



Agricultural Sectoral Plan Submission

Background: the Australian Organic Sector

The global organic agriculture industry is valued at \$220 billionⁱ, with the largest proportion of certified organic land (nearly 70 per cent) located in Australia. 53 million hectares of Australian land are now under certified organic management, which represents 12.4% of the country's agricultural farmland and comprises approximately 3,035 certified organic businesses employing over 22,000 full-time equivalent workersⁱⁱ. Overall, the Australian organic industry is currently worth a conservative total of \$2.6 billion inclusive of direct and indirect contributions to the economy. The organic industry fully supports emission reduction initiatives and would like to collaborate with government where possible to contribute to reaching its stated targets.

Building on existing tactics and knowledge

At present there is a focus on leveraging existing tactics and knowledge to reduce emissions, with such practices based around conventional farming methods. However, existing farming systems in Australia are already providing enormous benefits when it comes to emissions reduction. One such system is organic production, which prioritises minimal inputs in a way that markedly reduces GHG emissions. Strategies that help promote organic farming as part of a sustainable farming system must be considered by the government to help benefit Australian agriculture. Incorporating initiatives and programs outside of the current status quo adds diversity to the agricultural framework, creating alternative options for farmers that consider the various geographical nuances of the Australian agricultural landscape. Doing so will also promote well-established and highly regarded organic techniques in aid of the broader strategies around sustainable agriculture.

The following case study serves as an example to highlight the potential of the organic industry in advancing the government's net zero sustainability objectives. This case study illustrates how organic practices can lead to measurable reductions in carbon emissions that align with broader national objectives.

I. Bonnie Doone on Climate Change Mitigation and Adaptation

Bonnie Doone is a 20,000-acre certified organic property in Queensland that has made the news recently after generating a record number of 94,666 Australian Carbon Credit Units (ACCUs) for an individual soil carbon farming project. For every tonne of livestock their farm carries, 6.6 tonnes of CO₂ are buried in soil after accounting for all emissions. For context, these 94,666 units are worth approximately \$2.8 million AUD. Notably, the carbon-negative cattle achievement comes at a time when the meat industry is still re-evaluating its carbon neutral goals. The Bonnie Doone soil carbon project involved many years of focusing on increasing soil carbon by altering stocking rate, duration or intensity of grazing. Despite the seasonal challenges posed by dry weather and fluctuating cattle prices, the owners were able to sequester 126,222 tonnes of GHG emissions into their soils over the five-year reporting periodⁱⁱⁱ. The property is owned by the Burnham family, who were dedicated to building a more resilient operation to maintain long-term viability; this meant learning more about the grasses and the soil that supported them^{iv}.

The above example highlights the adaptability and potential of organic production to generate benefits for broader agriculture in Australia. A stronger shared understanding of the advantages carried by different areas of production will help agricultural groups to effectively coordinate across the industry when developing the sectoral plan. Highlighting the different types of producers (organic or otherwise) across agriculture through examples of positive environmental stewardship may help to foster new initiatives and strengthen those that already exist.

Organics toward Net Zero

In the year to June 2023, an estimated 17.7% of greenhouse gas emissions (GHG) in Australia are currently attributed to the agriculture industry. Australian agriculture recognises the need to decrease the emissions profile through programs such as Meat and Livestock's CN30 Campaign. However, enteric methane emissions are not the sole cause of agriculture contributions to GHG emissions. Farm inputs such as fertilisers and pesticides are considered Scope 3 emissions that have historically not been accounted for within individual agricultural commodity emission profiles. Synthetic nitrogen fertilisers alone account for around 67% of global cropping emissions as nitrous oxide is 265 times more potent than carbon dioxide as a greenhouse gas, remains in the atmosphere for over 100 years, and depletes the ozone layer. Within Australia, the combined scope of pesticides and fertiliser contributed to a total of 48.3% grain emissions per tonne^v.

Within the 2021-22 financial year, Australian producers purchased more than \$5 billion worth of pesticides^{vi}, with sales projected to continue to grow at a CAGR of 10% through to 2030^{vii}. Scope 3 emissions represent the largest portion of operators' total greenhouse gas (GHG) inventories compared to Scopes 1 and 2^{viii}. They are also the most difficult to measure and tackle, largely due to their indirect nature. While many operators (especially those with longer value chains) cannot directly control their Scope 3 emissions, they can influence upstream and downstream processes to reduce emissions.

Organic farming practices can play a significant role in GHG emissions reduction and contributing to net zero targets, especially when it comes to upstream considerations. Organic agriculture is based on a systemic redesign to strategically reduce reliance on inputs. The absence of mineral fertilisers within organic farming facilitates the avoidance of significant GHG emissions from both fertiliser application and the production of that fertiliser^{ix}. For farmers, converting to organic is more than switching out similar products or inputs; it is about understanding the natural cycles of farm agroecosystems and how to use them to their advantage rather than control them. Certified organic products represent agricultural practices that promote biodiversity, minimise erosion and protect watersheds, create wildlife zones and habitats, encourage soil regeneration with natural alternatives to synthetic fertilisers and pesticides, and so much more. Further, a 2020 case study analysed the carbon footprint impact of organic livestock farming using a life cycle assessment (LCA) method and found that: 1) the emissions of organic farms are lower than that of conventional farms; and 2) the carbon sequestration levels of organic farms are noticeably higher^x.

The focus on emissions efficiency of production suggests organic systems may have lower yields (tonnes/ha) compared to non-organic systems (10-20%), especially during initial conversion periods as the soil adapts to the changed practices^{xi}. However, research suggests that this lower emissions profile is retained even when productivity increases, with organic farms consistently

recording lower emissions per hectare than non-organic^{xii}. Well-established organic systems have been shown to emit up to 40% less carbon emissions than non-organic systems in multiple long-term trials^{xiii}. These metrics highlight the potential of reduced input production systems for emissions reduction.

Linking financial and environmental sustainability

Organic goods are also considered a premium product, often increasing sales value by 60%^{xiv}. From an Australian export perspective, this is an opportunity to keep export value of products consistent while potentially decreasing emissions per hectare (and thus total emissions from the agricultural sector). Grass fed beef systems produce almost 1,600 times the amount of human edible protein they consume during their lifetime. This was 1,598 times more than non-organic grain fed beef systems (feedlots)^{xv} and highlights the additional benefits of organic grazing systems beyond direct emissions output. Other positive factors for organic production are lower operating costs, increased resilience, access to price premiums and shorter supply chains. For cropping, organic can have an average price premium of 111–138% and lower production costs and yields; accordingly, organic systems achieved 2.4 times greater net returns at lower risk^{xvi}. Certified organic beef secures a 25% premium compared to non-organic at wholesale^{xvii}.

Countries such as China and Vietnam have shown a willingness to pay premiums of up to 35 per cent or more for Australian certified organic beef^{xviii}. This highlights the significant opportunity for the organic industry to collaborate with the non-organic sector in reducing overall emissions and contributing to net zero targets. Organic producers are therefore poised to be key strategic partners for the Agricultural Land Sectoral Plan.

Supporting and enabling change

██████████ fully supports emission reduction initiatives and would like to collaborate with government where possible to contribute to reaching its goals. Innovative organic techniques can play an integral role within an overall system that improves the sustainability of the Australia's agricultural sector. As noted previously, organic farmers have shown an ability to embrace soil carbon sequestration efforts as part of optimal management practices on their land.

The importance of emissions reductions within the broader sustainability context cannot be overemphasised, especially considering the work being done by Australia's key trading partners. For instance, the European Union has developed the Farm to Fork Strategy (F2F) as part of its European Green Deal that would, by 2030, see at least 25 % of its agricultural land become organic farming land, as well as a significant increase in organic aquaculture^{xix}. Meanwhile, the United States Department of Agriculture has announced a \$300 million USD investment in a new Organic Transition Initiative designed to provide comprehensive support for farmers looking to switch to organic production^{xx}. Within Australia, the Australian Agricultural Sustainability Framework (AASF) identifies 17 overarching principles of sustainability for the agricultural industry. Organic farming principles are at the heart of many of these initiatives, including environmental stewardship, emissions reduction, and economic resilience, as well as people, animals and community^{xxi}. The Australian organic sector also represents clear untapped potential when data management and sustainability reporting are considered.

Initiatives being conducted by Australia's trading partners can act as useful case studies for our own emissions reduction efforts. As noted previously, the Government has an opportunity to build a consistent approach by enacting a consultation body that gathers opinion on agriculture across the entire sector. Currently the organic industry faces barriers around research, development and extension of organic farming. While studies on the benefits of organic farming have been conducted throughout the Northern Hemisphere, there is still relatively little research on the potential benefits of organic farming for Australian conditions. The Agricultural Sectoral Plan is an opportunity to start looking at ways to integrate organic farming techniques into broader plans for sustainable agriculture. New research initiatives may strengthen knowledge around the advantages of Australian organic farming in a way that benefits the future Sectoral Plan.

The Australian certified organic industry already has sustainability at its core, as well as robust verification, traceability and certification systems in place. Incorporating this knowledge into the Sectoral Plan will be vital to its success as it will help provide a broader range of skills and land management techniques that all farmers will have access to, regardless of whether they are organic or not. Organic producers, as evidenced by the case study above, have the potential to be key partners of the government's Agricultural Sectoral Plan.

The organic industry already has a strong foundation with its existing certification frameworks ensuring the integrity of organic claims. However, the absence of mandatory domestic regulation poses a significant challenge and jeopardises the credibility and financial benefits for certified organic producers. In terms of the Agricultural Sectoral Plan and the inclusion of organic farming, it is vital that differentiation is made between products claiming to be organic and products that are already certified organic. Organic products that are certified have been subjected to a rigorous and trustworthy process that guarantees their legitimacy. Consideration of certified organic status within the Agricultural Sectoral Plan will be vital to ensuring its overall success.

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