

The New Zealand government has decided to use an emissions trading scheme for greenhouse gas emissions as part of its response to climate change. Emissions trading will help reduce emissions, encourage and support global action on climate change, and help put New Zealand on a path to sustainability. This factsheet is an introduction to how emissions trading is likely to affect the agricultural sector.

Emissions trading and agriculture

Factsheet 9



September 2007

Agricultural emissions

New Zealand's biologically-based economy relies on a benign and stable climate for production, and, therefore, action on climate change – here and internationally – is crucial for New Zealand's long-term economic, social, and environmental well-being.

The agricultural sector is the largest single source of greenhouse gas emissions in New Zealand, making up approximately 49 per cent of our total emissions. Emissions in the sector are also continuing to grow.



Emissions from the sector mainly consist of methane from livestock and nitrous oxide from animal excrement and the use of nitrogen fertiliser.

What activities will the emissions trading scheme cover in this sector?

The emissions trading scheme will cover all the major agricultural sources of methane and nitrous oxide.

What are the priority issues for discussion?

Under its Memorandum of Understanding with the agricultural sector (entered into in October 2003), the government agreed that it would bear the cost of the agricultural sector's non-carbon dioxide emissions during the first commitment period (2008–2012) of the Kyoto Protocol, provided that the sector contributes to research into ways to reduce greenhouse gas emissions from agricultural activities. The target of that research (coordinated through the Pastoral Greenhouse Gas Research Consortium) is to deliver abatement technologies that will lower total ruminant methane and nitrous oxide emissions by at least 20 per cent from business as usual levels by the end of 2012.

The government has decided in principle to bring all agricultural gases into the emissions trading scheme on 1 January 2013, and not to introduce any other price-based measures in the meantime.

The government proposes that agricultural sector participants in the scheme be required to begin monitoring their emissions before 2013, to ensure the relevant monitoring and reporting systems are working properly.

However, the government will work with the farming sector to identify opportunities for reducing emissions before 2013.

The government prefers to make processing companies, not individual farmers, responsible for participating in the scheme. This would mean fertiliser manufacturers, dairy processors, and meat processors would participate.

An alternative approach would be to give the responsibility to participate in the scheme to individual farmers. This would lead to higher compliance costs for farmers and the agricultural sector as a whole, but would improve the incentives for farmers to reduce emissions.



The government has identified three possible options for giving out free emission units. It could give them to:

- > individual farmers
- > companies and processors dealing with farm produce
- > farming industry organisations that would manage emission units on behalf of farmers.

The advantages and disadvantages of these options are discussed in detail in **'The Framework for a New Zealand Emissions Trading Scheme'** (see details at the end of this factsheet). Whichever option is chosen, the aim will be to ensure the benefits of the free allocation of emission units ultimately go to farmers, not the companies and processors, because it is farmers who are expected to face most of the impacts of the emissions trading scheme.

Potential impacts of an emissions trading scheme for the agricultural sector

The government expects to see changes in the amount of land used for agriculture relative to other uses such as forestry, and the type and intensity of agricultural operations. It also expects to see changes in farming efficiency, more tree planting, more efficient use of nitrogen fertiliser, increased use of nitrification inhibitors, and more effective management of animal excrement.

The emissions trading scheme will increase costs for the agricultural sector, but much of this effect will be offset by the government initially giving free units to the sector in the early phases of the scheme. Ongoing reductions in the level of emissions for every unit of agricultural output will also help to reduce this impact.

Other government climate change initiatives relevant to agriculture

Emissions trading is part of a wider government package of policies to tackle climate change in New Zealand's land management sectors.

The government will be working in partnership with stakeholders and Māori in the agriculture and forestry sectors to put in place a Plan of Action for Sustainable Land Management and Climate Change. This package includes helping farmers, growers, foresters, and other businesses in the land management sectors to develop the skills, knowledge, technology, and management techniques to reduce their emissions and adapt to climate change.

There is a clear role for a strong agricultural research effort aimed at reducing the carbon footprint of New Zealand's agricultural industry. The government is currently investing approximately \$5 million per annum in this research through the Pastoral Greenhouse Gas Research Consortium, crown research institutes and universities. In addition, in the last budget the government introduced research and development tax credits that will also encourage greater levels of agricultural research.

The government intends to look closely at whether further resources are warranted for research in this area.

Where to go for more information

For more information on the government's climate change work, including **'The Framework for a New Zealand Emissions Trading Scheme'** and a series of emissions trading factsheets, visit www.climatechange.govt.nz