Project Summary

Project Name: Horticulture Sector Action Plan for Food Waste Reduction

THE CHALLENGE

Approximately 50% of the total food waste in Australia occurs in the horticulture sector. Australia loses 18% to 22% of total horticulture production at pre-retail with an estimated loss of $1.72B in fruit and vegetables.

THE OPPORTUNITY

The aim of this Sector Action Plan (SAP) was to deliver strategic actions that can reduce food waste across the horticulture sector of Australia and to establish a vision for increased profitability and supply chain resilience and improved environmental outcomes through reducing food waste.

THE RESEARCH

Central Queensland University (CQU) led this project with support from RMIT and University of Southern Queensland (USQ), and in collaboration with End Food Waste and the Queensland Department of Environment and Science (QDES). The team developed an action plan to reduce food waste across the horticulture sector of Australia. This consisted of an overall national framework as well as individual plans for two commodities; bananas and melons. This study used the Review-Plan-Do approach to develop a framework for the whole of the horticulture sector as well as applying WRAP's whole chain food waste reduction plan toolkit to build action plans for the Banana and Melon industries.

Initially research focused on identifying waste hotspots, followed by a deep dive into root cause analysis. Using the food recovery hierarchy, the project then identified and prioritised a range of practical solutions through co-design workshops to facilitate industry input, buy-in and adoption. Throughout this process the team identified international and domestic best practices, emerging technologies, and effective solutions from comparable industries.

THE FINDINGS

Developing an action plan for a complex sector like horticulture requires examining a range of root causes and creating targeted responses. Key actions were identified based on extensive research, stakeholder interviews, and feedback from workshops. The focus was on addressing key, game-changing actions rather than every issue.

The 9 key actions are mapped to the root causes they address and can be broadly categorised into three strategies: **enabling, preventing, and repurposing**. These consist of four enabling actions, three prevention actions, and two repurposing actions.

Enable it - Make it easier to reduce food waste

E1. Identify root causes of food waste and develop sector action plans for key horticultural commodities.

E2. Establish mechanisms for data collection, monitoring, measuring, and reporting to generate evidence about food waste in the horticulture industry.

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E3. Institute an effective policy and regulatory environment for food waste minimisation across the horticulture sector.

E4. Accelerate and incubate innovation and technology solutions in the horticultural industry for food waste minimisation.

Prevent it - Stop food waste from occurring in the first place

P1. Apply mechanisms for managing overproduction and balancing the demand and supply of horticultural products.

P2. Address labour and skill shortages across the horticultural supply chain for different commodity cycles of production and distribution.

P3. Reduce the impact of product specifications on food waste.

Repurpose it - From food waste to resource

R1. Explore ways to add value to surplus or waste produce.

R2. Implement effective mechanisms for food donation.

The full actions plans developed can be found at the below link:
https://endfoodwaste.com.au/horticulture

IMPACT

This project has made a strong impact on the horticulture sector in Australia by raising awareness, fostering collaboration, and catalysing action to reduce food waste.

1. Industry Engagement and Awareness:

The project played a key role in elevating food waste as a priority topic within the horticulture industry. This was most notably demonstrated at the Hort Connections 2024 conference, where the theme focused on upcycling, directly influenced by the outcomes of this research. Industry stakeholders, such as Melons Australia and the Banana Growers Association, showcased innovative upcycled food products from banana and melon waste, creating excitement and momentum across social media platforms and within the industry. Additionally, the project's success has attracted interest from other commodities and wholesale markets keen to develop similar food waste reduction plans.

2. Policy and Advocacy Influence:

The project's findings have influenced high-level discussions and decision-making, contributing to submissions for the Senate Review, and several horticultural industry bodies positions on food waste. The project's insights were also recognised in a presentation by the Agriculture Minister, and invitations to present at the Food and Agriculture Organization (FAO) and other key sustainability forums.

3. National and Global Recognition:

The project received extensive media coverage, including features on Landline, and its innovative solutions were showcased on international platforms, further cementing Australia's leadership in addressing food waste in the horticulture sector.

NEXT STEPS

Through implementing the SAPs developed in this project, the horticulture sector, including the banana and melon industries, can make significant strides towards achieving the aspirational target of halving food waste in the horticulture sector by 2030 and realising the associated economic, environmental, and social benefits. However, it is going to take strong collaboration between stakeholders of the horticulture supply chain to implement these actions and create the beneficial change that all stakeholders are striving for. Beyond working to

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implement all actions developed; future research could include the quantification of economic, environmental, and social impacts of actions to underpin funding/support requests through demonstrating the ROI across different success measures to investors.

PROJECT TEAM

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PROJECT REPORTS/PUBLICATIONS

1. Akbar, D., Babacan, H., Marty, M., Nguyen, T., Rahman, A., & Brown, P. (2023). *The Horticulture Sector Action Plan for Food Waste Reduction 2024- Final technical report*. End food waste Australia, pp. 86.
2. Akbar, D., Babacan, H., Marty, M., Rahman, A., Chhetri, P., Lau, C., Li, Y., & De Valck, J. (2023). *Banana industry food waste action plan 2023: Final technical report*. End Food Waste Australia, pp. 75.
3. Akbar, D., Marty, M., Babacan, H., Rahman, H., Ali, A., Xu, S., & Lyons, B. (2023). *Melon industry food waste action plan: Final technical report*. End Food Waste Australia, pp. 84
4. The Horticulture Sector Action Plan for Food Waste Reduction 2024: Summary report
5. Banana Industry Food Waste Action Plan 2023: Summary
6. Melon Industry Food Waste Action Plan 2023: Summary
7. Final project report: Horticulture Sector Action Plan 2024

PROJECT WEBPAGE

https://endfoodwaste.com.au/horticulture/

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