

# Banana Industry Sector Action Plan for Food Waste Reduction 2024

Summary





End Food Waste Australia is leading the development of Sector Action Plans as a key tool to reduce food waste through collaboration across the supply chain.

This Plan was compiled as an End Food Waste Cooperative Research Centre research project led by Central Queensland University, with valuable input from the banana industry. For further acknowledgements, see the inside back cover.

# Foreword

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**We know that banana growers and other industry participants do not intend to waste their valued and carefully grown, harvested, packed, shipped, ripened, stored, and displayed produce.**

Yet we also must recognise that fruit and vegetables are the most wasted food across the supply chain, and that bananas are in the top most wasted fruits.

Australia has committed to halving food waste by 2030, in line with the United Nations Sustainable Development Goal 12.3. The Australian Banana Growers' Council is proud to be at the forefront of the horticulture industry in finding solutions to reduce banana food waste.

By reducing food waste, we have a triple win - improving our industry profitability, reducing environmental impact, and assisting in food insecurity for those in need.

Australian Banana growers have always embraced ways to improve our industry and this plan to reduce food waste is no exception.

I encourage anyone who is a part of the banana supply chain to read this plan and get involved in any way they can because we all have a part to play in making our industry more sustainable.

**Leon Collins**  
Chairman of the  
Australian Banana Growers' Council



**66%**

**of consumers plan to purchase bananas in their next weekly shop<sup>1</sup>**

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This summary report is based on the technical report "Akbar, D., Babacan, H., Marty, M., Nguyen, T., Rahman, A., & Brown, P. (2024). The Banana Industry Sector Action Plan for Food Waste Reduction 2024 Technical Report. End Food Waste Australia.

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1. Produce Pulse, Hort Innovation, 2023

# Why address banana food waste?

Australia grows high-quality produce the world wants. Yet, 29% of all bananas are wasted.<sup>1</sup> Reducing food waste has significant impacts and opportunities for industry profitability, for people and the planet.

There is no time to waste when it comes to meeting Australia's goal of halving food waste by 2030.



## For industry profitability

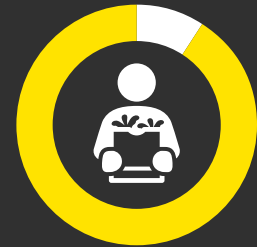
100,000 tonnes



100,00 tonnes of bananas are wasted a year<sup>2</sup> – enough to fill 4000 semi-trailers.

Reducing food waste means selling more of what you produce, earning you more from what you invest.

**Food waste is Australia's \$36.6 billion challenge<sup>3</sup> – and opportunity.**



91% of consumers prefer to buy from organisations taking steps to reduce food waste.<sup>4</sup>

## For people



312kg per person a year

Australians throw out the equivalent of 312 kg of food per person a year.<sup>5</sup>



Food security

Bananas that currently don't leave the farm could provide food insecure Australians with their year's supply.



1 in 6 adults & 1.2m children go hungry regularly<sup>6</sup>

## For the planet

When we waste food, we waste the water, energy and land resources used to grow, make, move and sell that food<sup>7</sup>



1. Lucas,D. et al.,2022. Agrifutures: Pre-farm gate waste management: Baseline waste data for the agriculture, fisheries and forestry sector.  
2. Based on Hort Innovation Statistics Handbook 2021-22, ref 1 above.  
3. FIAL, 2021. National Food Waste Study Feasibility Study.  
4. Capgemini, 2022, Why Food Waste is Everybody's Problem. Final-Web-Version-Food-Waste.pdf (capgemini.com)  
5. FIAL, 2021. National Food Waste Study Feasibility Study.  
6. Foodbank, 2021 Hunger Report.  
7. FIAL, 2021. National Food Waste Study Feasibility Study.



# How was this Plan developed?

**This Banana Industry Food Waste Action Plan was developed with partners across the supply chain, including small and large growers, the Australian Banana Growers' Council, Hort Innovation, wholesalers and retailers.**

Significant engagement occurred through one-on-one interviews and workshops with our reference panel. The research team also completed a literature review of national and international research on the banana supply chain and food waste reduction strategies.

Insights from the engagement and literature review were triangulated to identify a long list of strategies that were assessed against the following criteria:

- The volume of waste reduction
- Financial feasibility
- Technical feasibility
- Australian food and drink waste recovery hierarchy.

Nine strategies were identified, backed up by targeted actions with clear measures of success.

**“We are dealing with fresh food - it's a race against the clock”**



Project Established



Literature review



Engagement interviews and Workshops



Engagement and literature insights amalgamated



Feedback from across the supply chain



Comprehensive report developed and reviewed



# What have we learned about banana food waste?

We found the biggest hotspot for Banana food waste is on farm. Waste is between 10-30% of the crop, according to discussions with growers and the literature.

1

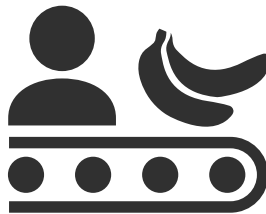


**In the paddock -  
where growers ask  
“Is it worth picking?”**

**This decision is affected by:**

- The health of the bunch - including fruit damage, pest, disease, climate, and weather impacts.
- The availability of staff to pick and pack.
- The expected dollar return - supply, demand and price.

2



**In the Packing Shed -  
where growers ask  
“Is it worth sending?”**

**This decision is affected by:**

- The condition of the fruit - ripeness, pest/disease damage.
- The appearance of the fruit and how it aligns with the specifications. (eg. size, shape).
- The expected dollar return - supply, demand and price.

3



**Markets/Distribution  
Centre**

**Where decisions are made based on:**

- Whether the fruit aligns with produce specifications.
- Any damage that occurred during transport.
- Ripeness and potential storage/shelf life.



“Good growers have always tried to minimise waste and improve profitability by finding a home for rejected fruit.”

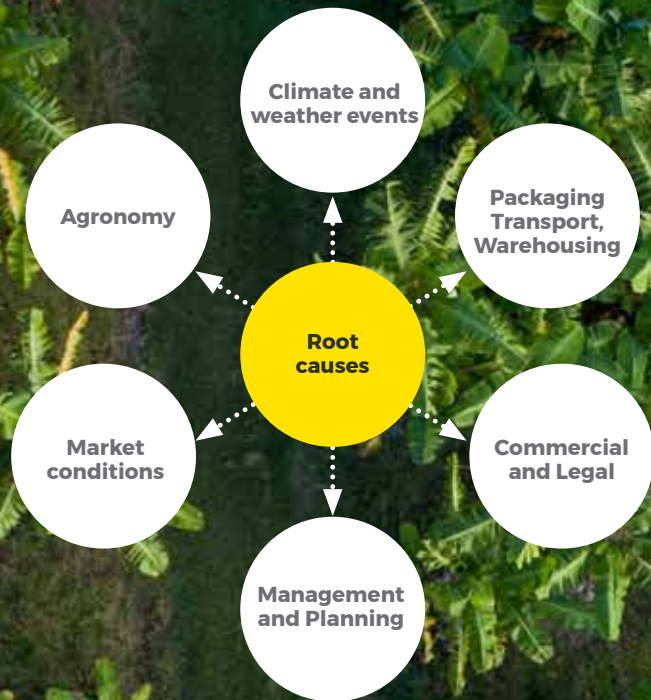
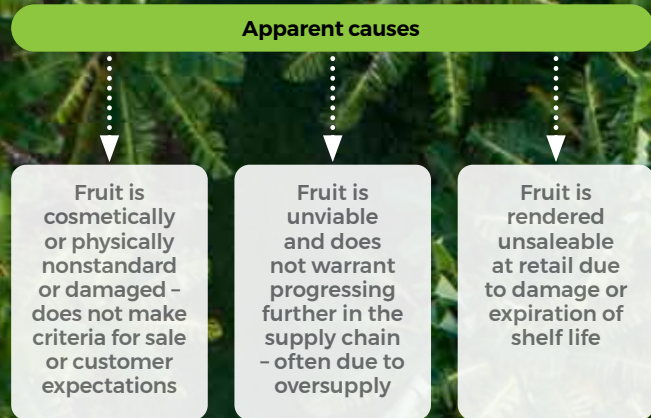
4



## Retail

Where fruit that doesn't sell is discarded because of:

- Singles
- Overripe
- Damage.



“To have invested a lot in the crop to not get a return doesn't make sense - we cut our losses and don't send”



# How can we effectively reduce banana food waste?

We all have a role to play in reducing food waste. Some strategies can be adopted on farm, during distribution or at a retail level. Others require systemic change, collaboration and action from across the supply chain, government and consumers.



## Prevent it

Stop waste occurring in the first place

### This will result in:

Less crop left in the paddock

Making the most of expensive inputs and environmental resources



## Repurpose it

From waste to resource

### Turn unavoidable waste into:

New products and profits

Donate it to food rescue charities to help feed people in the community



## Enable it

Make it easier to reduce food waste

### Support food waste reduction action through:

Better data

Better education

Better policy







Prevent It		
Action		How
P1	<b>Align banana production more closely with demand.</b>	Review Produce Specifications, Understand market mechanisms – including access to better data, Trial Whole Crop Purchase, increase seconds lines, increase banana demand and explore potential for increased export.
P2	<b>Support banana growers to continue best practice production.</b>	Continue research on pest management, nutrition, and optical grading, support Best Management Practice (BMP) and benchmarking, encourage innovation, invest in genetic technologies to improve germplasm, understand the impacts of climate change and develop risk management strategies, including collaborating with the Bureau of Meteorology for weather information.
P3	<b>Improve the transportation of bananas.</b>	Improve on-farm transportation, use real-time monitoring, reduce multi-commodity loads, implement packaging techniques to delay ripening, and enhance training and supervision of long-distance truck drivers.
P4	<b>Facilitate a consistent supply of skilled labour.</b>	Develop Workforce Plan, promote the banana industry as an employment option, facilitate worker availability, backpackers and travellers, provide staff training tools across the supply chain.

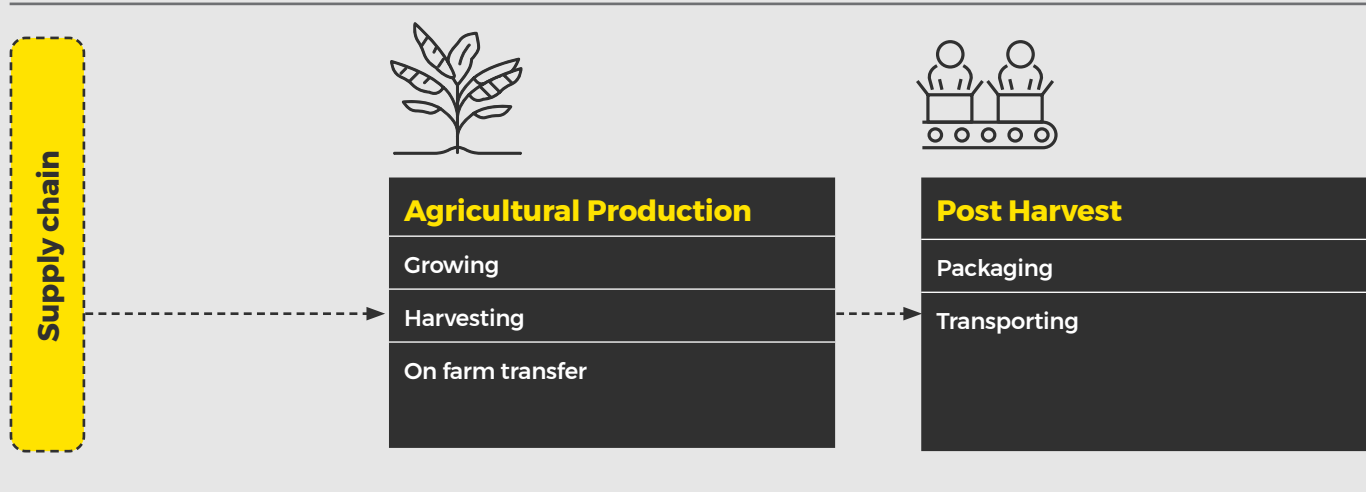


Repurpose it		
Action		How
R1	<b>Increase the quantity of bananas being processed and incorporated into value added products for human consumption.</b>	Conduct feasibility studies, support expansion of successful initiatives, collate research and trials for innovative banana value-added products, support regional processing hubs and explore mobile processing plants, seek engagement of investors, marketers and growers in value-add initiatives.
R2	<b>Increase the quantity of bananas donated to food rescue organisations.</b>	Address barriers to increasing waste banana deployment to food rescue organisations, Identify regional hubs and partners for banana recovery, recognise contributors to food rescue organizations, engage high-profile champions, advocate for financial incentives.



Enable it		
Action		How
E1	<b>Food Waste data collection, reporting and analysis.</b>	Review waste data collection methods globally, recommend data collection method, report industry food waste, measure and evaluate impact of reduction initiatives in biannual report.
E2	<b>Education campaign and supply chain communication/coordination activities.</b>	Develop and promote educational campaign on banana food waste reduction for supply chain, collaborate with other horticultural groups for waste reduction techniques, support standards aligned with existing industry certification, build optional waste reduction certification, showcase champion stakeholders and initiatives.
E3	<b>Calibrate policy and regulatory settings.</b>	Maintain quarantine vigilance to prevent the spread of pests and diseases, review interjurisdictional arrangements, advocate for waste reduction regulation/incentives, support biosecurity control/monitoring containment measures.

# Supply chain waste map





### Markets & DC

Ripening

Wholesaling

Distribution



### Retail

Major supermarkets

Other grocery

Niche markets



### Consumer

Individuals

Hospitality industry

Institutions

#### Oversupply

Produce Specifications not met

#### Logistics

#### Product handling

staff skills & equipment

#### Perishability

Oversupply/Competition from seasonal fruit

#### Ripening cycle

Mishandling and poor merchandising / stock management

Process Mechanisation,  
Increased monitoring/  
measurement

Staff training

Opportunities for food donation

Monitoring and management  
of stock

Staff training

Support supplier planning

Opportunities for food donation

Facilitate the sale of  
nonstandard lines

#### Key:



**Prevention** – is the  
priority

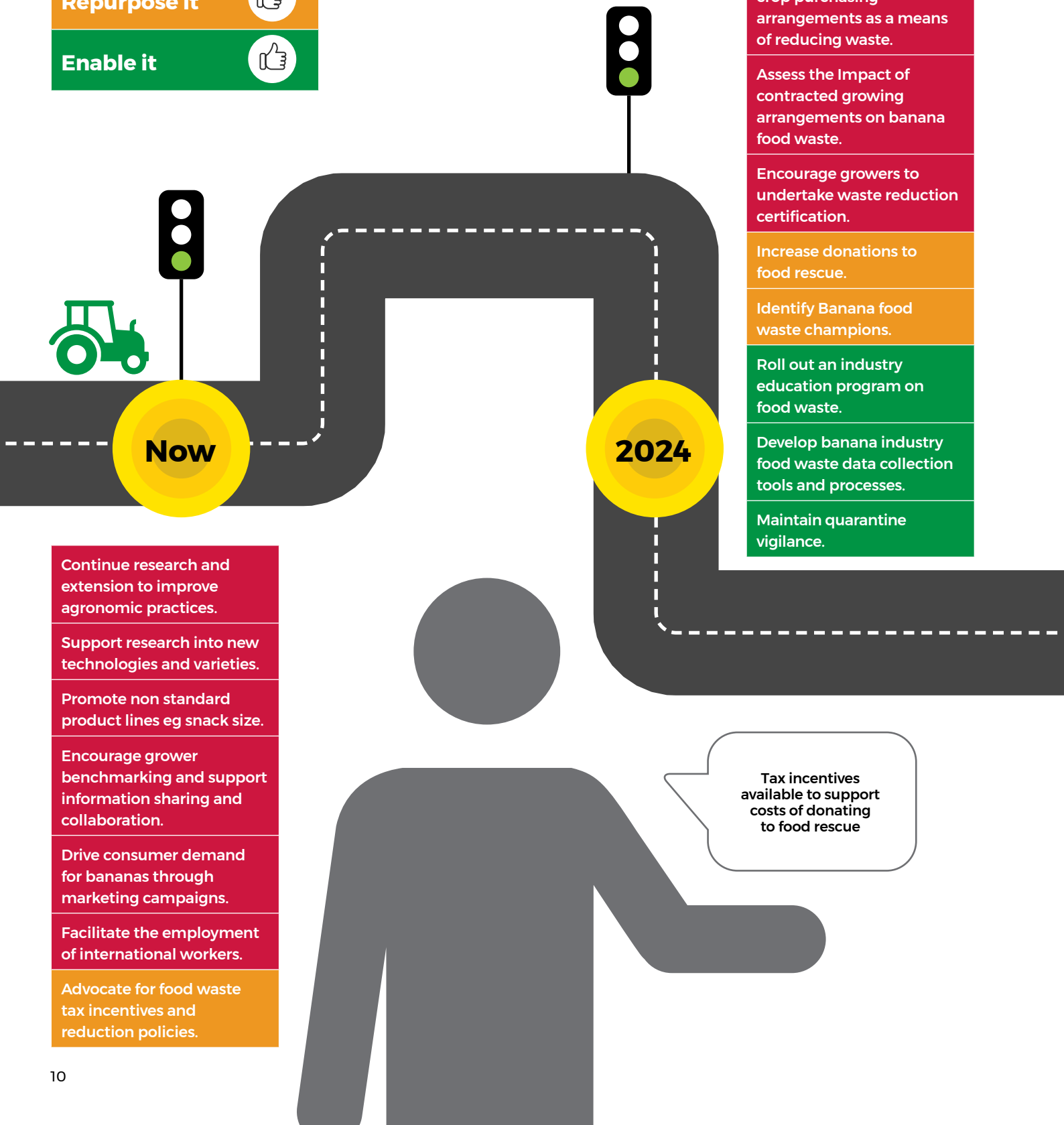
**Repurpose** – if we can't  
prevent

\* Dried eg powder, snack bars, pulp e.g. baby food, frozen e.g. ice-cream, preserves – jams/jellies, bakery – flour, bread, beverages

# The Roadmap

## Key actions with major milestones for banana food waste reduction

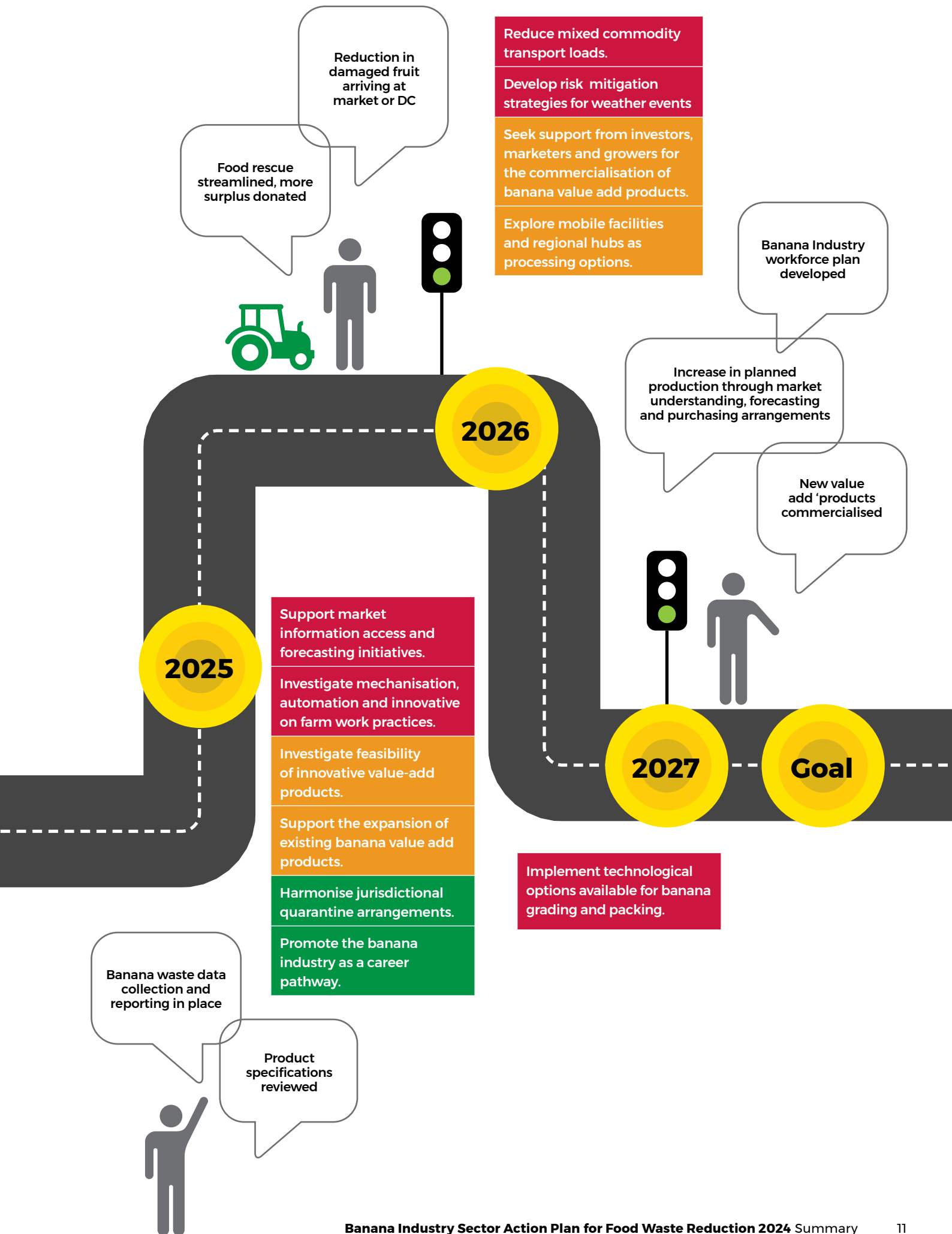
<b>Prevent it</b>	
<b>Repurpose it</b>	
<b>Enable it</b>	



- Continue research and extension to improve agronomic practices.
- Support research into new technologies and varieties.
- Promote non standard product lines eg snack size.
- Encourage grower benchmarking and support information sharing and collaboration.
- Drive consumer demand for bananas through marketing campaigns.
- Facilitate the employment of international workers.
- Advocate for food waste tax incentives and reduction policies.

- Review banana product specifications.
- Develop and deliver staff training resources for growers, logistics services and retailers.
- Increase real time monitoring in road transport.
- Investigate whole crop purchasing arrangements as a means of reducing waste.
- Assess the Impact of contracted growing arrangements on banana food waste.
- Encourage growers to undertake waste reduction certification.
- Increase donations to food rescue.
- Identify Banana food waste champions.
- Roll out an industry education program on food waste.
- Develop banana industry food waste data collection tools and processes.
- Maintain quarantine vigilance.





# Taking action now

## Be **Proactive**



Record your food waste  
“If you can measure it,  
you can manage it”



Manage overproduction  
“grow to sell”



Look for value adding  
opportunities

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## **Participate** in industry activity



Communicate demand  
and supply



Food waste reduction in  
staff training and KPIs



Be part of initiatives  
like benchmarking,  
trials and pilots

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## **Partner** across the supply chain



Work together to  
plan ahead for gluts



Build trusted relationships  
to share information





Australian Government  
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**AusIndustry**  
Cooperative Research  
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University of  
Southern  
Queensland

**Hort  
Innovation**

**BANANA  
FUND**

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Further information including the Technical Report can be accessed at <https://endfoodwaste.com.au/sector-action-plans/>

