

PO Box 12009 George St, Level 6, 183 North Quay, BRISBANE QLD 4003  
Phone: 07 3837 4747 Fax: 07 3236 4100 Email: [qfarmers@qff.org.au](mailto:qfarmers@qff.org.au) Web Site: <http://www.qff.org.au>

April 2008  
Garnaut Review Secretariat  
Level 2, 1 Treasury Place  
Melbourne VIC 3002  
Email: [contactus@garnautreview.org.au](mailto:contactus@garnautreview.org.au)

Dear Sir/Madam,

Please find attached the submission from the Queensland Farmers' Federation to the Review's Discussion Paper on a National Emissions Trading Scheme (ETS). The Federation appreciates the extension provided by the Review to allow the Federation to receive input on the topic from our Future of Farming seminar on 23 April.

QFF appreciates the opportunity to input into this important Review. The clear message from our submission is the need for policy makers to continue to engage with the agricultural sector in the development of the ETS, regardless of whether agriculture is 'in' or 'out' for the ETS will have a major impact on costs of the sector regardless.

QFF is not a member of the National Farmers' Federation, but wishes to lend its in principle support to the broader submissions by the NFF to this review. The key message is the need for extensive engagement between Government, industry and researchers in developing the most cost-effective path for agriculture towards a lower emissions-intensive growth path, the need to avoid perverse consequences for a crucial trade exposed sector, and the need for the ETS to be considered in its proper place as one of a number of policy tools within a broader climate change policy response..

Yours sincerely



John Cherry  
Chief Executive Officer  
Queensland Farmers' Federation

# GARNAUT CLIMATE CHANGE REVIEW

## EMISSIONS TRADING SCHEME DISCUSSION PAPER

### RESPONSE BY THE QUEENSLAND FARMERS' FEDERATION

#### 1. In or out, agriculture must be at the table:

QFF represents the interests of the intensive agriculture sector in Queensland, including horticulture, sugar cane, dairy, chicken meat, aquaculture, cotton and nursery production. Our sector contributes over \$5 billion to the State's GVP and generates over 35,000 jobs.

QFF and its members have been actively engaged in the climate change and variability debate for many years. No sector is as exposed to climate variability as agriculture, and the sector faces enormous challenges in grappling with adapting to climate change over coming decades. Estimates by ABARE suggest that Queensland agriculture faces reductions in production due to climate change effects greater than other states. On a business as usual basis, ABARE estimates that beef production in Queensland could fall by 9.6% by 2030 and 19% by 2050, and sugar production by 12% by 2030 and 17% by 2050. These changes, which would be reflected in massive reductions in Queensland's farm exports, would contribute to a reduction in State GVP of over 8% by 2050.<sup>1</sup> Farming faces a major challenge adapting to the effects of climate change. Coping with the policy effects of mitigation should not aim to make this difficult task even harder.

The Government has indicated that agriculture will not be included in the ETS in first instance, but there is an intention to include it when 'practical'. This broad approach is supported in principle by QFF. However, it needs to be understood that regardless of whether agriculture is in or out of the ETS, it will be impacted by increased costs, at a time when climate change and variability are already posing major challenges for the sector. ABARE estimates that emissions intensive inputs make up around 39% of the costs of cropping and 17% of the costs of extensive grazing operations. Even if agriculture is excluded, it faces a cost increases from the ETS of around 3% for livestock and 4.5% for cropping. If, however, it is included, the cost increases would be 18% for livestock and 6% for crops. Under either scenario, the costs would be significant.<sup>2</sup>

It is also worth noting that the most emissions intensive inputs to agriculture (fuel, chemicals and fertiliser) have risen sharply in price over the last decade and are likely to continue to do so. There is already a very strong price signal to farmers to use fuel, chemicals and fertilisers more efficiently, reducing the carbon footprint of the sector:

#### Farm cost increases 1998/9 2008/9

Cost Item	% increase 1998/9 to 2008/9	% total cash costs (2008/9)
Fuel	153.5	8.0
Fodder & feedstock	106.9	17.9
Fertiliser	70.6	8.0
Chemicals	50.3	6.0

(ABARE Australian Commodities)

<sup>1</sup> ABARE Australian Commodities Dec 2007

<sup>2</sup> ABARE presentation to QFF forum 22/4/08

**In summary, whether agriculture is in or out of the ETS or when it enters, the sector must be represented at the table when the rules for design of the ETS are developed.**

In or out, the ETS will significantly add to farm costs and poses a challenge to the sector to offset that impost by accelerating productivity growth. The catch 22 will be that many of the improvements that have driven much of the sector's impressive productivity improvement in the past (e.g. nitrous fertilisers, mechanisation, expanded acreage) are emissions intensive and thus costly under an ETS.

## **2. The ETS in a wider climate change context**

Climate change is an enormous policy challenge for Australia and Australian industry and the ETS is just **one** of the policy instruments available to address that challenges. This point is self evident and yet frequently missing from much of the current policy debate about climate change. There are other more cost effective means of addressing climate change in the agricultural sector than an ETS, and these should not be forgotten. All QFF industry bodies members have or are developing Farm Management Systems programs for producer members including within a risk based farm decision making system a range of practices to reduce risk and improve farm productivity and sustainability. Such practices, focusing on improved soil and water management, nutrient management and energy efficiency will reduce carbon emissions over time as well as improving farm sustainability and productivity. Indeed, the progressive uptake of improved farming practices has made a significant contribution to keeping emissions from the agriculture sector at a flat growth trajectory over the past decade.

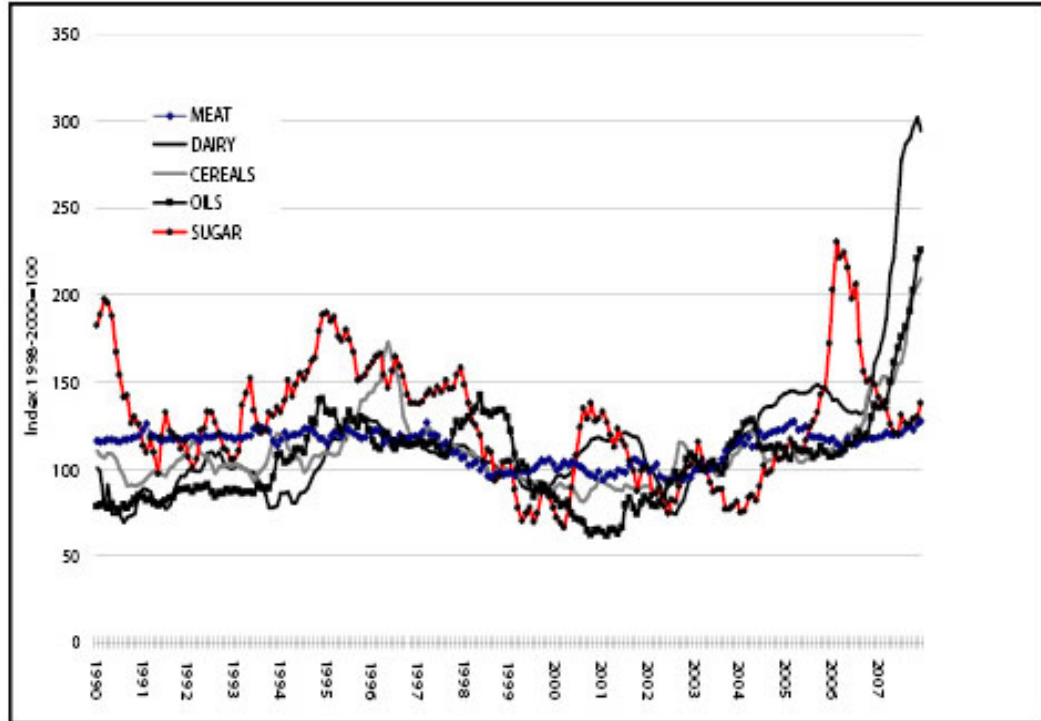
A key policy question that must also be considered in the overall debate about climate change is the looming food security crisis. Professor Julian Cribb in a recent article argues that the combination of rising world population and rising consumer demand for richer diets will require a 110 per cent rise in global food output over the next 40 years. However, increasing water scarcity, reductions in arable land, soil losses, scarcity of applied nutrients, decline in marine harvests, climate change and competition with biofuels will make this task even harder. He points out that in 2007, the world's supply of grain was at its lowest level since records began in 1960. Such a looming food shortage has international security consequences and global human displacement triggers.<sup>3</sup> Earlier this month, World Bank President Robert Zoellick recently urged immediate action to deal with sharply rising food prices, which have caused hunger and violence in several countries. He called on governments to rapidly carry out commitments to provide the UN World Food Program with \$500 million in emergency aid by May 1. The following table from the FAO highlights the rapid growth in commodity prices in recent years. While there will be a supply response of some sort, the underlying problems of supply and demand are likely to be with us for some considerable time, climate change among them.<sup>4</sup>

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<sup>3</sup> Julian Cribb "The Coming Famine" Discussion Paper March 2008

<sup>4</sup> Keogh M presentation to the Farm Institute seminar on the ETS 21/4/08

## World Food Commodity Price Indexes - FAO



In developing a policy for climate change, the Australian Government needs to be conscious of the broader social and economic consequences of global climate change on food production, interacting with other social, economic and environmental forces. In then developing the ETS as a tool within its climate change policy, it needs to ensure that the ETS does not have perverse consequences for the agriculture and food sector in seeking to meet those challenges.

### 3. Setting the emissions limit and trajectories:

Assuming that agriculture is included in the ETS at some point, there needs to be a clear and frank policy discussion about the emissions limit and the trajectories for the sector. Given the importance of food as a component of household budgets in Australia and given the looming international imbalance of demand and supply for food, it makes sense to seek to avoid unnecessary costs being imposed on the sector. **QFF submits that the trajectory for emissions target reductions for agriculture should realistically reflect practical mitigation alternatives.**

QFF would argue that the ETS will have imposed an 'unnecessary cost' if it forces the sector to buy credits for which there is no mitigation alternative other than reducing output. Methane emissions from extensive grazing are a good example of an unavoidable emission for which no realistic mitigation alternative is available. The impact of the ETS would be an 18% increase in the cost of producing beef, which can only make fewer Australians eat meat and fewer overseas countries buy it. If the producer has no mitigation alternatives, the policy benefit of this large increase in costs of a food staple would be non-existent.

QFF acknowledges that there are mitigation opportunities in other parts of agriculture and the price signal from the ETS would accelerate uptake and innovation in these areas. Nitrous fertiliser application rates, feed management in intensive animal production, energy efficiency, and soil carbon managements are examples of these. However, even with these techniques, the question inevitably arises about how much mitigation is realistic. Further, how much mitigation is possible through uptake of improved practices will differ from commodity to commodity and region to region. And, there are question marks over whether the ETS can develop rules which accurately pick up the mitigation effects of the uptake of improved farming practices.

There is no policy gain in requiring producers to aspire to a target that is practically impossible to attain. By tying the sectoral emissions target to practical mitigation alternatives, Australia could achieve a 'win-win' of reduced emissions from the agricultural sector without substantial increases in food prices. This approach may appear to cut across the Review's preferred 'simplicity' design rule that seeks to treat all sectors the same, but avoids unnecessary complexity and perverse consequences in application. All sectors are not the same. The mitigation effort in a stationary energy generator is very different from that in agriculture which is conducted in wide range of landscapes, climatic conditions, commodities, farming systems and regions. Seasonal variability and extreme events such as drought, fire, storms and floods can have major impacts on carbon sequestration rates in a rural setting. Seasonal variability also makes the setting of the baseline difficult. Using current drought affected production levels in Queensland as the baseline for example would deny agriculture access to normal 'seasonal' growth when better conditions return. We do not live or operate in a world of 'simplicity'.

A sectoral approach that seeks to marry the trajectory for emissions reductions for the sector against practical mitigation alternatives could be linked to the uptake of farm practices that reflect those alternatives. Australian farmers have an impressive record of innovation and productivity improvement, backed by the application of R&D. A comprehensive R&D effort would be needed to underpin the mitigation path for agriculture. Current investment in mitigation research in agriculture is puny compared with the investment in the energy and mining sectors.

The sectoral approach could overcome the major problem with inclusion of agriculture in the ETS and that is the measurement and verification of emissions reductions from practice change. QFF draws the review's attention to the submission from Professor Peter Grace to the Review's paper on Agriculture and Land Use. His research found that conventionally tilled crop pasture systems emit 14% more than those under minimum tillage, which in turn emit 10% more than no-till systems. Complete adoption of no-tillage across six regions of South Eastern Australia would yield an additional 18.6 million tonnes of carbon over 20 years, the equivalent of 20% of annual fossil fuel emissions for year 2000. Grace's research highlights that small changes in soil carbon levels, over a wide area, could have a major effect on emissions. Soil carbon gains from moving to zero tillage would be difficult to capture as an ETS offset with the permanence, additionality and variability rules. However, uptake of the practice would have a large cumulative mitigation impact if the incentives for uptake of the practice were in place. The ETS is unlikely to provide a sufficient incentive.

The ETS is also likely to have difficulty capturing as emissions credits reductions in nitrous fertiliser application rates, as reductions should reflect 'good current practice', and as such

might not be counted as ‘additional’.<sup>5</sup> However, with nitrogen having a greenhouse weight 300 times that of carbon, such practice change needs to be encouraged. Good practice has benefits for other policy objectives such as improving water quality and reducing farm costs. The sugar cane industry, in partnership with the Bureau of Sugar Experimental Stations, is currently rolling out programs to reduce nitrous fertiliser application rates in Queensland. It is also likely to be a major objective of the Federal Government’s \$200m Reef Rescue Plan. Linkages between mitigation and other farm sustainability and profitability initiatives should be explored and encouraged wherever possible. It would be a perverse outcome if the technical limitations of the ETS resulted in a disincentive to adopt good practices if not adequately covered in credits and offsets.

The sectoral approach outlined above would require an ongoing dialogue between Government, industry and the research community about what is achievable by when, where and by whom. It should then provide agreed appropriate incentives (both positive and negative) to progress towards the targets, backed up with research, development and extension. Targets and trajectories should then be reviewed (say every 3-5 years) to ensure that they reflect current knowledge. Targets might differ by commodity and region, depending on the practices identified for adoption in that commodity and region and its mitigation potential. Where producers exceed the trajectory and generate credits, these should be marketable within the ETS. This sectoral approach could sit within the ETS with its own sub-system or alongside it with appropriate linkages.

#### **4. When should agriculture be included in the ETS?**

The discussion paper signals that agriculture and forestry should be initially excluded from the ETS, and included as soon as practicable thereafter. What that means needs to be extensively and openly debated between Government, industry and researchers.

A key question for agriculture is from what date emissions reductions will be recognised, particularly for offsets. This is not an easy question, as it could disadvantage early adopters of good practices. Further, it could have the perverse effect of preventing continuing adoption of good practices until the ETS ‘recognises’ the practice. There is no easy answer to this question, but it needs to be debated carefully with industry.

If the broad approach of this submission were adopted and the mitigation effort for agriculture were linked to uptake of agreed practical practices, this ‘early adopter’ question might be overcome, as the question would be for other producers to catch up rather than ‘gain’ a credit for late adoption.

The question of when agriculture is included in the ETS must also be linked to when the R&D supporting the entry is completed. The New Zealand Government allocated around \$12 million for R&D to prepare agriculture for entry to the ETS, and address the issues of practical mitigation alternatives, measurement and verification. Given the wider variety of agricultural commodities and climatic zones in Australia, the Australian Government would need to make a very large investment in agricultural R&D to address the mitigation and measurement issues.

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<sup>5</sup> Eckhard R “Greenhouse gas emissions from livestock and fertiliser and implications for a NETS” - Farm Institute seminar paper 22/4/08; Henry B et al “Measurement Issue and Mitigation Options – Land Use” Farm Institute seminar paper 22/4/08

The key question for research is developing an accepted, reliable, cost-effective and accurate way to monitor and verify emissions. Inevitably, this is likely to make extensive use of proxy measures. These, in turn, will likely draw on R&D on accepted and practical mitigation practices, which will eventually be accepted into industry best management practice and Farm Management Systems programs. A better understanding of the impacts of future climate change is also needed as higher temperatures and different soil moisture regimes will accelerate rates of turnover of liable soil carbon pools.

Perverse consequences of policy need also to be identified and researched. A massive market signal to develop carbon sinks could result in good agricultural land being converted to forestry, with impacts on water availability and on local social and economic structures, as forest developers will seek out high rainfall good land that produces the highest net return. Competition between farming and forestry is already an issue in coastal Queensland sugar growing zones due to the economic distortions caused by tax preferences in Managed Investments Schemes, and could get worse under an ETS. The review should consider placing limits on large-scale plantation forestry developments in high rainfall areas on good agricultural land that are able to be utilised as offset credits in the ETS. 'Good agricultural land' is already recognised in State Planning Policy in Queensland, and presumably in other states. The development of carbon sinks on marginal or non-agricultural land is obviously a different and less contentious issue.

Even if entry of agriculture into the ETS is delayed for some years, a clear dialogue about the route to inclusion, the criteria for what is 'practical', a clear R&D agenda, agreement on baseline activities and timelines, an understanding of the market role of offsets and a clear understanding of the likely emission permits and trajectories for mitigation should be negotiated sooner rather than later to provide certainty for future investment.

## **5. Domestic offsets**

QFF supports the agricultural sector being able to sell offsets in the ETS. However, for such a policy to work, a large number of issues would need to be resolved beforehand for landholders to have the confidence to participate:

- What is the nature of the obligation? For how long?
- What risks would need to be covered over that period? Fire? Flood? How?
- Will the transaction costs of providing an offset exceed the economic benefit of providing it, particularly measurement?
- Will the market recognise less permanent offsets, based on changes in land practices (e.g. soil carbon)?
- What will be the obligations for the carbon footprint for the rest of the enterprise or industry? Is a lifecycle analysis approach needed?
- Will early sellers be disadvantaged if required to later buy credits if agriculture enter the ETS?
- Will the provision of offsets have perverse outcomes of discouraging landholders from adopting good sustainability practices until the ETS pays for them?

QFF offers no views on these issues, other than to note that they will need to be resolved in the design phase. This highlights the need for agriculture to be at the table in the ETS negotiations regardless of whether the sector is in or out of the ETS.

QFF would urge the Review to consider the debates and pilot projects that have occurred in Canada, New Zealand and within voluntary US schemes such as the Chicago Climate Exchange on the issues that arise in the recognition of offsets. Issues such as lengthy liability periods imposing uncertainty, high costs of supply and transaction costs relative to trading prices, baseline, eligibility criteria, questions of leakage and certainty for market participants are key issues.

Onfarm energy use and uptake of renewable energy provides real options for farmers to mitigate emissions. It is our understanding that the results of energy efficiency will be counted within the energy sector of the ETS rather than the farming sector, which could have an adverse effect on incentives. The ETS does need to be flexible enough for farmers to earn credits for major onfarm investments in renewable energy or even energy efficiency with strong mitigation effects.

## **6. Point of obligation:**

QFF endorses the view that the point of obligation should be at the point of emissions where practical. It also notes the view of the Federated Farmers of New Zealand in opposing the NZ Government's position that the point of obligation should be at the processor level.<sup>6</sup> The FFNZ opposes this on the basis that farmers would receive all the costs of emissions without control over mitigation efforts. Of course, the compliance cost of moving the point of obligation to the farm level is much higher. However, the obligation should go with the capacity to mitigate. In some sectors, that capacity might be at the processor level, depending on arrangements with farmers.

## **7. Permit releases to be auctioned**

As outlined earlier, QFF submits that the 'one size fits all' approach to permit allocation, if it includes agriculture, is likely to have perverse consequences for the sector. The system should provide strong incentives to adopt identified, practical mitigation options. But, where there is no identified mitigation opportunity, requiring agriculture to buy permits will simply increase the price of food in both Australia and abroad. It would also reduce Australia's competitiveness as a food exporter. And, it would almost certainly reduce Australia's agricultural production at a time when the world needs more food as reducing output is the only way to reduce emissions in the absence of mitigation options.

These consequences could be avoided by ensuring that agriculture is not required to 'buy' permits for that part of their production for which mitigation is not practical. However, giving producers the option of mitigating or buying permits for the rest of their production would meet the policy objectives at a lesser cost to industry and the nation.

## **8. Trade exposed emissions intensive sectors**

Around 70% of Australian agricultural produce is exported, and is seriously trade exposed. Of the remainder, much is competing against imports, notably in horticulture and pork. The definition of 'trade exposed' needs to take this into account.

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<sup>6</sup> Pederson C address to the Farm Institute forum on ETS 22/4/08

It is QFF's view that the best mechanism for compensating for the costs of the ETS is not to generate the costs in the first place. Our proposal to link emissions reductions trajectories to practical mitigation opportunities on a sectoral basis would help to achieve this. Under this approach, the direct cost of buying permits for producers would probably not require compensation as mitigation alternatives would be available to meet emissions targets.

However, even under this option, Australian food producers would still face indirect costs due to the higher cost of emissions intensive inputs (e.g. energy, fertiliser, chemicals, equipment etc.) The Government would need to provide a simplistic crediting device to ensure these costs were recovered, possibly based on 'proxy measures' of the general cost increase for each input as a result of the ETS. This credit might be made available to all exporters selling into all markets. The credit could be made reportable to countries with an ETS which could then require repayment of the credit for 'equivalence' into that country.

For commodities that are competing against imports, a full refund of credits might be required. Alternatively, the Australian Government might impose a levy on nations without an ETS to reflect the estimated carbon component of the imported product. This would have the advantage of removing any competitive advantage for countries not in an ETS, particularly if the approach were adopted multi-laterally.

All such arrangements will need to be negotiated at a multi-lateral level. But, the key principle must be to ensure that Australian business is not disadvantaged in either export or import replacement industries.

## **9. Use of permit revenue**

QFF argues that there is a huge R&D need for agriculture to address the challenges of mitigation and measurement, and this should be an important call on permit revenue. Adjustment assistance for industries or regions having major difficulty coping with climate change should be another priority.