



SUBMISSION

on

New Zealand second emissions reduction plan

to

Ministry for the Environment

Date: 25 August 2024

Contact: Vera Power, Greg Sneath
Organisation: The Fertiliser Association of New Zealand
Postal Address: PO Box 11519, Manners St, Wellington, 6142
Phone: (04) 473 6552
E-mail: info@fertiliser.org.nz

About the Fertiliser Association of New Zealand

The Fertiliser Association of New Zealand is an industry association funded by member companies to address issues of common public good. Member companies include Ballance Agri-Nutrients Ltd and Ravensdown Ltd. Both are farmer co-operatives with some 35,000 farmer shareholders. Between them, our members supply the majority of fertiliser used in New Zealand. As co-operatives, they are driven by delivering best value to farmer shareholders rather than maximising the value of product sales.

The Association member companies have invested significantly in products, systems and procedures which support responsible nutrient management to enable a viable primary industry within environmental limits.

The Association submits on national policy and regulation, with the view that policy and regulation should be enabling, and that controls are both appropriate and necessary while providing for sustainable primary production.

The Fertiliser Industry is committed to supporting New Zealand's 2050 net zero emissions target and to enabling its farmer shareholders to achieve their ambitions in environmental management including reduction of agricultural greenhouse gas emissions.

Summary

Our submission focuses on the draft Emissions Reduction Plan as it relates to agriculture.

The fertiliser industry has supported farmers to contribute to the reductions required in the first emissions budget, through increased efficiencies, precision agriculture technologies, improved management and reductions in nitrogen fertiliser use.

Enabling use and recognition of a broader range of emissions-reducing practices and technologies is critical to achieving emissions reductions. This must include complying with international regulatory frameworks to ensure market access and assurance of food safety. Improvement to our domestic regulatory system to support more rapid application of technologies is critical.

While we are supportive of increased use of coated urea, the assumption that 80% urea sold will be coated with urease inhibitor ignores the fact that opportunities exist in addition to a single product. Ultimately successful emissions reductions will be aided by use of a broad range of inhibitors, including nitrification inhibitors. Exploring and realising the potential for nitrification inhibitors to reduce both direct GHG emissions and losses to water will be an important element to successful emissions reduction.

Introduction

The Fertiliser Industry is committed to:

- supporting farmers on the journey to New Zealand's 2050 net zero emissions target and
- enabling its farmer shareholders to achieve their ambitions in environmental management including reduction of agricultural greenhouse gas emissions, and
- supporting farmers and growers to meet their market expectations for emissions reductions.

Our focus on fertiliser is on the reduction of nitrous oxide emissions associated with fertiliser, which in 2022 represented 2.8% of agricultural greenhouse gas emissions. Carbon dioxide emissions associated with urea when applied adds a further 1% bringing the total to 3.8% of agricultural emissions being associated with fertiliser.

In practical terms, we seek to minimise the emissions footprint of fertiliser manufacture, transport and use by:

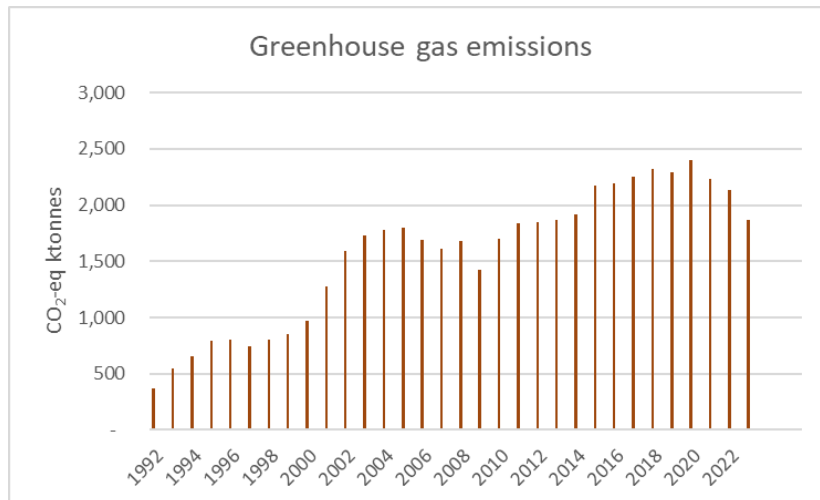
- Supporting farmers in their choices for on-farm emissions reduction by providing information and advice in applying the 4Rs.
- Providing farmer shareholders with quantitative information on their farm-level emissions associated with the products used.
- Working to deliver a nitrification inhibitor for use particularly on dairy farms to support a reduction in losses of nitrogen to the atmosphere and to water.
- Factoring consideration of emissions into product purchase decisions.

Enduring signals are important for business planning, investment and change. Our submission focuses on nitrous oxide emissions and in particular those associated with fertiliser use.

Nitrogen fertiliser use

Use of nitrogen fertiliser on-farm is associated with direct and indirect emissions of nitrous oxide, and additionally for urea, emissions of carbon dioxide. Overall nitrogen fertiliser emissions in New Zealand

peaked at 2.4 million tonnes CO₂-eq in 2019/20. Fertiliser emissions in 2022/23 were 1.9 million tonnes CO₂-eq representing a 0.4 million tonnes CO₂-eq reduction in annual emissions over three years.



Source: Developed from National Greenhouse Gas inventory methods and industry data

In the 2022 New Zealand greenhouse gas inventory, emissions associated with fertiliser represented 3.8% of agricultural emissions.

To support reduced environmental impact the fertiliser industry is:

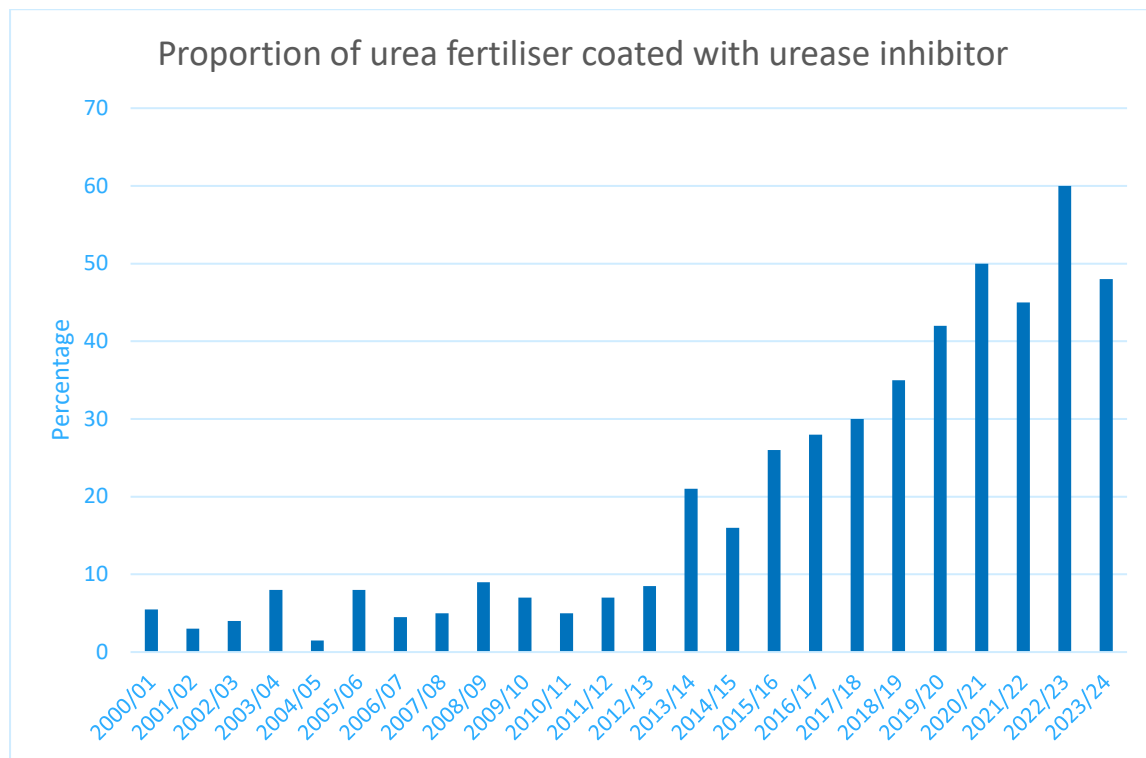
- Providing farmer shareholders with quantitative information on emissions associated with applied fertiliser products.
- Considering nitrification inhibitors for potential use on farms to support a reduction in losses of nitrogen to the atmosphere and to water.
- Factoring the consideration of emissions into fertiliser product purchase decisions.

Use of coated urea

The draft Emissions Reduction Plan sets an aspiration that 80% of urea sold will be coated with urease inhibitor. Currently, 50% of urea sold in New Zealand is coated with a urease inhibitor, following peak usage of 60% in 2022/23. The recent drop reflects farmers' responses to a limited fertiliser budget and high fertiliser price.

Farmers' confidence in the product and its impact is an important part of ensuring high usage. When productivity benefits to farmers are clear, mitigation technology can have a significant impact. In the absence of production advantages from mitigations, additional incentives may be essential to make inroads on emission reductions by 2030. The discussion document seems to support this view noting that *"prior to specific policy decisions, the assumption is that the pricing system is accompanied by incentive payments for the uptake of these technologies."* We anticipate that commercial SBTi targets and climate disclosures will be an increasing driver of emissions reduction. The draft Plan does not appear to have considered the impact of such non-government drivers on emissions reduction, nor how commercial and regulatory signals could align more effectively.

New Zealand has the highest market penetration globally for the use of urease inhibitors, and there continues to be international curiosity about how such high levels have been achieved on a voluntary basis. The closest country in terms of use is Germany, where use peaked with 20% of urea sold being coated with urease. This followed regulation making use of urease inhibitor mandatory unless urea was incorporated in the soil. The low level of uptake, despite the regulatory requirements, reflects the difficulty of ensuring regulatory compliance.



Potential for impact of nitrification inhibitors

Nitrous oxide emissions from agriculture remain relatively difficult to reduce. Nitrification inhibitors could potentially have application as both a fertiliser coating and as an in-situ urine amendment. We are also conscious of the dual benefits of nitrification inhibitors in terms of the potential for reduction of nitrate leaching alongside reduction of nitrous oxide emissions.

There are existing commercially available products which are very effective that could act in this way. However before use in New Zealand, they will require registration under the Agricultural Compounds and Veterinary Medicines Act 1997, and also, agreement on maximum residue limits through Codex Alimentarius.

There is significant fiscal and time challenge for any commercial supplier to take products through the regulatory system, and in developing the required evidence base. Formulation, application rates, efficacy trials, toxicology, economics, and in particular the potential for food residues and trade risk are all critical to determining the value of inhibitor products for pastoral agriculture.

Currently, there is a range of nitrification inhibitors that are potentially available, such as DCD, DMPP, and Nitrapyrin. There have been a number of detailed trials looking at the efficacy of these products to improve nitrogen use efficiency or to reduce emissions or leaching. Some of these trials have been undertaken in pastoral conditions. However, few of these trials have considered the challenging regulatory environment governing the use of these products.

Significant progress needs to be made in terms of a faster and more flexible domestic regulatory system for environmental inhibitors. A review looking at opportunities to streamline the process is underway. The critical step is the development of international regulatory processes. There has been initial agreement at Codex on its role in terms of establishing internationally agreed residue limits for environmental inhibitors. While work is at an early stage it is an important first step in acknowledging the global benefits from environmental inhibitors.

Conclusion

We welcome the opportunity to provide input and are happy to discuss any of the issues raised.

End