



Name:

Melissa Smith

Which of the following best describes your situation?

Not for profit organisation

Are you responding on behalf of an organisation or industry body?

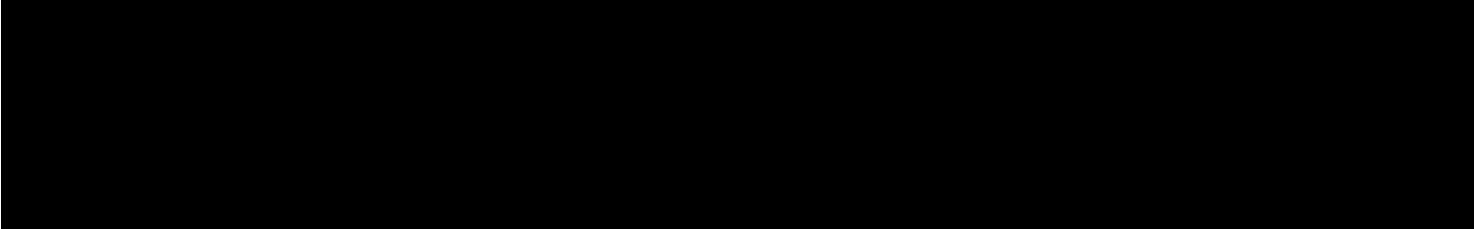
Yes

Who are you responding on behalf of?

End Food Waste Australia

How would you like to respond?

c. Both



What are the opportunities to reduce emissions and build carbon stores in agriculture and the land? What are the main barriers to action?

With 22% of Australia's food waste in primary production, there is a clear opportunity to take action on addressing food loss and waste and associated GHG emissions. Two thirds of this primary production food waste occurs in the

horticulture sector, so working with End Food Waste Australia to implement the Horticulture Sector Action Plan provides a clear foundation for initiating trials, taking action and providing targeted investment.

Are there initiatives or innovative programs underway that could be applied or expanded on at a national scale?

Yes, the Horticulture Sector Action Plan to reduce food waste and associated GHG has identified 9 strategies to reduce horticulture food waste: Prevention • Apply mechanisms for managing overproduction and balancing the demand and supply of horticultural products. • Address labour and skill shortages across the horticultural supply chain for different commodities cycles of production and distribution. • Reduce the impact of product specifications on food waste. Repurposing • Explore ways to value add to surplus or waste produce. • Implement effective mechanisms for food donation. Enabling • Identify root causes of food waste & and develop sector action plans for key horticultural commodities. • Establish mechanisms for data collection, monitoring, measuring, and reporting to generate evidence about food waste in the horticulture industry. • Institute an effective policy and regulatory environment for food waste minimisation across the horticulture sector. • Accelerate and incubate innovation and technology solutions in the horticultural industry for food waste minimisation. Working with End Food Waste Australia to prioritise and deliver actions provides a strong pathway to reduce GHG emissions in the horticulture sector.

How can the Australian Government bring together existing effort and new initiatives into one coordinated plan?

Take a systems approach, identify where there are GHG emissions hotspots and carbon sink potential; match to existing programs and establish cross sectoral working groups to identify opportunities to address the emergent gaps.; recognising everyone across the supply chain has an important role to play.

What are the most important options to be further adopted or supported, looking in the short and the longer-term?

The Horticulture Sector Action Plan has used a systems approach with intensive industry engagement to identify strategic areas of action to reduce food waste and it's associated emissions. Support to deliver these actions via focussed programs is important for short and long-term gains. Specifically, there are clear opportunities for government to work with End Food Waste Australia to deliver the Horticulture Sector Action Plan through the following projects: • Work with industry and retailers on product specifications • Review the Horticulture Code of Conduct's role in food waste creation • Facilitate whole crop purchase trials • Address cross jurisdictional policies that impact on food waste such as harmonising States' and territories' biosecurity measures. • Support and expand ongoing data collection and reporting techniques

What are the practical solutions to increase uptake?

Fund trials, communicate findings using emergent benefits for Profit, People and Planet

How do you see the agriculture and land sectors contributing over the medium and longer-term? What are the opportunities to deliver emission reductions in parallel with wider goals?

Reducing food waste has broad benefits beyond the reduction of associated emissions. Prevention of food waste equates to better use and decreased impact of the inputs used to create the food. This includes the land, water,

fuel, fertiliser and other products. Currently, a land mass the size of Victoria is wasted every year to grow food that is wasted. (FIAL, 2021. The National Food Waste Strategy Feasibility Study) Food waste also drives food insecurity and increases the cost of living to all Australians. There is a clear economic advantage to action on food waste reduction with research showing that for every \$1 invested there is a \$14 return, (Champions 12.3, 2017. The business case for reducing food loss and waste)

How can the Australian Government better support agriculture and land sectors to:

a) drive innovation

b) build capacity

c) ensure the system enables emissions reductions

These fundamental pillars of activity are key to changing practice and facilitating change. They are like the legs on a three legged stool and all are required. During the development of Sector Action Plans (SAP) for food waste reduction, End Food Waste Australia has also identified these pillars to categorise the actions emergent from our collaborative stakeholder processes. For example, in developing the Horticulture Sector Action Plan to reduce food waste and related GHG emissions, we identified the following ENABLING strategies that are cross-sectoral and create a strong foundation for change: • Identify root causes of food waste & develop sector action plans for key horticultural commodities. • Establish mechanisms for data collection, monitoring, measuring, and reporting to generate evidence about food waste in the horticulture industry. • Institute an effective policy and regulatory environment for food waste minimisation across the horticulture sector. • Accelerate and incubate innovation and technology solutions in the horticultural industry for food waste minimisation.

What new initiatives could the Australian Government design that would support emissions reduction and carbon storage in agriculture and land and help ensure a productive, profitable, resilient and sustainable future for the sectors?

There is a clear connection between reducing food waste on farm and a commensurate reduction in GHG emissions. The horticulture sector is responsible for two thirds of Primary Production food waste. In 2023, End Food Waste Australia led development of a collaborative process to reduce horticulture food waste across the supply chain, which identified these specific opportunities for government to: • Work with industry and retailers on product specifications • Review the Horticulture Code of Conduct's role in food waste creation • Facilitate whole crop purchase trials • Address cross jurisdictional policies that impact on food waste such as harmonising States' and territories' biosecurity measures • Support and expand ongoing data collection and reporting techniques

A consistent and trusted approach for assessing and reporting emissions is often raised as a barrier to reducing emissions. Is there a role for the Australian Government in addressing this concern, and how can producers and land managers be supported?

Internationally there are protocols and guidance for assessing and reporting GHG emissions in the Agriculture Sector. Here are a couple which would need adaptation in the Australian context. An interesting concept could be to expand the role of the RDCs to adapt and trial these international approaches for their industry. SBTi (Science Based Targets Initiative), 2022 for FLAG for Forestry, Land and Agriculture (FLAG) <https://sciencebasedtargets.org/sectors/forest-land-and-agriculture> World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol <https://ghgprotocol.org/agriculture-guidance>

What skills, knowledge and capabilities do you think producers and land managers need to implement change? What information and data would help them make decisions about emissions reductions and sustainable land management in the short and longer-term?

EFWA has found in working with growers and others across the supply chain, the key to food waste reduction (with associated GHG reduction benefits) is measurement. Farmers have told us it wasn't until they started to measure their waste, they realised they had an opportunity to extract better value from their inputs. Below are some targeted actions from the Horticulture Sector action Plan to better measure and inform crop management that could be advanced through government resourcing: • Review horticultural food waste measurement and reporting including existing processes, systems and methodologies, current research, gaps in evidence, and best practices for data collection. • Conduct trials of commodity-specific data collection and reporting techniques on food waste across the supply chain to ascertain a unified method. • Create a framework to collect and report food waste data annually by providing incentives for business /grower participation in data collection and recording process. • Report on food loss research and data (type and volume) in the horticultural industry annually including regional and seasonal mapping.

Is your response confidential?

No

Do you agree to your response being published on our website?

Yes

I have read and understood the privacy notice and consent to the collection, use and disclosure of my personal information as outlined in the privacy notice.

Yes

Confirm that you have read and understand this declaration.

Yes

Reducing Food Waste in Agriculture for Net Zero Gains

Background

Food waste is a major global and national challenge causing economical loss, environmental impact and food and nutritional insecurity. Globally food loss and waste accounted for about half of the global annual GHG emissions from the whole food system (Zhu et al, 2023). In Australia, 7.6 million tonnes (Mt) of food are wasted per year, costing the economy an estimated \$36.6 billion, and generating around 3-4% of Australia's total greenhouse gas emissions (FIAL, 2021). Primary production is responsible for 22% of all food waste, with two thirds of on-farm food waste occurring in the Horticulture sector (FIAL, 2021).

In 2017, the Australian Government set a target to halve food waste by 2030, aligning with the United Nation's Sustainable Development Goal Target 12.3. End Food Waste Australia (EFWA) has been established as a partnership of national, state and territory governments, peak industry bodies across the farm-to-fork supply chain and the four major food rescue charities to collaborate on preventing and repurposing food waste.

Taking Action on Food Waste on Farm

For the past year EFWA has been working with university researchers and stakeholders across the horticulture supply chain to codesign a Horticulture Sector Action Plan (SAP) to reduce food waste in the sector. Developing an SAP employs a systems approach to identify hotspots throughout a supply chain, their root causes and potential solutions. An overall triangulation methodology comprised of a literature review, extensive stakeholder interviews and stakeholder workshops was applied. This analysis highlighted the largest food waste hotspots in horticulture are on-farm or in the packing shed.

Our collaborative process prioritised nine strategic actions to reduce horticulture food waste and associated GHG:

Prevention

- Apply mechanisms for managing overproduction and balancing the demand and supply of horticultural products.
- Address labour and skill shortages across the horticultural supply chain for different commodities cycles of production and distribution.
- Reduce the impact of product specifications on food waste.



Repurposing

- Explore ways to value add to surplus or waste produce.
- Implement effective mechanisms for food donation.

Enabling

- Identify root causes of food waste & and develop sector action plans for key horticultural commodities.
- Establish mechanisms for data collection, monitoring, measuring, and reporting to generate evidence about food waste in the horticulture industry.
- Institute an effective policy and regulatory environment for food waste minimisation across the horticulture sector.
- Accelerate and incubate innovation and technology solutions in the horticultural industry for food waste minimisation.

Roles for Government

While industry stakeholders across the horticulture supply chain have obvious roles to play in reducing food waste, there are clear roles for the Australian government in creating an enabling policy environment and facilitating requisite commercial and technological changes to existing practice. Specific actions that DAFF could advance to reduce horticulture food waste and associated GHG include:

- Working with industry and retailers on product specifications
- Reviewing the Horticulture Code of Conduct's role in food waste creation
- Facilitating whole crop purchase trials
- Addressing cross jurisdictional policies that impact on food waste such as harmonising States' and territories' biosecurity measures.
- Supporting and expanding ongoing data collection and reporting techniques

The Agriculture, Land and Emissions Discussion paper (DAFF, 2023) acknowledged:

The emissions reduction potential of agriculture and land will be significantly influenced by a combination of technical, economic, social and market related factors. There are a number of areas where action could be taken to influence these factors and enable the industry to take advantage of the global transition to lower emissions.

For the past year cross-sectoral engagement with supply chain actors has evaluated and prioritised those actions with the most potential to reduce food waste and associated GHG in the horticulture sector. Addressing this complex problem requires all actors to take action and collaborate to achieve a reduction in food waste on farm,



leading to reduced GHG emissions. Taking and sponsoring identified actions to reduce the GHG associated with food waste in horticulture production is a tangible initiative the DAFF can prioritise now.

References

DAFF, 2023 The Agriculture, Land and Emissions Discussion paper.

FIAL, 2021. The National Food Waste Strategy Feasibility Study.

Zhu, J., Luo, Z., Sun, T. *et al.* Cradle-to-grave emissions from food loss and waste represent half of total greenhouse gas emissions from food systems. *Nat Food* **4**, 247–256 (2023). <https://doi.org/10.1038/s43016-023-00710-3>

