Deer Industry New Zealand

Deer Industry New Zealand

Submission on Climate Change Response (Zero Carbon) Amendment Bill

16 July 2019

Introduction

1. Deer Industry New Zealand ('DINZ') is a levy funded industry-good body established to promote and assist the development of the deer industry in New Zealand.

2. New Zealand is the world's largest producer of farmed deer. The main products marketed from deer are venison and deer antler velvet and approximately 95% of products are exported. In the year ending 30 September 2018, deer products were worth $322 million in export receipts to New Zealand.

3. DINZ's levy payers are producers and processors of venison and velvet. There are roughly 1,500 deer farmers and 8 venison processing plants.

4. The industry is the youngest pastoral-based industry in New Zealand (the first deer farm licence was issued in 1970) but provides diversified markets and additional revenue to and complementary land use with other pastoral farming industries. Indeed about 80% of deer farmers also farm other livestock species and/or arable crops.

5. DINZ supports the ambition of the Climate Change Response (Zero Carbon) Amendment Bill (the "Bill") to create a framework to achieve the Paris Agreement goal of "Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change" (Paris Agreement, UN 2015, Article 2).

6. However DINZ is concerned that the methane reduction targets in the Bill are overly ambitious i) compared with other greenhouse gas reduction targets; as well as ii) with regard to the ability for drystock farms to reduce methane through any other means than reducing stock numbers.

7. Further, the ambition of these reduction targets (10% reduction of methane by 2030 and 24-47% reduction by 2050) is unreasonably restricted by the proposed inability for farmers to offset the impacts of methane emissions through on-farm sequestering of carbon in trees and other woody vegetation.

8. DINZ, along with other pastoral industry bodies continues to invest in and otherwise support research and technologies to reduce livestock greenhouse gas emissions.

When effective technologies are available, DINZ would support increasing the level of ambition of any reduction target through an appropriate review process. Until then the reduction target for methane should be at a level of methane emissions that does not result in further warming.

9. The deer industry shares concerns with all the other pastoral-based industry bodies but has particular affinity with the drystock sector as:

    i. Deer farms tend to be multi-species;
    ii. products derived from deer farms are similar (venison alongside beef and lamb, annual velvet harvesting alongside wool),
    iii. Deer farms occupy the same land classes and run similar production systems (breeding, venison finishing/velvet) and have similar levels of inputs.

10. For this reason this submission is confined to issues that will particularly impact on deer farming, but DINZ wishes to note that it supports submissions from the Meat Industry Association of New Zealand (MIA) and Beef + Lamb New Zealand (B+LNZ).

Recognition of Food Production

11. DINZ notes that the purpose of the Bill is "*to provide a framework by which New Zealand can develop and implement clear and stable climate change policies that contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels*."

12. An important contextual detail of the Paris Agreement is the stated goal of "*Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, <u>in a manner that does not threaten food production</u>.*"

13. **DINZ wishes to see the importance of maintaining food production acknowledged more explicitly in the Bill**. Part 1 clauses 5L, 5Q, 5Z and 5ZN should be amended to include the text from the Paris Agreement that efforts to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels "do not threaten food production."

14. This is very pertinent for deer farming (and drystock farming in general) as much of the land where deer farming occurs is unsuitable for large-scale arable cropping or horticultural and alternative land uses (based on the suitability of the land) would be forestry or native vegetation regeneration. Many deer farms already have a mix of land use (livestock, forestry, retirement, wetlands, small-scale cropping) that reflects the capabilities of the land and the range of products that can be generated from it (venison, velvet, timber, tourism, ecosystem services).

Methane Reduction Targets

15. DINZ does not support the methane reduction targets as proposed in the Bill, namely that *gross* emissions of biogenic methane in a calendar year are:

    i. 10% less than 2017 emissions by the calendar year beginning on 1 January 2030; and
    ii. at least 24% to 47% less than 2017 emissions by the calendar year beginning on 1 January 2050 and for each subsequent calendar year.

16. **In the first instance DINZ recommends that the word "gross" be replaced by "net" so that the impact of all greenhouse gases can be fairly mitigated.** Given that carbon dioxide and nitrous oxide have a net zero target this seems to be favouring or at least allowing for the continued emission of fossil fuels (as long as there is an ability to offset these emissions), while effectively requiring livestock numbers to be reduced (based on the current lack of mitigation technology available to drystock farmers).

17. DINZ in conjunction with other agricultural and horticultural industry organisations have proposed a government-iwi/Maori-industry agreement that will develop on-farm emissions and mitigations reporting. It would seem both logical and practical that a farm that can report on "both sides of the ledger" can then determine a net position across all gases.

18. In terms of the targets themselves DINZ notes that there is a range of suggested methane reduction targets for 2050. The specified target range, 24% - 47% appears to be based on the IPCC Report Summary for Policy Makers. DINZ notes that:

    i. The IPCC Report and one of the authors of the report state that the scenarios in the report should not be used as targets.

    ii. The IPCC scenarios with a 24% - 47% methane reduction also provide ranges for other gases - notably, that nitrous oxide emissions need to only change by between +1% and -26%. These components of the chosen scenarios are not reflected in the Bill.

19. Other credible estimates of methane reduction targets that would result in no additional warming are 10% - 22% (Parliamentary Commissioner for the Environment) and it is important to note that two prominent climate scientists (David Frame and Andy Reisinger) were in broad agreement that if the world was on a 1.5°C-consistent emissions reduction pathway, and if New Zealand reduced long-lived gases to net zero by 2050, then the methane reductions needed to achieve the Paris goal were around 20-25%.

20. There therefore appears to be large variance between the reduction targets as proposed in the Bill and credible scientific opinion. **DINZ would prefer the process of determining appropriate methane reduction targets to be more transparent and be based on peer-reviewed analysis.**

21. While the focus of the Bill is to set reduction targets that contribute to the Paris Agreement, it is also appropriate to consider the ability for pastoral farms to make reductions without major land use change (i.e. farms in their entirety becoming plantation forests).

22. Analysis of mitigation options was conducted by the New Zealand Agricultural Greenhouse Gas Research Centre (NZAGRC) on behalf of the Biological Emissions Reference Group (BERG). DINZ as a member of BERG wishes to note the following details from the two technical reports that underpin the BERG synthesis report:

23. Reisinger *et al.* (2017). *On-farm options to reduce agricultural GHG emissions in New Zealand*:

    i. "Options to reduce biological GHG emissions are more limited for the sheep & beef sector than for the dairy sector, given the lower management intensity. The main option consists of integrating forestry into farm operations. This can achieve

significant emission reductions (beyond 100%) especially if forests are planted for conservation purposes."

ii. "Reducing stocking rates while improving productivity per animal in intensive finishing systems results in minor (2-5%) emission reductions, but a potentially significant increase in profitability of 16-28%."

iii. For the deer sector, emissions reduction options and their economic implications are quantified only coarsely due to the absence of relevant data and process models. The limited analysis suggested that reduced stocking rate could reduce emissions by around 10 % with some small improvement in profitability. DINZ considers this finding counter-intuitive and inconsistent with deer farmer perspectives (simplistically, reduced stocking rate and increased profitability implies that the farm is overstocked so that productivity is not maximised).

24. Reisinger *et al.* (2018). *Future options to reduce biological GHG emissions on-farm: critical assumptions and national-scale impact*:

i. "When these individual options are combined into different mitigation 'packages', biological GHG emissions from New Zealand's pastoral sector could be about 12-24% below 2005 levels by 2030, and 9-40% below 1990 levels by 2050. The wide range in potential outcomes results from different assumptions that can be made about both efficacy and adoption rates of various mitigation options."

ii. Given the significant technical and commercial challenges to realisation and implementation of some of the mitigation options, especially at the high end of assumptions, these figures illustrate the challenges for the pastoral sector to contribute to New Zealand's overall mitigation targets under the Paris Agreement. <u>All the modelled mitigation packages rely heavily on new technologies</u>."

25. DINZ considers that the key messages from these reports for drystock farms are that:

i. Forestry and reduced stocking rates are the currently available methods to offset or reduce emissions, and

ii. Future (and greater) reductions rely on new technology that is currently unavailable and may not be suited to extensive pastoral farming systems.

26. **DINZ requests that the methane reduction targets are reconsidered by the committee** with the following principle in mind:

The target for emissions reduction is for New Zealand to achieve zero carbon by 2050, defined as zero contribution to increased warming by 2050, through a balance of emissions and removals, which will be achieved by:

i. Net emissions of greenhouse gases in a calendar year, other than biogenic methane, being zero.

ii. Net emissions of biogenic methane achieving a level equivalent to zero carbon in their impact on temperature.

27. With regards to the 2030 methane reduction target (10%), DINZ queries why this is explicitly stated for methane but absent for carbon dioxide and nitrous oxide. Rather than commit to an arbitrary 2030 target, any ambition for methane (or other gases) reductions prior to 2050 could be expressed through the five-yearly budgets set by the

Independent Climate Change Commission. **DINZ therefore requests that the 2030 reduction target for methane be removed.** This would be a fair and equitable treatment of all greenhouse gases.

Summary

28. DINZ supports the intent of the Bill, particularly with respect to meeting the goals set under the Paris Agreement.

29. DINZ recommends significant amendments to the Bill that would enable deer farmers to play a positive role in meeting these obligations, being:

    i. Treating methane equitably with long-lived gases by allowing farmers to meet *net* methane reduction targets on-farm and removing the 2030 target.

    ii. Undertaking a re-assessment of the 2050 methane reduction target in a manner that is transparent and subject to scientific rigour and peer review.

30. DINZ notes that deer farming is an environmentally suitable land use and offers complementary revenue streams, local employment and foreign exchange to other land uses. Legislating methane reduction targets that are unachievable for low input, low impact extensive livestock farms may result in land use change that is much less varied and not reflective of the land's natural capital and optimal use.

Oral Submission

DINZ would welcome the opportunity to present to the Committee.

Contact

Lindsay Fung, Environment Stewardship Manager, DINZ, Deer Industry New Zealand, Lindsay.fung@deernz.org, (04) 471 6115