscores the potential for producing high-quality taro-based products under the right conditions.

Spices
Based on New Zealand buyer's interview, young, early-harvested ginger and turmeric roots are preferred. Consistent quality and water content are important and require ongoing testing and research. Organic certification (USDA organic) is a must-have, alongside cleanliness and proper processing at the farm level, all of which are critical to passing MPI inspections.

3.2 Certifications

During interviews with New Zealand importers and manufacturers, several key certifications and labels were highlighted. These certifications, recognised internationally and domestically, play a vital role in ensuring food safety, sustainability, and quality standards across various stages of production and supply. Although New Zealand wholesalers mentioned that organic and other third-party certifications seem essential for some buyers, they noted that consumers don't always follow through on their stated preferences for certified products. Below is a summary of the most frequently mentioned certifications and their significance in the New Zealand market.

a) **CGL (Crossed Grain Logo)** Coeliac New Zealand's Crossed Grain Logo (CGL) Trademark confirms that products that display the CGL symbol also state that it is 'gluten-free' and meet the FSANZ (Food Standard Australia and New Zealand) criteria of 'no detectable gluten'. Products that display the CGL confirm that the food does not contain wheat, rye, barley, triticale and oats.

b) **HACCP (Hazard Analysis and Critical Control Points)** is a systematic approach to food safety that identifies, evaluates, and controls potential hazards in food production. It is a preventive system that identifies critical points in the food production process where hazards can be controlled or eliminated. It aims to ensure the safety of food products by identifying and managing potential risks at critical stages of production.

c) **New Zealand GAP (Good Agricultural Practices)** is a set of voluntary standards that focus on agricultural and aquaculture practices to ensure the safety and sustainability of food production. These requirements cover various aspects, such as environmental conservation, worker welfare, and food safety. Essentially, Global GAP aims to establish and maintain standardised farming and food production practices to meet quality and safety standards for global markets.

d) **USDA (United States Department of Agriculture) Organic** is a label that indicates that a food or agricultural product has been produced according to the USDA organic standards, which require operations to use practices that cycle resources, conserve biodiversity, and preserve ecological balance.

3.3 Volume

Order volumes vary significantly depending on the product type and market size, ranging from a few kilograms for smaller businesses to several metric tonnes for larger retailers or manufacturers. Maintaining a steady supply of any functional food is crucial. Interviews revealed that some buyers secure a guaranteed purchase agreement with farms, committing to buy the entire production of ingredients like ginger and turmeric. For such buyers, a consistent and reliable supply is essential to support their value-added product manufacturing.

3.4 Packaging

All functional commodities must be packaged to meet biosecurity and food safety standards. Clear labelling is essential, with details including the product name, country of origin, net weight, packaging date, expiration date, and relevant certifications.

Our interviews show the importance of proper packaging to successfully pass MPI inspections in New Zealand. The MPI thoroughly inspects containers and boxes, and shipments may be rejected if the packaging does not comply with standards. Non-compliance can result in significant penalties, reaching up to $2,000 per container. Some buyers reported challenges, with shipments being rejected due to issues with packaging and labelling.

Key packaging requirements identified are as follows:

- ✓ Boxes and packaging must include all required information in a clear, accurate label.
- ✓ Packaging should protect the product and preserve its quality, particularly during frozen transport.
- ✓ All packaging must meet MPI regulations and standards to prevent costly delays or rejections.

3.5 Transport recommended and precautions

Functional foods should be transported under conditions that minimise contamination risks, aligning with biosecurity and food safety standards. For New Zealand buyers handling products like ginger and turmeric, frozen transport is preferred to maintain product quality and eliminate the need for methyl bromide treatment. However, unpredictable MPI inspections and delays add layers of complexity and expense to the supply chain. Buyers have often made substantial investments in building reliable supply chains and fostering strong relationships with farms to ensure consistency and quality.

4. Types Buyers/Distributors

- **Pharmaceuticals/Nutraceutical industry:** Buyers and manufacturers such as Pure Ingredients, Shieling Laboratories, and Douglas Pharmaceuticals could be buyers for functional type ingredients with associated and demonstrated health benefits.
- **Beverage industry:** Companies such as Hakanoa Handmade Drinks and juices, such as Barkers or Homegrown provide beverages focusing on health claims (Immunity, gut health..., etc.).
- **Processed Food Industry:** For integration into preparations with companies such as Brooke Fine Foods (Gluten free flours), Kea Biscuit (gluten-free range), FreshLife (Providing a wide range of gluten-free baking flours), and Pure Delish (Gluten-Free Granola).

5. Key Success Factors

1) **Unique and scientifically substantiated health benefits:** New Zealand consumers are interested in functional foods that offer well-researched and substantiated health benefits. The insights from our interviews highlight the importance of active contents, for example, turmeric's high curcumin content.

2) **Catering to consumer demand for natural and authentic products**: New Zealanders value natural and authentic products. Highlight the Pacific origin of your functional foods and emphasise sustainable sourcing practices.

3) **Strong brand identity and marketing strategy targeting the New Zealand market:** Develop a brand that resonates with New Zealand consumers. This includes attractive packaging, clear messaging about the product's benefits, and a marketing strategy that reaches your target audience.

4) **Effective distribution channels to reach health food stores, supermarkets, and online retailers:** A well-established distribution network is crucial for getting your products on shelves. Target health food stores, supermarkets, and online retailers that cater to health-conscious consumers.

5) **Compliance with New Zealand food safety regulations and labelling requirements:** Ensure your functional foods comply with all New Zealand food safety regulations and labelling requirements. This includes proper labelling of ingredients, health claims, and allergens. New Zealand has strict regulations around functional foods and health claims.

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