

## **Inquiry into the impact of climate change on Queensland agricultural production**

**Submission No:** 18  
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This is an individual submission in response to the Terms of Reference (ToR) **regarding the State Development and Regional Industries Committee inquire into and report to the Legislative Assembly on:**

1. **the impacts of climate change and climate variability on Queensland agricultural production and the existing and potential future risks of climate change on the sector.**

There is much greater confidence in the use of climate forecasts (e.g. La Nina v El Nino years) on agricultural production. The recent heatwaves and wildfires in North America and southern Europe are a clear indicator of the rapid increase in risk to agriculture with climate change.

2. **opportunities for the Queensland Government to create and support resilience, adaptation and mitigation measures in preparing the agricultural sector for future climate change.**

Queensland agricultural production is heavily dependent on water availability which is directly impacted by climate variability and change. Whilst the Queensland Government has been responsive in developing software tools for farmers with respect to climate information, there is a critical need for soil conservation work in all regions. Well managed soils with adequate plant cover have a buffering effect on soil moisture retention and sustainable agricultural production. However, this is an agronomic extension issue with little expertise in the Queensland government other than regions adjacent to the Great Barrier Reef. Relying on commercial agronomists is not the solution to soil conservation as they mainly serve commercial interests in the sale of chemicals.

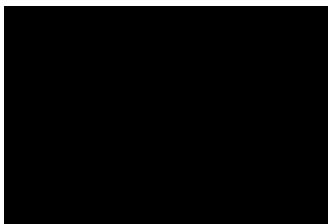
Climate change mitigation is a critical area lacking investment in Queensland. Nitrogen fertilisers produce nitrous oxide (N<sub>2</sub>O) which is a greenhouse gas 273 times the impact of carbon dioxide, however there is no investment in this area. Over application of nitrogen fertilisers is standard in the cotton, grains and cane industries, the latter has made some changes, but better management of nitrogen fertilisers can be a win-win through increased production and profit and reduced environmental impact. Reducing nitrous oxide from better fertiliser is a permanent low cost mitigation strategy, unlike many of the issues with soil carbon sequestration which is a temporary increase in soil carbon lacking permanence a critical aspect of climate change mitigation.

The Queensland Government should realise Pastoral enterprises are major contributors to climate change through methane emissions from animals. Some of this is negated by reduced tree clearing and increased vegetation management but a number of the enterprises market they are climate neutral when in fact they are purchasing overseas carbon credits at a very cheap price. These enterprises need to invest in Queensland carbon mitigation projects and buy credits from within the state. They are being provided a financial advantage at the expense of the Queensland taxpayer. The Queensland Government should legislate that carbon offsets which benefit Queensland enterprises

should be sourced from within Queensland instead of the enterprise going offshore and buying cheap credits for financial gain and environmental credibility.

The investment in any aspect of agricultural production and adaptation or mitigation to climate change has been severely hindered by staffing restrictions imposed by the state government. In particular, there is a serious lack of professional capacity in agricultural science and its relationship to climate change which needs urgent attention. Partnerships with climate change experts in tertiary institutions should be considered a priority.

Your sincerely



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