

SUBMISSION ON

Building Resilience to Hazards Long-term Insights Briefing

26 November 2024

To: Department of the Prime Minister and Cabinet (DPMC),
Ministry for the Environment

Name of Submitter: Horticulture New Zealand

Supported by: New Zealand Butternut Squash Council, New
Zealand Kiwifruit Growers Inc., Persimmon Industry Council,
Potatoes New Zealand, Strawberry Growers NZ, TomatoesNZ

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OVERVIEW

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Our submission

Horticulture New Zealand (HortNZ) thanks the Department of the Prime Minister and Cabinet (DPMC) and the Ministry for the Environment (MfE) for the opportunity to submit on the Building Resilience to Hazards Long-term Insights Briefing and welcomes any opportunity to continue to work with DPMC and MfE to discuss our submission or comment on the draft briefing.

The details of HortNZ's submission are set out in our submission below.

HortNZ's Role

Background to HortNZ

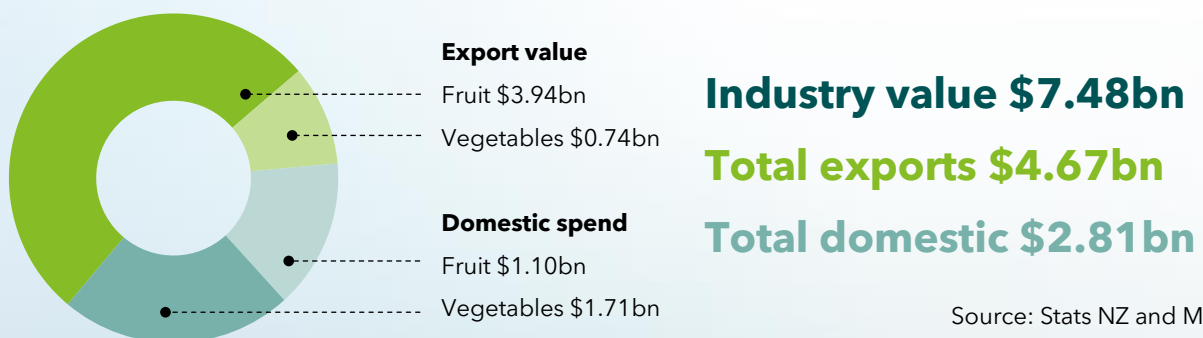
HortNZ represents the interests of approximately 4,200 commercial fruit and vegetable growers in New Zealand who grow around 100 different fruits and vegetables. The horticultural sector provides over 40,000 jobs.

There are approximately 80,000 hectares of land in New Zealand producing fruit and vegetables for domestic consumers and supplying our global trading partners with high quality food.

It is not just the direct economic benefits associated with horticultural production that are important. Horticulture production provides a platform for long term prosperity for communities, supports the growth of knowledge-intensive agri-tech and suppliers along the supply chain, and plays a key role in helping to achieve New Zealand's climate change objectives.

The horticulture sector plays an important role in food security for New Zealanders. Over 80% of vegetables grown are for the domestic market and many varieties of fruits are grown to serve the domestic market.

HortNZ's purpose is to create an enduring environment where growers prosper. This is done through enabling, promoting and advocating for growers in New Zealand.



Submission

1. When Natural Hazards Affect Food Production

Natural hazards, where they affect the production, processing, transportation and retail of fruits and vegetables, will be a continued risk to New Zealand's domestic food supply and high-value exports into the future. Adverse weather events, such as the cyclones, heavy rainfall, and flooding witnessed in recent years, can devastate crops and significantly disrupt supply chains. Increasing biosecurity risk with climate change and future pandemics which prevent workers from entering the country will affect our ability to grow.

1.1. Domestic Food Supply

Over 70% of the fruits and vegetables bought by New Zealanders (by value) were produced in New Zealand.¹ It is not possible to import enough fruits and vegetables to feed our population due to the country's geographic isolation and the perishable nature of fresh produce.

Extreme weather may cause global shocks to supply chains that leave imported food, including the remaining 30% of fruits and vegetables consumed by New Zealanders but not produced here, unavailable or unaffordable. Should natural hazards disrupt the domestic fruit and vegetable supply chain, our population's access to food will be significantly affected.

While horticulture is the third most valuable primary sector export in New Zealand², over 80% of vegetables, and many fruits including citrus, summerfruit and feijoas, are primarily produced for the domestic market.

The country needs to be prepared for potential shocks to New Zealand horticultural production and global supply chains which could impact domestic food security and availability.

1.2. Resilient Exports

The viability of high-value export crops after natural hazard events also needs to be considered for New Zealand to meet the Government's goal to double export value³ and transition to a low emissions economy. For instance, the apple and pear industry contributes almost \$2 billion of total revenue impact to the New Zealand economy.⁴ However, fruit and vegetable growing faced a massive disruption from Cyclone Gabrielle in 2023. Boston Consulting Group (BCG) found that the cyclone caused \$1.2 billion losses

¹ United Fresh, Plant & Food Research. "[Fresh Facts 2024](#)". (p. 33)

² New Zealand Government. "[Situation and Outlook for Primary Industries \(SOPI\)](#)". June 2024.

³ National. "[National sets bold target for export growth](#)". 10 October 2023.

⁴ New Zealand Apples and Pears Inc. "[Economic contribution of the New Zealand Apple and Pear Industry 2024](#)". 29 August 2024.

to the horticulture sector in just the Hawke’s Bay region⁵, which is home to about 60% of New Zealand’s pipfruit production, 70% of squash, 20% of summerfruit, and 25% of beans and peas.⁶ While production has bounced back beyond initial expectations, the industry’s future resilience will be supported by advance planning for the next shock.

To keep the horticulture sector strong and address the long-term risks of climate change to horticulture, BCG recommended a data-driven approach to resilience planning, including adding flood risk, soil drainage and freshwater access to MPI’s Farm Monitoring Programme to help growers manage risks. The Government should use climate risk assessment to prioritise resilience and adaptation funding for the horticulture sector.⁷ Strategic public/private partnership on hazard risk management can support the future growth of this low emissions, high-value sector in the aftermath and in advance of natural hazard events.

Irrigation security will also impact the long-term resilience of the sector. Rootstock survival water is just the amount of water necessary to prevent the loss of horticultural crops for human consumption during times of low freshwater flows. This water should be provided for in resource management decisions. This ensures that trees and vines – which require significant upfront investment and take a few years to reach maturity and profitability – can stay economically viable after drought years. Energy security and resilience is also important to support the horticulture industry’s remaining decarbonisation and ensure the ongoing operation of post-harvest facilities.

Developing New Zealand’s export products may also provide a resource for international food security, should hazards limit food supply in other countries. Future biosecurity incursions, pandemics, climate change events or gradual degradation of conditions for food production could make New Zealand’s relative isolation from global shocks our greatest strength. Government strategies should be clear about New Zealand’s role in global food security.

2. Social and Economic Costs

The Long-term Insights Briefing consultation document writes,

“We [the New Zealand Government] plan to look across a range of potential disasters and crises caused by major hazard risks and consider possible common impacts that New Zealand could encounter, including consideration of social and economic costs.”⁸

The social and economic costs of events which disrupt the supply and prices of fruits and vegetables will include acute and sustained impacts on public health, nutrition, and household budgets. When events caused reduced supply, prices increase. For families living in deprived areas, increases in fruit and vegetable prices compel them to substitute

⁵ Boston Consulting Group. “[Hawke’s Bay Horticultural Sector: Economic Recovery Update: A Year after Cyclone Gabrielle](#)”. 10 July 2024; United Fresh, Plant & Food Research. “[Fresh Facts 2024](#)”.

⁶ United Fresh. [Fresh Facts 2024](#).

⁷ Boston Consulting Group. “[Hawke’s Bay Horticultural Sector: Economic Recovery Update: A Year after Cyclone Gabrielle](#)”. 10 July 2024

⁸ DPMC, MfE. “[Long-term Insights Briefing Topic Consultation: Building resilience to Hazards](#)”. October 2024.

the purchase of healthier whole fruit and vegetables with cheap, energy-dense and nutrient-poor products.⁹ This has an impact on the overall wellbeing of communities. Food insecurity plays a role in educational outcomes as well as physiological and psychological health.¹⁰

Hazards can also disrupt employment. The horticulture industry employs over 40,000 people. The COVID-19 pandemic caused a widespread labour shortage in the industry which led to product quality problems and left some crop unharvested.¹¹ Future shocks which restrict people or product movement across the border will have a serious effect on the horticulture industry.

3. Resilience

The Long-term Insights Briefing consultation document continues,

“Importantly, our goal is to identify opportunities for how New Zealand might strengthen its resilience, for example, by looking at required skills, equipment, activities, information sharing opportunities, and other ways to build resilience to future challenges.”¹²

3.1. Growing Indoors and Under Cover

New Zealand can strengthen the resilience of our food supply through enabling indoor and covered growing via our resource management policy. Greenhouses and artificial crop protection structures - which use cloth to protect crops from hail, sun, wind and pests - can be caught by restrictive planning rules. If food security or enabling the supply of fresh fruits and vegetables was provided for in national planning direction, it would help councils make decisions which enable resilient growing systems.

Businesses may elect not to construct high-value assets like greenhouses on hazard areas like floodplains. As such, workable planning rules are needed to ensure that these growing systems can establish in other areas.

3.2. Breeding Resilience and Adapting to Change

The Government can protect our future food supply and exports by supporting research and development into climate-resilient crop varieties. Further investment could go into sustainable farming practices to adapt to changing environmental conditions.

⁹ Rush, E., Savila, F., Jalili-Moghaddam, S., & Amoah, I. (2018). Vegetables: New Zealand Children Are Not Eating Enough. *Front. Nutr.*

¹⁰ [The association of food security with psychological distress in New Zealand and any gender differences](#), *Social Science & Medicine* 2011

¹¹ [Labour crisis 2021 | Fruition Horticulture, Zespri reputation under threat as quality controllers scramble](#)

¹² DPMC, MfE. “[Long-term Insights Briefing Topic Consultation: Building resilience to Hazards](#)”. October 2024.

4. Discussion Questions

This submission responds directly to the discussion questions posed in the consultation document.

Q. 1 Will the proposed topic provide information on an issue that affects New Zealand and is it important for our country's future?

AGREE

Natural hazards will have a significant impact on the future of horticulture and New Zealand as a whole. Adverse weather events from drought to cyclones affect a season's crops but also have long term impacts on what people choose to grow, where and how. Adverse weather events may drive more fruit and vegetable production indoors or under cover, where it can be protected from heavy rain, wind, hail and extreme temperatures.

This Long-term Insights Briefing provides an opportunity to explore how Central Government will manage and share costs and responsibilities of managing risk - with local government, insurance companies, industries and individuals. Depending on how the cost of risk is shared and how decisions are made about which areas are protected from natural hazards, some activities may become unviable.

The Government should develop a National Infrastructure Investment Strategy to guide spatial planning to determine how hazards are managed. Once cost-sharing responsibilities are understood between central and local government, criteria will be needed to prioritise investment. Criteria for flood protection, for example, may prioritise protecting human life, then life-sustaining activities (e.g. water, food production and electricity generation), then other land uses.

Q. 2 Thinking about the proposed topic, what issues should we explore in this Briefing?

4.1. Regional Resilience and Redundancy of Supply

Natural hazard decision-making must consider the risk hazards, particularly related to climate change, pose to New Zealand's food security. When some regions experience large-scale natural hazard events that limit food production or cut off transport of goods, other regions need to be ready to supply food and the impacted regions would benefit from local food production during their recovery. Our country can prepare for these circumstances with a resilient local food system robust enough to sustain our people. That starts with ensuring policies and rules enable the supply of fresh fruits and vegetables, which contribute to healthy diets.

When major growing regions are battered by severe weather and forced to halt or reduce production, like Gisborne and Hawke's Bay during Cyclone Gabrielle, the country's food supply suffers. In the immediate aftermath of that disaster, we saw the price of fresh produce skyrocket, which increased the cost of living across the country. Destruction from the cyclone continued to impact the availability and price of tinned fruits and vegetables at least nine months on from the event.¹³

¹³ Taunton, Esther. "Where have all the tinned fruit and vegetables gone?" 05 November 2023. Stuff. Accessed online <https://www.stuff.co.nz/business/133221876/where-have-all-the-tinned-fruit-and-vegetables-gone>.

The Government can prepare for this eventuality through ensuring policies that support food production are nationally consistent. Regional Councils cannot be expected to make decisions which support the national priority of food security without national direction.¹⁴ Read more about the importance of policy to protect the national value of food security in HortNZ's position paper on [National Direction for Commercial Vegetable Production](#).

4.2. Managed Retreat, but Using the Land

When natural hazards policy is developed in New Zealand, it may include shifting high-risk, sensitive activities such as housing, schools and hospitals off of hazard-prone land. That land may still be suitable for lower-risk activities that involve fewer people and no one sleeping on site, such as fruit and vegetable production and processing. Floodplains often provide fertile soils, so growing food in hazard areas may be both efficient - to make use of the land with a lower risk activity - and the most productive use of a limited natural resource. For this reason, it is essential that urban risk accounting is not applied to rural activities like horticulture.

New Zealand's highly productive alluvial terraces are an intergenerational asset that have taken thousands of years to develop. This land is most suitable for low emissions, high-value primary production. National policy, through the National Policy Statement for Highly Productive Land, recognises that this land should be protected for land-based primary production. This should include protection from urban sprawl, sediment deposition through upstream catchment management, and flooding. A full-catchment approach would manage upstream activities such that they do not increase the natural hazard risk on downstream activities, often low-emissions food production, through sediment and debris flows. Natural hazard protection infrastructure should also be designed not to diminish the productivity of versatile soils.

4.3. Protecting Our Food System

Although horticulture should not retreat from highly productive land, we still need to protect our food resources from floods to build resilience into our food system and ensure our population has access to affordable, healthy and culturally appropriate food. Drainage management, channel maintenance and ongoing maintenance of flood protection infrastructure is needed in the rural environment to avoid or mitigate the effects of flooding and support rural production. The Government needs to continuously strengthen grey infrastructure like stop banks and remove silt and shingle from flood channels to prevent dangerous debris flows. Catchment-scale spatial planning and hazard management is needed to build lasting solutions.

The Government also needs to set expectations and prepare policy in advance for disaster response and recovery. After Cyclone Gabrielle, it took weeks to finalise Orders in Council to let land users get to work on recovery. The Government should have these Orders drafted and on hand in advance of the next disaster, so recovery works can start promptly, without leaving land users to stare at the damage without being able to get to work.

¹⁴ NZIER. 2024. [Making the case for vegetable production in New Zealand](#). A report for Horticulture New Zealand.

Financial relief and practical assistance will be needed for growers affected by natural disasters. Since food security is a matter of national importance, helping our food system recover from disasters should be a priority.

4.4. Infrastructure Resilience

We still need to maintain transportation connectivity when an area is determined too risky for housing but still suitable for food production. Roads are critical to ensure timely distribution of perishable produce from the source to consumers. This is especially important in times of natural disaster to ensure food security, so that growing areas are not cut off when we most need a consistent supply of food. Rural communities need multiple paths to evacuate in times of disaster in case one is cut off by a natural hazard like a slip.

In addition, the resilience of the inter-island ferries is essential when food needs to be moved between the North and South Island, say if an earthquake destroyed food production, distribution and/or retail on one side of the Cook Strait.

Damage to roads, bridges, port facilities, airports, rail and infrastructure for water and telecommunications caused by natural disasters could also pose significant challenges for the transport of produce to export markets. The Government should prioritise and fund critical infrastructure to withstand extreme weather events and ensure the continuity of supply chains. Investing in this infrastructure will be a long-term enabler for food production, supporting productivity and uplifting New Zealand's GDP.

Read more about how natural hazard policy design can impact the horticulture industry in HortNZ's previous submissions on the [proposed National Policy Statement for Natural Hazard Decision-making](#) and on the [Inquiry into Climate Adaptation](#).