

New Zealand Productivity Commission,
PO Box 8036,
The Terrace,
Wellington 6143
<https://www.productivity.govt.nz/make-a-submission>

SUBMISSION ON TRANSITIONING TO A LOW-EMISSIONS ECONOMY

Submitter: New Zealand Farm Forestry Association incorporated [NZFFA]

Address: New Zealand Farm Forestry Association

9th Floor, 93 The Terrace, Wellington
PO Box 10 349, The Terrace
Wellington 6143

Submitted by: Neil Cullen
President

About this organization. The NZFFA represents people who own small-scale (generally less than 1,000 hectares) private forests and/or are interested in the many values of trees. Currently there are about 2,000 members in the NZFFA but de facto the NZFFA can be said to represent the views of about 13,000 others who own such private forests.

Contact: To discuss this submission you are welcome to contact:
Neil Cullen
NZFFA President
Ph 03 415 8470
333 Glenomaru Valley Road, RD 1, Balclutha 9271
Email cullen@farmside.co.nz

Summary

1. NZ Farm Forestry Association members are concerned about climate change and the cost to this country of meeting its Paris obligations. We accept that large-scale land use change is urgently needed.
2. Encouraging farmers to plant more trees on their land is an important strategy. It avoids the unproductive, deadweight cost of land transfer and will be less socially disruptive than selling farms for conversion into plantation forests.

3. As mitigation technologies for agricultural emissions are largely still undeveloped, we urge the Government to begin policy-driven change now while continuing to invest in research that might allow us to switch to a more technological path later.
4. We note the Commission's modelling assumes that land conversion should occur on sheep and beef farms. In terms of carbon, these are innocent bystanders. Dairy farms are the major emitters of green house gases but no suggestion is made of their conversion to forestry.
5. We agree that "uncertainty about the returns to alternative uses will affect land use decisions." The problems of uncertainty, education and sunk costs are substantial but fear of them should not be allowed to paralyse the sector. While these problems are being addressed, emphasis should be placed on afforesting private land offered by the educated and willing, and Government land.
6. We are not disturbed by the planting targets offered by the Commission. Combined with high carbon prices, these offer the sector a major opportunity to create large, economic blocks of higher value species that will support domestic processing and widen the markets available to smaller growers.
7. We agree that agriculture should be in the ETS on some EITE basis. As quickly as systems allow, the point of obligation should move to all farms above a certain size, with processors as points of obligation for 'small' farms, horticulture and cropping. Over time the size threshold for 'small' could be tightened.
8. We believe that in the face of large-scale land use change, we need to urgently and widely check whether existing laws and institutions will *encourage* it; simply *accommodate* it; or *impede* it. For instance threshold forest size does not appear to be a barrier to joining the ETS at the moment and focussing on this would not be cost effective.

Background

9. Association members are concerned about climate change and the cost to New Zealand of meeting its Paris obligations. We accept that large-scale land use change is urgently needed.
10. Most farmers recognise the value of trees in their landscapes for amenity, erosion control, water quality, shelter or forage for their animals. For the last 60 years the NZ Farm Forestry Association has represented these farmers and others with interests in farm timbers and commercial forests. Recently, successive climate change reports have cast a strong light on this area, advocating bigger forests to store carbon and buy time for serious emissions reductions. Encouraging farmers to plant more trees on their land will help, and will be less socially disruptive than selling farms for conversion into plantation

forests. The Association has 60 years' experience in encouraging trees on farms, and views on how it should be approached.

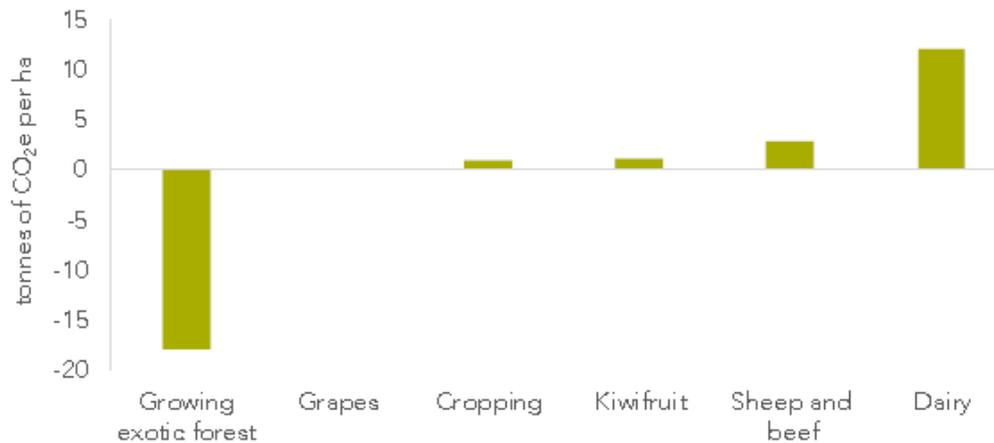
Modelling scenarios

11. Chapter 3 of the Commission's draft report describes the scenarios used to model mitigation pathways, while later chapters look at the constraints and implications of these. Three technology scenarios are proposed: policy driven decarbonisation (PD), disruptive decarbonisation (DD) and stabilising decarbonisation (SD). While we are not qualified to comment on the modelling we observe that the DD and SD scenarios both rely on technologies that are still largely undeveloped. It is imprudent to assume they will come to our rescue. We are strongly of the view that the Government should adopt policy driven decarbonisation now, while continuing to subscribe to and invest in research that might allow us to switch to a more technological path later. If that research investment fails, we will lose expectations but nothing more.
12. We understand that the PD approach has political costs, for example in reducing dairy cow numbers. That political cost should be aggressively managed. Events such as the decision to cull 150,000 cows for mycoplasma bovis should be seen as an opportunity to reduce the national herd; concerns over fresh water as an opportunity to control expansion of the industry; and productivity gains as an opportunity to maintain income with fewer animals and lower costs. Perverse outcomes such as Fonterra being obliged to collect milk from new, remote farms should be corrected with legislative change (Commission report page 273).
13. We also understand that the PD approach assumes that by 2050 it will be hard to keep planting forests, and we will need other ways of reducing greenhouse gas emissions. However, we feel it is safer to assume that new technologies will be available post 2050, rather than post 2030 as in the SD and DD scenarios.

Land prices

14. Over the last 25 years rural land prices have been inflated by privatising the profits of land use and socialising the costs in relation to pollution, erosion and biodiversity loss. Because land prices do not reflect 'fair value' if these externalities were to be fully accounted, forests have been converted to dairy farms. An impartial observer would conclude from the graph below (figure 10.1 in the Commissions draft report), that if we seriously wanted to reduce emissions, the first thing to do would be convert dairy farms to forestry:

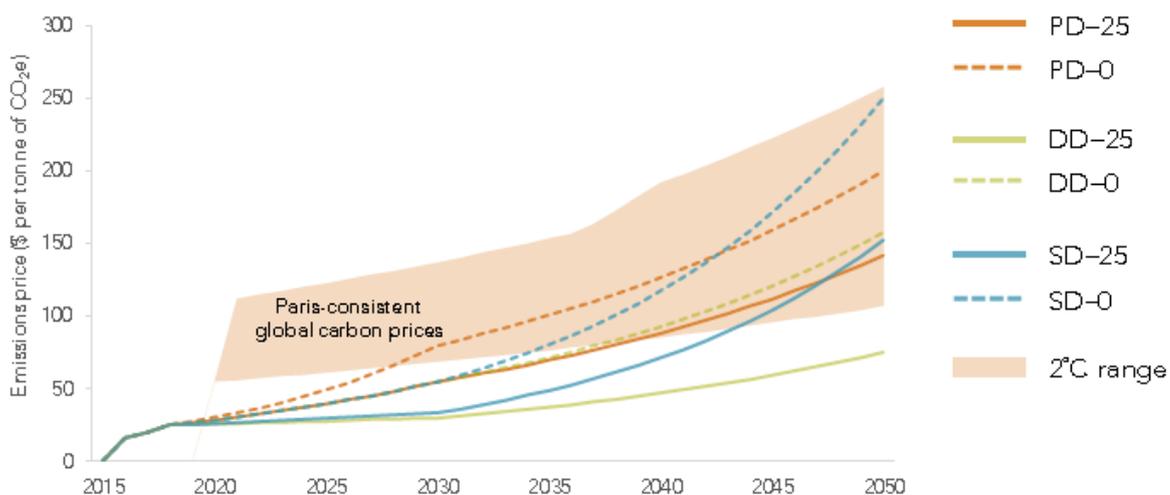
Figure 10.1 Indicative yearly biological emissions per hectare from different land uses



Of course this is unlikely but it is worth asking the question “Why not?” It would be instructive to identify the real barriers of converting dairy to forestry, and seek ways to overcome these. The Commission’s modelling assumes that conversion should occur on sheep and beef farms *when in practical terms these are innocent bystanders*, not major emitters of green house gases. We note in passing that dairy conversion to forestry would also reduce nitrate leaching and solve the problem of cadmium poisoning from superphosphate, which prevents dairy conversion to cropping. Dairy farmers if exposed to the cost of their emissions would have the option of either paying that cost or offsetting by planting trees on what ever land is available to them. This may be on their dairy platform, their runoff block, or other land they purchase for that purpose.

15. We also note that compared with dairy farmers, where “Fonterra generally collects milk at no cost regardless of location” (Commission report page 273), foresters pay their own freight. Were both to be charged on an equal basis, we expect that in some areas close to ports and mills but remote from dairy factories, commercial forestry would be more profitable than dairying, *leaving aside externalities*. Cross subsidising freight from dairy farms is not only inefficient, it creates economic distortions. If we are seeking highest and best land use as well as emissions reductions, this is worth investigating.
16. A further consequence of inflated land prices is that for some time, even marginal farmland has been too expensive for commercial forestry. Commercial forests are not expanding on to hill country because for the moment, the combination of cost, location, access, regulation and carbon prices makes it uneconomic. We note the range of carbon prices indicated in Figure 3.13 of the Commission’s report and observe that rising carbon prices might help tip the balance, but little is happening yet.

Figure 3.13 Emissions prices to achieve net-zero-consistent emissions reductions, NZ\$



Source: Concept, Motu, Vivid Economics

- Of course in the background is the question “Why spend thousands of dollars a hectare to simply change the name on the land title?” That money plants no trees at all: the cost of land is simply a deadweight drag on the system. We advocate encouraging existing landowners to plant more trees, avoiding the cost of land and focussing only on necessary cash flows.

Rates of land-use change

- We note the rates of land use change suggested in the report (section 10.2) and accept that in order to achieve these, large scale change of ownership might be required. Alongside that however will be more trees on farms, which is where our members have expertise and are willing to make a contribution. This includes experience with a wide variety of useful species, grown under a range of conditions and treatments, and the relative economics of each.
- We also note and agree that “uncertainty about the returns to alternative uses will also affect land use decisions.” The problems of uncertainty, education and sunk costs are substantial. However each can be addressed. Fear of these problems should not be allowed to paralyse the rural sector.
- While these problems are being addressed, we agree that emphasis should be placed on afforesting private land offered by the educated and willing – both Pakeha and Maori – and Government land, including parts of the Conservation estate. Unless we deal with climate change, we will lose most of the values we are trying to protect in the Conservation estate anyway.
- It is commonly assumed that increased forestry means more radiata pine. Radiata is cheerfully useful, fast growing, easily available and well understood, but other species (eucalypts, redwoods, fir and natives) might be used on

remote, sensitive or inaccessible land if carbon prices were high enough to encourage planting.

22. We are not disturbed by the Commission's estimate of 2.0 – 2.8 million ha of new forests under the policy-driven approach. This target combined with high carbon prices offers the sector a major opportunity to create large, economic blocks of higher value species (as noted above) that will support domestic processing and widen the markets available to smaller growers.

Mitigation options – soil carbon

23. While in general no credit for soil carbon is given in the ETS or in international greenhouse gas accounting, we note that in general “soil carbon tends to increase over time on hilly sheep and beef farms with less intensive stocking, but tends to decline on flat-land pasture” (Commission report page 242). This emphasises the past foolishness of converting forests to dairy farms with loss of stored carbon above and below ground, and increased agricultural emissions.

Mitigation options – productivity change

24. Under an earlier review of the ETS, carbon offsetting was introduced to allow landowners to clear pre-1990 forests from flat land and replant them on hill country, provided they re-grew the total carbon. MPI touted this as a benefit to the sector, but in fact it was not. It was simply a benefit to those particular landowners. The offset forests are more remote, less accessible and less productive than those they replaced, and the sector and the forest industry now have to bear those costs in perpetuity. The farming sector on the other hand benefitted from swapping hard country for easy country, something not mentioned at the time. We understand productivity.
25. Productivity is important to any industry and we fully support research into new practices, technologies and genetics that increases farm productivity. The sheep and beef sector has done particularly well in this regard: Beef & Lamb NZ chairman Andrew Morrison says that since the 1990s “We’ve reduced sheep numbers from 57.9 million to 27.6 million and beef cattle numbers have declined 23%. Absolute greenhouse gas emissions from sheep and beef farms are 30% below 1990 levels while the sector’s contribution to GDP has doubled to \$5 billion. GHG emissions per kilogram of saleable product have dropped by 40% and nitrate leaching per kilogram of saleable product has declined by 21%.”
26. We have much less sympathy for the dairy sector which has been expanding, and despite productivity gains per cow has increased its greenhouse gas emissions. We do not agree that agricultural emissions should continue to rise, and suggest that action should be taken to curb “current patterns of growth in agricultural production” (Commission report page 247). If the market fails to protect the environment, the market is at fault. We are not slaves to the market.

We pay economists to find alternatives and elect politicians to correct the system when such perversities arise.

Agriculture in the ETS – point of obligation (Question 10.1)

27. We agree that it would be foolish to change course now and replace the ETS with a carbon tax. We prefer the devil we know, even if it is being constantly tweaked to remove perversities and encourage 'suitable' behaviour from different industries. As the economy and public expectations evolve, so the ETS must evolve to remain both positive and effective.
28. The ETS was originally designed so that "the point of obligation (i.e. the participant in the scheme) is as far upstream in the supply chain as possible." (MfE). This principle has not changed, although numbers of participants have increased over time. We note that adding individual farms as points of obligation would expand the scheme by a factor of 16, from around 2,500 to around 40,000 participants.
29. We agree that to improve behaviour it is necessary to bring agriculture into the ETS, and we would have preferred it were done earlier. We accept that it will raise significant problems and agree that an EITE (emissions intensive, trade exposed) approach with declining free allocations is warranted. We understand that it would be difficult to make each farm a point of obligation without huge and ongoing costs of education and compliance.
30. Our preference for the point of obligation is to start with option 1, 'agricultural processors' (Motu says there are already 80 points of obligation for biological emissions from agriculture, which might be processors); then as quickly as systems allow, move to option 2, all farms above a certain size with processors as points of obligation for 'small' farms, horticulture and cropping. Over time the size threshold for 'small' could be tightened.
31. Making this migration clear at the outset would send the right signal for behaviour change. Beef & Lamb NZ has a strategy for moving its sector to carbon neutrality by 2050 (<https://beeflambnz.com/environment-strategy>), but little work seems to have been done on how dairying might offset its emissions. We would rather that sector was more actively engaged because we doubt technology will in fact save them.

Threshold forest sizes in the ETS (Question 10.2)

32. Increasingly, satellite data is being used to measure land use change and SAR radar scanning can now detect land surface changes of 1 mm. (<https://www.youtube.com/watch?v=urQgAkJEIto&index=6&list=PLEhIZxWdHU3vrZN8fLMnJw1I1vpJ14WBw>) This technology offers the promise of measuring forest carbon across the country on a daily, monthly or annual basis. While it

might be some years before our Government decides to invest in the software to do this, when it does the ETS could be applied to individual trees. Until then it is important to keep the scheme practical and apply financial resources to expanding the forest, not tweaking the detail. At the moment threshold forest size does not appear to be a barrier to joining the ETS and focussing on this would not be cost effective.

Laws and institutions

33. New Zealand's laws and institutions have evolved to support an agricultural economy. If there is to be wide-scale land use change, it would be sensible to check whether they will encourage this, simply accommodate it or impede it. One problem we have already found is described below.
34. Our Association, the NZ Forest Owners' Association, and the NZ Institute of Forestry have for years argued for an amendment to the Income Tax Act to remove an anomaly that discourages the sale of immature forests. Right now, anything that discourages forest investment deserves close scrutiny. A copy of our latest submission accompanies this document.

If submissions are being heard we ask for the opportunity for a representative of the NZ Farm Forestry Association to present this in person.

Sincerely,

N Cullen

President NZFFA