SUBMISSION ON

Climate Change Response (Emissions Trading Scheme Agricultural Obligations) Amendment Bill

26 July 2024

To: Primary Production Committee
Name of Submitter: Horticulture New Zealand
Supported by: Citrus New Zealand, Horticulture Canterbury, New Zealand Apples & Pears, NZ Persimmon Industry Council, Summerfruit NZ, Tomatoes NZ, Vegetables New Zealand Inc.

Contact for Service:

Emily Levenson
Environmental Policy Advisor
Horticulture New Zealand
PO Box 10-232 WELLINGTON
Ph: 027 305 4423
Email: emily.levenson@hortnz.co.nz

Horticulture™ New Zealand
Ahumāra Kai Aotearoa

OVERVIEW

Submission structure

1. **Part 1:** HortNZ's Role
2. **Part 2:** Executive Summary
3. **Part 3:** Submission

Our submission

Horticulture New Zealand (HortNZ) thanks the Primary Production Committee for the opportunity to submit on the Climate Change Response (Emissions Trading Scheme Agricultural Obligations) Amendment Bill and welcomes any opportunity to continue to work with the Primary Production Committee and to discuss our submission.

HortNZ wishes to be heard in support of our submission and would be prepared to consider presenting our submission in a joint case with others making a similar submission at any hearing.

The details of HortNZ's submission and decisions we are seeking are set out in our submission below.

PART 1

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.

Export value

Fruit $3.94bn

Vegetables $0.74bn

Domestic spend

Fruit $1.10bn

Vegetables $1.71bn

Industry value $7.48bn

Total exports $4.67bn

Total domestic $2.81bn

Source: Stats NZ and MPI

PART 2

Executive Summary

General Position

The horticulture sector supports New Zealand's net-zero target and market mechanisms to achieve that goal. HortNZ supports the removal of farm-level fertiliser emissions from Emissions Trading Scheme (ETS) obligations under the Climate Change Response (Emissions Trading Scheme Agricultural Obligation) Amendment Bill. HortNZ notes that the Amendment Bill does not remove all agriculture because greenhouses still pay into the ETS. The greenhouse sector has made considerable strides toward decarbonisation but faces challenges due to the cost of the transition and uncertainty around the pace of regulatory change.

Action Still Needed on Agricultural Emissions

The Government and primary industries need to make further concrete steps to reduce agricultural emissions. HortNZ recognises that more work is needed to find the optimum solution for reducing fertiliser and animal emissions, but action cannot be delayed indefinitely. HortNZ was not consulted about the decision to remove agriculture from the ETS. The horticulture sector should have a seat at the table in future policy development in this space as a key stakeholder in the transition to a low emissions economy, particularly regarding fertiliser emissions.

Fair Allocation for Horticulture in the ETS

Heated greenhouse growers who have emitting energy sources currently pay into the ETS. Growers of fresh tomatoes, cucumbers and capsicums are eligible for industrial allocation due to their "Emissions Intensive and Trade Exposed" status. A recent sudden drop in the allocative baseline for these crops will impose severe costs on growers without accompanying support for decarbonisation.

Energy-switching is prohibitively expensive, particularly for small and medium-sized growers. HortNZ urgently seeks the **establishment of a Sustainable Food Systems Fund** to reinvest ETS proceeds in greenhouse decarbonisation to support this transition. HortNZ seeks that the **allocative baseline change is delayed until funding is available**, no earlier than July 2025, to allow time for gas contracts to expire and for growers to make fuel or efficiency changes.

This aligns with the second pillar of the Government's climate strategy – "Credible markets support the climate transition: Pricing emissions fairly and effectively to incentivise emissions reductions" – and the fourth pillar – "World-leading climate innovation boosts the economy", which contains the aim, "Agriculture industry uses technology to lower emissions while lifting productivity".[1]

[1] Ministry for the Environment. "Responding to a changing climate: The Government's climate strategy". July 2024. Accessed 10/07/24.

PART 3

Submission

1. General Position

The horticulture sector supports New Zealand's net-zero target and market mechanisms to achieve that goal. HortNZ supports the removal of farm-level fertiliser emissions from ETS obligations under the Climate Change Response (Emissions Trading Scheme Agricultural Obligation) Amendment Bill (referred to as the Amendment Bill in this submission).

2. Fertiliser Emissions

Fertiliser was included in the Climate Change Response Act 2002 because it is responsible for nitrous oxide emissions, which are a greenhouse gas with warming effects. [2] HortNZ supports the removal of farm-level fertiliser emissions from ETS obligations because this policy would have created an undue administrative burden for farmers and growers. Pricing fertiliser emissions at the processing stage through a simplified scheme outside of the ETS would be just as effective as farm-level pricing with less administrative cost and uncertainty.

Growers need to use fertiliser to grow fruits and vegetables, and there is no viable alternative. Compost still has nitrous oxide emissions[3] and is not typically standardised enough to substitute for synthetic fertiliser, which delivers the precise nutrients commercial crops need at each stage of the growing cycle. This dynamic means that horticulture businesses will need to buy fertiliser whether or not the price rises. Pricing fertiliser in the ETS will not reduce its use in the sector; it would only add to the cost of production, increasing the price of food and the cost of living.

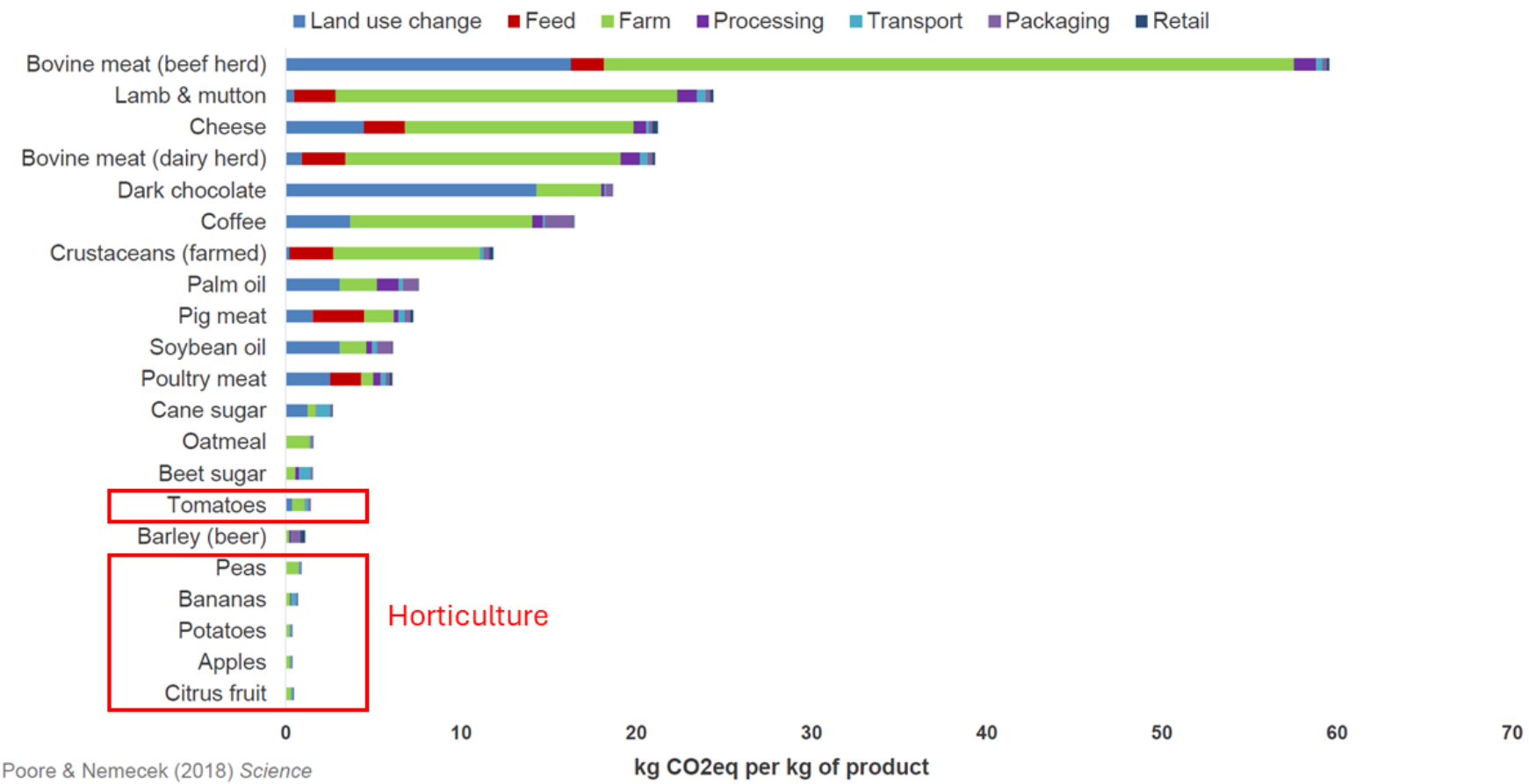
The Government has committed to "support the development of, and access to, tools and technology to reduce emissions by food and fibre producers" as an action under the draft Second Emissions Reduction Plan.[4] Horticulture is already the lowest emissions form of food production, as evidenced in the carbon footprint chart below. To enable the continued success and expansion of low emissions food production to double exports by 2035, the Government should invest in developing low-emissions fertilisers and decarbonising the growing systems that do use fossil fuels.

---

[2] Ministry for the Environment. *Aotearoa New Zealand's first emissions reduction plan.* "Chapter 13: Agriculture". Accessed 11/07/24.

[3] Charles, Anaïs, et al. "Global Nitrous Oxide Emission Factors from Agricultural Soils after Addition of Organic Amendments: A Meta-Analysis." *Agriculture, Ecosystems & Environment*, vol. 236, 2017, pp. 88-98. ISSN 0167-8809, https://doi.org/10.1016/j.agee.2016.11.021. Accessed 09/07/24.

[4] Ministry for the Environment. 2024. New Zealand's second emissions reduction plan (2026–30): Discussion document. Wellington: Ministry for the Environment.



Source: Poore & Nemecek (2018) *Science*
Deconinck, Koen. "Carbon Footprints for Food Systems".
MPI Presentation to GROW. (7/8 Feb 2024)

3. Action Still Needed on Agricultural Emissions

The Government and primary industries need to take further action to reduce agricultural emissions. HortNZ recognises that more work is needed to find the optimum solution for reducing fertiliser and animal emissions, but action cannot be delayed indefinitely.

HortNZ was not consulted about the decision to remove agriculture from the ETS. The horticulture sector should have a seat at the table in future policy development in this space as a key stakeholder in the transition to a low emissions economy, with a specific interest in how fertiliser emissions are managed.

Horticulture is a low emissions industry which feeds New Zealanders and makes valuable export products. HortNZ was committed to He Waka Eka Noa because our sector recognised that New Zealand needs to reduce our agricultural emissions to maintain global credibility. The agriculture sector is responsible for 53% of New Zealand's total emissions, so the sector needs to make its fair share of reductions.[5]

Land use change to horticulture is one way to reduce agricultural emissions. The Climate Change Commission's demonstration path to meet the second emissions budget benchmarks a 14,000-hectare conversion from livestock farming to horticulture by 2030.[6] That transition will require significant investment and enabling policy frameworks for land use change. Policy to enable horticultural expansion will encompass freshwater, labour, infrastructure and planning for ancillary activities like packhouses. The conversion will not be possible for all farmland or farmers due to topography, climate, market demand, and ability to pick up specialised horticultural knowledge.

The Government can encourage the transition by accounting for animal farming emissions, paired with incentives to farmers. This is the approach being taken by Denmark, who have surpassed New Zealand as the world leader in this space.[7] Instead of subsidising agricultural emissions, the Government could be investing in reducing barriers to a transition to low emissions land uses like horticulture. Horticulture is not an all-encompassing solution to agricultural emissions, but it is one avenue toward a just transition to a low emissions future.

4. Fair Allocation for Horticulture in the ETS

The horticulture industry is undergoing decarbonisation, including switching greenhouses to renewable energy sources. Many greenhouses use heating sources powered by fossil fuels in colder months and rely on the CO_2 captured when burning natural gas to pump into the greenhouses to boost plant productivity. It should be noted that greenhouse-grown vegetables generate a tiny fraction of the emissions generated from dairy and meat production per kg, evidenced by comparing tomatoes to animal

[5] Ministry for the Environment. *New Zealand's Greenhouse Gas Inventory 1990-2022: Snapshot*. Accessed 11/07/24.

[6] Climate Change Commission. *2023 Advice on the direction of policy for the Government's second emissions reduction plan*. Accessed 09/07/2024. (p. 149)

[7] Dwyer, Orla and Yanine Quiroz. "Q&A: How Denmark plans to tax agriculture emissions to meet climate goals". 09/07/24. *Carbon Brief*. Accessed 11/07/24.

products in the graph above, and yet heated indoor growers who have emitting energy sources have already paid into the ETS for years.

Growers of fresh tomatoes, cucumbers and capsicums are eligible for industrial allocation which recognises their "Emissions Intensive and Trade Exposed" status, whether they grow indoors or outdoors.[8] This policy was designed to prevent carbon leakage because these crops compete in the commercial market with imported vegetables not subject to the same emissions policies.

All growers of these crops, regardless of energy source or growing outdoors, are eligible for industrial allocation to incentivise growing systems without carbon emissions (such as those which have decarbonised, grow with better carbon-efficiency or manage without heating in warmer climates). Most growers use their industrial allocation to offset their NZ ETS obligations for fuel use. The rest struggle to trade their allocation because it is too small or due to administrative difficulties.[9]

4.1. Postponing Industrial Allocation Changes for a Just Transition

On 12 July 2024, Ministry for the Environment (MfE) wrote to greenhouse businesses who submitted on the 2023 industrial allocation data collection to inform them of changes to the allocative baseline. The allocative baseline is the rate at which an activity receives an industrial allocation for the products it manufactures. The number represents the emissions per unit of product made. If a product's allocative baseline is 1.5, there are 1.5 tonnes of carbon dioxide equivalent (CO_2e) emitted for every 1 tonne of product made.[10]

As shown in Table 1, vegetable growers expect to see a reduction in their allocative baseline between 42.6 and 77.7% based on the proposed new baselines, with the highest impacts on cucumber growers. This change is directly proportional to a reduction in industrial allocation, determined by formulas in the Climate Change Response Act 2002.[11]

Table 1: July 2024 updates to allocative baseline for vegetable products

Activity	**Baseline currently in 2010 regulations**	**New baseline**	**Reduction** (1 - New baseline/Old)
Production of fresh tomatoes	2.6006	1.4926	42.6%
Production of fresh capsicums	3.6064	3.0027	16.8%
Production of fresh cucumbers	3.4461	0.7695	77.7%
Mean	*3.2177*	*1.7549*	*55.6%*

[8] Environmental Protection Authority. "Horticulture". Accessed 11/07/24.
[9] Tomatoes NZ
[10] Ministry for the Environment. "Overview of industrial allocation". 19/06/24.
[11] Climate Change Response Act 2002. S81 (1)

This change was not well-signalled to the industry, and growers have already committed to expensive annual gas contracts that they cannot break mid-year. The reduction in allocation is financially significant and expected to cost large businesses as much as $200,000, which they have not included in their budgets for the year. The cost may be enough to push businesses toward decarbonisation, but that change requires advance planning and access to capital.

Without assistance or time to adjust, the change in allocative baseline will serve as an effective **"tax on food"**, increasing the cost of production for vegetable growers for no additional emissions reductions in the interim time it will take to make energy changes.

Because of the necessity of affordable food, a just transition requires food system decarbonisation to avoid disrupting production and supply chains. Settings from the ETS are already making it more difficult for growers to produce vegetables at an affordable price, which is necessary to both keep them in business and ease the cost-of-living crisis.

Paired with sky-high gas prices and rising costs of other inputs, growers are already under tight financial pressure. According to one greenhouse grower, the cost of production increased 30-50% in recent years, while the price of cucumbers only went up 10%. A cucumber grower told HortNZ,

> "The plethora of legislative changes in the last 5 years have put me under a huge amount of pressure. Time spent completing compulsory MfE data requests, resource consent applications, and interpreting and understanding the next compliance hurdle has taken my focus off the important stuff; growing my people and my crops."

HortNZ seeks that the **allocative baseline change is delayed until funding is available to support the transition**, no earlier than July 2025 to allow time for gas contracts to expire and for growers to make fuel changes with support. The industry takes its ETS obligations seriously and is actively working on sector decarbonisation. Due to the monumental cost of energy transition, growers cannot make changes without co-investment, as outlined in section 4.2 of this submission. If the new allocative baselines come into effect before financial backing is available, greenhouses will go out of business. Regulatory certainty and realistic timeframes are needed to make change.

Giving growers time and co-investment to adjust to the new allocative baseline fits within the following pillars of the Government's climate strategy –

- the second pillar, "Credible markets support the climate transition: Pricing emissions fairly and effectively to incentivise emissions reductions", and
- the fourth pillar – "World-leading climate innovation boosts the economy", which contains the aim, "Agriculture industry uses technology to lower emissions while lifting productivity".[12]

[12] Ministry for the Environment. "Responding to a changing climate: The Government's climate strategy". July 2024. Accessed 10/07/24.

4.2. Funding for Decarbonising Greenhouses

The cost for a greenhouse grower to decarbonise is roughly $1 million per hectare.[13] Vegetable growing already has incredibly slim margins, so this transition cost and the slow return on investment makes the change to renewable energy sources unachievable for most covered cropping businesses. Efficiency and emissions improvements can also be made through mitigations like installing screens, which reduce the amount of fuel needed.

Only 25 ha of greenhouses from the largest companies have already decarbonised. These companies were able to make the transition with co-investment from the Government Investment in Decarbonising Industry (GIDI) Fund.[14] GIDI funding was only available to the largest greenhouse companies because small and medium-scale growers could not meet the emissions threshold for eligibility. It seems ill-advised that the GIDI fund was removed in the proposed Second Emissions Reduction Plan, just as new baselines are announced, doubly reducing the assistance for New Zealand producers to decarbonise while avoiding carbon leakage.[15]

Funding is the most important way the Government can help the covered cropping sector to decarbonise. Small and medium-scale growers, who make up half of the industry at current estimates, do not have the capital on hand to make these changes. There are still 216-285 ha of greenhouses that are not decarbonised, which would cost roughly $216-285 million to transition.[16] These growers need grants for co-investment to either switch fuels or improve energy efficiency. Easily accessible low interest loans would also help.

HortNZ seeks the establishment of a Sustainable Food Systems Fund, to come into place before the allocative baseline changes, that reinvests ETS proceeds in decarbonising and adapting New Zealand's domestic food supply. The funding should not have an emissions threshold for greenhouse businesses to participate. Resourcing should be available for both fuel switching and efficiency improvements, which have a 100% chance to decrease emissions. These mitigations are proven and do not bank on experimental technologies or development of entirely new science.

The Government is already investing nearly $150 million in the New Zealand Agricultural Greenhouse Gas Research Centre to work on reducing domestic agricultural emissions in the next 5 years,[17] and co-investing $191 million over four years with the agricultural industry for AgriZero^{NZ}, in addition to other projects.[18] Given the Government's commitment to reducing agricultural emissions, it is only appropriate that decarbonising greenhouses fits in to the overall investment programme, particularly because the vegetables produced are healthy food grown primarily to feed New Zealanders.

[13] Vegetables NZ, Inc. estimate
[14] EECA. "Final stage of energy strategy for fresh produce company". 28 July 2022. Accessed 25/07/24.
[15] Ministry for the Environment. "Discussion document: New Zealand's second emission reduction plan". July 2024. Accessed 24/07/24.
[16] Vegetables NZ, Inc. estimates
[17] New Zealand Agricultural Greenhouse Gas Research Centre. "Our funding: Maintaining the momentum towards solutions." Accessed 24/07/24.
[18] Ministry for the Environment. "Discussion document: New Zealand's second emission reduction plan". July 2024. Accessed 24/07/24.

4.3. Greenhouses are Needed to Adapt Our Food System

Growing indoors, also known as covered cropping, is what allows New Zealanders to buy tomatoes, cucumbers, capsicum, courgettes, eggplants, leafy greens and herbs year-round. Consumers expect access to these crops, which drives production. If these crops were not grown in New Zealand, consumer demand would drive greater imports from other countries without an ETS, driving carbon leakage and further emissions associated with international freight.

An increase in covered cropping will be essential to adapt the food production system to the variable weather that comes with a changing climate while still producing enough food for our population. Indoor growing systems are less vulnerable to environmental conditions and pressures such as significant weather events. During Cyclone Gabrielle, 80% of the tomatoes grown outdoors for processing were destroyed, whereas the supply of indoor grown greenhouse tomatoes was relatively unaffected.[19]

Covered crops play an important part in providing supply of fresh produce at times of the year when outdoor cropping is challenging. Covered crop growers even out the supply of fresh produce, extending the availability of seasonal crops. Indoor growing systems also use less water and land and fewer nutrients than growing outdoors.

4.4. Support for All Business Sizes for Industry Diversity and Resilience

Currently, only biggest growers can afford to change energy systems, which is leading to rapid consolidation of the sector. This reduces competition, potentially increasing prices for consumers. It hurts small business owners who support the local economy and employment in rural communities.

Since specific surveying began in late 2022, 15 greenhouse growers were confirmed to have gone out of business, with additional growers expressing that they will be looking at halting their operations within the next year. [20] There is a serious risk that more businesses will join their ranks under the proposed policy regime.

Hectares of greenhouse production are still growing overall while the biggest businesses expand, but the risk of losing more small and medium operations threatens the diversity and resilience of the industry. Co-investment from Government within an emissions threshold for eligibility is one way to reverse this trend.

[19] Tomatoes NZ
[20] Vegetables NZ, Inc.