



# Soil & Health Association ( Est. 1941 )

Healthy Soil, Healthy Food, Healthy People

To: Ministry for the Environment

## Submission of the Soil & Health Association on the Emissions Reduction Plan

From: The Soil & Health Association

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### Our contact details:

Jenny Lux, National Councillor  
[jenny.lux@soilandhealth.org.nz](mailto:jenny.lux@soilandhealth.org.nz)

Marion Wood, Chairperson  
[marion.wood@soilandhealth.org.nz](mailto:marion.wood@soilandhealth.org.nz)

### Summary of our submission

Our submission focuses on agriculture and organic waste and states that more can be done, sooner, by supporting a faster transition to regenerative organic farming.

Emissions from organic waste and from agriculture can be managed down together, through conversion of farming to regenerative organic systems alongside better organic waste collection and processing for composting and soil-building.

To do this the government needs to prioritise support for existing available solutions such as organics rather than focusing on new technologies. We agree that rural extension services, research and better waste regulation are key tools to deliver this change.

### About Soil & Health

The Soil and Health Association is the largest membership organisation supporting organic food and farming in New Zealand. We are also one of the oldest organic organisations in the world, established in 1941.

Soil & Health is committed to advocating our maxim “Oranga Nuku – Oranga Kai – Oranga Tāngata: Healthy Soil – Healthy Food – Healthy People”.

We represent organic consumers and producers, own the shareholding of BioGro, and publish Organic NZ magazine.

## Submission of the Soil & Health Association on the draft ERP – agriculture

It is unacceptable that agriculture, as our largest emitting sector, is the least developed and most poorly explained aspect of the ERP.

New Zealand's plan to transform agriculture should be a top priority in the final plan and include clear direction with support for immediately available solutions.

The draft ERP currently highlights pricing, extension and research as key tools. We agree with this approach and have the following to add:

- To properly honour the pricing strategy of government climate policy and the ERP, agriculture must enter the Emissions Trading Scheme from 2022, with the same subsidies that other high-emitting industries have. The ERP should indicate that subsidies will be eliminated across all industries by 2025.
- The agriculture ERP should follow the advice of the Climate Change Commission which emphasized the importance of implementing present-day solutions to their maximum effect. Indigenous growing practices including Hua Parakore, a Māori organic system, offer immediate solutions to mitigate farm emissions. The agriculture ERP must include research, funding and support for these existing agricultural systems with low emissions profiles.
- Certified organic agriculture presents a major opportunity to reduce emissions and should be included as an element of the plan.
- Research and extension should be invested in proven sustainable systems, such as organic agriculture, at least to the same degree as searching for new technologies. Organic regenerative agriculture research has never been well funded in NZ, which is why it is often discounted as a potential solution. This contrasts with overseas jurisdictions like the US and EU who are currently investing heavily in organic research and in the organic sector to help reduce emissions (see for example the EU's Green Deal "Farm to Fork" strategy which aims for at least 25% of the EU's agricultural land to be organic by 2030).
- Funding must focus on proven methods, such as organic systems, as a priority. Only once these are in progress should "new" or hypothetical solutions such as inhibitors or vaccines be funded. For example, dairy farm management under organic practice is already shown to be less GHG intensive per hectare, while attracting a higher price at market.<sup>1</sup>

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<sup>1</sup> Shadbolt N., Thatcher A., Horne D., Kemp P., Harrington K., Palmer A., Martin N. June 2011. Massey University Organic-Conventional Dairy Systems Trial: Report after the seventh season of full certification. <https://www.massey.ac.nz/massey/fms/DCRU10/Annual%20Reports/DairyNZ%20Report%20June%202011.pdf>

- Allowable parameters for ruminant livestock farming should be consistent with organic regenerative farming where the aim is to maximise soil health, soil carbon sequestration and long-term farm profitability while minimising GHG emissions and water pollution. To this end, a sinking cap on synthetic nitrogen fertiliser should be introduced to de-intensify pastoral systems and reduce nitrous oxide emissions. A 6.7-fold increase in nitrogen-containing fertilizer use has occurred since 1990 (MfE 2020) and is contributing directly to carbon intensity in our farming systems. A sinking cap on imported feed should also be introduced, to further incentivize reduced stocking rates.

## **Response to specific questions posed in the draft ERP - agriculture**

QUESTIONS (from page 100, draft ERP)

*83. How could the Government better support and target farm advisory and extension services to support farmers and growers to reduce their emissions?*

Government should establish a national pathway to lead the farming transition. This pathway should acknowledge the spectrum of regenerative agriculture systems and techniques, with organic certification at the premium end, and give incentives and support for farmers to move along the pathway.

Priority should be given to rewarding farms already on the regenerative pathway, with incentives and support to take the final steps to achieve organic certification and benefit from the resulting price premiums at market.

Secondary priority should be given to moving the most intensively polluting practices on to the regenerative pathway.

*84. What could the Government do to encourage uptake of on-farm mitigation practices, ahead of implementing a pricing mechanism for agricultural emissions?*

Provide funding grants and bridging finance for farms converting to organic. This kind of support gives financial security in the period of transition and will accelerate on-farm mitigations. It is a common policy in overseas markets such as the USA and Europe.

Good extension services for farmers are also key to them having the confidence to change systems.

*85. What research and development on mitigations should Government and the sector be supporting?*

Government should support research into current low-intensity systems such as organics.

The science of using agricultural soils to capture atmospheric carbon is still not well developed in NZ. McNally et al. (2017) investigated the carbon sequestration potential of different types of agricultural soils, concluding that 'brown soils' had the largest capacity to sequester C with an estimated 50.9 Mt C able to be stored, as these soils covered the largest land area under high producing grassland in New Zealand (2.7 M ha). Overall, they estimate that NZ's soils could store a total of 124 Mt C.<sup>2</sup>

In response to the need to benchmark soil carbon, in 2020 Landcare Research – Manaaki Whenua commenced a detailed soil carbon monitoring study across 500 sites in NZ<sup>3</sup>. Unfortunately, this study is stratified by land use (orchards, arable, drystock, dairy etc.), but not by management type (e.g., conventional vs. organic), so it will not be possible to compare how management affects soil carbon over time. This is an example of how we are failing to design the types of research that we need, and which would support decision-making about best practice.

Soil & Health recommends that this study be changed to include a comparison between conventional and organic.

*86. How could the Government help industry and Māori agribusinesses show their environmental credentials for low-emissions food and fibre products to international customers?*

The Organic Products and Production Bill and associated regulations need to come into force, followed by the introduction of a specific government objective to increase the land area under organic certification in Aotearoa.

Organics exists within the spectrum of regenerative farming practices and is the only system with existing certification that is internationally recognised. Organics has global recognition as a low-emission and environmentally friendly farming system. International markets are currently moving quickly to adopt a greater proportion of organic management (e.g., USA and the EU have government policy to advance organics).

The New Zealand Government needs to include expansion of organic production into its plan for the future of farming.

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<sup>2</sup> McNally SR, Beare MH, Curtin D, et al. Soil carbon sequestration potential of permanent pasture and continuous cropping soils in New Zealand. *Glob Change Biol.* 2017; 23:4544–4555. <https://doi.org/10.1111/gcb.13720>

<sup>3</sup> <https://www.landcareresearch.co.nz/news/a-new-national-soil-carbon-monitoring-system-for-agricultural-land/>

In Aotearoa the potential of Māori entities participating at all levels of the farming sectors as leaders, business owners, producers, researchers and as traditional knowledge holders has yet to be realised. The Hua Parakore system is the world's first indigenous verification and validation system for Kai Atua (pure food). Verified producers already operate on farms and from Māori food outlets across Aotearoa. The system is also available to other indigenous producers around the world – there are indigenous producers that are Hua Parakore verified such as MA'O Farms in Hawai'i.

A genuine Tiriti partnership is essential to embed indigenous practices that will mitigate climate change and enhance food security. This is a significant marketing opportunity and point of difference for Aotearoa food exports and one that needs strategic support and investment.

*87. How could the Government help reduce barriers to changing land use to lower emissions farming systems and products? What tools and information would be most useful to support decision-making on land use?*

Provide funding grants and bridging finance for farms converting to organic.

This kind of support gives financial security in the period of transition and will accelerate on-farm mitigations. It is a common policy in overseas markets such as the USA and Europe.

*8. Are there any other views you wish to share in relation to agriculture*

The agriculture section of the ERP needs to focus more on soil and soil health.

We believe that actions to protect and enhance soil health will be the most beneficial for emissions mitigation. For example, soil microbiology, biodiversity, and topsoil depth all contribute to biomass. In turn, natural biomass in the soil maximises the soil's sustainable fertility levels without the need for major external inputs such as synthetic nitrogen.

We believe there is a strong link and opportunity in connecting agricultural emissions reductions with organic waste reduction through the soil-building activity of composting. Reduced synthetic nitrogen use (to reduce emissions) can be offset by large scale composting by territorial authorities, creating a systematic regional collection of organic waste for use in soil regeneration and fertilisation.

International agreements, such as the Kyoto Protocol, do not recognise soil carbon in 'carbon accounting' procedures, only carbon that has become stored due to planting. Soil & Health understands that crediting carbon sequestration in soils usually presents bigger challenges than crediting other components of the forest ecosystems. It is,

however, of vital importance in the struggle to mitigate climate change and robust ways of measuring soil carbon must be found.

Soil & Health is also concerned that the current ETS settings favour monocultural pine plantations over planting native trees. Any single species solution, e.g., pines, does not take account the biodiversity and long-term value of native planting. There is a need for urgent work to address this imbalance, so that financial rewards are no longer greater for monocultural pine plantings.

Continued...

## **Submission of the Soil & Health Association on the draft ERP – organic waste**

Our submission focuses on organic waste.

The ERP highlights reducing food waste, reducing organic waste to landfill, and reducing emissions from landfill. We agree with this approach and have the following to add:

- Reducing organic waste to landfill should be the priority over reducing emissions once the organic waste is dumped.
- We would support a ban on organic waste to landfill.
- Food waste should be tackled as a government priority, to eliminate food poverty and food insecurity.
- Organic waste collection and processing infrastructure should be accelerated and co-designed with the agriculture sector on a regional scale.

### **Response to specific questions posed in the draft ERP – waste**

*89. The Commission's recommended emissions reduction target for the waste sector significantly increased in its final advice. Do you support the target to reduce waste biogenic methane emissions by 40 per cent by 2035?*

40% by 2035 is the minimum acceptable target and could be strengthened further.

*90. Do you support more funding for education and behaviour change initiatives to help households, communities and businesses reduce their organic waste (for example, food, cardboard, timber)?*

Yes.

*91. What other policies would support households, communities and businesses to manage the impacts of higher waste disposal costs?*

Organic waste collection and processing infrastructure should be accelerated and co-designed with the agriculture sector on a regional scale.

Creation of circular economies for organic materials at a regional level will mitigate emissions from waste as well as agriculture.

*92. Would you support a proposal to ban the disposal of food, green and paper waste at landfills for all households and businesses by 1 January 2030, if there were alternative ways to recycle this waste instead?*

Yes. Organic waste should be prioritized for collection and processing as part of regional scale composting and soil-building efforts. This change will support emissions mitigation within agriculture as well as waste.

*93. Would you support a proposal to ban all organic materials going to landfills that are unsuitable for capturing methane gas?*

We would support a total ban on organic materials going to landfill, with an exception for contaminated material.

*94. Do you support a potential requirement to install landfill gas (LFG) capture systems at landfill sites that are suitable?*

Only as a secondary measure. I.e., the priority must be diversion away from landfill for organic material.

*95. Would you support a more standardised approach to collection systems for households and businesses, which prioritises separating recyclables such as fibre (paper and cardboard) and food and garden waste?*

Yes. We believe regional and local organic waste collection and processing partnerships should be funded. Infrastructure is also required, such as organic waste depots and composting facilities. These need to be co-designed with the agriculture sector to provide a circular pathway from food production and to organic waste and back to the soil.