

# **SUBMISSION ON**

## Pricing Agricultural Emissions Consultation Document

18 November, 2022

**To:** Ministry for the Environment

**Submitter:** Potatoes New Zealand and Vegetables New Zealand



### **Contact for service:**

Chris Claridge  
CEO, Potatoes NZ  
[Chris.Claridge@potatoesnz.co.nz](mailto:Chris.Claridge@potatoesnz.co.nz)  
phone: 021 577 387

Antony Heywood  
GM, Vegetables NZ  
[Antony.Heywood@hortnz.co.nz](mailto:Antony.Heywood@hortnz.co.nz)  
Phone: 021 998 038

## EXECUTIVE SUMMARY

1. New Zealand vegetable growers<sup>1</sup> object in principle to being brought into the Emissions Trading Scheme (ETS), either directly or via the mechanisms proposed in Pricing Agricultural Emissions for two reasons:
  - a. The proposal is neither effective, practical nor equitable, and therefore fails to meet its own objectives.
  - b. Fresh vegetable and potato growers collectively account for only 0.032% of all agricultural emissions and should be exempt as are other minor contributors.
2. The proposed emissions levy on fertiliser doesn't create any meaningful additional economic incentive for change in fertiliser use for the vegetable sector, especially in the context of vegetable growers having limited options available to them.
3. If the emissions levy were to be increased to a point that it would create change, that change would be entirely counter-productive and result in exacerbating the cost-of-living crisis, a loss of national income from vegetable exports (and corresponding increases in food imports), and a very real threat to New Zealand's food security and health outcomes. This would be a direct contradiction of the 2015 Paris Agreement to safeguard food security while managing climate change.
4. In any case, the proposed emissions levy carries an administrative cost out of proportion to the value of the levy itself. This goes against a key principle of sensible tax design.
5. Furthermore, various parties have been granted exemptions either by membership of a sector, a group identity, or by the arbitrary threshold of 40MT fertiliser per annum. For vegetables, this creates an intolerable inequity between parties competing in exactly the same markets.
6. If vegetable growers are brought into the agricultural emissions pricing regime, we respectfully suggest:
  - a. The emissions levy on fertiliser should be administered entirely by the fertiliser companies (processors) themselves, and included in the price of fertiliser, with no differentiation between any parties, or on any basis; and
  - b. The vegetable sector should be exempt from all other administrative demands and costs; and
  - c. The governance of emissions pricing should be according to the original HWEN proposal, with representation from the primary sector.
7. Further to these points, if and when the vegetable sector is paying an emissions levy, then we would require additional assurances:
  - a. That the recycling of emissions levies back to the vegetable sector is managed exclusively by vegetable sector peak bodies, for the benefit of their members (not the wider horticulture sector); and
  - b. That vegetable peak bodies have a broad scope available to them in regards to how that money is spent, noting the fundamental point that the most likely way in which growers will improve is to increase crop yield per unit of nitrogen fertiliser.

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<sup>1</sup> In this context, the term "vegetable growers" is inclusive of both potato growers and other vegetable growers in Aotearoa New Zealand  
PNZ and VNZ  
Submission to Ministry for the Environment  
Pricing Agricultural Emissions

## **INTRODUCTION - POTATO AND VEGETABLE SECTORS**

8. Potatoes New Zealand and Vegetables New Zealand together represent significant interests in New Zealand's horticultural sector.
9. Potatoes New Zealand (PNZ) is a Primary Sector levy organisation. PNZ's membership comprises 172 grower members, 4 trade members (potato processors, exporters, and retailers) and 7 associate members.
10. Potatoes are Aotearoa New Zealand's third largest horticultural export earner, after apples and kiwifruit. Potatoes are grown on 8,951 hectares and earn \$1.1 billion annually<sup>2</sup> across the entire value chain<sup>3</sup>.
11. Vegetables New Zealand (VNZ) represents the interests of growers of all fresh vegetable crops (other than potatoes, onions, tomatoes, asparagus, and buttercup squash). This includes approximately 760 growers who produce more than 55 crops.
12. Vegetables New Zealand members produce vegetables worth \$430 million annually, growing on approximately 9,400 hectares.
13. Together, PNZ and VNZ welcome the opportunity to provide feedback on the Pricing Agricultural Emissions document.

## **OBJECTION IN PRINCIPLE TO VEGETABLES INCLUSION**

14. New Zealand vegetable growers object in principle to being brought into the Emissions Trading Scheme (ETS)<sup>4</sup>, either directly or via the mechanisms proposed in Pricing Agricultural Emissions for two reasons:
  - The proposal is neither effective, practical nor equitable, and therefore fails in the first instance to meet its own objectives.
  - Fresh vegetable and potato growers collectively account for only 0.032% of all agricultural emissions and should be exempt as are other minor contributors.
15. This submission outlines the ineffectiveness of the proposal for vegetable growers in paragraphs 20 to 24; the impracticality of such a burdensome approach in paragraphs 32 to 36; and the inequities in paragraphs 37 to 44.
16. This submission also outlines the negligible contribution of emissions by vegetable growers in the following paragraphs 17 - 24 below.
17. The contribution of New Zealand vegetable growers to greenhouse gas emissions is negligible, comprising only 0.017% of New Zealand's total emissions.
18. In the first instance, vegetable growers occupy less than 0.2% of New Zealand's 13.3 million hectares of farm land<sup>5</sup>, and their only contribution to emissions for the purposes of this exercise is only through fertiliser use<sup>6</sup>. The entire contribution of all nitrogen and

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<sup>2</sup> 2021 sector data: <https://potatoesnz.co.nz/administration/industry-values/>

<sup>3</sup> The 'value chain' refers to growing, processing, domestic retail and and export value of potatoes and potato products.

<sup>4</sup> Vegetable growers are technically already included in the ETS as users of diesel and electricity.

<sup>5</sup> Source: Statistics NZ

<sup>6</sup> Emissions from use of fuel on farms is accounted for separately.

lime fertiliser applied in New Zealand is just 1.2% of our greenhouse gas inventory. Vegetable growers use about 1.4% of fertiliser applied nationally (e.g. an estimated 5,500 MT of nitrogen fertiliser compared to a national usage of 400,000 MT per annum). Therefore, we estimate that our vegetable growers contribute only 0.017% of national greenhouse gas emissions (or 0.033% of agricultural emissions). These values are supported in the following tables.

#### **Sector Land Area in New Zealand**

<b>Sector</b>	<b>Land Area (hectares)</b>	<b>Percentage</b>
Potatoes (2021)	8,951	0.07%
Vegetables (estimated)	9,418	0.07%
NZ Total Farms	13,316,404	100.00%

Data source: Statistics NZ

#### **Nitrogen Use in New Zealand**

<b>Fertiliser Usage (MT p.a.)</b>	<b>2021</b>	<b>Percentage</b>
Potatoes (estimated)	2,685	0.67%
Vegetables (estimated)	2,825	0.71%
NZ Total Farms	400,000	100.0%

Data source: Fertiliser Association

<b>Emission Source</b>	<b>Emissions kt CO<sub>2</sub>-e</b>	<b>Percentage</b>
Lime	409.5	0.5%
Urea	542	0.7%
Enteric fermentation	28,831.50	36.6%
All Agriculture	39,425.50	50.0%
New Zealand Total	78,778.40	100.0%

Data source: MfE. 2022. New Zealand's Greenhouse Gas Inventory 1990–2020.

<b>Emissions from Vegetables</b>	<b>Summary</b>
Vegetables % of Fertiliser	1.378%
Fertiliser % of Ag Emissions	2.413%
Fertiliser % of All Emissions	1.208%
Vegetables % of Ag Emissions	0.033%
Vegetables % of All Emissions	0.017%

19. Other sectors such as poultry have been granted exemptions (eggs-exemptions?) from the Emissions Pricing on the basis of being “minor-emitting sectors”. On this basis vegetable growers should also be exempted.

## INSUFFICIENT INCENTIVE TO CHANGE BEHAVIOUR

20. The proposed mechanisms for Pricing Agricultural Emissions will be ineffective towards changing the behaviour by vegetable growers, or reducing emissions any faster than is already being accomplished<sup>7</sup>.
21. We estimate the initial implementation of the scheme is likely to impose an additional cost on growers of only \$5.29 to \$7.06 per hectare, depending on what calculation is used<sup>8</sup>.
22. If we assume a nominal crop of process potatoes yielding 50MT per hectare (saleable crop) at a farmgate price of \$600 per tonne, then it is clear the emissions levy will only amount to between 0.018% and 0.024% of the crop value. Many crops are more valuable and so the sector average could be even lower.

<b>Emissions Pricing for Vegetables (2025)</b>	<b>Scenario</b>		
	<b>ETS</b>	<b>HWEN</b>	<b>High</b>
Emissions (CO <sub>2</sub> -e MT/ha)	1.25	1.39	1.66
Carbon Price (\$/MT CO <sub>2</sub> -e)	\$85	\$85	\$85
Discount	95%	95%	95%
Emissions Levy \$/ha	\$5.29	\$5.90	\$7.06
Nominal Crop Yield (MT/ha)	50	50	50
Nominal Farm Gate Value (\$/MT)	\$600	\$600	\$600
Crop Value (\$/ha)	\$30,000	\$30,000	\$30,000
<b>Emissions Levy % of Crop Value</b>	<b>0.018%</b>	<b>0.020%</b>	<b>0.024%</b>

Source: HWEN Calculator, HortNZ grower survey, Sector estimates.

23. Vegetable growers use fertiliser not only to ensure that their soils contain sufficient nutrients for efficient production, but also to manage the timing and finishing of the crop with regards to harvest quality for market. The suggestion that imposing a levy equivalent to just 0.025% of crop value would lead any grower to reduce optimal fertiliser use and potentially compromise their ability to achieve that saleable crop is ludicrous. Growers are already reducing fertiliser use in any case.
24. Even in the hypothetical future case in 2050 where carbon prices reach \$200 per MT and there is no discount for agriculture, the emissions levy on fertiliser would only be 0.83% to 1.11% of crop value. This would still be insufficient incentive to lead vegetable growers to reduce fertiliser use below the optimal level needed to grow their crops, any faster than they are already doing.

<b>Emissions Pricing for Vegetables (2050)</b>	<b>Scenario</b>		
	<b>ETS</b>	<b>HWEN</b>	<b>High</b>
Emissions (CO <sub>2</sub> -e MT/ha)	1.25	1.39	1.66
Carbon Price (\$/MT CO <sub>2</sub> -e)	\$200	\$200	\$200
Discount	0%	0%	0%
Carbon Tax \$/ha	\$249.05	\$277.74	\$332.00
Nominal Crop Yield (MT/ha)	50	50	50
Nominal Farm Gate Value (\$/MT)	\$600	\$600	\$600
Crop Value (\$/ha)	\$30,000	\$30,000	\$30,000
<b>Emissions Levy % of Crop Value</b>	<b>0.83%</b>	<b>0.93%</b>	<b>1.11%</b>

Source: HWEN Calculator, HortNZ grower survey, Sector estimates.

<sup>7</sup> NZ vegetable growers are already investing to reduce emissions both separately and collectively.

<sup>8</sup> The ETS and HWEN scenarios use surveyed averages of growers' fertiliser use under two different calculation regimes, while the "high" case assumes 300 units of N and 100kg of lime per hectare under the HWEN scheme.

## CREATING A SUFFICIENTLY HIGH INCENTIVE WOULD BE COUNTER PRODUCTIVE

25. If the emissions levy were to be increased to a point that it would create change, that change would be entirely counter-productive and result in exacerbating the cost-of-living crisis, a loss of national income from vegetable exports (and corresponding increases in food imports), and a very real threat to New Zealand's food security and health outcomes. This would be a direct contradiction of the 2015 Paris Agreement<sup>9</sup> to safeguard food security while managing climate change.
26. Vegetable growers have extremely limited options in regards to offsetting or otherwise reducing fertiliser use as almost all growing is conducted on "highly productive land", and much of this land is leased. The competitive market in which they operate with tight financial margins would result in less productive growers being uncompetitive in (re)securing leases over time.
27. As evidence of tight financial margins, vegetable grower input costs have experienced significant inflation ahead of prices. Labour costs have increased by more than 4.5% per annum since 2015, and fertiliser prices increased by over 63% in the last year alone. Meanwhile farm-gate prices for vegetables have lagged below growers' cost inflation. A study conducted earlier this year by VNZ concluded farm-gate prices increased just 1.7% per annum over the period 2015-2022 (this being only half the rate of retail price inflation for vegetables). In consequence, we estimate the average vegetable grower's margin may have halved over the last decade.
28. The majority (about 80%) of fresh vegetables are grown for the domestic market<sup>10</sup>. As a result of tight growing margins, any material emissions levy for growers would simply increase the price of domestic vegetables with a corresponding reduction in fresh vegetable consumption, especially for our most vulnerable low socio-economic communities. Fresh vegetables are a highly price sensitive category. Further price increases, especially with the cost-of-living crisis, are estimated have a significant impact on New Zealanders' welfare and national health costs<sup>11</sup>.
29. New Zealand is also an important source of fresh vegetables exported to the Pacific Islands. These vulnerable communities would likely experience price increases and consequent changes in reduced consumption and worse health and welfare outcomes.
30. New Zealand vegetable growers could become uncompetitive in wider export markets, threatening \$700m worth of export trade income<sup>12</sup>. No other nation is bringing their agricultural sector into emissions trading scheme or implementing a similar emissions levy, and so this could be a significant competitive disadvantage for New Zealand growers who supply export markets.
31. Even more concerning, other nations may see opportunity to enter and expand vegetable imports into New Zealand. The dumping of subsidised European potato products into the New Zealand market during 2000 as COVID hit domestic sales in the EU is a harbinger of what could occur<sup>13</sup>. This would ultimately undermine the survival of the New Zealand vegetable sector and our national food security.

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<sup>9</sup> 2015 Paris Agreement: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

<sup>10</sup> KPMG. (2017). New Zealand domestic vegetable production: the growing story.

<sup>11</sup> Cleghorn, C. 2020: The health and health system cost impacts of increasing vegetables prices over time, University of Otago

<sup>12</sup> Source: Horticulture NZ 2022 Annual Report, Vegetable Exports.

<sup>13</sup> <https://www.newshub.co.nz/home/rural/2020/07/new-zealand-potato-industry-calls-for-govt-protection-from-predatory-eu-exporters.html>

## ADMINISTRATION COSTS ARE UNREASONABLE

32. The proposed emissions levy carries an administrative cost out of proportion to the value of the levy itself. This goes against a key principle of sensible tax<sup>14</sup> design, as described by the government’s own Tax Working Group<sup>15</sup>:

*“Compliance and administration cost: The tax system should be as simple and low cost as possible for taxpayers to comply with and for the Inland Revenue Department to administer.”*

33. We estimate that the total levy on New Zealand vegetable growers in 2025 will be somewhere between \$97,000 and \$130,000. Justifying administration costs for collecting this trivial amount defies logic.

### Total Emissions Levy for Vegetables in 2025

Sector		Low	Med	High
Potatoes and Vegetables Land	(ha)	18,369	18,369	18,369
Emissions Rate	CO2-e MT/ha	1.25	1.39	1.66
Total Emissions	CO2-e MT	22,874	25,509	30,493
Carbon Price	\$/MT CO2-e	\$85	\$85	\$85
Discount		95%	95%	95%
Collective Emissions Levy	\$ 000's	\$97,216	\$108,412	\$129,593

34. The current proposal outlines “establishment costs of the system, estimated at \$87 million, and ongoing operating costs, estimated at \$32 million per year”. The maximum possible emissions levy from “all agriculture” in 2025 can be estimated as no more than \$169 million based on 39.4 million tonnes CO2-e per annum. Given the various exclusions the actual levy could be much less, indeed close to the cost of implementation. We find this highly unreasonable.

35. The additional burden of administration within vegetable growers’ own businesses is also problematic. We draw attention to the numerous other administrative burdens already being placed on vegetable growers including consent processes for rotations, new consents for land to replace expired leases, regional plan changes and farm environment plans for compliance with the national policy statement for fresh water.

36. We also note that PNZ and VNZ already have efficient administrative systems for collecting commodity levies from their members. It is unconscionable that these systems should be duplicated at great cost by another government agency.

<sup>14</sup> The word “levy” is synonymous with “tax” and the same principles for good design apply.

<sup>15</sup> Tax Working Group Information: Release Document, September 2018

## EXEMPTIONS AND THRESHOLDS ARE UNREASONABLE

37. Various parties have been granted exemptions either by membership of a sector, a group identity, or by the arbitrary threshold of 40MT fertiliser per annum. For vegetables, this creates an intolerable inequity between parties competing in exactly the same markets.

38. We again draw attention to another of the government's own principles for a good taxation system:

*Equity and fairness: The tax system should be fair. The burden of taxes differs across individuals and businesses depending on which bases and rates are adopted. Assessment of both vertical equity (the relative position of those on different income levels or in different circumstances) and horizontal equity (the consistent treatment of those at similar income levels, or similar circumstances) is important. The timeframe is also important, including how equity compares over peoples' life-times*

39. The most critical issue for vegetable growers is the "40 MT Threshold", i.e.

*The Government proposes to define farmers and growers who must report emissions and pay the levy as those who are goods and services tax registered (to define the business owner) and meet one of the following thresholds:*

- *550 stock units (inclusive of sheep, cattle and deer, calculated on a weighted annual average basis); or*
- *50 dairy cattle; or*
- *apply over 40 tonnes of nitrogen through synthetic nitrogen fertiliser.*

40. For vegetable growers, this apparently arbitrary demarcation would split vegetable growers who are otherwise using the same systems to grow the same product on similar land. It could also potentially create a perverse incentive to limit the size of operations at whatever area total fertiliser use falls below the threshold<sup>16</sup>. Also, many more fruit growers would fall below this threshold versus vegetable growers and it would thus drive a wedge through the entire horticultural community.

41. The exemptions granted to pigs, poultry, and goats have already been highlighted. If these sectors are exempt "because the costs of including these minor sectors in an interim levy would likely outweigh the additional emissions reductions benefits that would arise from pricing these sectors at the processor level", then vegetable growers should also be exempt.

42. The exclusive focus on levying "synthetic nitrogen" could create unnecessary market distortions. There is already sufficient incentive for parties desiring claims in respect to using organic fertiliser or similar practices. We submit that emissions from a unit of synthetic nitrogen fertiliser cannot be objectively distinguished from emissions from a unit of non-synthetic nitrogen fertiliser. How people might "feel" about those products is immaterial.

43. The apparently arbitrary inclusions and exclusions in regards to vegetation qualifying for sequestration are also problematic, and we take the position that this is symptomatic of a larger issue: namely that the architects of this policy already understand that is too unwieldy and impractical especially when it cannot possibly achieve its goals. The attempt to reduce complexity by disqualifying the only classes of on-farm vegetation that vegetable growers could claim is extremely disappointing.

44. Finally, cultural identity is not an appropriate basis for discrimination in any levy system.

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<sup>16</sup> We also advise that there would be an incentive for parties to create multiple intermediaries each purchasing less than 40MT, solely to avoid the levy. The proposed system would therefore require policing as well as administration, to no useful purpose.

## **RECOMMENDATIONS IF VEGETABLE GROWERS MUST PARTICIPATE**

45. If vegetable growers are brought into the agricultural emissions pricing regime, we respectfully suggest:
- a. The emissions levy on fertiliser should be administered entirely by the fertiliser companies (processors) themselves, and included in the price of fertiliser, with no differentiation between any parties, or on any basis; and
  - b. The vegetable sector should be exempt from all other administrative demands and costs; and
  - c. The governance of emissions pricing should be according to the original HWEN proposal, with meaningful representation from the primary sector.
46. Levying fertiliser at the point of sale to all parties provides a fair and equitable solution as, from a scientific perspective, the emissions outcomes are the same regardless of who is purchasing fertiliser.
47. The vegetable growing sector is only liable for fertiliser emissions, as it has no livestock. Therefore, with the emissions levy being managed entirely by the fertiliser company, and included in the price of fertiliser, there is no need for an additional administration levy on vegetable growers.
48. As a matter of principle, vegetable growers support the position of the HWEN partners in regards to primary sector involvement in governance of the price-setting mechanism. The government's rejection of primary sector involvement in setting the emissions price, its priorities in how the price is set and the tightening in the classes of vegetation recognised in sequestering carbon is cause for concern.

## **RECYCLING OF EMISSIONS LEVIES TO THE VEGETABLE SECTOR**

49. If the vegetable sector is included in the agricultural emissions pricing scheme, then we require additional assurances in regards to how that revenue will be recycled back into the sector, i.e.
- "Any revenue raised from the pricing system, once incentive payments are netted off, would be used for administration where it is appropriate, and remaining funds would be subject to the revenue recycling strategy to drive further emissions reductions, and to support farmers and growers to reduce their emissions".*
50. On the basis that no administration costs should apply to vegetable growers (for the reasons already stated) we submit that the entire emissions levy revenue from vegetable growers should be remitted back to their respective peak bodies for the purpose of "driving further emissions reductions, and to support vegetable growers to reduce their emissions". For clarity, we ask that levy collected from potato growers be remitted to PNZ, and levy collected from fresh vegetable growers be remitted to VNZ. We do not agree to any system that would see these revenues remitted back to the general pool of funds managed by Horticulture NZ.
51. Vegetable peak bodies will require discretion in regards to how the emissions levy revenue is spent, noting that the most likely way in which growers will improve and reduce emissions is to increase crop yield per unit of nitrogen fertiliser. Optimal selection and application of fertiliser is just one aspect of the entire vegetable growing system. Other avenues of useful research and extension include efficient machinery, and the efficient use of machinery.