SUBMISSION:
Action on Agricultural Emissions

TO:
Ministry for the Environment

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FROM:
New Zealand Pork Industry Board

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Action on Agricultural Emissions: NZPork Submission

NZPork would like to thank the Ministry for the Environment for the opportunity to comment on the Action on Agricultural Emissions proposals. We would welcome the opportunity to speak to our submission. We note that these proposals and the recommendations put forward by the Interim Climate Change Commission (ICCC) have been designed for the ruminant livestock sector and it is unclear at present as to how these recommendations will affect the pork industry. As such, our submission does not answer the questions proposed in the discussion document but focuses on how the pork industry can best be involved in an emissions reduction scheme in the future.

1. Summary of Recommendations

1. That the Government recognises New Zealand grown pork as a naturally low emission animal protein product, and this is given consideration in any policy decisions on emissions reductions for the pork industry.
2. That the Government works in collaboration with NZPork to jointly determine a long-term policy approach for greenhouse gas emissions reductions for the pork industry.
3. That farm level measuring and reporting of greenhouse gases is supported as the best option for pork to incentivise reductions in greenhouse gas emissions without compromising production in the long term.
4. That as an interim approach, a 5-year programme of action is developed by NZPork in collaboration with the government to support emissions reductions and progress implementing a farm level measuring and reporting system.
5. That processor level obligations are not supported, in the short or long term, for pork.

2. About the New Zealand Pork Industry

The New Zealand Pork Industry Board (NZPork) is a statutory board funded by producer levies. It actively promotes “100% New Zealand Pork” to support a sustainable and profitable future for New Zealand grown pork. The board’s statutory function is to act in the interests of pig farmers to help attain the best possible net on-going returns while farming sustainably into the future.

Nationally there are about 90 registered commercial pork producers, comprising a relatively small but significantly integrated sector of the New Zealand agricultural economy.

New Zealand pork producers are facing economic, social and environmental challenges and animal welfare pressures in order to remain viable. The contribution of imported pork to New Zealand’s total pork consumption has increased significantly in recent years, placing further demands on producers who have responded by developing increasingly efficient systems. Currently, nearly all pork produced in New Zealand is consumed locally and makes up less than 40% of the domestic market supply.

Pigs’ needs are quite unique compared to other farmed animals. They need constant access to shelter, a balanced diet fed daily and regular care and supervision. To meet these needs, New Zealand’s commercial pig farmers have adopted a range of farming methods that they believe best suit their animals. Around 45% of New Zealand’s commercial breeding herd is farmed outdoors. However, outdoor breeding can only work where there is a moderate climate with low rainfall and free-draining soil conditions. In New Zealand, these conditions are mostly found in parts of the South Island, like Canterbury. Many farmers prefer indoor farming because they believe it allows them to provide the best care for the modern animal by allowing them to carefully manage their environment. It is estimated that around 55% of New Zealand’s pigs are farmed in this way. In both indoor and outdoor systems there are variances between farms in housing systems, effluent management systems and...
animal feed requirements and diet composition. Each farming system presents unique challenges for managing environmental effects, including monitoring and reducing greenhouse gas emissions.

Pig farmers in New Zealand are leaders in environmental management and consistently demonstrate a high level of innovation and environmental stewardship. The New Zealand pork industry has committed significant time and resource to Sustainable Farming Fund projects centered on environmental initiatives. Many farms also participate in food recovery programmes, to utilise recovered food products such as bread, distiller’s grains and by-products from the manufacture of dairy products that would otherwise end up in landfill dumps, as part of a carefully balanced diet for their animals. However, profit margins for the industry remain tight and dialogue with farmers indicates that ongoing regulatory and compliance costs and uncertainty into the future, across many facets of their operation, are key issues.


Pork is the world’s most consumed meat, and pork production is recognized as one of the most greenhouse gas efficient livestock meat sectors:

- Pigs are mono-gastric (rather than ruminant) animals
- Feed conversion is very efficient in precision managed and housed commercial herds. Production is increased by optimising nutritional needs and limiting feed waste.
- Most pigs internationally are housed indoors, with manure collected and appropriately spread for pasture or crops to utilise the nutrients (rather than deposited in the paddock).

Research undertaken by NZPork to calculate greenhouse gas emissions based on farm survey data found total industry emissions equated to <2kg CO₂e/kg\(^1\). To put this in perspective relative to other sectors: greenhouse gas emissions from New Zealand dairy products are in the region of 10+ kg CO₂e/kg product\(^2\), and emissions from New Zealand lamb are in the region of 12+ kg CO₂e/kg product\(^3\).

In 2017, the livestock sector was responsible for 44% of New Zealand’s total greenhouse gas emissions. Of this, the New Zealand pork industry accounted for approximately 0.2% of total livestock emissions, which is significantly lower than other livestock sectors including dairy (50%), sheep (29%) and beef cattle (18%).\(^4\) The emissions profile of pork production differs significantly from that of the ruminant livestock sectors. Most of the

![Figure 1: Sources of greenhouse gas emissions from pork production in New Zealand, 2010.](image)

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\(^1\) Recalculate Pork Industry Emissions Inventory Milestone 4 Report, Jaye Hill, 2010
greenhouse gas emissions associated with pork production relate to emissions of methane from effluent ponds and nitrous oxide following spreading of manure to land.

The unique emissions profile of pork production creates unique challenges in emissions reduction. Fortunately for the pork industry, there are options available that can be investigated and harnessed to limit the biggest emission source – which are emissions from effluent ponds. The mixture of methane and carbon dioxide emitted from ponds (known as biogas) has a moderate energy content, which can be used to generate heat or electricity. However implementing a system to capture and use biogas in this way requires significant capital investment, costing upwards of $100,000. At the simplest level, the biogas from effluent ponds can be captured and burned, to destroy the methane and eliminate the global warming contribution. Diet manipulation to more closely align nutrient content of the feed to the pig’s requirements is another option for reducing on farm greenhouse gas emissions. Researchers at Massey University have undertaken research in this field and are able to model the effects of correct diet on the greenhouse gas output of commercially bred pigs.

4. Our Commitment to Climate Change Action

Pork, as a naturally low emission product, has the potential to play a starring role as an animal protein of choice in New Zealand’s low emissions economy. The New Zealand pork industry is committed to responding to the challenges posed by climate change and to contribute to the global effort to reduce greenhouse gas emissions, not only as part of New Zealand’s contribution to the Paris Agreement but as a component of its positioning as an environmentally responsible industry sector. Although the pork sector has a very low carbon footprint comparatively, we know that meeting New Zealand’s emissions reductions targets will require every sector to make changes.

As part of our Environmental Strategy, NZPork has set targets for the on-farm measuring and reporting of greenhouse gas emissions and for emissions reductions over time. As a small industry with a low carbon footprint, there hasn’t been much focus on pigs from research institutes to date. Available tools such as Oversee or the Lincoln University Carbon Footprint Farm Calculator report only for ruminant animals. Oversee will produce an emissions number for outdoor pigs, but this number is not accurate and so is not a reliable tool for our farmers. To address these issues, NZPork is currently in the process of developing a tool to enable farmers to monitor and report their emissions on farm, and model different emission mitigation strategies. This model is based on Australian Pork’s PigGas model, which was developed specifically for the pig farming sector in Australia to model emissions from different piggery production and manure management systems combinations. NZPork employs a dedicated Environmental Advisor, who will be working with farmers on an individual basis to assist with farm level emissions calculations and reporting once a model has been developed.

5. Feedback on Proposals: Long Term Options for 2025 and beyond

NZPork agrees with the IPCC recommendations that livestock emissions should be priced at the farm level from 2025. NZPork supports the point of obligation being set at the farm level on the basis that farmers can make management decisions that affect emissions and offsets within their farm system, and this will be reflected in their emissions obligations. A price on emissions at the processor level will not incentivise changes to farming practices to mitigate emissions.

For synthetic nitrogen fertiliser emissions, NZ Pork agrees with the IPCC recommendation of pricing these at the manufacturer/importer level through the Emissions Trading Scheme as the best long-term policy option, given that farmers would receive the same incentive to reduce fertiliser emissions whether priced at the farm or at the manufacturer/importer.

The policy options proposed by the IPCC for emissions reductions have been developed for the ruminant livestock sector. As a lower emission sector with a unique farming model, we don’t yet know the extent to which these policies will be appropriate for pig farming. The IPCC report recognises that for pigs, further investigations will be
required on the feasibility and desirability of including emissions in any farm-level policy. NZPork appreciates that there is a significant body of work to be undertaken before any decisions are made on how emissions will be calculated, how free allocation will be decided and how to build the capability of farmers to reduce emissions. We understand that these steps are complex, challenging and will take time.

NZPork would like to engage with the Government as part of this process and work together to develop a practical and cost-effective system for calculating and reducing emissions at farm level for pigs by 2025 that will:

a) be accurate for our industry
b) help to achieve emissions mitigation through incentivising emissions reductions
c) recognise and support the industry as a low emission animal protein source

One potential option could be for NZPork to manage an emissions reduction programme for our sector. As a small sector, with less than 100 commercial farmers, we are well placed as an industry body to provide tailored support to all our farmers and successfully implement independent work programmes. Our PigCare™ animal welfare assurance programme is an example of an industry led, independently managed and expertly verified programme implemented by NZPork. PigCare™ is a world-class assessment of animal welfare that provides an assurance that New Zealand's high welfare standards are being met. In addition to New Zealand’s welfare standards, PigCare™ standards incorporate an assessment of the health of the pigs, the farm buildings and facilities, stockmanship, management, and husbandry practices, all of which support the ability of the farm to provide for welfare.

The PigCare™ certification programme has been an important tool in setting a consistently high standard for professional pork producers, which is recognised by wholesalers and retailers who sell pork products throughout New Zealand. As part of the programme, all commercial pig farmers in New Zealand are audited annually. Farmers who do not meet the PigCare™ standards would fail their PigCare™ audit and, as a result, their pigs would be unable to be marketed under the PigCare™ brand and may receive a lower price. The success of the PigCare™ programme demonstrates NZPork’s commitment to upholding standards and is an example of how a consequence-based programme to drive improvements can be successfully managed within our industry.

6. Feedback on Proposals: Interim Options until 2025

NZPork supports a formal sector-government agreement, as outlined by the Primary Sector Climate Change Commitment, as the preferred interim measure to support emissions reductions and equip farmers with the knowledge and tools they need to deliver emissions reductions. We do not support a processor level point of obligation as an interim measure.

NZPork was not involved in the development of the Primary Sector Climate Change Commitment. While we are supportive of their proposed 5-year programme of action, pig farming will require a different approach to that of the ruminant livestock sector. As such, NZPork would like to work with the Government to agree on an interim work programme to 2025 that is specific to our industry and addresses the barriers that currently exist to farmers in understanding their emissions and options for reducing them. This programme would be funded by existing producer levies with options for co-funding explored where possible. We have included as an appendix to this submission a draft interim work programme which is modelled on our current environmental strategy for

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5 Action on Agricultural Emissions Technical Appendix 1: Defining the Entity for the Point of Obligation, Interim Climate Change Committee, April 2019
6 He Waka Eke Noa – Our Future In Our Hands. Primary Sector Climate Change Commitment, July 2019.
greenhouse gas mitigation. We see this draft interim work programme as a starting point for discussions, and we are seeking to work in collaboration with the Government to develop this plan.

As a small industry we are confident that an industry led programme of action to facilitate emissions reporting and reductions at a farm level will be very achievable by 2025. NZ Pork does not believe that a processor level point of obligation for pork is appropriate or necessary as an interim measure for the following reasons:

1. The Government is encouraging New Zealander’s to change their diets and eat less red meat to reduce their carbon footprints\(^7\). Encouraging increased consumption of New Zealand pork compared to imported pork and ruminant protein can play a big part in enabling Kiwis to reduce their carbon footprint without having to give up regular animal protein. A processor level obligation does not have the ability to recognise farmers who are reducing emissions intensity per unit of product. Without an incorporated mechanism to reward reduced emissions intensity, the only way for a farmer to reduce their levy is to reduce production. Given the opportunities that increased consumption of New Zealand pork brings for reducing greenhouse gas emissions, any policy approach that results in reductions in output should be avoided. If a processor level point of obligation were to be complemented with a farm-level incentive scheme in which farmers could apply for a grant equivalent to the benefits of reducing emissions, this may have more merit and would warrant further discussion.

2. Commercial pig farmers in New Zealand are facing increasing challenges to remain profitable due to the rising price of domestic grain and increases in cheaper imports of foreign pork. Imported pork now accounts for 60% plus of total New Zealanders consumption. New Zealand farmers struggle to compete with foreign pork on price for several reasons, including lower required standards of animal welfare in exporting countries, lower feed prices (which account for up to 2/3 of a farmer’s costs) and overseas government subsidies. Additional costs imposed on New Zealand farmers, even when minimised by providing an initial 95% free allocation, further erodes the profitability of commercial pig farming in New Zealand and paves the way for continued increases in imported pork. In addition to the food miles these imported products generate, the methods of production and therefore the greenhouse gas emissions of these products, are unknown. While we are committed to climate change action, NZPork believes we can achieve this in a way that doesn’t put further financial strain on New Zealand farmers. The ICCC acknowledges in their report that emissions from pigs are relatively small and that some farmers may be unduly impacted by processor level obligations\(^8\).

3. The levies collected from a processor point of obligation are to be recycled back into an Agricultural Emissions Fund to investigate options for a farm level scheme and for research and development of mitigation options. While NZPork is supportive of the concept of the Agricultural Emissions Fund, the extent to which pig farmers will benefit from this fund is uncertain. Research and development of mitigation options are likely to remain heavily focussed on the ruminant livestock sector and more work is needed to establish whether pigs will enter any farm level scheme. NZPork does not support levies being collected from a low emission industry to support policy development and emissions reductions for higher emission industries.

NZPork believes that decisions made on an interim approach for the pork industry should be considered separately from decisions made for the ruminant sector. The decision should reflect the low emission nature of pork, the small scale of the industry compared to the red meat sector, and the benefits that increasing the consumption of New Zealand pork could bring to reducing our national greenhouse gas footprint.

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\(^7\) [https://www.mfe.govt.nz/climate-change/we-all-have-role-play/what-you-can-do-about-climate-change](https://www.mfe.govt.nz/climate-change/we-all-have-role-play/what-you-can-do-about-climate-change)

\(^8\) Action on Agricultural Emissions Technical Appendix 1: Defining the Entity for the Point of Obligation, Interim Climate Change Committee, April 2019
Appendix 1: Draft Interim Work Programme Summary

The draft workstreams for a 5-year programme of action for greenhouse gas emissions for the pork industry are outlined below. This programme is based on NZPork’s Environmental Strategy and would be funded via existing producer levies and co-investment opportunities where available.

We would like to work with the Government to establish interim milestones for each workstream and a contingency plan if milestones are unable to be achieved. We would also like to work with the Primary Sector Climate Change Commitment Group to identify opportunities to work together where there may be synergies in our workstreams.

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<tr>
<th>WORKSTREAM</th>
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| 1. Develop a system for accurate emissions reporting | 1. Develop a methodology and system for the accurate calculation of on farm greenhouse gas emissions. This will include:   
  a. exploring the option of developing a tool specific to the NZ pig farming sector, modelled on the Australian farm emissions calculator PigGas.  
  b. Identifying how emissions reporting for pigs in existing tools such as Overseer can be improved, or how pigs can be incorporated into other models in development.  
  2. Engage with the wider primary sector on alignment for common issues such as the quantification of on-farm sequestration  
  3. Implement an extension programme so that all farmers can use an emissions reporting tool to accurately assess their on-farm emissions and model different mitigation options to support business decision making.  
  4. Develop a system for the central collection and collation of data obtained from on farm emissions calculations to allow us to accurately report emissions reductions as an industry. | To be agreed |
| 2. Updating FEPs to include greenhouse gases. | 1. Expand NZPork’s Farm Environment Plan Template to cover greenhouse gases.  
  2. Work with Government, Regional Councils and Industry to ensure our FEP is aligned with other industries and able to meet regulatory requirements. | To be agreed |
| 3. Supporting development and uptake of mitigation technologies and methods | 1. Identify opportunities for research and investment into new mitigation tools and techniques for pig farming.  
  2. Engage with commercial partners to bring tools to market for use by our farmers  
  3. Identify opportunities to support and incentivise early adoption of mitigation technologies | To be agreed |
4. Develop an extension programme for pig farmers to increase understanding of available options to reduce emissions. This will include:
   a. Identifying and sharing examples of emissions reduction practices
   b. Developing and participating in information sharing workshops
   c. Working with farmers on an individual basis to calculate their emissions and model reduction scenarios.
5. Develop and communicate milestones for emissions reductions based on available mitigation options and emissions targets.
6. Provide industry input on pig farming into the planned one-stop-shop website for farm related climate change information
7. Work with the wider primary sector to advance planting of potential sequestration areas identified in farm plans.

4. Working with Government to develop an agreed long-term approach for reducing emissions

1. Work with Government in an ongoing capacity to develop a long-term policy approach for managing and incentivising emissions reductions from pig farming.

To be agreed