
Submission to the discussion paper on Assuring Agricultural Sustainability Claims

Department of Agriculture, Fisheries and Forestry



Summary of key points

1. **Science-based sustainability claims** – Leverage Australia’s existing data to support evidence-based, globally aligned sustainability claims.
2. **Science-based chemical regulation and use** – Recognise the APVMA’s regulatory framework in trade negotiations and avoid arbitrary chemical reduction targets.
3. **Land use and productivity data** – Utilise ABARES data to highlight Australia’s sustainable agricultural practices.
4. **Food security and emissions** – Ensure sustainability policies do not, inadvertently, compromise agricultural productivity, food security, or increase global emissions.
5. **Maximum Residue Limits as a sustainability metric** – Acknowledge Australia’s residue monitoring system as proof of responsible chemical use.
6. **Climate-resilient technologies** – Recognise the adoption of crop biotechnology innovations and precision chemical application technologies as sustainability solutions.
7. **Circular economy and product stewardship** – Adopt existing metrics of participation in industry-led programs that contribute to environmental sustainability outcomes.
8. **Clear metrics and standards** – Define sustainability terms objectively and counter misinformation in reporting (e.g., organic claims).

Introduction

CropLife Australia (CropLife) is the national peak industry organisation representing the agricultural chemical and plant biotechnology (plant science) sector in Australia. CropLife represents the innovators, developers, manufacturers, formulators and suppliers of crop protection products (organic, synthetic and biological based pesticides) and agricultural biotechnology innovations. CropLife’s membership is made up of both large and small, patent holding and generic, Australian and international companies. Accordingly, CropLife advocates for policy positions that deliver whole of industry and national benefit. However, our focus is specifically on sustainable environmental land management and an Australian farming sector that is internationally competitive through globally leading productivity and sustainability practices. Both of which are achieved through access to world-class technological innovation and products of the plant science sector.

The plant science industry contributes to the nation's agricultural productivity, environmental sustainability and food security through innovation in plant breeding and pesticides that protect crops against pests, weeds and disease. More than \$31 billion of the value of Australia's agricultural production is directly attributable to the responsible use of crop protection products, while the plant science industry itself directly employs thousands of people across country.¹ CropLife Australia is a member of CropLife Asia and part of the CropLife International Federation of 91 CropLife national associations globally.

CropLife welcomes the opportunity to provide input into the Department of Agriculture, Fisheries and Forestry's discussion paper on *Assuring agricultural sustainability claims* for export market access and regulatory compliance. Our submission focuses on ensuring that agricultural sustainability claims are science-based, risk-proportionate, and aligned with rules-based international trade requirements. Sustainable agricultural practices must balance food security, environmental, and social outcomes while supporting market access for Australian producers.

Genuine and outcomes-based sustainability claims

A robust and evidence-based approach to sustainability claims is essential to ensuring that Australia's agricultural sector remains productive, competitive, is environmentally responsible, and able to demonstrate its existing sustainability credentials in trade negotiations. Sustainability metrics must be practical, scientifically grounded, and aligned with global best practices to support both environmental stewardship and food production security.

Australia has a robust framework of data sets that demonstrate the sustainability credentials of its agricultural sector. Many of these are underutilised in supporting market access. These data sets provide scientifically rigorous evidence of Australia's responsible land management, chemical stewardship, and agricultural productivity, reinforcing the country's position as a leader in sustainable food and fibre production.

¹ Deloitte Access Economics, "Economic Contribution of Crop Protection Products in Australia," August 2023, <https://www.croplife.org.au/resources/reports/economic-contribution-of-crop-protection-products-in-australia/>.

Science-based chemical use and risk assessment

A clear, scientific, and outcomes-focused approach to sustainability claims is essential to avoid misleading, arbitrary, or counter-productive targets that do not align with scientific evidence or practical agricultural and environmental outcomes. This requires the careful selection and alignment of lead and lag indicators to ensure that actions taken contribute to meaningful improvements. Good lead indicators should correlate with and drive improvements in lag indicators by measuring the implementation of best practices. Lag indicators should be used to assess actual environmental and agronomic outcomes rather than act as proxies for decision-making, as they can be influenced by multiple factors and risk leading to misleading conclusions or perverse outcomes. By ensuring that lead indicators effectively track progress toward meaningful lag outcomes, sustainability claims can remain evidence-based, transparent, and effective in driving genuine sustainable agricultural practices.

On the topic of “chemical use” (identified on page 18), the term requires explicit clarification within sustainability frameworks. Sustainability claims must differentiate between risk-based chemical use, which uses scientific assessment and responsible management, and arbitrary lag indicators such as input reductions, evident in the European Union’s Farm to Fork strategy that mandates a 50% reduction in chemical use without a risk-based justification.²

The Australian Pesticides and Veterinary Medicines Authority (APVMA) oversees one of the world’s most stringent chemical registration and risk assessment processes. Every registered agricultural chemical undergoes rigorous scientific evaluation that considers environmental and human health impacts before approval. This process ensure that Australian farmers use only the safest and most effective chemicals, reducing environmental risks while maintaining productivity.

Despite the APVMA’s scientific standing and regulatory credibility, the APVMA’s expert scientific regulatory oversight is not leveraged as evidence of sustainability in trade negotiations and market access discussions. Recognising risk-based chemical regulation as a valid sustainability metric would uphold scientific integrity, support evidence-based agricultural practices and strengthen Australia’s reputation as a responsible user of agricultural inputs.

² “Farm to Fork Targets - Progress - European Commission,” accessed February 14, 2025, https://food.ec.europa.eu/plants/pesticides/sustainable-use-pesticides/farm-fork-targets-progress_en.

Land use and productivity data

The Australian Bureau of Agricultural and Resource Economics' (ABARES) land use and productivity data present an opportunity to enhance the value of existing data to support sustainability claims by providing robust evidence of environmentally responsible primary production practices. These comprehensive datasets demonstrate how Australian farmers are increasing productivity while reducing land degradation and improving soil health. These datasets also highlight the industry's progress in sustainable water use, biodiversity conservation, and carbon sequestration, reinforcing Australia's strong environmental stewardship credentials.³ Greater use of this information could enhance the credibility of Australian exports in markets that prioritise environmentally responsible production.

Food security and safety

CropLife supports Australia's commitment to the global climate change ambitions outlined within the Paris Agreement and our economy-wide goal of balancing greenhouse gas emissions and removals. As outlined in the Paris Agreement, it is important that this is undertaken in a manner that not only promotes resilience to the adverse effects of climate change, but also develops low greenhouse gas (GHG) emissions *"in a manner that does not threaten food production."*⁴ Incorporating considerations for food security will ensure that sustainability objectives do not compromise the ability to produce sufficient, high-quality food. Sustainable agricultural practices must enhance, rather than restrict, food production capacity, particularly in the face of climate change and growing global demand. Incorporating food security as a sustainability metric would ensure a balanced approach that recognises the critical role of agricultural productivity.

Food security includes ensuring food is accessible and affordable. Policies and practices that reduce agricultural productivity – especially those driven by ideological opposition to modern, science-based farming – contribute to inflationary pressures, exacerbating the cost-of-living. The US Department of Agriculture's Economic Research Service highlights that stagnation in agricultural productivity heightens the risk of global food insecurity, increases food prices for consumers, and leads to further degradation of natural landscapes (as more land is brought into

³ Department of Agriculture, Fisheries and Forestry and ABARES, "Environmental Sustainability and Agri-Environmental Indicators – International Comparisons," July 2023, <https://www.agriculture.gov.au/abares/products/insights/environmental-sustainability-and-agri-environmental-indicators>.

⁴ Article 2(b), UNFCCC, "The Paris Agreement," 2015, <https://unfccc.int/documents/184656>.

production to compensate for lower yields).⁵ Additionally, climate extremes such as rising global temperatures are expected to cause persistent increases in food and headline inflation.⁶ Ensuring that agricultural policies support productivity growth is essential to mitigating food insecurity and inflationary pressures.

The discussion paper notes that one of the most significant areas of focus for all international markets is the carbon footprint associated with agricultural production. Appropriate sustainability metrics must recognise Australia's existing efforts and success in agricultural and environmental sustainability and ensure that any plans do not undermine Australia's world-leading position. A hypothetical plan that stipulates a reduction in GHG emissions for *Australian* primary producers would inadvertently cause an increase in *global* GHG emissions. In a report led by the CSIRO, the Australian grains sector is already a low emitter of GHG compared to other global producers.⁷ Australia's agricultural sustainability credentials are reiterated in a more recent analysis by ABARES.⁸ An absolute reduction in GHG in the Australian grains sector would therefore be a trade-off between total emissions and productivity. Given Australia's position as a net exporter, a loss in cropping productivity may see another nation with less sustainable practices fill the gap. Furthermore, if productivity declines domestically due to inappropriate lead-based sustainability indicators, Australian landholders may be forced to clear additional land to maintain production levels, leading to deforestation that would damage Australia's unique native habitats and threaten biodiversity. With a global lens on, it is more sustainable for Australia to enhance yield per cultivated area through sustainable intensification as this would eliminate the need to convert more land (and the resultant emissions created by this deforestation) to meet increasing global food demands.

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- ⁵ Jeremy Jelliffe, Keith Fuglie, and Stephen Morgan, "Global Changes in Agricultural Production, Productivity, and Resource Use Over Six Decades | Economic Research Service," USDA Economic Research Service, September 30, 2024, https://www.ers.usda.gov/amber-waves/2024/september/global-changes-in-agricultural-production-productivity-and-resource-use-over-six-decades?utm_source=chatgpt.com.
- ⁶ Maximilian Kotz et al., "Global Warming and Heat Extremes to Enhance Inflationary Pressures," *Communications Earth & Environment* 5, no. 1 (March 21, 2024): 1–13, <https://doi.org/10.1038/s43247-023-01173-x>.
- ⁷ Maartje Sevenster et al., "Australian Grains Baseline and Mitigation Assessment" (CSIRO, January 2022), <https://publications.csiro.au/publications/publication/Plcsi:EP2022-0163>.
- ⁸ Department of Agriculture, Fisheries and Forestry and ABARES, "Environmental Sustainability and Agri-Environmental Indicators – International Comparisons."

Maximum Residue Limits

Adherence to Australia's Maximum Residue Limits (MRLs) framework, which are monitored and verified through the National Residue Survey (NRS), provides extensive data on compliance with label requirements for pesticide applications and Good Agricultural Practice. The methodologies are aligned with international standards such as the Codex Alimentarius (Codex) which are developed by the UNFAO/WHO Joint Meeting on Pesticide Residues (JMPR).

The NRS annually conducts routine monitoring of agricultural commodities to ensure adherence to residue limits, offering a high level of assurance that Australian exports meet or exceed safety standards. While this system is critical for regulatory compliance, it is not always recognised as a sustainability metric, despite its role in promoting responsible chemical use and minimising environmental contamination.

Adoption of climate-resilience crop protection technologies

The adoption of climate-resilient technologies, including crop biotechnology and modern chemical application methods, should be a fundamental component of sustainability claims. Crop biotechnology innovations contribute to sustainable agriculture by providing varieties that afford farms with higher yields,⁹ pest resistance,¹⁰ and enhanced resilience to extreme weather conditions.^{11,12} Precision chemical application methods further minimise environmental impact while maintaining crop protection efficacy. Recognising these technologies within sustainability frameworks would encourage innovation and enable Australian agriculture to remain competitive and environmentally responsible.

Aligning sustainability metrics with the application of modern crop protection technologies requires the careful selection of lead and lag indicators. Lead indicators should track the adoption of best practices, while lag indicators should measure actual environmental and agronomic outcomes.

⁹ W Klümper and M Qaim, 'A Meta-Analysis of the Impacts of Genetically Modified Crops' (2014) 9(11) PLoS ONE e111629, <https://doi.org/10.1371/journal.pone.0111629>.

¹⁰ Ibid.

¹¹ G Brookes and P Barfoot, 'Environmental Impacts of Genetically Modified (GM) Crop Use 1996–2018: Impacts on Pesticide Use and Carbon Emissions' (2020) 11(4) GM Crops & Food 215, <https://doi.org/10.1080/21645698.2020.1773198>.

¹² S J Smyth, 'The Human Health Benefits from GM Crops' (2020) 18(4) Plant Biotechnology Journal 887, <https://doi.org/10.1111/pbi.13261>.

Circular economy and product stewardship

Australia's transition toward becoming a circular economy is essential for adapting to climate change. CropLife and its members lead globally whole-of-lifecycle product stewardship, demonstrating industry-driven sustainability.

A key example is **drumMUSTER**[®], CropLife's flagship product stewardship program that has collected and recycled eligible agricultural and veterinary chemical drums since 1999 – well before the introduction of regulatory requirements.¹³ **drumMUSTER**[®] stands as an example for the effectiveness of industry-led stewardship initiatives in Australia and internationally.

In mid-2024, CropLife, in partnership with Pact Group, an Australian based packaging manufacturer, launched Drums-to-Drums.¹⁴ Previously, technical barriers limited the recycling of collected drums to plastic pellets for other products. Now, Pact Group has developed an agricultural chemical drum containing at least 30% recycled plastic from chemical drums, setting a new benchmark for circular product stewardship.

Recognising the need for full packaging responsibility, CropLife and the Australian Seed Federation (ASF) established bagMUSTER[®], Australia's first not-for-profit, industry-wide collection and recycling program for agricultural plastic bags.¹⁵ This initiative further demonstrates the plant science industry's commitment to responsible waste management.

CropLife also partnered with the Australian Honey Bee Industry Council to develop BeeConnected, a free, nationwide smartphone app that facilitates collaboration between farmers, spray contractors, and beekeepers to support best-practice for honey bee protection.¹⁶ BeeConnected highlights Australian agriculture's ability to unite and develop practical solutions for shared challenges.

¹³ "DrumMUSTER Program Overview | Recycling AgVet Chemical Containers," Agsafe, August 26, 2024, <https://www.agsafe.org.au/dm-program-overview>.

¹⁴ "Announcing Drums-to-Drums: Evolution of DrumMUSTER Sets a New Standard in Plastic Recycling," *CropLife Australia* (blog), July 30, 2024, <https://www.croplife.org.au/media/media-releases/announcing-drums-to-drums-evolution-of-drummuster-sets-a-new-standard-in-plastic-recycling/>.

¹⁵ "BagMUSTER," bagMUSTER, accessed February 20, 2025, <https://www.bagmuster.org.au>.

¹⁶ "BeeConnected," accessed February 20, 2025, <https://beeconnected.org.au/>.

Participation in product stewardship programs, particularly those that contribute to Australia's circular economy, promote responsible resource use and waste management. Participation in CropLife's stewardship initiatives is already required as part of industry-specific Quality Assurance programs, which include Freshcare's Environmental Code of Practice,¹⁷ Best Management Practices Cotton's myBMP program,¹⁸ and the Almond Board of Australia's best management practice guide.¹⁹

Genuine and outcomes-based sustainability claims can be achieved by leveraging Australia's existing but underutilised data sets. Incorporating these metrics into sustainability claims would provide scientifically robust evidence to counter trade barriers and enhance the competitiveness of Australian agriculture in international markets.

Challenges in providing sustainability evidence

Unclear definitions

The lack of clear and internationally agreed definitions for sustainability-related terms adds complexity. Concepts such as "regenerative agriculture" are increasingly referenced in trade discussions, yet there is no scientific or practical consensus on what qualifies as regenerative, nor is there a standardised way to measure impact (alluded to on page 16). Some definitions emphasise soil health and biodiversity, while others incorporate broader social and economic factors. Without clear criteria or defined outcomes, sustainability claims become increasingly subjective, making it difficult for Australian producers to align their evidence with market demands. This lack of precision risks turning sustainability expectations into arbitrary marketing narratives rather than being grounded in scientific evidence.

¹⁷ "Freshcare Environmental Program - ENV3," Freshcare, accessed February 14, 2025, <https://www.freshcare.com.au/our-standards/environmental/>.

¹⁸ "BMP Modules," Cotton Australia, accessed February 14, 2025, https://www.mybmp.com.au/user/modules.aspx?id=c429a08e-ed66-4ea5-a9ab-2b0b605c56b4&p_id=5456F728-E88F-474D-A33A-CFFB63AA5852.

¹⁹ "Honey Bee Best Management Practices for Australian Almonds" (Australian Almonds, 2020), <https://almondboard.org.au/wp-content/uploads/2020/09/Australian-Honeybee-Best-Practice-Management-LOW-RES.pdf>.

For example, in the absence of outcome-based definitions, practices associated with regenerative agriculture can be misapplied to Australian farming systems, leading to perverse outcomes. Cover cropping, widely regarded as beneficial for soil health is a case in point. While effective in high-rainfall regions, it has been shown to be counterproductive in Australian growing regions with low-rainfall, negatively impacting soil health and reducing yields.²⁰

Regardless of the terminology used, the focus must remain on measurable sustainability outcomes. Definitions and standards should be outcomes-based, ensuring that sustainability claims reflect real environmental, economic, and social improvements rather than adherence to prescriptive or ideological frameworks. This approach provides clarity for producers, regulators, and consumers while ensuring that sustainability efforts are assessed on their actual impact rather than marketing-driven perceptions.

Unclear and misinformed reporting standards

The prevalence of misinformed reporting standards that conflate market-driven labelling schemes with genuine sustainability measures adds further challenges for Australian primary producers. A prime example is organic certification, which is often promoted as a sustainability benchmark despite lacking scientific validation for superior environmental outcomes, and in fact requires significantly more land to produce food.

Organic production is a market standard based on input restrictions rather than measurable sustainability benefits, yet some markets position organic products as inherently more sustainable than conventionally grown alternatives. This misrepresentation undermines evidence-based sustainability assessments and disadvantages Australian producers who follow best-practice integrated pest management, precision agriculture, and responsible chemical use—practices that demonstrably enhance environmental outcomes. Addressing this misinformation requires a stronger emphasis on data-driven sustainability metrics rather than reliance on marketing-led claims.

²⁰ Groundcover, "Climate Drives Cover Crop Outcomes," Groundcover, July 18, 2022, <https://groundcover.grdc.com.au/grower-stories/southern/climate-drives-cover-crop-outcomes>.