

Submission to the Climate Change Authority's Special Review: Second Draft Report

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NSW Farmers' Association Background

The NSW Farmers' Association (the Association) is Australia's largest State farmer organisation representing the interests of its farmer members – ranging from broad acre, Livestock, wool and grain producers, to more specialised producers in the horticulture, dairy, egg, poultry, pork, oyster and goat industries.

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Executive Summary

The New South Wales Farmers Association (NSWFA) welcomes the opportunity to provide a submission in response to the Climate Change Authority's (CCA) *second draft report of its Special Review on Australia's climate goals and policies*. NSWFA represents farmers and the agriculture sector in NSW.

NSWFA notes the following principles that should form the basis of Australia's climate policies:

- **Australia's emissions reduction commitments must not undermine our trade exposed economy.** Our international commitment, and the policies that are put in place to achieve this, should ensure that our economy is not undermined and that impacts on trade exposed industries such as agriculture are minimised.
- **Agriculture must be given specific consideration when setting Australia' climate goals and policies.** As Agriculture is an active part of the carbon cycle it provides the unique ability to provide a wide range of environmental benefits to the community.
- **Reducing emission intensity must be the cornerstone of any emission reduction policy.**
- **R & D must be recognised as an essential part of any climate goal and industry must be allowed to benefit from improvements in emission intensity.**
- **All emission reduction projects must be adequately assessed on an economic, social and environmental basis.** NSWFA does not support the current assessment methodology used to assess current Emission Reduction Fund (ERF) projects. The current assessment methodology has resulted in extremely large projects being funded in agriculture that have provided no significant additional benefit in emission reduction.
- **National food security be considered in assessing emission reduction projects.** Due to the historical reliance on fertiliser, energy, irrigation and mechanisation to deliver increased agricultural productivity gains through the green revolution, any emission reduction commitments made without proper regard to the special case that agriculture presents are likely to create an economic shock in the agricultural sector.¹

• ¹ (R. E. Evenson & D. Gollin, *Assessing the Impact of the Green Revolution, 1960 to 2000*, 2003: Vol. 300, Issue 5620, pp. 758-762).

1. Agriculture and land-use sectors

Farmers in NSW paid an enormous price to enable the rest of Australia to meet the government's previous emission reduction targets. Farmers in NSW were prevented from developing their farms by regulations brought in that lacked an understanding of agricultural issues and challenges. Overnight farmers were forced to retain unproductive vegetation while other sectors of the economy were allowed to operate business as usual.

Many of the assumptions that Government used to estimate greenhouse gas (GHG) emission from agriculture were subsequently proven to be incorrect (NSW Office of Environment and Heritage (OEH) found that analysis of new imagery reduced the clearing estimate by 50% and OEH did not include any estimation for re-growth (greening) despite CSIRO finding significant "greening" in NSW. Despite these obvious errors NSW farmers received no benefits from the significant reduction in emissions previously attributed to farming.

NSWFA is concerned about the inadequacy of the assessment of ERF projects. It is almost inconceivable that carbon price is the only factor used to assess multi-million dollar ERF projects. Our information indicates that this has resulted in hundreds of millions of dollars being allocated to under fewer than 100 projects that involved landholders not clearing scrubs on leasehold land in the Western Division of NSW. In addition, a large portion of this money has been paid out to aggregators rather than making it directly into landholders pockets. It is hard to get full clarity in terms of exactly how much has gone to these aggregators, other than to say it is substantial. We understand that this was approved under NSW regulations prior to 2010. It is our understanding that this resulted in one landholder, for example, receiving over \$14 million in incentives for not clearing land that is located 100 km west of Bourke. The anecdotal evidence that this property was purchased a few years earlier for approximately \$3 million underlines the lack of policy rigour applied to this process.

This lack of a sensible assessment methodology has allowed huge sums of funding to be allocated with very little benefits to the environment. A simple financial and environmental assessment would have revealed the faults in this methodology,

2. Principles for assessing policies

NSWFA opposes a number of the principles outlined in the CCA's paper.

When assessing the principle of equity, NSWFA seeks explicit consideration of the impact of the suite of policies on the farm sector and farming families. Farms, like other small businesses have a very unique nexus between the impact of a policy of the business and the impact on the income of a family.

Agriculture has borne the cost of Australia's past policies to achieve our international emissions reduction targets. State regulations on land clearing have been the biggest sectoral contributor to emissions reductions in Australia since 1990.

It is inequitable that much of the cost of Australia's progress to date has been carried by a relatively small number of farmers who have been prevented from improving the profitability of their farm businesses.

Farmers were also affected under the Carbon Tax. Carbon tax flow-on costs hit Australian farmers every time they paid for essential electricity, fertiliser, chemical and fuel supplies. While not a covered sector, the cost of the tax was passed through to farmers from covered entities.

The potential lies in the opportunity to link to industry innovation and the ability of the farming sector to deliver reductions in greenhouse gas emissions while meeting the food, fibre and energy needs of the over ninety eight percent of the community reliant on first world modern agriculture.

2.1 Emissions intensity

A key challenge for the agriculture sector is to reconcile the competing objectives of food and fibre security for a growing global population, while reducing emissions. The Paris Agreement highlighted the challenge of feeding a growing global population. Policy mechanisms that adopt an absolute approach to considering agriculture emissions reduction (i.e. net emissions from the sector) are at odds with the need to increase total production to meet growing demand.

Adopting an *emissions intensity* approach for agriculture enables the emissions reduction policy framework to facilitate competing goals. This is an efficiency approach – with a focus on reducing the “emissions footprint” of each unit of production.

NSWFA supports an emissions intensity approach for considering the agricultural sector. This metric will help protect the sector’s competitiveness by ensuring that food and fibre will be produced more efficiently, rather than placing a net cap on emissions.

3. Policy Options

NSWFA’s believes the government must maintain its policy focus on voluntary climate mitigation policy initiatives for the agriculture sector. Policies that increase the cost of production – either by directly imposing costs or resulting in costs passed down through the supply chain – put us at a competitive disadvantage to our major global competitors.

NSWFA does not support the imposition of regulations that impinge on the property rights of individuals to achieve emissions reductions. Regulations that unreasonably restrict land use change are not supported by NSWFA. Vegetation management regulation has underpinned the ability of Australia to achieve its international obligations under the Kyoto period. The cost of these regulations is almost all borne by the agriculture sector – with no recognition of the associated loss of property rights.

The reality is that for most Australian farmers, cost-effect methods have not yet been approved. NSWFA does not support mandatory policies (such as a tax or trading scheme) that cover farming. Such policies would be asking farmers to demonstrate that they are reducing emissions where there is no avenue for them to do so. Such policies would just impose costs on the agriculture sector, reducing our international competitiveness.

NSWFA welcomes the CCA’s recognition that mandatory pricing policies are not likely to be suited to agriculture as the cost of measuring and reporting on emissions are likely to be high. The report also notes that for small emitters in sectors that have few opportunities for emissions reductions in the short term it may be best to concentrate on

voluntary measures such as offset schemes and on research and development of low-emission's technologies.

NSWFA's view is that continued and sustained investment in research and development (R&D) is required to improve the carbon efficiency of our farming systems and enable the agriculture sector to contribute to reducing national and international emissions.

The opportunities to contribute to achieving emissions reduction that can be provided by investment in R&D are threefold:

- Enabling the participation of farmers in carbon markets through the development of cost effective methods to accumulate and sell Australian Carbon Credit Units (ACCUs) under the ERF and other market mechanisms.
- Improving the emissions efficiency of the sector. In this regard, developments that concurrently reduce emissions and improve productivity will be more readily adopted by farmers as it makes business sense to do so, and as a result will drive overall sector performance in the national inventory; and
- Broader opportunities to achieve emissions reductions by improving energy efficiency on Australian farms.

3.1 Emissions Trading

The NSWFA does not support an economy wide emissions trading scheme. In NSWFA's view, it is currently impractical for agriculture to be covered by an Emissions Trading Scheme (ETS). This is due to problems with measuring and verifying emissions and sequestration through Australia's 115,000 farm businesses, limited commercially-viable abatement options for the sector and the potential to significantly reduce agriculture's international competitiveness relative to that of other nations who are not constrained by emissions reduction policies. If implemented, an Emissions Trading Scheme would force Australian farmers into a position whereby the only way that they can meet their liabilities would be by reducing production.

Using Australian Bureau of Agriculture and Resource Economics data, approximately one-third of total broad acre farming input costs are energy dependent. This includes direct costs such as fuel and electricity, as well as other energy-dependent farm costs such as freight, fertilizers and crop contracting. This figure increases to a substantial 45% of input costs for cropping operations. All of these input costs will increase markedly should the electricity and fuel sectors be covered by an ETS. NSWFA does not support the inclusion of agriculture in an ETS.

3.2 A carbon tax

The NSWFA supported the Federal Government's decision to repeal the carbon tax. Whilst the agricultural sector itself was excluded from directly paying the tax, costs imposed on other businesses were passed on to agriculture and impacted the bottom line of farm businesses. These carbon tax flow-on costs impacted Australian farmers every time they paid for essential electricity, fertiliser, chemical and fuel supplies. These flow-on effects significantly dampened the sector's efforts to increase productivity.

The dairy industry has recently conducted a post carbon tax review of energy costs. This analysis of case study dairy farms on non-contestable electricity contracts showed that a carbon tax of \$23/tonne CO₂ translated to a daily cost of \$0.80- \$6.40 or 1.5-13% of total

bills. This range was between \$7-20 per day or 8-15% of total bills for farmers on contestable electricity contracts².

The NSWFA does not support the reintroduction of a carbon tax or similar policy instrument as a means to achieving a post-2020 emissions reduction target.

3.3 Voluntary carbon markets

It is critical that Government continues efforts to enable the agriculture sector to actively participate in voluntary carbon markets, such as the Emissions Reduction Fund which forms the centrepiece of the current Government's direct action policy. This requires a commitment to continue to develop cost-effective methods in partnership with the industry to enable the sector to be competitive over the life of the Fund.

A key challenge for much of the agriculture sector is that many emissions reduction technologies are still in the embryonic phase of research and development and are not yet "method ready". To fully unlock the potential for abatement in agriculture, further investment in R&D is required.

Climate R&D will continue to play an important role in ensuring that mitigation options are cost effective for Australian farmers. As the CCA noted in its 2014 review of the Carbon Farming Initiative, a lack of participation by particular activities and sectors within agriculture may reflect the fact that abatement options in those areas are not cost-effective³.

NSWFA's view is that there are opportunities for greater sequestration in the agriculture sector. In many parts of the Australian landscape, capturing carbon in our soils has real potential. More work needs to be done to capture these opportunities, by providing a low cost, low risk pathway to encourage farmer participation.

3.4 Direct action – innovation to drive practice change

With the support of the Australian Government through programmes such as CCRP and FRGP, the agricultural sector is pursuing the research and development of technologies and changes in practice to reduce the emissions intensity of agricultural production and sequester carbon in the landscape.

In agriculture, the NSWFA's view is that the best approach to reducing emissions across the sector is to develop cost-effective emissions reduction technologies and practices that also improve productivity or efficiency on farm. Mitigation options that improve productivity and profitability, rather than those that require an additional incentive from the market or from Government initiatives, are more likely to be adopted by farmers as it will make business sense to do so. Such a focus also overcomes the administrative barriers to participating in complex emissions reduction projects.

² Dairy Australia (2014).

<http://www.dairyaustralia.com.au/~media/Documents/Environment%20and%20Resources/22072014-Australian%20Dairy%20Shed%20Energy%20Costs-Fact%20Sheet-July14.pdf>

³ Climate Change Authority (2014), Carbon Farming Initiative Review, Climate Change Authority, Melbourne, Victoria.

The changing emissions intensity of the agriculture sector over the past few decades highlights the potential for R&D to drive reductions in emissions intensity over time. For example:

- in the dairy industry, the on-farm application of research related to cow nutrition, rumen microbiology and genetics has led to substantial increases in milk production from individual cows and improved feed conversion. This has resulted in the average methane intensity from Australian dairy cows reducing from 9.8 t CO₂e per tonne of milk solids in 1980 to 6.0 t CO₂e/t MS in 2010⁴.
- between 1981 and 2010, the beef industry has decreased greenhouse gas intensity by 14%, from 15.3 to 13.1 kg CO₂-e per kilogram of live weight⁵. This has largely been driven by changes in herd management to improve productivity such as higher weaning rates, higher growth rates, heavier carcass weights, lower mortality rates and improved feed conversion.

When considering these improvements, it is important to keep in mind that the focus of R&D over this time was largely on improved profitability by increasing feed efficiency or productivity, and not an active focus on reducing emissions intensity.

Through FRGP, a number of promising research avenues have been identified that could drive down the emissions intensity of agricultural production. Opportunities include those related to:

- reducing methane emissions in dairy and beef cattle through genetic improvements, rumen technologies and feeding;
- reducing nitrous oxide emissions in cropping and pasture systems through fertiliser application efficiency, nitrification inhibitors in fertilisers and irrigation management; and
- reducing emissions from intensive industries such as pork and poultry by better managing manure waste.

Some are opportunities that our agricultural industries will pursue on their own due to the productivity benefits they will provide. For others, public investment will enable research that would otherwise not proceed with industry investment alone, or accelerate the rate at which the research can be undertaken.

There are also significant opportunities for improving practice on farm within our current knowledge base. For example, in the dairy industry improvements can be made in nitrogen management, fertility, heat control, and energy use, and the industry is encouraging the adoption of these practices. Similarly, the cotton industry, with the support of Australian Government Programs, has embarked on a process of incorporating sequestration and mitigation options into the industry's Best Management Practice program and industry extension activities.

More broadly, extension efforts to encourage better management of soil carbon can result in both productivity benefits as well as sequestration benefits. In the NSWFA's view, focused investment in extension to encourage commercial and operational change to

⁴ Moate et al (2014) *Mitigation of enteric methane emissions from the Australian dairy industry*, Proceedings of the 5th Australasian Dairy Science Symposium 2014
<http://www.adssymposium.com.au/inewsfiles/2014proceedings/19MoateADSS2014.pdf>

⁵ Wiedmann et al (2015) *Resource use and greenhouse gas intensity of Australian beef production: 1981–2010* Agricultural Systems Volume 133, February 2015, Pages 109–11
<http://www.sciencedirect.com/science/article/pii/S0308521X14001565>

farm businesses has the potential to greatly facilitate agriculture's contribution to the national emissions reduction task.

It is important to recognise that for some research, there are long lead times. Technologies that will result in stepped change in our emissions profile are likely to emerge over the next decade. It is important that such R&D efforts are sustained over time. Investment to date through

CCRP and FRGP has also built the capability of Australian research teams, who are now recognized internationally for their expertise. Sustained investment can ensure that this capability is not eroded or lost to our international competitors.

3.5 Direct action by improving energy efficiency on farms

Projects in a number of agricultural industries have highlighted a range of opportunities to reduce energy emissions by transitioning to renewable energy sources and by adopting more energy efficiency of farm equipment⁶. The first step to understanding the range of possible options at the farm business scale is to conduct detailed energy audits. Previous State and Federal government programs have supported these types of industry initiatives, but these are no longer available. As a result of these audits, options to improve energy efficiency that have low capital outlays and short pay back periods are being adopted by farmers. However, there are barriers to adoption for some options, such as large up-front capital costs for equipment upgrades with longer pay back periods, which present barriers to improving energy efficiency.

For example, case study analysis conducted by Dairy Australia showed that with a 50% subsidy for installing more efficient heat pumps would make this a viable option for 89 of 101 farms, instead of 58 of the 101 farms without an incentive. It was estimated that the cost of providing such an incentive equates to approximately \$21t/CO₂e⁷.

There is an opportunity for the Government to consider direct actions that would support improved energy efficiency on farms such as rebates for on farm energy efficiency audits or providing incentives for capital upgrades through either direct subsidy or providing for accelerated depreciation.

⁶ See for example <http://www.nswfarmers.org.au/r-and-d/farm-energy-innovation-program>

<http://www.cottoninfo.com.au/energy-use-efficiency> <http://frds.dairyaustralia.com.au/events/smarter-energy-use/>

⁷ Dairy Australia, 2014. <http://www.dairyaustralia.com.au/Environment-and-resources/Energy-costs-and-the-carbon-price.aspx>