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What Happens Between Farm and Fork?

Characterising New Zealand's Domestic Fruit and
Vegetable Supply Chains

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Executive Summary

The Problem: New Zealand is a geographically isolated island nation with a significant commodity export economy. The domestic food system is far less understood. Making decisions that bolster the resilience and security of domestic food supply must start with a clear picture of the food system itself.

The Research: This report characterises how the commercial food system *within* New Zealand works to answer the question, “How do fresh fruits and vegetables get from orchards and market gardens to retailers in New Zealand’s mainstream domestic supply chains?”.

Literature review, interview research and geospatial mapping based on publicly available information are used to build a case study of the fruit and vegetable supply chain. Interviewees were selected to represent growers, wholesalers, marketers and retailers from diverse regions, business sizes and crop types.

Findings: The research identifies supply chain vulnerabilities, including roading and ferry infrastructure, fuel prices and an inconsistent cool chain. The digital infrastructure and information imbalance between growers, wholesalers and retailers is a vulnerability for suppliers, entrenching uneven power dynamics.

In a volatile world, supply chain participants are looking for what they can control. Growers trying to keep their businesses profitable are using strategies to gain premiums and manage their exposure to disruption. Diverse and direct supply relationships and supplier-customer loyalty are strategies being used to build certainty and redundancy into business models.

This research presents a tension between the efficiencies achieved with centralised food distribution and the resilience created through diverse growing regions and local supply networks.

Key Recommendations: Informed by the vulnerabilities of the domestic fruit and vegetable supply chain described in this research, strategic planning is needed to ensure the continued availability of domestically grown food for the New Zealand population.

1. A Grower Digital Information Systems project should be stood up by Horticulture New Zealand under the Aotearoa Horticulture Action Plan to develop options to reduce information imbalances in the supply chain, informed by legal advice to stay within the bounds of the Commerce Act.
2. A Code of Practice for Fresh Produce Cool Chain Management should be developed in collaboration between NZ Veg, NZGAP and the logistics industry.
3. A National Food Security Strategy should be developed, led by Industry groups and focused on a secure food supply for the New Zealand population.

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1. Introduction

New Zealand is a geographically isolated island nation with a significant commodity export economy. The domestic food system – made up of the food that New Zealanders eat on a daily basis– is far less understood.

Conversations about buying and supplying groceries in New Zealand are fraught. Many domestic producers of fruits and vegetables are struggling to recover the cost of production for products that are marked up considerably for consumers at checkout. At the same time, New Zealanders are eating fewer fruits and vegetables, with negative consequences for public health (Ministry of Health, 2025). The stakes are high for the viability of domestic-facing horticulture businesses and the health of New Zealanders.

This report characterises how the commercial food system *within* New Zealand works based on literature review, interviews with players throughout the domestic supply chain – including growers, wholesalers, marketers and retailers – and geospatial mapping to answer the question, “How do fresh fruits and vegetables get from orchards and market gardens to retailers in New Zealand’s mainstream domestic supply chains?”. The spatial extent of the supply chain is characterised with a focus on wholesale, distribution and retail, as well as key supporting infrastructure.

2. Aims

To date, New Zealand’s domestic fruit and vegetable supply chain has not been mapped with any specificity. Its spatial dimensions and commercial machinations are privately known by industry participants but not visible to the general public.

This report makes visible to consumers where New Zealand’s fresh produce comes from, where it has to transit to reach retail shelves and which parties are involved in its production and distribution. It provides the research basis for a conversation about how New Zealand feeds our own population.

Furthermore, having a map of the domestic supply chain shows how consolidated and centralised New Zealand’s domestic food system has become, explaining why a product like a head of lettuce might travel the length of an island and back before reaching the consumer, with implications for freshness, quality, and transport costs, which ultimately hurt grower profitability. It also exposes who bears the risk of transport disruption, the cost of produce wastage and the uncertain returns that fluctuate with supply and demand. The role of intermediaries and the trade-offs between different supply arrangements are explored.

For policymakers, this research makes visible how much continued access to fresh fruits and vegetables depends on physical public infrastructure. This provides a food security justification for policy and investment decisions.

3. Literature Review

3.1 Fruit and Vegetable Growing in New Zealand

New Zealand's primary sector is often described as export-oriented; however, the domestic production of food for New Zealand consumers is strategically important and underdocumented. Over 100 types of fruits and vegetables are grown in New Zealand, and many crop types are sold solely or predominantly to New Zealand customers rather than exported. Vegetables (including mushrooms), summerfruit (excluding cherries) and citrus are primarily grown for the domestic market (Curran-Cournane & Rush, 2021; United Fresh, 2025). A significant proportion of avocados are sold to the domestic market, although the split between export and domestic sale fluctuates year on year (United Fresh, 2025). Of the vegetables that are exported, most are unprocessed onions and potatoes (Curran-Cournane & Rush, 2021). However, potatoes, which are considered one of the largest export vegetable crops, earn 90.9% of their market value from domestic sales, highlighting the importance of the domestic market even for crops with export potential (United Fresh, 2025).

All New Zealand fruit and vegetable production – for domestic and export markets – occurs on approximately 80,000 hectares of land, or just 0.6% of New Zealand's farmland (Horticulture New Zealand [HortNZ], 2025; United Fresh, 2025). Vegetable production occurs on slightly more area than fruit production (United Fresh, 2025). Roughly delineating vegetable growing land as domestic-oriented and fruit growing land as export-oriented, this indicates that horticultural production for the domestic market operates at a comparable geographic scale to that for export.

Notably, the quality of information known about the domestic horticulture sector is variable. The cornerstone annual industry data report "Fresh Facts" states, "Within the domestic industry, some product groups have a very clear understanding of the structure of their sector, whilst others appear to be less sure" (United Fresh, 2025, p. 5). Data about fruit and vegetable production and sale often does not distinguish between products destined for the domestic or export market, or it excludes production for domestic sale entirely (Brunsdon & Callendar, 2026; United Fresh, 2025).

At the time of writing, the New Zealand Government has a goal to double export value between 2024 and 2034 (Ministry for Primary Industries [MPI], 2025a). The horticulture industry has its own goal to double farmgate value over a similar timeframe, through the Aotearoa

Horticulture Action Plan (**AHAP**) (HortNZ, 2023). The industry's chosen focus on farmgate value shows recognition that profitability is needed in the domestic market, not just in exports.

3.2 New Zealand Food Security

New Zealand produces more than enough fruits and vegetables to meet its population's needs (Soliman & Greenhalgh, 2020). Enough vegetables are grown to provide 11.7 servings of vegetables per New Zealand person per day. Of these, 3.2 servings are exported, leaving 8.5 servings in the country – more than enough to meet the recommended daily intake of 5 servings per person per day (Curran-Cournane & Rush, 2021). Vegetable imports are minimal, at 0.3 servings of vegetables per person per day, and are largely limited to non-perishable processed potatoes and tomatoes (in chips, canned tomatoes and tomato sauce) (Curran-Cournane & Rush, 2021). Domestic consumption of fresh vegetables currently relies on production occurring within New Zealand, although that balance may have changed in recent years, especially with the 2026 announced closures of major vegetable processing facilities in New Zealand (Farmers Weekly, 2026). Some core components of New Zealand diets, including sugar, wheat, rice and coffee, are not produced domestically at all, leaving the country reliant on imports and exposed to trade volatility (Soliman & Greenhalgh, 2020).

3.3 Food Security as National Security

When global and domestic supply chains are disrupted, the ability to produce food within national borders and feed the domestic population is a matter of national security. This gets to the heart of a country's ability to meet the basic needs of its residents. Challenges to national food security include global factors like geopolitical tensions, geo-economic transitions, climate change and technological advances, as well as domestic factors like biosecurity and water security (Henderson & Coyne, 2025). A stable geopolitical environment, predictable trade conditions and stable climate can no longer be taken for granted, so governments need to plan for upheaval (Henderson & Coyne, 2025).

The impacts of geopolitics on critical imports for food production have become all the more salient in 2026, with the US-Israel-Iran War and the resulting blockade of the Strait of Hormuz severely disrupting the petroleum supply chain. The price and availability of fuel and fertiliser has been a key concern for New Zealand since, with direct impacts on the cost of food production.

National food security relies on the ability to store, transport, and distribute food, as well as the ability to access critical inputs and imports (Yadav et al., 2022). Maritime shipping is the only way to transport significant volumes of goods to New Zealand as an island nation, with the exception of air freight, which is far more expensive. Reliance on food, fuel and fertiliser imports renders New Zealand vulnerable to any disruption to international shipping, creating a risk both for both economic prosperity and food security at home (Henderson & Coyne, 2025).

Countries with economies reliant on export, like New Zealand and Australia, are more vulnerable to disruptions to international shipping (Henderson & Coyne, 2025). During the COVID-19 pandemic, New Zealand responded to shipping disruption by shifting from the typical “just in time” food supply chain to a “just in case” supply chain for exports, building in redundancy through back-up suppliers and prioritising customers with a more stable response to the pandemic (MPI, 2022).

That “just in case” approach was not adopted in New Zealand’s domestic food supply chain. New Zealand’s major supermarket retailers were allowed by the government to stay open during the pandemic as an “essential service”, while specialty grocers like greengrocers and butchers were not. Some specialty retailers closed or moved to online sales (Commerce Commission, 2022). This policy reduced the avenues available to growers to sell their produce and reduced consumer options to access food.

Domestic food security, distinct from domestic food prices, has not historically been a top political priority in New Zealand (Soliman & Greenhalgh, 2020). MPI has released a bi-annual report on the *Situation and Outlook for Primary Industries* since 2012. December 2025 was the first edition to include a special feature on feeding New Zealand, specifically focused on domestic vegetable and arable production (MPI, 2025b). Otherwise, these reports have focused almost exclusively on export.

3.4 Regional Resilience and Adverse Weather Events

New Zealand’s domestic horticultural production is regionally specialised. Avocados are predominantly grown in Northland and Bay of Plenty, apples in Hawke’s Bay and Tasman-Nelson, kiwifruit in Bay of Plenty, summerfruit in Otago and citrus in Gisborne (United Fresh, 2025). Vegetables are mostly grown in Pukekohe, Gisborne, Ohakune, Horowhenua and Canterbury, with some regional crop specialisation like sweetcorn in Gisborne and Hawke’s Bay (United Fresh, 2025).

Regional specialisation means that when adverse weather events hit particular growing regions, the continued supply of a full range of fruits and vegetables is threatened (Soliman & Greenhalgh, 2020; Vatsa & Renwick, 2025). A localised event brings the potential to damage an entire season’s crop of a particular product – for instance, the concentration of summerfruit orchards in Central Otago could all face damage from the same frost or hailstorm. Supply disruption caused by adverse weather affects consumers, exacerbating volatile produce prices (United Fresh, 2025; Vatsa & Renwick, 2025).

In addition to damaging crops, adverse weather events can damage or disrupt the physical infrastructure required to transport fresh produce from farm to market (Brunsdon & Callendar, 2026). Most fresh produce is transported by roads, which can be cut off by slips, flooding or other

natural hazards (Brunsdon & Callendar, 2026). New Zealand agribusiness leaders ranked “develop(ing) resilient supply chains” as one of the 10 most significant issues for the primary sector, alongside “invest(ing) in resilient rural infrastructure” (KMPG, 2026). Food safety and security is a supply chain challenge (Yadav et al., 2022).

3.5 How Do You Describe a Supply Chain?

All of the factors that influence where food comes from, how it reaches the consumer, price, nutrition and culture around food can be considered part of a wider food system. The supply chain as a unit of the food system provides a discrete segment of the wider system to study. Supply chain models typically include “nodes” and “links”, where nodes refer to specific geographical locations, like a storage facility, and links refer to the temporal and spatial pattern of distribution between nodes (Svahn & Westerlund, 2009; Zhang et al., 2025). Each node and link adds “value for customers”, for example through processing, manufacturing and delivery (Svahn & Westerlund, 2009; Yadav et al., 2022).

Supply chain models vary in complexity, the number of nodes described, and linear or non-linear configurations (New Zealand Institute of Economic Research [NZIER], 2025). Nodes in the food supply chain include crop production and harvesting (farms), primary transport, processing or pre-processing, storage, manufacturing, distribution centres, secondary transport, delivery and markets (NZIER, 2025; Zhang et al., 2025). The fresh produce supply chain, in particular, includes post-harvest activities, such as sorting, washing, cooling and packing. Food system infrastructure includes roads, rail, ports, airports and shipping channels, which enable the movement of goods between supply chain nodes (Henderson & Coyne, 2025; United Fresh, 2025).

3.6 Challenges to the Fresh Produce Supply Chain

The fresh produce supply chain faces challenges which differ from other food supply chains, including perishability, limited shelf life, seasonality, and unpredictability (Gadde & Amani, 2016; Zhang et al., 2025). Product quality degrades over time, rather than having a single moment of “expiration” (Zhang et al., 2025). Planning for perishability is a central supply chain challenge, key to reducing food loss, managing product quality and achieving sustainability goals, with implications for food safety and security (Yadav et al., 2022; Zhang et al., 2025).

These characteristics influence the structure of fresh produce supply chains. For instance, cold storage is used to extend the shelf life of perishable products (Gadde & Amani, 2016; Zhang et al., 2025). Managing perishability can help a supply chain achieve economies of scale (Gadde & Amani, 2016). For fruits and vegetables, the ability to effectively manage perishability is constrained by geography, the seasonality of production and the limited availability of suitable growing land (Zhang et al., 2025). The ability to shorten the physical distance or time product has

to travel to market is dependent on where physical and human geography makes it practical to grow, process and retail food.

The literature identifies several additional challenges for fresh produce supply chain management, including traceability to manage food safety, warehouse management and inconsistency of supply and demand (Yadav et al., 2022). Fresh produce is subject to volatile and unpredictable consumer preferences, and staying responsive is a challenge (Gadde & Amani, 2016; Yadav et al., 2022). Supply chain participants who can rise to the challenge of meeting those changing preferences gain a competitive advantage. Optimising a supply chain while maintaining a profit presents marketing, food safety and logistics challenges, showing the diverse skills required for business success.

3.7 Angles for Studying Supply Chains

There are many ways to measure success for a supply chain. Studies have looked to optimise food supply chains, for instance considering how the choice of a food distribution route could lead to more efficient design (Yadav et al., 2022). Early supply chain studies focused on economic performance, while there has been a more recent academic focus on environmental and social outcomes (Yadav et al., 2022). Performance can be measured through lenses like sustainability, uncertainty, risk, perishability, resilience, efficiency, responsiveness, flexibility, food quality, greenhouse gas emissions and growth (Yadav et al., 2022).

Another way to frame supply chain research is to look at where food sources of essential nutrients – like protein or vitamins – are produced, compared to where they are distributed, showing the degree of separation between the localised effects of production and the benefits of consumption. In New Zealand, the spatial distribution of food production has been studied, overlaying spatial layers with nutritional information (Vannier & Barnes, 2025). However, these maps do not distinguish between nutrients destined for domestic or overseas sale and consumption, missing the end destination component of the supply chain. Identified research gaps to develop nutritional risk maps for New Zealand include, “transport, storage, and processing pathways that influence food availability” and “patterns of retail distribution” (Vannier & Barnes, 2025). Essentially, the role of infrastructure in food availability and where consumers access food have not been investigated in the same context as production patterns in New Zealand.

3.8 Supply Chain Links: Transport

New Zealand's fresh produce supply chain relies heavily on roads (Brunsdon & Callendar, 2026; United Fresh, 2025). Rail is used to transport small volumes of apples, bananas, onions and potatoes in New Zealand (United Fresh, 2025), mostly between inland ports (logistics hubs) and sea ports (Brunsdon & Callendar, 2026). Some coastal shipping is used to move fruits and

vegetables, and interisland ferries are used to transport product between New Zealand's North and South Island (Brunsdon & Callendar, 2026).

Some roads are especially important to the fruit and vegetable supply chain. Approximately half of all interregional fruit and vegetable movements in New Zealand transit roads in the Waikato Region (Brunsdon & Callendar, 2026). The State Highway (**SH**) 1 Brynderwyns section between Auckland and Northland and the Waiokea Gorge section of SH 2 between Gisborne and the Bay of Plenty region have been identified as key vulnerabilities for fresh produce transport due to frequent road closures and delays (Brunsdon & Callendar, 2026).

Transport disruption creates a risk for the quality and freshness of product by extending travel distances and time via detours (Brunsdon & Callendar, 2026). Longer distances add cost in fuel, driver hours and wastage of fresh produce en-route. More reliable transportation links would result in better value produce by minimising these costs (Brunsdon & Callendar, 2026).

3.9 Supply Chain Participants and Nodes: Producers, Wholesalers and Retailers

The nodes in New Zealand's domestic fresh produce supply chain have been characterised in the industry publication "Fresh Facts", reproduced in Figure 1. These include growing locations, ports and airports, wholesalers and ripeners, packhouses, online pack assembly services, post-harvest processing, retail locations, foodbanks and end consumers (United Fresh, 2025).

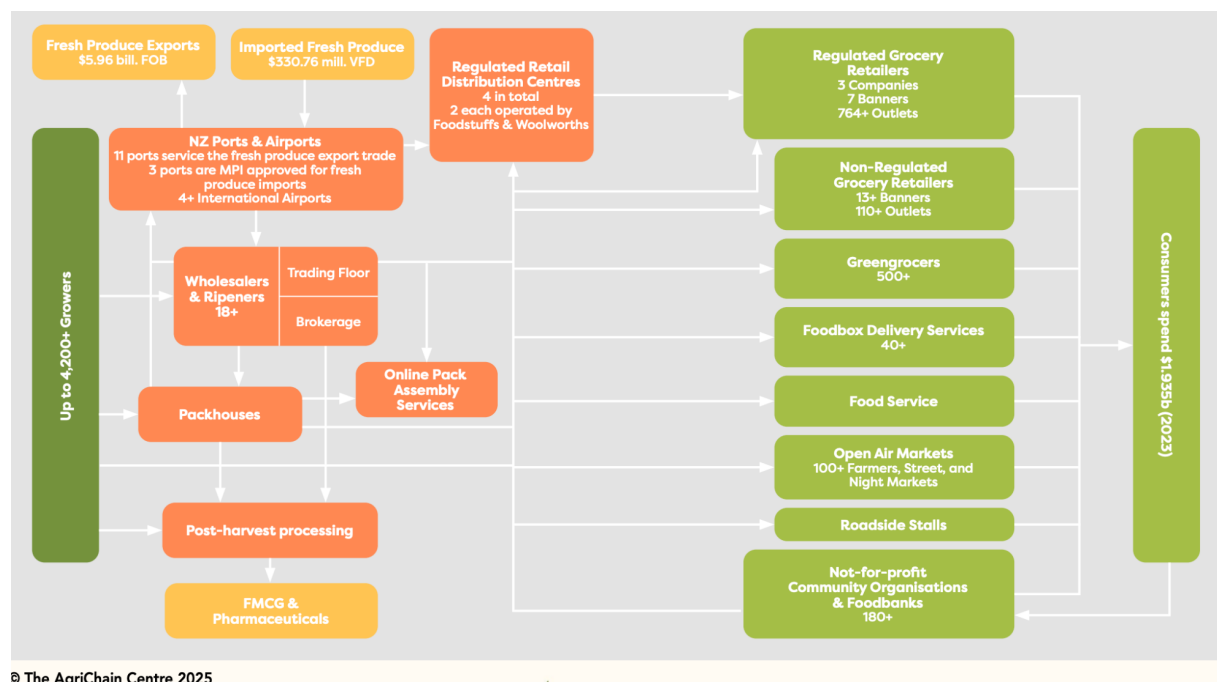


Figure 1. New Zealand's fresh produce supply chain, reprinted from United Fresh (2025) with permission from the AgriChain Centre.

Food supply chain participants include suppliers (growers, farmers, agricultural suppliers, manufacturers and food processors), distributors, consumers, non-governmental organisations, national and international industry bodies, government and allied institutions (Commerce Commission, 2022; Yadav et al., 2022). New Zealand's grocery supply chain can be broadly simplified to producers, wholesalers and retailers (Commerce Commission, 2022). The term "customer" is used in this report to refer to the purchaser at the first point of sale, which is typically a retailer, foodservice provider or broker but not typically the end consumer.

[3.9.1 Suppliers](#)

In grocery policy, the term "supplier" is used to refer to the business that sells directly into supermarket retailers, whether that is a wholesaler, grower or processing company (Grocery Supply Code, 2025). This report follows that convention and uses the term "grower" to describe the domestic producers of fruits and vegetables – whether or not they have a direct supply arrangement with regulated retailers.

[3.9.2 Brokers: Wholesalers and Marketers](#)

The businesses that facilitate the trade of grocery products between food producers and markets are generally known as wholesalers. However, New Zealand's major supermarket chains have their own wholesale functions, which mainly serve their own retail stores (Commerce Commission, 2022). These are distinct from the specialised fruit and vegetable wholesalers and marketers which operate in the same market, serving as a broker between growers and their customers (largely retailers and food service providers) (United Fresh, 2025). There are also single-product wholesalers for meat, bread, milk, imported goods, and wholesalers (Commerce Commission, 2022). Given the potential for confusion of terms, fresh fruit and vegetable wholesalers and marketers are categorised as "brokers" in this report, given their role as an intermediary between producers and customers.

There are at least 18 fresh produce brokers in New Zealand (United Fresh, 2025). These companies serve a mix of grocery retail, food delivery boxes and food service, which includes restaurants, cafes, cruise ships, university dining halls, hospitals and sports stadiums.

[3.9.3 Retailers](#)

Most groceries in New Zealand are sold through one of the three major supermarket retailers: Woolworths, Foodstuffs North Island (**FSNI**), or Foodstuffs South Island (**FSSI**) (Commerce Commission, 2022). These three firms are collectively referred to as "regulated grocery retailers" (**RGRs**) in New Zealand grocery policy and will be referred to as such in this report. The RGRs collectively operate over 764 supermarket produce departments, as shown in Table 1, and there are at least 110 additional grocery stores which sell produce (United Fresh, 2025).

Table 1. Number of Stores Operated by Regulated Retailers, adapted from United Fresh (2025).

Regulated Grocery Retailer	Number of Stores
Foodstuffs North Island	46 PAK'nSAVE 103 New World 163 Four Square
Foodstuffs South Island	12 PAK'nSAVE 43 New World 59 Four Square 70 On the Spot
Woolworths	187 Woolworths 74 FreshChoice/SuperValue

3.9.3.1. Woolworths

Woolworths New Zealand is owned by Progressive Enterprises Limited (Commerce Commission, 2022). In 2002, the Woolworths, Big Fresh, Foodtown, Countdown, Price Chopper, SuperValue, and FreshChoice brands all merged under this one firm (Commerce Commission, 2022). Big Fresh, Price Chopper, Woolworths and Foodtown stores became Countdown supermarkets in 2000s and 2010s, which were then rebranded to "Woolworths" in 2023 (Commerce Commission, 2022), (Woolworths Group, 2023). Stores under the Woolworths umbrella include Woolworths, FreshChoice and SuperValue retailers (Commerce Commission, 2022), (United Fresh, 2025). FreshChoice and SuperValue stores are locally owned franchises under the umbrella of Wholesale Distributors Limited, a firm owned by Woolworths NZ, and they are typically smaller than Woolworths stores (Commerce Commission, 2022). Woolworths stores are not franchises.

3.9.3.2. Foodstuffs

FSNI and FSSI are separate co-operatives which emerged as the result of many mergers over the last century (Commerce Commission, 2022). However, they do share some functions through Foodstuffs (N.Z.) Limited, a firm fully owned by FSNI and FSSI which represents the two co-operatives at the national level, owns retail brands, and provides shared services to FSNI and FSSI (Commerce Commission, 2022).

Foodstuffs stores are franchises supplied centrally by Foodstuffs (Commerce Commission, 2022). FSNI and FSSI own their franchise stores' land, buildings, supply chain infrastructure and IT (Commerce Commission, 2022). FSNI and FSSI provide services to their owner-operator members,

including “wholesale purchasing, warehousing and distribution of groceries”, marketing and IT (Commerce Commission, 2022, p. 28).

Both FSNI and FSSI sell under the New World, PAK'nSAVE and Four Square banners (Commerce Commission, 2022), (United Fresh, 2025). FSSI also sells under the On the Spot banner and, until recently, Raeward Fresh (United Fresh, 2025). FSNI and FSSI do not compete in the same market, since each only operates on one island (Commerce Commission, 2022).

The different brands under the Foodstuffs umbrella aim to serve different consumer segments. PAK'nSAVE stores reportedly aim for low prices and are often located in large towns and cities (Commerce Commission, 2022). New World stores are typically smaller than PAK'nSAVE stores and located in high traffic areas, with a bigger emphasis on customer service than PAK'nSAVE (Commerce Commission, 2022). Four Squares are smaller neighbourhood shops or larger stores in rural areas (Commerce Commission, 2022).

3.9.3.3. Independent Retailers

Other fresh produce retailers in New Zealand include online-only options (My Food Bag, HelloFresh, Wonky Box and WOOP) and those with physical retail stores (The Warehouse, Costco Fruit World, Tai Ping Supermarket, DH Supermarket, Farro Fresh, Fresh & Save Limited, Commonsense Organics, DaHua Supermarket, Wang Korea Food Market, H Mart, Moore Wilson's, Foodie Asian Supermarket, and Paddock to Pantry) (United Fresh, 2025). New Zealand has over 500 fruiterers and green grocers and over 100 outdoor markets (United Fresh, 2025). Fresh produce retail options beyond the RGRs generally fall into the categories of meal kits, fresh produce boxes, big box stores, Asian supermarkets, specialist grocery retailers, greengrocers and convenience stores/dairies with a narrower range of products (Commerce Commission, 2022).

Independent retailers are usually urban, with fewer total stores than the RGRs, and residents of Auckland have the most choices for grocery retailers in the country, ahead of Wellington and Christchurch (Commerce Commission, 2022). Rural consumers are less likely to have access to independent retailers and have less choice for local supermarkets in general (Commerce Commission, 2022). Small, regional towns often only have one supermarket (Commerce Commission, 2022). Planning laws, restrictive covenants on land and limited places where a grocery store would be profitable due to small population have all restricted new stores opening (Commerce Commission, 2022).

3.10 Power and Competition in the Supply Chain

New Zealand's grocery sector is characterised by a lack of competition. The Commerce Commission's landmark 2022 competition study found that the RGRs have a minimum combined market share of 70-90%, holding over 90% of market share for consumers' main shopping trips (Commerce Commission, 2022). The study estimated that the RGRs earn \$430 million annual

excess profits beyond an expected return in a more competitive market (Commerce Commission, 2022).

Power differentials inherently shape food supply chains. Challenges for farmers and growers include unfair profit share with other supply chain players and “weak negotiating power” (Commerce Commission, 2022; Yadav et al., 2022). This holds true in New Zealand, where the consolidation of the grocery retail sector means that there are few alternatives outside of the RGRs for suppliers to sell their products (Commerce Commission, 2022). This dynamic makes it critical for suppliers to secure a place on retailers’ limited shelf space, and many suppliers would close if they could no longer sell through the RGRs (Commerce Commission, 2022).

This dynamic is amplified for perishable products. It is especially difficult to find an alternative buyer for fresh produce on short notice if an RGR does not follow-through on a purchase, and perishable products become unsalable if not sold in a specific time window (Commerce Commission, 2022).

Suppliers with less power have to bear higher costs and more risk, “despite retailers being better placed to manage them” (Commerce Commission, 2022, p. 324). For example, the Commerce Commission (2022) reported that in 2019, RGRs earned one-third to two-thirds of their revenue from products on promotion, far more than peer nations. Promotions are most often funded by suppliers, meaning that suppliers get a lower return and bear the cost of the promotion, while the retailer retains the same profit margin.

It is important to distinguish, however, that larger suppliers with brand recognition have greater negotiating power, including in New Zealand (Commerce Commission, 2022). Most supplier and retailer relationships are bargaining relationships with specific negotiated trading terms (Commerce Commission, 2022). The level of negotiating power a supplier has influences whether they are a “price taker” or a “price maker” – meaning whether they have to sell at the price the retailer offers or whether they can demand a particular price (Commerce Commission, 2022).

Low trust between supply chain participants has been observed globally across food categories (Yadav et al., 2022). For those with power, exercising control in the supply chain can create short-term cost savings, but it risks creating brittle and transactional relationships, which in turn affect supply chain resilience (Choi & Hong, 2002; NZIER, 2025). Conflict in supply network relationships can decrease participants’ ability to solve full supply chain challenges (Gadde & Amani, 2016).

The supply chain member with the most financial power can be described as the “focal company”, which in the case of New Zealand, would be the RGRs (NZIER, 2025; Stadler, et al., 2015). Other supply chain participants then have to cater to the focal company’s expectations. For example, RGRs have been known to leverage specific requirements for logistics to reduce

competition. In the past, RGRs have required the use of an in-house provider rather than allowing suppliers to choose the most cost-effective transportation option (Commerce Commission, 2022).

In 2023, the Grocery Supply Code came into force, which prohibits retailers from requiring suppliers to use a particular transport or logistics service (Grocery Supply Code, 2025). However, retailers retain the power to set supplier standards across domains such as food safety, sustainability and coolchain management (Gadde & Amani, 2016). For example, Foodstuffs and Woolworths require all of their produce suppliers to hold a domestic or international social practice certification such as the New Zealand Good Agricultural Practice (NZGAP) Social Practice add-on or Global Good Agricultural Practice (GLOBALG.A.P.) Risk Assessment on Social Practice (GRASP) to reduce the risk of worker exploitation in the supply chain (FSNI et al., 2026; Woolworths Group, 2020).

Competition matters not just for pricing and power dynamics, but also for the effective operation of the supply chain. Supply chain innovation is expected in competitive markets (Commerce Commission, 2022). Innovation that grows the value of the overall supply chain can boost profits for all participants (Zhang et al., 2025).

3.11 Describing New Zealand's Fresh Produce Supply Chain

Limited research has been conducted on New Zealand's fresh produce supply chain. Supply chain links and nodes have been characterised in "Fresh Facts", but without a spatial or geographic component (United Fresh, 2025).

In January 2026, Horticulture New Zealand commissioned Infometrics to compile a report on New Zealand's fresh produce supply chain with a focus on hectares of production, value and volume of produce per region, as well as infrastructure. The research delivered on an action under the AHAP to "map existing supply chains and infrastructure by region to identify key intervention points" (Brunsdon & Callendar, 2026; HortNZ, 2023).

The Infometrics study found that no sole entity in New Zealand holds information about the entire fresh fruit and vegetable supply chain (Brunsdon & Callendar, 2026). The report states, "the information needed to populate a national supply chain model is dispersed, inconsistent, or not collected at all" (Brunsdon & Callendar, 2026, p. 7). The report relied on industry bodies and some packhouses, but did not interview or survey growers, wholesalers or retailers. Further research is needed to capture the experiences of supply chain participants themselves.

4. Methodology

This report uses a case study approach to characterise New Zealand's domestic fruit and vegetable supply chain. The case study relies on both interview research and geospatial mapping based on publicly available information.

4.1 Mapping

Using desktop research and information publicly available online, key nodes and links in the national fresh produce supply chain were mapped using Google MyMaps. The information contained in these maps was corroborated but not informed by interviews. No information was included in the maps that could not be found publicly online. Brokers and retail distribution centres mapped were based on the list of key sector participants in “Fresh Facts” and whether their address was public online (United Fresh, 2025). **Whether a business was included in the map provides no indication whether someone from that business was interviewed for this report.** Once points on the map were placed, clusters of supply chain infrastructure were identified.

4.2 Interviews

Semi-structured interviews were used to characterise and describe the real world context of the fruit and vegetable supply chain based on the experiences of commercial participants in the domestic market. Interviewees were selected to represent the major stages of the supply chain (growers, brokers and retailers), regions, business sizes and crop types. In total, 15 interviews were conducted, described in Tables 2 and 3, each lasting approximately one hour. 13 interviews were conducted over video call on either Zoom or Microsoft Teams, and two interviews were conducted in person. All interviews took place between 19 March and 29 April 2026.

Table 2. Interview Participants by Type

Growers	6
Brokers (Wholesalers and Marketers)	7
Retailers	2
Total	15

Table 3. Interview Participants' Operations by Location*

North Island only	8
South Island only	4
Both North and South Island	3
Total	15

**Note: This relates to where their own physical operations are located, not the total range where their product is distributed.*

4.2.1 Growers

Six growers were interviewed, representing niche and common crop types, large and small businesses, intergenerational and first generation businesses, indoor and outdoor cropping and both the North and South Island. Collectively, the growers interviewed grew over 25 crop types, including both fruits and vegetables. Individual crops are not named in this report to protect the identity of interviewees. Combined information of crop type and geographic location along with interview responses could be enough to make some participants easily identifiable, even for more commonly grown crops.

Interviews provided the primary producer's perspective of the supply chain, giving insight into how much a grower knows about where and how their product travels, how much they decide about the features of their product's supply chain, and why they make those decisions.

4.2.2 Brokers: Wholesalers and Marketers

Seven brokers were interviewed, with businesses self-describing as wholesalers, marketers or both. These interview participants are grouped together because they serve a common role in the supply chain facilitating the sale of produce between grower and customer.

4.2.2.1 The Importance of Interviewing Brokers

The entire food supply chain faces the challenge of information asymmetry. Producers and processors hold information about supply, and retailers and consumers hold information about demand (Yadav et al., 2022). Distributors are a linking bridge which hold information about both supply and demand (Yadav et al., 2022), but in New Zealand, these distributors are often the supermarkets themselves. However, the fresh produce category has wholesalers and marketers

independent of the RGRs. These were the most critical firms to interview because they had information about both supply and demand.

[4.2.2.2 Note on Vertical Integration](#)

Vertical integration is a strategy in which a firm aims to have ownership and control over as much of their supply chain as possible. Some wholesalers could also be categorised as growers because they have vertically integrated their businesses by purchasing growing operations. For the purposes of this study, these firms are counted as brokers because that is the primary component of their business model. The individual staff members interviewed worked in wholesale or marketing.

Several growers and brokers interviewed showed some degree of vertical integration. Configurations included:

- A grower who self-described as a marketer and distributor and produces some of their own inputs.
- A grower who processes, markets and imports to complement their product off-season.
- A grower, exporter, importer and wholesaler.
- A marketer and grower owned by a wholesaler.

[4.2.3 Retailers](#)

Two grocery retailers of differing scales and market share were interviewed. These retailers were able to give insight into mainstream and independent supply chains.

[4.2.4 Interview Description](#)

During the interviews, each participant was asked to describe the supply chain for their products. For growers, this included the location of the sites where they grow, how much of their product is destined for the domestic versus export market, where the product is packed and labelled, and each further destination the product travels to until the retailer. For brokers and retailers, this included the physical location of their operations and where they sourced their supply. All interviewees were asked which method of transport is used between each destination. Follow-up questions were asked to dive deeper into relevant topics and when participants wanted to take the conversation in new directions. While the interviews were structured around drawing supply chain diagrams, follow-up questions were asked.

[4.3 Drawing Supply Chain Diagrams](#)

After asking introductory questions during interviews, a slide (Figure 2) was shared on screen with boxes representing nodes, arrows representing transport links, and icons representing different modes of transportation. Participants were asked to verbally help fill out the diagram. A series of

questions were asked about the physical location of their business' operations and where fruits and/or vegetables moved throughout their supply chain, "drawing" that information on the slide with boxes, arrows, icons and notes.

Participants were asked about the following nodes and links, drawing on supply chain characterisation from Svahn and Westerlund (2009) and a literature review conducted by NZIER (2025):

- Location and Ownership of Facility Nodes
 - Processing and packing
 - Storage
 - Market floors
 - Distribution centres
 - Retail
- Distribution Links
 - Road, rail and ferry network
 - Transportation configuration and who pays.

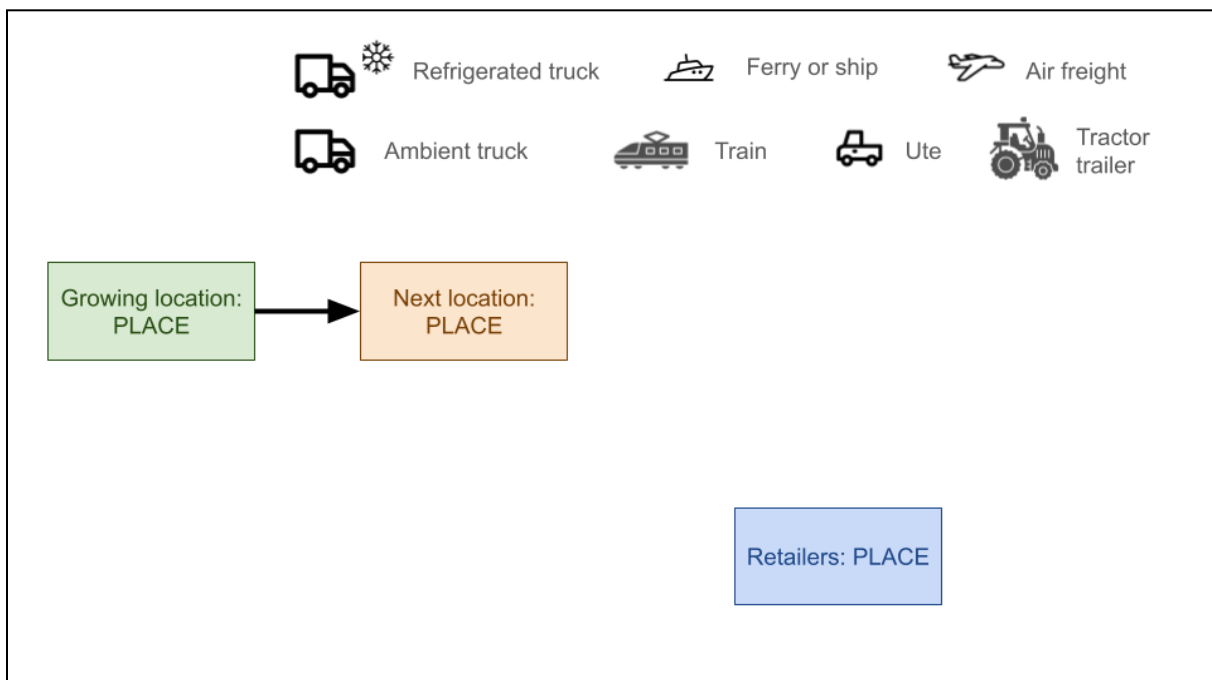


Figure 2. Template supply chain diagram slide

4.4 Commercial Sensitivity and Human Ethics

This research was reviewed and approved by the Lincoln University Human Ethics Committee. All participants were provided with a consent form, attached as Appendix B.

For this report, each interview was prefaced by stating an understanding that commercial sensitivity is a concern for participants in the fresh produce industry. It was stated that all information gathered in interviews would be kept anonymous and aggregated. However, New Zealand has a very small domestic market, and sometimes “anonymous” data or interviews can still contain identifiable information, for instance if there is only one supplier in a particular region of a niche crop. Interview participants were invited to let the researcher know before, during, or after the interview if they had any concerns about commercial sensitivity. This invitation was taken up by some interview participants before and during the interview, and in those instances, the sensitive information was noted to be excluded from the final report.

Participants were given the option on the consent form and verbally in the interview to confirm whether they were comfortable with the interview being recorded for notetaking purposes. They were informed that the recordings would be deleted once the report was finalised.

Given the commercially sensitive nature of the material in this report, responses in this report's analysis are not attributed to a specific, numbered interview. This is because the combination of interviewee characteristics and interview responses could collectively render the subject identifiable. Responses are instead attributed based on interviewee category: grower, broker or retailer.

5. Analysis

5.1 Mapping

Mapping the publicly available locations of wholesalers and distribution centres demonstrated that where there are grocery distribution centres, they are often co-located with markets and transportation depots. Maps (in Appendix A) revealed supply chain clusters in Mt. Wellington (Auckland), Tauranga, Palmerston North, Grenada North (Wellington) and Hornby/Sockburn (Christchurch). Some of these clusters showed multiple wholesale businesses operating out of the same building. Market infrastructure was also present in New Plymouth, Hastings, Nelson, Dunedin and Invercargill. Clustering was corroborated in interviews; for example, one wholesaler said that they chose their location in Mt. Wellington due to proximity to other wholesalers and associated efficiency for transport.

The number of wholesalers in each population centre is listed in Table 4. These numbers are a minimum because wholesalers were mapped only if they were listed in “Fresh Facts” (2025), and those wholesalers without publicly available addresses were not mapped. Virtual-only markets

such as one in Whangarei were excluded from maps because produce does not physically transit the location.

Table 4. *Fresh fruit and vegetable wholesalers in population centres*

City	Minimum number of wholesalers
Whangarei	1 (virtual only)
Auckland (including Pukekohe)	11
Tauranga	6
Hamilton	4
Rotorua	1
Hastings	1
Palmerston North	3
Wellington (including Lower Hutt)	7
Nelson	2
Christchurch	5
Dunedin	1
Invercargill	1

Consistent with the Commerce Commission's (2022) findings that consumers in Auckland have access to the most options for grocery stores, followed by consumers in Wellington and Christchurch, mapping revealed that Auckland has the most unique fresh produce brokers, followed by Wellington, then Christchurch. The Commerce Commission (2022) also found that groceries were relatively less expensive in Auckland than the rest of the country, likely due to greater retail competition. It may be that greater competition amongst wholesalers also continues to lower fruit and vegetable prices in Auckland.

The correlation between the number of independent retailers and the number of wholesalers was corroborated in interviews, with one wholesaler explaining that the number and geographic diversity of wholesale markets has decreased over time, with the growth of supermarket market share reducing the number of independent grocers (who buy through the markets).

5.2 Supply Chain Diagrams

The exercise of drawing supply chain diagrams corroborated the model in Figure 1, showing the same supply chain players. It also corroborated the findings of Brunsdon & Callendar (2026), that “some products are packed and retailed onsite, whereas others are transported off site for packing, with further movements for storage, distribution and/or export.” (Brunsdon & Callendar, 2026, p. 11). While Brunsdon & Callendar (2026) found that Auckland was typically the distribution point for domestically consumed produce, interviews for this report instead revealed that Christchurch is the main distribution point for products destined for the South Island market, Palmerston North plays a role for the Lower North Island, and Tauranga plays an important role for Bay of Plenty crops such as avocados and kiwifruit.

5.3 Descriptive Case Study

While the primary purpose of this study was to characterise the physical geography of fruit and vegetable supply chains, the semi-structured nature of the interviews meant that other topics were discussed, guided by participant interest, including methods of sale, freight costs, resilience, cool chain management, and supply chain vulnerabilities. The following descriptive case study of the New Zealand fruit and vegetable supply chain was developed based on those conversations.

5.3.1 Supply Chain Nodes: Where Does it Go?

Supply chain nodes in the New Zealand fresh produce supply chain can be generalised as:

- Growing operations,
- Packhouses,
- Markets,
- Transportation depots,
- Grocery distribution centres, and
- Retailers.

5.3.1.1 Packhouses

Most products are packed at a packhouse. Packhouses may be onsite as part of the growing operation, or they may jointly pack produce for multiple growers at a dedicated site (Brunsdon & Callendar, 2026). Most fruits and vegetables are packed in the same region in which they were grown (Brunsdon & Callendar, 2026). After fruits and vegetables are packed, they are transported to either a broker or grocery distribution centre, sometimes via multiple transportation legs, before transportation to the final retail location. The number of steps in this process varies depending on the method of sale, including whether and how sale is facilitated by a broker.

5.3.1.2 Brokers

The general role of brokers – wholesalers and marketers – is to sell produce to a retailer or food service customer who then sells it to an end consumer. Brokers represent third party growers in the marketplace as their salesperson, with one wholesaler describing their role as a marketing arm for grower suppliers. Wholesalers and marketers sell fresh produce through physical depots and market floors. They also manage “virtual” markets and electronic sales.

In a virtual market, a product is electronically processed through the depot even if it never physically transports that location. Instead, it is sold by the broker but physically transported directly from packhouse to customer. Purely virtual markets slash operational costs, as described by one wholesaler,

“Traditionally, it was based around bricks and mortar and physical market sites. Now, we’re just trying to connect product with customers rather than the huge expense of managing a site.” – Wholesaler

One wholesaler shared that if they want to open a new location somewhere with high property costs, they can open a virtual market instead. However, the option to touch, smell and “eyeball” produce in-person at markets, as one independent grocer put it, continues to be valuable for discerning customers.

5.3.1.3 Distribution Centres

Grocery acquisition and distribution is a national process for RGRs through centralised distribution centres (**DCs**). Some products are sold and distributed straight to individual stores, especially in the Foodstuffs group (Commerce Commission, 2022). Both central headquarters and individual stores make decisions about which products to stock on shelves (Commerce Commission, 2022). Buyers from individual stores order from the distribution centre in advance. One retailer interviewed estimated that 90% of produce is sent through the distribution centre. The locations of the RGRs' fresh distribution centres are shown in Table 5. In addition to these distribution

centres, FSNI transports fresh produce through transport depots in Whangarei, New Plymouth, Hastings and Wellington.

Table 5. Fresh distribution centre locations of major retailers

Retailer	Auckland	Palmerston North	Christchurch
Woolworths	X		X
Foodstuffs North Island	X	X	
Foodstuffs South Island			X

[5.3.2 Methods of Sale](#)

There are three main methods of sale in the New Zealand fresh produce supply chain. Customers can either buy:

- Direct from the grower,
- With a direct relationship to the grower, facilitated by a broker, or
- Through a broker without a direct relationship with the grower.

[5.3.2.1 Direct from Grower](#)

The most direct way for a grower to sell their fruits or vegetables to an end consumer is through their website or rural roadside retail. One step further back in the supply chain, growers can also sell their product directly to retailers or food service providers through one to one relationships. Sales to retail can be direct to an independent retailer's store, the distribution centres of major grocery retailers, or individual franchise stores of the RGRs such as individual NewWorld, Pak 'n Save, FourSquare, SuperValue or FreshChoice stores.

In franchise models, not all products have to be routed or purchased through centralised distribution centres. Franchise operating models allow stores to cater their offerings to their particular consumer demographic by procuring directly from suppliers.

The RGRs have direct supply arrangements with preferred category suppliers, who may be their only or main supplier for a specific crop type. For retailers, the literature describes that single sourcing, from one supplier, provides the advantage of scale and often a lower cost product (Svahn & Westerlund, 2009). This was confirmed in some interviews, but others described a dynamic where a single major supplier of a crop can command higher prices through direct supply arrangements. Single sourcing also introduces the risk of overreliance, leaving the retailer exposed if the supplier is unable to deliver due to crop loss or another disruption.

Direct supply arrangements can have benefits for both the grower and the retailer. Interviews described that direct relationships can ensure continuity of supply for the retailer and fresher product that is routed directly to the customer rather than via a broker. Growers in contracted direct supply arrangements benefit from preferential access to retail shelves and certainty of demand.

5.3.2.2 Through Direct Grower Relationship, Facilitated by Broker

Growers and retailers can have a direct supply relationship where the sale is managed by a broker. In this category of sale, the wholesaler or marketer sells on the grower's behalf, and the wholesaler does not necessarily take physical control or ownership of the product. The paperwork and electronic transfer is handled by the wholesaler, but the product is delivered directly from grower to retail customer. Both major grocery retailers and independent grocers use this method of sale. This method can shorten the time product spends between harvesting and retail and save on costs because it avoids having to unload and load the product at a wholesaler's physical operations.

5.3.2.3 Through Wholesaler without Grower Relationship

Customers can also purchase products through a broker without a specific grower supplier in mind. In this method, growers transport their product to a wholesaler's physical location. Retail or foodservice customers then purchase the product from the wholesaler, in person, online or over the phone. The grower may not know who buys their produce or its end destination, and the customer may not know which grower supplied the product.

Brokers can also be preferred category suppliers for the RGRs, with one broker stating they were able to get the best orchard gate returns for growers through their direct supply relationship with one of the major retailers.

Wholesalers give retailers access to product from multiple suppliers. This provides a more reliable and resilient supply and allows the retailer to benefit from different suppliers' skillsets (Svahn & Westerlund, 2009).

5.3.2.4 Trading versus Consignment

When a sale is facilitated by a broker, the type of sale can be characterised based on how the grower is paid. Brokers can either buy product outright from growers at a predetermined price (known as “trading”) or sell for growers on consignment, where the broker earns a percent commission.

When a product is traded from grower to broker at a fixed price, the wholesaler takes ownership of the product on arrival. The grower has certainty about what they will be paid for their product, and they will be paid the same amount whether the broker makes a profit or a loss. In this configuration, the wholesaler, rather than the grower, is exposed to the risk of fluctuating supply and demand, and the wholesaler works for themselves rather than as a salesperson for the grower. Some wholesalers only trade, rather than sell on consignment.

When a product is sold on consignment, the grower owns the product until the broker sells it to a customer, and the product leaves the wholesaler's building. This means that a grower could theoretically take back their product at any time until it is sold to a retailer or foodservice customer. Most domestic produce is sold on consignment.

Opinions about which method is more profitable for growers varied between interviews. Some interviewees speculated that growers can make more money on consignment because they benefit from higher prices when there are spikes in demand. However, some viewed selling on consignment as a gamble that the market price will be higher than a wholesaler would agree to trade, while the price could just as easily be lower than expected. The market price the product will achieve is unknown and dependent on supply and demand on a given day. Trading at a fixed price provides certainty, while selling on consignment exposes growers to gains or losses tied to the daily market value of their product.

5.3.3 Supply Chain Links: How Does it Get There?

The supply chain diagrams drawn during interviews included modes of transportation used from farm to retail, shown in Table 6. All interviewees reported the use of refrigerated trucks in their supply chain, alongside heavy reliance on interisland ferries. Two-thirds of participants had ambient (unrefrigerated) trucks or light vehicles in their supply chain, for local deliveries or less perishable product lines.

Of most interest were the two supply chain participants utilising domestic air freight, counter to the expectation that air freight would not be financially feasible except for export. Multiple brokers reported using rail, but only for imported produce, so that was excluded from Table 6. Similarly, one broker did report using coastal shipping, but only for imported products.

Also of interest were the three growers using courier or NZ Post to deliver their products directly to consumers or foodservice. All three growers mentioned that it was not the most profitable arm of their business, but they valued fostering direct relationships with their consumers. Further detail about methods of transportation is described in the following sections.

Table 6. *Types of transportation used in the domestic supply chain*

Transport Type	Respondents (out of 15)
Refrigerated trucks	15
Ambient trucks or light vehicles	10
Ferry	13
Coastal shipping	0
Air freight	2
Rail	0
Courier or NZ Post	3

5.3.3.1 Road Transport

Both ambient and refrigerated trucks are used to transport fresh produce, depending on the perishability of the crop type and distance to travel. Most long-haul trucks stop in multiple centres. On each link of the supply chain – from grower to broker, grower to distribution centre or distribution centre to retail store – the product could be subject to multiple truck stops or changes. Interviewees described the heavy reliance on roads as a major vulnerability, corroborating the findings of the Brunsdon and Callendar (2026) report.

5.3.3.2 Who Owns the Trucks?

Growers arrange transportation for their own product to the first point of sale, either with their own trucks or through a hired freight company. If a wholesaler takes physical ownership of the product, they or their customer will arrange freight to the next supply chain node. In the case of major retailers, the wholesaler arranges transport to the RGR distribution centre.

Interviewees across all three categories (growers, brokers and retailers) used a mix of owned and hired road transport. Benefits of fully or partially using their own vehicle fleets included:

- less reliance on other people,
- reduced vulnerability to road closures (because they could make their own detours),
- flexibility and
- the ability to pick things up instead of having them delivered when there is disruption.

An independent retailer said owning their own vehicles gave them power to work around supply disruptions or source product outside of scheduled deliveries, saying,

"It gives us some freedom..to be like 'Something's broken down, we've missed this'. You know, jump in the truck, jump in the van."

– Independent retailer

For those who did not own their own vehicles, reasons to contract out the transportation part of the supply chain included:

- the low profit margin for logistics with lots of room for error,
- a perception that using a contractor is more economic and
- a lack of expertise in logistics.

A further challenge is that trucks have to travel in two directions, and an empty truck doesn't earn money. Growers usually contract logistics providers for non-local deliveries because freight companies can plan their deliveries to have full trucks in both directions.

5.3.3.3 Ferries

All supply chain participants who transported product between the North and South Island relied on interisland ferries. The ferries were repeatedly described as a major supply chain vulnerability due to frequent disruption from mechanical breakdowns and cancelled sailings. With the rare and costly exception of domestic airfreight, ferries are the only way to move product between the North and South Island, and the ferry companies face limited competition.

Interviewees consistently described the ferries as extremely expensive. One grower said that it's more expensive to send a box of product to Wellington from the top of the South Island than a whole pallet to Invercargill, without the certainty that it will arrive on time and in good condition. In their words, they,

"Don't mind paying for a good, reliable service, but you do mind paying a premium when it's all just pretty average." - Grower

5.3.3.4 Air Freight

Air freight is an uncommon method of domestic transport for fresh produce. However, its use was reported for some highly perishable, high value domestic crops. Air freight provides an alternative to the ferries and to trucking from geographically isolated growing locations.

5.3.4 Freight Costs

The cost of all modes of freight was a consistent theme, described by a wholesaler as one of the biggest challenges for domestic supply after compliance costs. Freight costs have to cover wages for drivers, fuel and the vehicles themselves, which are imported.

5.3.4.1 Impacts of the 2026 Fuel Crisis

On 28 February 2026, the United States and Israel launched strikes on Iran, initiating a war and a prolonged fuel price and availability crisis in New Zealand. All interviews were conducted during this period of instability, providing a natural case study of how supply chain participants manage a sudden supply chain shock.

The fuel shortage has impacted the availability and cost of transport. According to one wholesaler, the cost of freight was realised in produce pricing up until the US-Israel-Iran War. Transport companies charge users (growers and brokers) a Fuel Adjustment Factor (**FAF**). One wholesaler shared that they'd seen a FAF at 13-15% of transport cost since 2021. The week they were interviewed, the FAF jumped from 18% to 30% due to the effects of the US-Israel-Iran War on fuel prices.

The market has not fully passed the increased price of fuel on to consumers, so for now, someone else has to bear the cost of elevated fuel prices. Who bears that cost varies. Several interviewees stated that growers are paying the full cost of transport. However, some growers are charging their retail, wholesale or food service customers a FAF. On a short-term and case-by-case basis, one retailer said that they are absorbing the cost. Who absorbs the cost depends on negotiating power, which does not typically sit with the grower.

Some supply chain participants expressed concern about the long-term viability of some businesses if they cannot afford the continued high price of fuel. If growers exit the market and their land use is transitioned into pastoral or forestry use, it would reduce the amount of food being grown for the domestic market, creating a food security issue. They also expressed concern about New Zealand's continued ability to access imports, with a risk of New Zealand getting skipped on international shipping networks.

5.3.4.2 Effects on Geographic Supply Patterns

The cost of fuel is putting pressure on New Zealand's elongated supply chain, with wholesalers and retailers questioning the viability of trucking the length of the country due to freight costs. One North Island-based wholesaler remarked that the cost of diesel is making it "uncompetitive" to source product from the South Island. Instead, they will look to source from growers closer to their locations where possible or order from further suppliers less frequently. Freight costs may make it cost prohibitive to source some product at all.

Similarly, some growers may turn away from directly supplying independents, instead only selling their product to centralised locations to minimise freight. Suppliers pay fees for products to be processed through RGR distribution centres, which are avoided when selling directly into franchise stores, but selling into a distribution centre means the supplier only has to coordinate one delivery rather than several out to individual stores. This highlights a trade-off between the centralised, streamlined hub-and-spoke supply chain approach or the local, regionalised one.

5.3.5 Route Disruption

Transportation is the post-harvest portion of the supply chain most often disrupted. Routes can become congested or impassable due to adverse weather events, traffic accidents, roadworks or earthquakes. Ferries are often disrupted by mechanical issues or cancellations due to weather. Interviewees reported regular disruption, from a weekly to monthly frequency. The more geographically isolated the growing location, the more severe disruption can be, especially with major weather events or earthquakes. The further a product has to travel, the greater risk that disruption will occur. As one grower stated,

"The longer it's been transported, the more that can go wrong." – Grower

Physical infrastructure failing is a risk to the continuity of food supply. Growers offered examples such as an earthquake damaging SH 1, which crosses multiple faultlines, or the collapse of the bridge over a river between their growing location and market which would prevent trade or require detours.

Effects are national, not localised, and disruption has cascading impacts on the supply chain. New Zealand has just a few main supply routes via the state highways. When one is disrupted, it puts pressure on the rest of the road system as trucks take the same detours. When a road is closed for a single day, it can mean the next day is lost as well if product cannot reach the market by the cutoff time for drop-offs. A ferry cancellation in Picton can affect the timely delivery of produce to a wholesaler in Auckland. If product cannot get to market at all, retailers and brokers then all need to find volume from elsewhere.

When road closures happen, they add to freight costs by pushing driver hours and requiring detours. Drivers are only allowed to drive for a limited number of hours per day, so detours have to navigate around that constraint.

Delays also affect product quality by stretching the hours until market. The value of produce declines immediately as it degrades, like how a car depreciates in value as soon as it is driven off the lot. No one in the supply chain can charge more for a product that is declining in quality just because inputs – like freight – cost more.

To mitigate the risk of delayed product, one retailer described keeping a couple days of extra stock in the distribution centre when possible but said that is not possible for highly perishable products like bagged salad. Interviewees expressed that retail and wholesale customers tend to understand delays given their frequency, but consumers don't understand product shortages or quality issues well.

[5.3.6 Cool Chain and Perishability](#)

As discussed in the literature review, the fresh fruit and vegetable supply chain is characterised by perishability, which necessitates timely movement of goods and appropriate cool chain (refrigeration) management to slow the process of degradation. Handling and temperature control are critical to ensure fresh produce arrives at its destination in a saleable form. This is why refrigerated trucks were used for long-haul transport in the supply chains of all interview subjects.

The major retailers have requirements for their suppliers to manage temperature from farm gate to distribution centre, with increasing levels of compliance. Both Woolworths and Foodstuffs measure truck temperature on arrival. For example, the Foodstuffs Compliance Pack states, "Temperature sensitive products will have temperatures checked and documented on arrival to the store. Products will not be accepted if they do not meet Foodstuffs strict temperature limits" (FSNI et al., 2026). In addition, both Woolworths and Foodstuffs require fresh products to be delivered to their distribution centres in hard-sided trucks, which offer greater temperature control than curtain-sided trucks. Hard-sided trucks are also safer for forklift drivers, who drive onto the trucks to move product.

Strict logistics specifications can counterintuitively add time to the supply chain. Small growers that only have curtain-sided trucks may have to reroute their produce through a wholesaler, even if it means driving further, so that it can be unloaded and reloaded into a hardsided truck for delivery.

[5.3.6.1. Temperature and Hired Freight](#)

Meeting requirements for temperature control is logistically challenging for growers who entrust their products to contracted freight providers. Multiple interviewees mentioned that untrained

drivers are a supply chain vulnerability. Products may be loaded and unloaded multiple times in transit, sometimes sitting in unchilled locations between transportation legs. Growers expressed frustration with a lack of driver understanding of perishability or shelf life, fresh produce being left at the transport depot for too long, and drivers stacking product in the trucks in a sub-optimal configuration. Multiple interviewees mentioned freezer burn or exposure to warm air damaging produce depending on where in the truck it was packed.

The lack of information or transparency about whether and how product is kept at the right temperature in the hands of contracted freight providers was a theme. One grower described putting expensive data recorders in self-addressed envelopes in crates with their produce to be mailed back to them once it reached the end of the supply chain. The data they recorded included major temperature spikes, indicating their highly perishable product was left outside, unrefrigerated. With up to four truck movements between their farm and the final market destination, the marketability of their produce was being left up to the daily decisions and training of unknown truck drivers.

Temperature control can also be subject to the practices of other growers. At harvest, a grower can remove the “field heat” in their crops by cooling them in a chiller as soon as possible. Not all growers have chillers to do this pre-cooling, so their products may transfer heat to chilled products sharing the same truck. Interviewees’ comments were consistent with the Brunsdon and Callendar (2026) report, which found that the first stretch of transport between harvest and the packhouse is the most critical to cool and stabilise produce temperatures to manage shelf life and quality.

There are strategies that growers can take to manage their own temperature risks. Interviewees’ described double boxing their product and trying to arrange product pick-up as late in the day as possible to shorten time with the logistics company before arriving to market. One grower described walking their product into the local supermarket’s chiller themselves, rather than leaving the task to supermarket staff, who they’ve seen leave produce on the loading bay in the sun for unknown amounts of time.

Wholesalers and retailers acknowledged the importance of their own cool storage infrastructure to prevent spoilage, with one wholesaler saying,

“We made a conscious effort to invest heavily in cool storage because the growers – they go to a good effort to get it on...a cool truck, and then we don’t look after it properly, so...we’re trying to look after it better now. And [get] a better return for the customer too.” – Wholesaler

5.3.6.2 Crops in Storage

The supply chains for crops that store well and those that are highly perishable differ because of the relative time pressures or lack thereof. Crops that store can be slowly released to market to meet demand and achieve the best prices, while perishable products have to be sold when they're ready or they'll spoil.

For crops that are stored for long periods, the effects of disruption from a weather event may not show up until much later. For instance, when onions were damaged during the 2023 Auckland Anniversary floods, shortages weren't seen in the market for months because previously stored onions were able to meet demand for some time. It is a similar story for slow-developing quality issues. Too much heat during apple harvest can reduce fruit quality, but the problem takes months in storage to develop, only to be seen by consumers later in the year.

5.3.6.3 Who Pays for Wastage?

When a product shows up damaged or spoiled, who pays depends on who "owns" the product or has a duty of care. Both wholesalers and retailers stated that the grower is still responsible for quality within a certain time window after the product arrives at the wholesaler or distribution centre, and any wastage can be deducted from grower pay.

If wastage is found within that window at the distribution centre, the supermarket will have a conversation with the supplier about whether the product should have a price change or be sold at all. The product can be returned to the grower at the grower's expense, but that is not often practical depending on their growing location.

If the product is safe and suitable for consumption but fails to meet supermarket specifications, the grower can arrange for it to be sold to a wholesaler instead. In that case, the grower arranges for the wholesaler to pick it up from the distribution centre. If a product is damaged in transport and rejected by the wholesaler or retailer on arrival, the grower bears the cost and may try to recover costs from their transport provider. Recovering costs can be challenging. As one grower said, when this happens,

"Everyone runs for cover." - Grower

If wastage is found after the specified window, the retailer or wholesaler bears the cost. Both retailers interviewed described trying to move product swiftly out of the distribution centre or cool storage to sale, with one stating,

"We don't want things sitting, and fresh is best for us." - Retailer

5.3.7 Geographic Location of Supply Chain

Geographically, New Zealand is a difficult country to service with groceries – it is long and skinny with a body of water in the middle. It takes more than three days to transit from Northland to Invercargill. New Zealand has only a handful of population centres with numerous small catchments of people that need access to groceries as well. This pattern differs from countries like Australia, which have population-dense, consolidated markets in major cities and benefit from economies of scale.

The geographic location of growing operations impacts costs from production to transport. Where to grow may have been a choice made by previous generations, and new businesses will often crop up by leasing or purchasing existing growing infrastructure. Once growing infrastructure like glasshouses or a packhouse is in place, it is not usually removed. The locations where fruit and vegetable growing can take place is also constrained by appropriate soils and climate.

New Zealand's domestic supply chain is highly centralised, with fresh produce distribution centres only located in Auckland, Palmerston North (just for Foodstuffs), and Christchurch, as previously shown in Table 5. For suppliers in the Lower North Island who sell through Woolworths, the lack of a Palmerston North distribution centre means that they have to transport their product to the distribution centre in Auckland before it is trucked back to the Lower North Island for retail sale. The same can be said for fruit and vegetables grown in Gisborne which have to be trucked to Auckland to be trucked back to consumers in Gisborne, or Nelson-Tasman produce sent to Christchurch and back again. There are growers on the South Island whose major market is Auckland and growers in Auckland whose product is shipped to Christchurch to be distributed out from there. Growers located close to markets and close to the production of critical inputs have a competitive advantage from reduced freight costs.

6. Findings and Discussion

6.1 Supply Chain Vulnerabilities

Supply chain vulnerabilities identified in interviews included:

- Reliance on roads and ferries and the vulnerability of that infrastructure,
- Fuel prices,
- Cool chain management,
- Energy prices,
- Exposure to exchange rates, with a weak NZD raising the cost of key imported inputs like fertiliser,
- The overall economic viability of doing business, including the cost of compliance,
- Access to talent with relevant technical and market experience and

- Pest and disease pressures.

Both the cost of doing business and consumer price sensitivity are having impacts on grower profitability. Lack of profitability is a supply chain vulnerability when it leads to business closures and subsequent consolidation of the industry. In highly consolidated parts of the industry, the nation's domestic supply of certain crops hinges on just a few businesses. This means each additional closure has an outsize impact. In 2026, two of New Zealand's only vegetable processing companies – Heinz Watties and McCain – announced the closures of major manufacturing facilities, threatening the livelihoods of hundreds of grower suppliers and workers (Farmers Weekly, 2026). This demonstrates that the reinforcing feedback loop created by lack of business viability is already underway, with consequences for the self-sufficiency of New Zealand's food system.

6.2 Role of Brokers

Interviews with growers, brokers and retailers revealed that wholesalers and marketers play a more nuanced role in the supply chain than simply acting as middlemen or arranging the sale between the grower and the customer. Based on interviews, these are a range of the additional services or benefits provided by brokers.

6.2.1 Logistics, Storage and Distribution

Wholesalers and marketers play a role in transportation, either through owning their own transportation fleet or arranging contracted transport. They provide a physical place to warehouse product until sale, which is especially important for crops with a long storage life. Wholesalers make sure the product gets where it needs to go, aiming to deliver product in full, on time and to customer specifications.

6.2.2 Brokering Relationships

Brokers hold relationships, so other supply chain players don't have to. They leverage their networks to link up suppliers and customers.

6.2.2.1 Servicing More and Smaller Customers

Multiple interviewees raised that wholesalers are able to service many customers at once to the grower's benefit. As one wholesaler put it, it would be uneconomic for a grower to truck to 100 restaurants, but a wholesaler can service all of them from the market floor. From one grower's perspective, the wholesaler's margin is still less than the cost of freight would be for that individual grower to transport their product to numerous small stores. National marketers can also expand a product's reach to a wider scope and breadth of customers than a grower could find, from cruise ships to restaurants to major retailers.

[6.2.2.2 Giving Retailers Access to More Growers](#)

While some interviewees claimed it benefits the grower to use a broker to reach many markets, one wholesaler also claimed that wholesalers help retailers access more suppliers. For instance, in the kiwifruit and avocado sectors, there are too many packhouses to buy individually from each – and each packhouse is sorting the product of a large number of growers. The broker can grant the retailer access to that whole pool of growers with just one point of contact.

[6.2.2.3 Protection](#)

When there are brittle relationships or uneven power dynamics between grower and retailer, the wholesaler can act as a buffering intermediary. Multiple growers shared stories of fractured relationships with RGRs due to coercive or anticompetitive behaviour. Those growers can still sell their product to those large customers if they go through a broker.

[6.2.3. Provide Produce in Quantities Customers Want](#)

Brokers can either add up the volume of produce from several suppliers to meet the bulk needs of big buyers, or they can offer small sales quantities for small customers like restaurants and food service.

[6.2.4 Resilience in Supply for Customers](#)

Whereas supply from an individual grower could be lost to adverse weather, pest and disease or another disruption, brokers can buffer risk through offering product from many suppliers from diverse locations, including imports.

[6.2.5 Specialisation and Expertise](#)

Specialist wholesalers have particular expertise in supply chain management for certain crops. In some supply chains, marketers also provide technical and compliance support to growers, crop monitoring, market knowledge and food safety advice.

[6.3 Information Capability and Market Forecasting](#)

A dearth of good information available to growers was a consistent finding from interviews and industry publications. Capability at collecting and utilising data is variable throughout the supply chain. While the literature provides a model where growers have information about supply, retailers demand, and brokers both, retailers have greater power in the New Zealand system (Yadav et al., 2022).

Growers have information about their own supply, but not the full market, with widely varying degrees of sophistication in their data and information systems. Big wholesalers have information about total supply and pricing from across the country. Supermarkets, meanwhile, have

immense power in data collection and processing capability. They get quotes for every product and can compare prices with their competitors through online grocery websites. Due to their outsize market share, they have plentiful information about supply volumes. Combined, this gives them near perfect information.

Prices in the domestic market are highly sensitive to volume, especially since New Zealand is such a small country. When there is an oversupply, growers get lower returns, and when the market is short, they get higher returns for the product they do sell. With fruit that can be stored, brokers can distribute the fruit at a rate to meet domestic demand and get the best returns, but that is not possible for highly perishable products like fresh cut vegetables. There was a general sentiment amongst growers and brokers that better information systems would yield collective benefits in avoiding oversupply or dumping of product at low prices.

While retailers can find information about their competitors' prices just by walking into a neighbourhood store, growers are not allowed to compare prices under New Zealand's competition law. Collaborating to restrict available production volume is prohibited by the cartel provisions of the Commerce Act 1986. The legal settings require further examination, and possibly reassessment, if the outcome is an immense information imbalance between retailers and suppliers, entrenching uneven and uncompetitive power dynamics.

6.4 Traceability

The need for integrated information throughout the supply chain is consistent with the research of Trienekens et al. (2012), who write that supply chain partners need to meet consumer demands for food safe and high-quality products through transparency and traceability.

Lack of traceability is creating food safety risks today, particularly when the origin of produce becomes unclear due to repacking in the supply chain. One grower described repackers – firms which buy loose product from the market floor and then onsell it. This loose product comes from multiple different growing businesses, but it gets combined to be resold, making traceability difficult if there was a food safety event. When the produce is then labelled with a single barcode or industry assurance certification tied to one of the original suppliers, this becomes a form of “food laundering”.

Similarly, one wholesaler discussed how some growers without industry-standard food safety certification dump large volumes of product into the markets. While the product does not meet supermarket requirements, it could end up in independent retail stores or food boxes.

If a consumer became sick from any of these products, it could lead to a drop in demand and poor sales for all of the growers who do get the proper food safety certification. These concerns are consistent with the literature, which states that trust is a known global challenge in fresh produce supply chains, including food fraud, mislabelling, and origin misrepresentation (Yadav

et al., 2022). Greater oversight and enforcement action is needed to prevent a food safety event causing human harm and damage to industry reputation.

6.5 Controlling What You Can

In a volatile world, supply chain participants are looking for what they can control. Growers trying to keep their businesses profitable in a constrained market with a lack of supermarket competition are using strategies to gain premiums where they can be found and manage their exposure to disruption. Some growers find premiums by serving niche consumer segments (e.g. organics). Others grow a range of crops to build in resilience when the market is soft for particular products.

It could be assumed that exerting control in the market is an option only available to large or monopolistic suppliers, but one small grower felt they maintained excellent control by cultivating direct supply relationships with diverse customers. They also work collaboratively with other small growers to fill each others' production gaps when they are short of product for supply contracts.

A common theme from growers was that they were looking for every avenue to become a "price-maker" rather than a "price-taker". In an industry with so much inherent risk, flipping that dynamic is the difference between power and precarity.

6.6 Power and Competition

Although the focus of this research was on the physical geography and infrastructure of the supply chain, all interview participants raised topics about relationships, loyalty, power and competition. New Zealand's domestic market is very small, and reputation and relationships determine whether a customer will buy from a supplier or not.

Loyalty was described as a strategy for resilience. One broker talked about how loyalty leads to better service during a shortage – when they'll get prioritised by a supplier over other buyers. Similarly, a grower shared that they are more loyal to customers who buy from them when supply is plentiful, making sure they prioritise those customers when supply is short. Interviewees perceived that personal relationships are needed to get a product being displayed at the best spot on a supermarket shelf or being pitched by brokers to customers. The human touch is very much alive in the fresh produce industry, and who you are, who you know, what you say and what you do is crucial to success. Building up strong relationships is just as important as growing a good crop, if not more.

Some supply arrangements have lasted for decades and some have been broken and never repaired. Interviewees expressed that the fear of blacklisting is huge, with worry that saying the wrong thing could lead to being cut out of major markets. For example, one grower shared that they were blacklisted by the national office of a major retail chain due to a poor relationship

with one staff person, even though individual stores wanted to buy from them. So long as blacklisting is a fear, open and frank conversation about improving supply dynamics will be stifled.

Transactional relationships can create advantage from competition, while a relational approach can create advantage from cooperation (Svahn & Westerlund, 2009). The New Zealand domestic fruit and vegetable supply chain is characterised by both. Growers with positive, direct relationships with the supermarkets benefit from the cooperative approach, while others compete for remaining shelf space – creating a price advantage for the retailers. Either way, the retailers win, and some growers come out on top.

6.7 Local versus Central Distribution

This research presents a tension between the efficiencies achieved with centralisation and the resilience created through diverse growing regions and local supply networks. Global supply chain studies suggest that decentralising processing in supply chains can lead to higher farmer profits (Zhang et al., 2025). This may not be directly applicable to fresh fruits and vegetables, but the concept of decentralised distribution could apply in New Zealand. The major wholesalers take a more regionalised approach to distribution than the supermarkets, as evidenced by the maps in Appendix A. Distribution points in smaller population centres provide a direct avenue for local produce to reach local customers without travelling half an island away to a distribution centre and back.

With the cost of freight causing all supply chain participants to question the viability of long-haul distribution, local distribution networks are an attractive option. This is a case for a diversity of crops to be grown in a diversity of regions.

However, regional distribution locations still need to source product from around the country, alongside imports, to be able to provide a complete basket of goods. Not every region's climate is suitable for every crop type. Even when crops are grown in multiple regions, the harvest times will vary depending on climate. For instance, Hawke's Bay and Marlborough summerfruit is ready for harvest before Central Otago.

The interviews also revealed that local produce is not necessarily less expensive to distribute than through a national model because of the difference in cost of using major freight providers or the labour and cost of using small vehicles to distribute locally. The cost of freight for a grower to deliver to customers in small volumes can be prohibitive, but consolidating orders from multiple growers in a single truck is an economic way to move smaller amounts of product. Wholesalers and transportation providers do coordinate this, but it could also be done amongst growers themselves.

A common theme in the interviews was the importance of regional diversity in growing regions. If one area gets cut off or it becomes too expensive to transport product from that area, multiple growing regions provide alternatives. If all of the growers of a crop are in the same region, it can lead to a massive shortage with an entire season's harvest knocked out in a single weather event. One wholesaler even described the importance of intentionally growing product in different parts of the same region to mitigate the risk of localised hail events. They also described how their suppliers have farms in multiple regions to spread the risk of their own businesses.

The case for centralisation is that running brick and mortar distribution centres or fresh depots is expensive and requires infrastructure, like cool storage. Centralised distribution gives stores access to a complete basket of goods from a national supply network, reducing dependency on individual suppliers.

Mapping in this report shows the frequent co-location of critical fruit and vegetable supply chain infrastructure such as wholesalers, distribution centres and transport depots, which makes sense for transportation efficiency, but it also presents risks. A biosecurity incursion that necessitates a cordon on fruit and vegetable movements or a localised flooding event could cut off distribution of food.

The supply chain clusters mapped in this report, combined with geospatial information about land use and the location of grocery retail stores would provide a complete picture of the fruit and vegetable supply chain from farm to distribution to sale. This information should be used in resource management planning, natural hazard planning and infrastructure investment prioritisation to protect and enhance our domestic food distribution network.

7. Conclusions

New Zealand's political and cultural focus on exports obscures the simple fact that New Zealand also feeds its own people with domestic production. Understanding how the food we eat gets to us and the vulnerability of that system is critical in a volatile world with unstable global supply chains, frequent adverse weather events and aging infrastructure. Infrastructure investment and prioritisation for ferries and roads has a measurable impact on the quality and availability of fresh produce for New Zealanders.

New Zealand lacks strategic planning for the resilience of our domestic food supply, which starts with first understanding that supply environment. Now that the characteristics and some of the key vulnerabilities of the domestic fruit and vegetable supply chain are better understood, strategic planning is needed to bolster resilience. Decision-makers need to think critically about how resilience can be bolstered in terms of physical infrastructure, commercial viability and resilience to input price shocks.

8. Recommendations and Next Steps

8.1 Information Sharing

A key finding of this research was the tension between suppliers' desire for better information systems and the constraints imposed by the Commerce Act, which prohibits coordination and cartel behaviour. An industry project should be stood up under the AHAP in the next 12 months to get legal advice and better understand what information can be shared and what grower capability can be built in this area.

The horticulture industry is full of cooperatives – a discussion paper should be commissioned to consider how these can be legally leveraged for better information sharing without introducing anticompetitive behaviour. HortNZ is well-placed to coordinate these projects as a pan-sector organisation, in collaboration with the domestic-focused product groups (NZVeg, Summerfruit NZ, Citrus NZ, etc).

8.2 Cool Chain Management

Concerns about the capability and understanding of perishability amongst refrigerated truck drivers was another key finding of this research. Industry has an opportunity to take a leadership approach, build relationships with logistics providers, and create and distribute a Code of Practice for Cool Chain Management for Fresh Produce. The newly formed NZVeg would be well-placed to lead this project as an early win, alongside industry assurance programme NZGAP.

8.3 National Food Security Strategy

The New Zealand government has the power to build resilience into critical supply chain infrastructure, but it would require political prioritisation and a framework for action. The Australian Strategic Policy Institute, an independent, non-partisan think tank founded by the Australian government, has said that market forces are not enough to build resilience in supply chains – government intervention is needed (Henderson & Coyne, 2025). Australia's Department of Agriculture, Fisheries and Forestry now has work underway to develop a National Food Security Strategy. Other countries and regions with formal plans for domestic food security include Singapore, Japan, China, Indonesia, the EU, the UK, Canada and the US (Henderson & Coyne, 2025).

The concept of a National Food Security Strategy is distinct from a National Food Strategy because it focuses on how people within the country will continue to have access to safe and suitable food, not just how food is produced for export profit. New Zealand, as an isolated island nation, is especially vulnerable to shipping-related disruption and should be especially invested in how to continue producing and accessing food in times of global shocks.

Food security does not neatly fit into any one ministry's portfolio, so a whole-of-government approach should be taken, with governance from the Ministry for Primary Industries, the Ministry for Business, Innovation and Employment, the Ministry of Health and the Ministry for Social Development with expert advice from the Commerce Commission and the New Zealand Infrastructure Commission.

The AHAP can be used as a structuring mechanism to bring industry, government, the science sector and Māori together to deliver this work as the co-owners of the strategy. If food security is not on the government agenda and political will is lacking after the 2026 election, industry should lead the charge and begin developing this work independently in 2027.

8.4 Further Research

Further research is needed to paint a more complete picture of the domestic supply chain. First of all, future research should characterise the supply chain for inputs into the fruit and vegetable production system that were out of scope for this research, such as fertiliser, agrichemicals, packaging and machinery. Further research could explore in more depth the differences in the supply chain for highly perishable crops (e.g. fresh-cut greens, berries) and crops that can be stored for extended periods (e.g. apples, onions). It would be worthwhile to better understand the differences in freshness and availability of produce in different parts of the country, including for rural versus urban consumers.

Further studies should incorporate the perspectives of supply chain participants not captured in this study, such as logistics providers, ferry operators, ports and food service businesses. Studies could also seek to quantify travel time and distance for products between farm and consumer. Other potential topics for further research include the feasibility of alternative transportation (e.g. coastal shipping, rail) in the domestic supply chain and scenario testing alternative supply chain structures, such as less centralisation.

Given the salience of power and pricing as topics in the interviews, further research could focus specifically on the social and relational aspects of participation in the domestic commercial environment.

9. Limitations

This study has a limited sample size of 15 participants, with six growers representing six regions. Horticulture is a diverse industry representing over 100 crop types, grown across all of New Zealand's regions. While wholesalers, marketers and retailers provided national insight and specific information about regions not represented by grower participants, the geographic scope of participating businesses is a limitation. Growers were primarily contacted through existing relationships, which means that there was bias toward growers who interact with Horticulture New Zealand.

Due to the scope of the research, transportation, infrastructure providers and suppliers of key inputs were not included in interview subjects. However, these groups would have further insight into the functioning and character of the New Zealand fruit and vegetable supply chain.

Commercial sensitivity was a limitation of this research and will be for any interview-based research with domestic grocery market participants. The small size of the market meant that extra care had to be taken to not link the comments of interviewees because the sum of their comments could render them identifiable. This constrained the types of analysis and method of reporting analysis possible for this research. However, interview participants were more open than expected due to the anonymity and reassurance that results would be aggregated.

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Appendix A. Maps

Legend:

- All blue - brokers, from United Fresh (2025). Those without publicly available addresses were excluded.
- Dark blue - brokers in clusters
- Yellow - stand-alone broker
- Dark red - Foodstuffs fresh distribution centre or transport depot
- Green - Woolworths fresh distribution centre



Figure 3. North Island



Figure 4. South Island

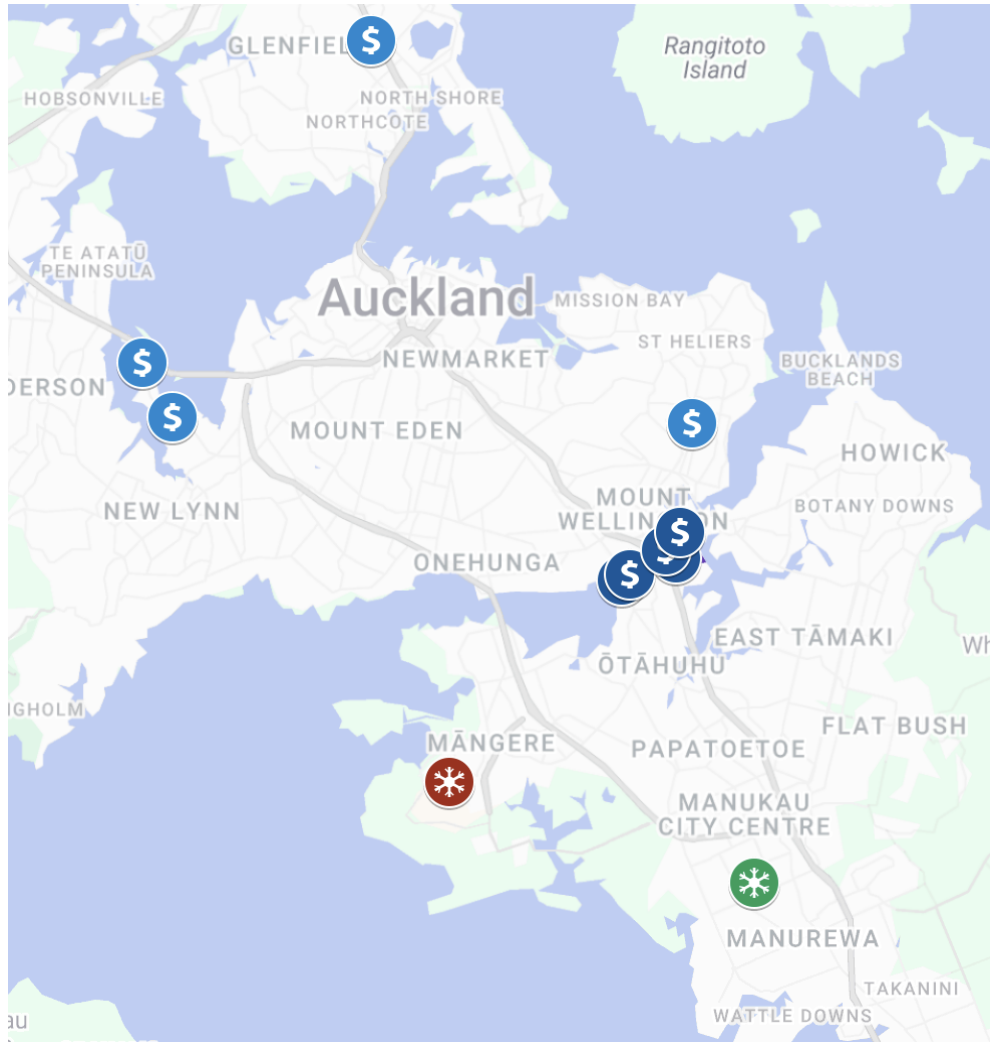


Figure 5. Auckland, supply chain cluster in Mount Wellington in darker blue



Figure 6. Tauranga

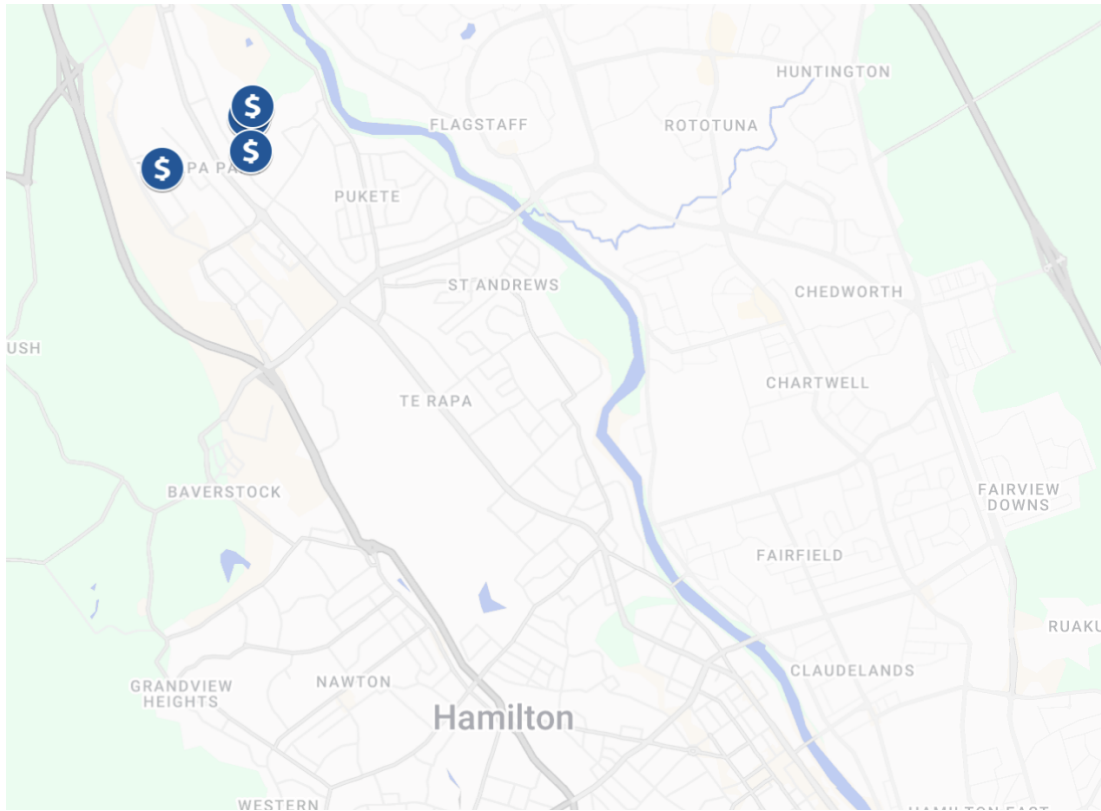


Figure 7. Hamilton (Te Rapa Park)



Figure 8. Palmerston North (Roslyn)

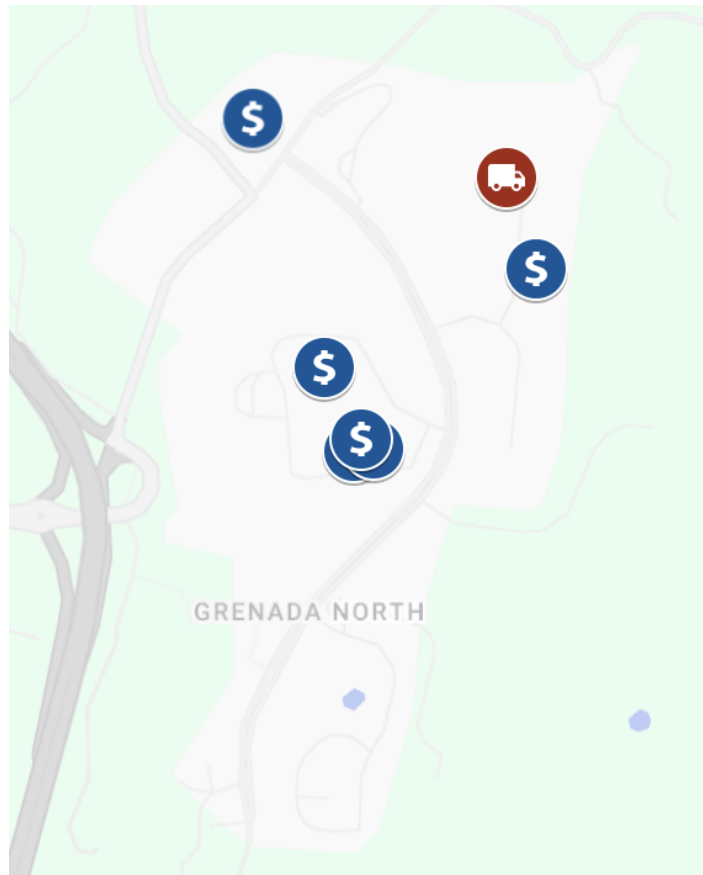


Figure 9. Wellington (Grenada North)



Figure 10. Nelson

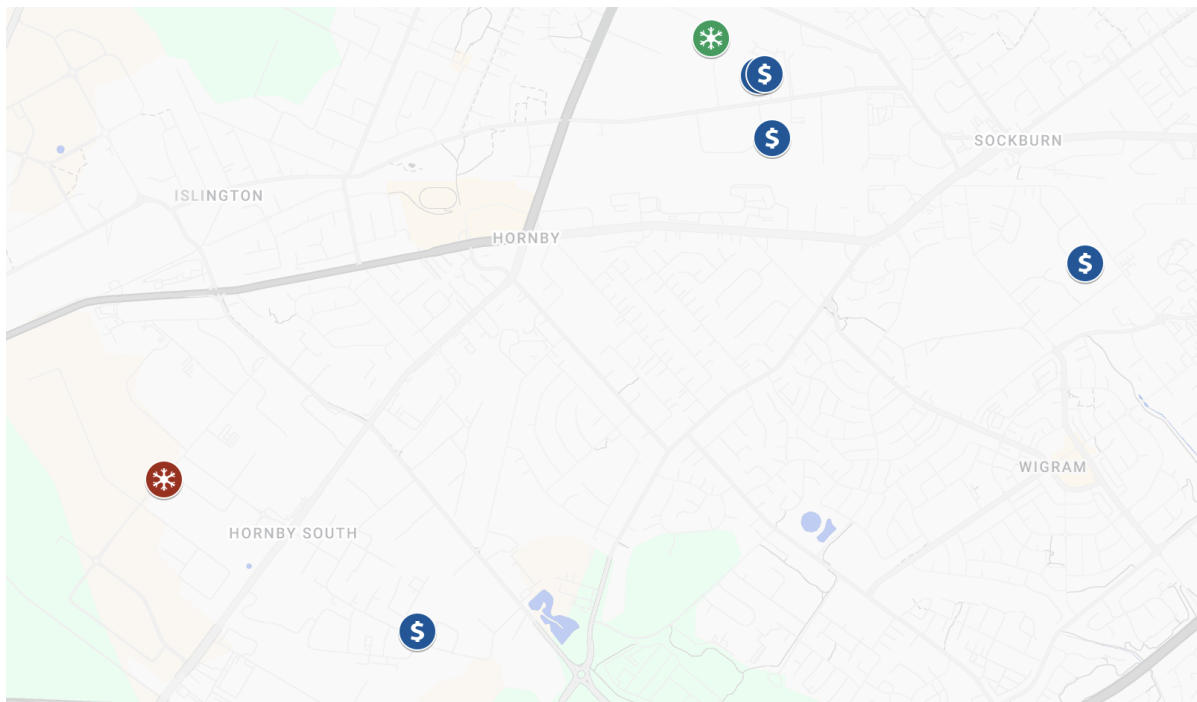


Figure 11. Christchurch (Hornby/Sockburn)

Appendix B. Interview Consent Form



MGMT 631 and the Kellogg Rural Leadership Programme

Research Information & Consent Form for Interviews

I would like to invite you to participate in a project entitled ***What Happens Between Farm and Fork? Characterising New Zealand's Domestic Fruit and Vegetable Supply Chains.***

The aim of the project is to understand the physical geography of New Zealand's domestic fruit and vegetable supply chains, including where product moves and what essential infrastructure supports its movement. If people want to be part of the project, they need to be commercial fruit and vegetable growers who supply the domestic market, wholesalers, retailers or logistics providers and be over the age of 18.

If you wish to be part of this project, I will invite you to have an interview with me (Emily Levenson) that will last about 45-60 minutes, online over Zoom or in person at the HortNZ office in Wellington. The interview will be more like a conversation, and the questions will be about your business' interactions with the domestic supply chain. With your permission, I will record the interview. Only I will have access to this recording, you will not be quoted by name, and I will delete the recordings after the report is finalised in June 2026.

Your participation in this research is voluntary, and you don't have to answer any question if you don't want to. You can withdraw from the project, including withdrawing any information you have provided, up to 1 June 2026 by contacting me or my Course Examiner (Craig Trotter) via the emails below.

The results of the project will be published on the Kellogg Rural Leaders website and may be published in an academic journal or presented at a conference. However, you may be assured of your anonymity: your identity will not be made public or made known to any person other than the Human Ethics Committee in the event of an audit. To ensure confidentiality, your interview data will only be seen by me and will be stored in an electronic form with password protection. Only aggregated data will be presented in any publications, and no information will be reported in a way that might identify you as an individual.

This study has been reviewed and approved by the Lincoln University Human Ethics Committee (HEC2026-10). If you have any questions about participating in the project, please contact me or my Course Examiner; we would be happy to discuss any concerns you have.

Thank you for agreeing to participate in this project!

Emily Levenson
Email: emily.levenson@lincolnuni.ac.nz

Course Examiner: Dr Craig Trotter, Faculty of Agribusiness and Commerce
Email craig.trotter@lincoln.ac.nz
Phone 03 423 0254

Consent

1. I have read and understood the description of the project above.
2. I have been given enough time to consider whether or not to participate in the project and to ask questions.
3. I have been given a copy of this Research Information and Consent Form to keep.
4. I understand that I may withdraw from the project, including withdrawal of any information I have provided, up to 1 July 2026, by contacting Emily Levenson or her Course Examiner.

☐ I consent to participate in the project.

☐ I consent to publication of the results (which may include my anonymised information).

☐ I consent to having an audio recording made of my interview.

☐ I do not consent to having an audio recording made of my interview, but agree to notes being made.

Name: _____

Signed: _____ Date: _____

Please return this form to Emily Levenson (emily.levenson@lincolnuni.ac.nz) before your interview.