ON-LINE TEMPLATE TO BE USED FOR SUBMISSION

on

Regulatory Systems (Primary Industries) Amendment Bill

To

Select Committee

https://www.parliament.nz/en/ECommitteeSubmission/54SCPRIP_SCF_B67A1511-3571-4BA8-96CA-08DB71EF2382/CreateSubmission

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About the Fertiliser Association of New Zealand

1. The Fertiliser Association of New Zealand (the Association) 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 all fertiliser used in New Zealand. As co-operatives, they are not driven by maximising the value of product sales, but by delivering best value to farmer shareholders.
2. The Association submits on national policy and proposed regulation to support environmental management, with the view that policy and regulation should be enabling, and that controls are both appropriate and necessary while providing for sustainable primary production within environmental limits.
3. The Fertiliser Industry is committed to supporting NZ's 2050 net zero emissions target and to enabling its farmer shareholders to achieve their ambitions in the environmental management including reduction of agricultural greenhouse gas emissions.
4. Member companies of the Association have for many years sold **urease inhibitors** which reduce losses of ammonia to the atmosphere from urea under conditions favourable to volatilisation.
5. Members companies have also pioneered the use of **nitrification inhibitors** for application to livestock urine patches in soil, which is a principal source of nitrous oxide emissions from agricultural production.
6. Nitrification inhibitors and urease inhibitors are proven, currently available mitigations. However, nitrification inhibitors were voluntarily withdrawn from market in 2012, awaiting supporting regulation.

Submission points

7. We support the amendment to the definition of agricultural compound in the Agricultural Compounds and Veterinary Medicines Act to cover products whose purpose is mitigation of environmental impacts.
8. The proposed amendment provides a clear statutory basis for the use of inhibitors to mitigate the impacts of agricultural greenhouse gas emissions and also nitrogen leaching losses. This will support reductions in agricultural greenhouse gas emissions as well as enabling innovation and flexibility for farmers to adopt sustainable, productive farm management systems.
9. This submission is focussed on:
    a) the definition of inhibitor.
    b) transitional arrangements
10. The Association seeks that the definition for inhibitors does not inadvertently exclude the use of urease or nitrification inhibitors because these are typically applied via fertiliser to soils or directly to soils. We propose the inclusion of the word "land" to the proposed definition for inhibitor, as follows. (The term "land" is consistent with the term used in the definition of agricultural compound).

> ***inhibitor*** *means an agricultural compound applied (either directly or indirectly) to* ***land****, plants or animals to mitigate adverse impacts on the environment or to mitigate emissions that contribute to climate change.*

11. We submit that the 12 months transition period, providing exemption from registration following commencement of the Act, should be extended to two years. This will provide adequate time for gathering the information to support application for the range of trade name products currently on the market associated with use of urease inhibitors, and also allow for the average processing time for the ACVM team to undertake assessment for novel products (typically 250 days). This will avoid reducing farmers' access to the use of the few proven mitigation technologies available until full registration is in place. In the 2022/23 fertiliser year, 60 per cent of nitrogen was sold in the form of urea coated with urease inhibitors. This high usage is the result of the promotion of these products to farmers both as a way of mitigating emissions and enabling less nitrogen fertiliser to be used. In the face of tightened margins for farmers and growers it is critical that access to use of these technologies is maintained.
12. Alongside the Bill, a new legislative instrument is required to provide for inhibitors already in use in July 2022, but not yet registered, to continue to be used between July 2024 (when current exemptions from registration are revoked), and commencement of the Act (when the new transition period is adopted).
13. Thank you for the opportunity to make comment and submit on the proposed amendments.

Background

14. There are currently three very different types of inhibitors which can be applied to address agricultural emissions. (i) Methane inhibitors are applied to livestock to inhibit the production of enteric methane. (ii) Urease inhibitors are coated on urea fertiliser. They slow the conversion of urea to ammonia in soil and under conditions conducive to volatilisation they can reduce ammonia losses substantially. (iii) Nitrification inhibitors are coated on fertiliser or applied directly to soil, to slow the conversion in soil of ammonium to nitrate, thereby reducing leaching losses and also significantly reducing nitrous oxide emissions from soil.
15. Urease and nitrification inhibitors are applied to soil for the express purpose of influencing chemical reactions in the soil (hydrolysis or urea) or soil microflora (nitrification processes).
16. Urease inhibitors and nitrification inhibitors are not applied directly or indirectly to plants or animals, because their activity occurs in the soil. That is, urease and nitrification inhibitors' activity are entirely independent of plants and animals. See diagrams below adapted from Fertilizers Europe (*Nitrogen fertilization: Inhibitors*):

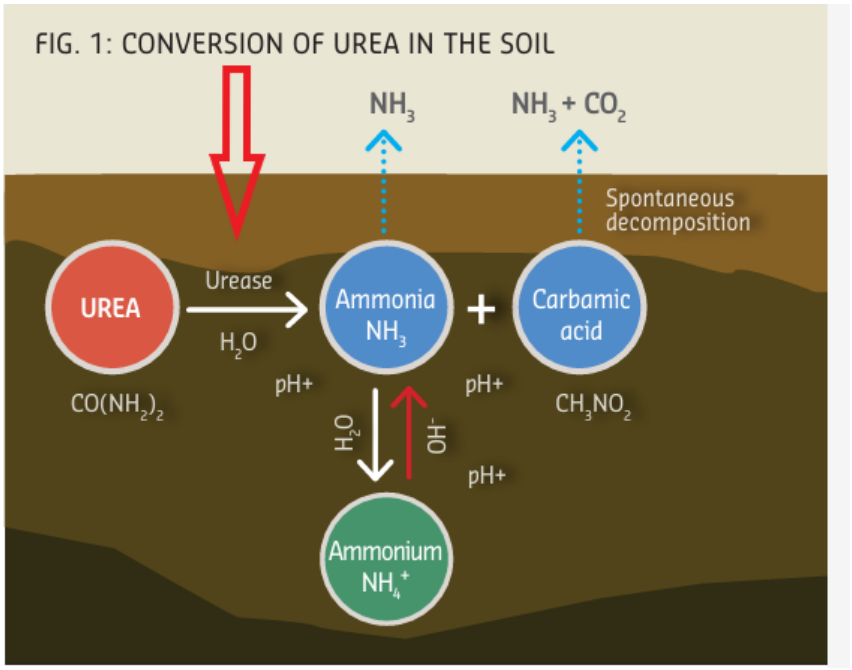

Figure 1: Site of activity of urease inhibitors on application to soil
[Adapted from: Fertilizers Europe (*Nitrogen fertilization: Inhibitors*)]

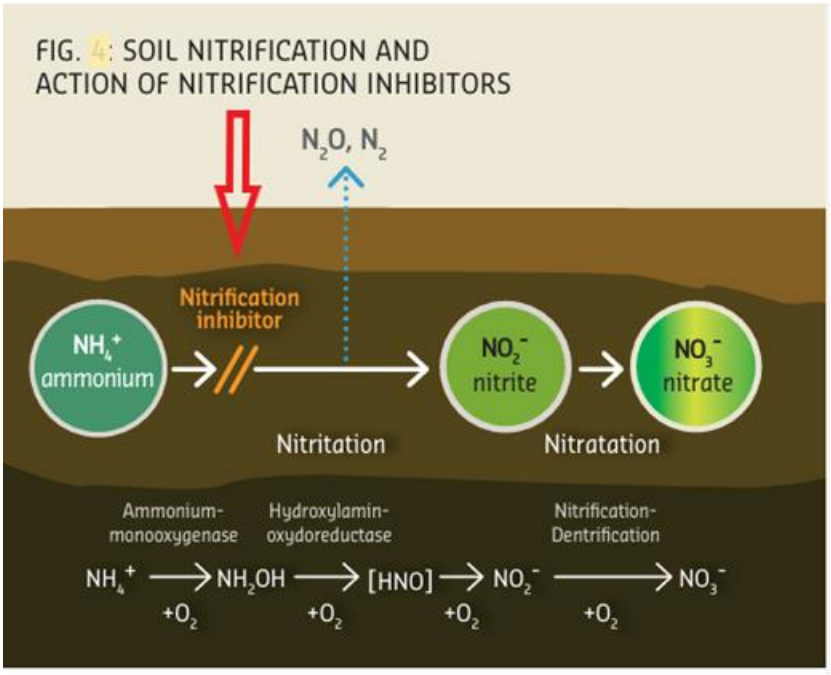

Figure 2: Site of activity of nitrification inhibitors on application to soil.
[Adapted from: Fertilizers Europe (*Nitrogen fertilization: Inhibitors*)]

17. Nitrous oxide emissions from agricultural soil represent roughly 10 % of in New Zealand GHG emissions. Losses from livestock urine account for roughly 5.5%, as nitrous oxide and “other” activities account for 4.6% of GHG losses: (See Fig 3), where ’other’ includes GHG emissions from soil organic matter loss, crop residues, mineral nitrogen fertiliser, organic fertilisers, and indirect losses (e.g. volatilisation or leaching and runoff).

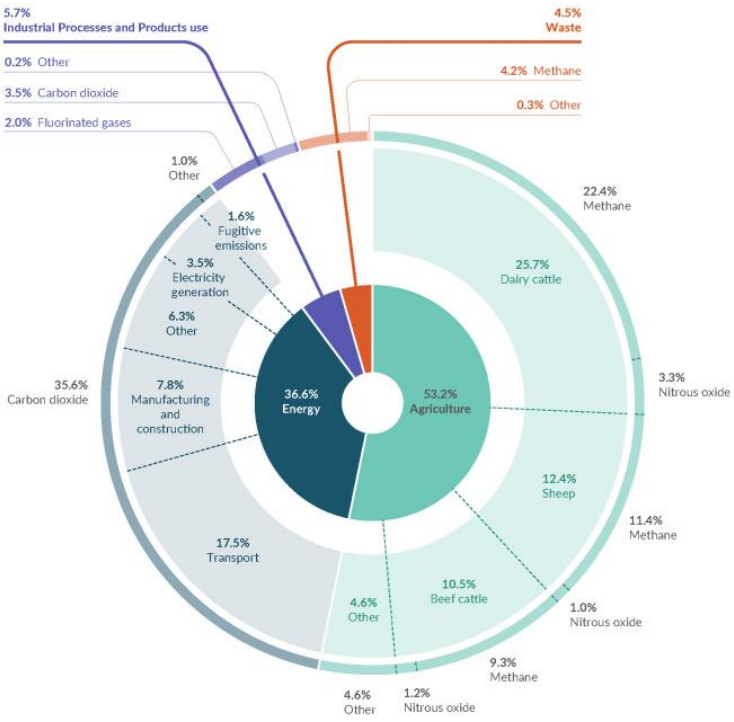

Figure 3: Gross greenhouse gas emissions in 2022 by sector, sub-category and gas type, (National inventory 1990-2022 Snapshot.)

18. Urea fertiliser coated with a urease inhibitor has been sold in New Zealand since 2001. Use has increased significantly over the past decade, with 60% of urea sold coated with urease inhibitor in 2023. (Figure 4) This is a positive step for the environment as it reduces volatilisation losses of ammonia from urea use, maximises nitrogen available for uptake and contributes to mitigating greenhouse gas emissions.

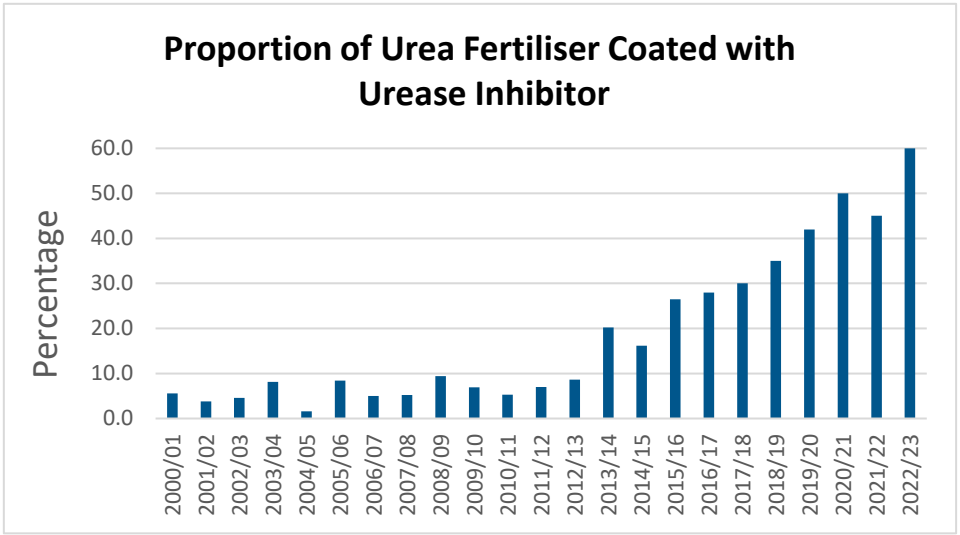

Figure 4: Percentage of urea coated with urease inhibitor each year.

End.