

Coffs Waste Conference 2022

MEETING THE CHALLENGE

Halving Australian food waste by 2030

5 May 2022



The Fight Food Waste CRC



The largest R&D program dedicated to tackling food waste in the World (\$123M of resources)

An Australia without food waste The Fight Food Waste Cooperative Research Centre will increase industry profitability, address food insecurity and enhance Australia's reputation as a sustainable food producer.

By uniting science and industry we will

REDUCE food waste throughout the supply chain.

TRANSFORM unavoidable waste into innovative products.

ENGAGE with industry and consumers to deliver behavioural change.

2018
Baseline

- 1/3 of all food produced
- \$20 Bn p.a. in Australia
- 7.3 MT food waste p.a.
- 298kg per Australian per year
- 13.5 MT of CO₂-e
- 4 M people food insecure

Deliver the Grant Agreement

We will first establish our initial 30-project research, development and extension program based on the best science and expertise with our existing participants. We will then develop and deliver new projects with existing and new participants that ensures we effectively deliver on all Grant Agreement performance milestones.

Deliver Future Initiatives

We will identify and target additional food loss and waste opportunities based on the National Food Waste Baseline and other key reports that will deliver significant food waste reduction and industry benefits to help achieve SDG 12.3. Additionally, we will scope and potentially develop a 10-year national behaviour change program that targets the entire food system, particularly consumers, with the Australian and state and territory governments and industry that reduces and prevents food waste from entering landfill.

2028
Accumulative Grant Agreement targets

- 30 M T of reduced food waste
- \$2 B Increase in industry profitability
- 20 M Kg of rescued food distributed
- 5200 circular economy jobs
- 40 Future Leaders graduated
- 250 Industry people trained p.a.

Our Core Values

Collaboration
We will be greater than the sum of our parts.

Innovation
Real impact on food waste reduction and commercial outcomes from the CRC activity.

Participant Value Creation
Our participants get more than they expected from being part of the FPW CRC.

Our People
To be a workplace of choice for our salaried and in-land staff.

Excellence
To deliver the best that we can for our participants.

Accountability
We stand behind our people and our work.

FIGHT FOOD WASTE
Cooperative Research Centre

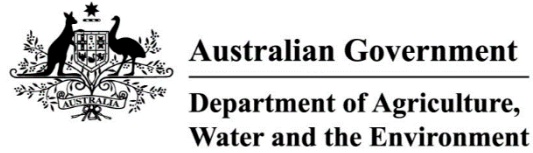
Australian Government
Department of Industry, Science, Energy and Resources

Business Cooperative Research Centres Program



Stop Food Waste Australia

A unique public - private partnership



Food loss and waste in Australia



Food waste is a monumental challenge that affects everyone in the food value chain.

We all need to act now to deliver Australia's target to halve food waste by 2030.

Other food waste impacts:

- **25.73M ha of land** is used to grow food that is then wasted - **bigger than the landmass of the UK** (24.2M Ha)¹ or **4x the size of Tasmania**
- **2,628 Giga litres of water per year** is used to grow food that is then wasted, **equivalent to 286 litres per person per day**¹ in an economy where the average annual rainfall is 470mm, well below the global average².

This means that, every year,



7.6M
tonnes of food

(enough to fill the Melbourne Cricket Ground to the brim almost nine times) never makes it to a table, costing our economy



\$36.6b
a year

It also has massive environmental impacts. By wasting food, we're wasting the resources such as land, water, energy and fuel used to produce and distribute it; and generating around

A grey cloud icon with the text '17.5M tonnes of CO2' in white inside a grey circle.

17.5M
tonnes of CO₂

Three grey downward-pointing arrows.

3% of Australia's national GHG emissions

These shocking statistics were announced at a time when



(over 5 million people) were food insecure. Since then, food insecurity has increased, with food charities struggling to meet an average



increase in demand for food relief in 2020.

FIAL (2021) National Food Waste Strategy Feasibility Study



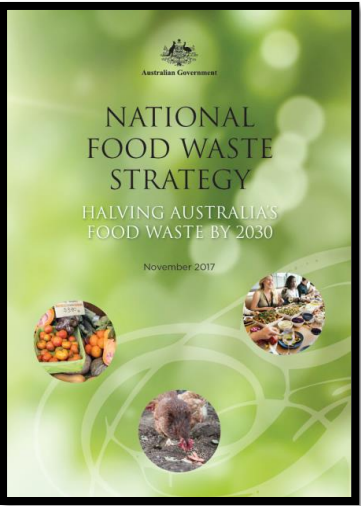
The policy context



“By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses”

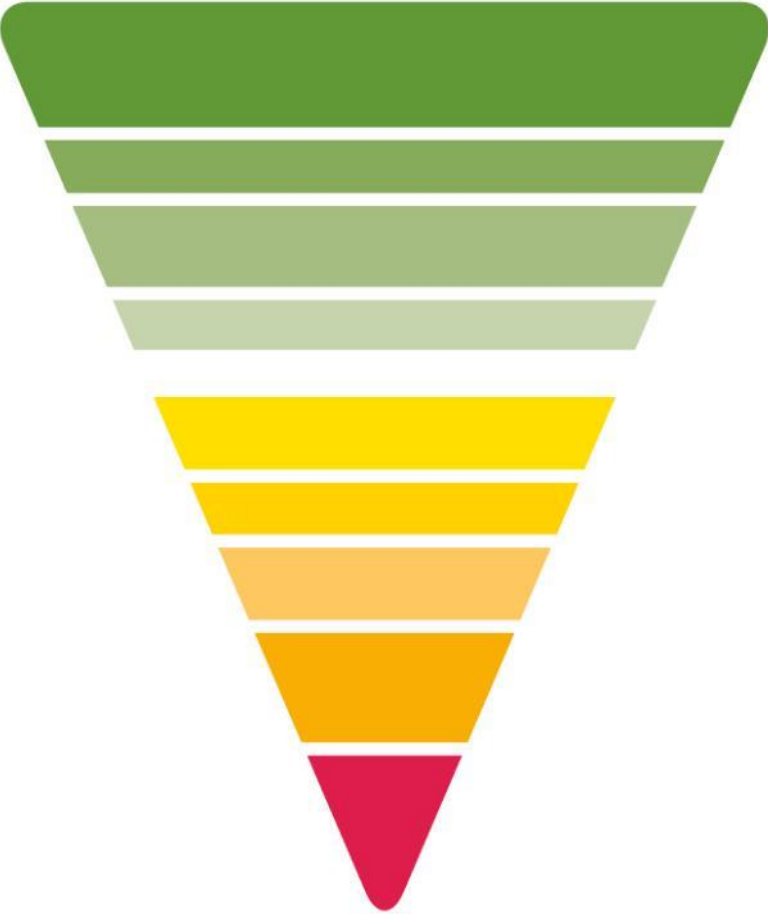
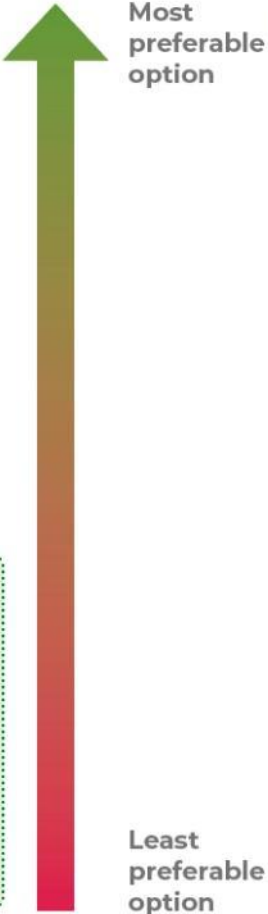


Defining food waste & the food recovery hierarchy



How the National Food Waste Strategy defines Food Waste:

- » Solid or liquid food that is intended for human consumption and is generated across the entire supply and consumption chain.
- » Food that does not reach the consumer, or reaches the consumer but is thrown away. This includes edible food, the parts of food that can be consumed but are disposed of, and inedible food, the parts of food that are not consumed because they are either unable to be consumed or are considered undesirable (such as seeds, bones, coffee grounds, skins, or peels).
- » Food that is imported into, and disposed of, in Australia.
- » Food that is produced or manufactured for export but does not leave Australia.

- Prevention**
Waste of raw materials, ingredients and product arising is reduced - measured in overall reduction in waste.
- Repurposed and upcycled into new food.
- Donated to people.
- Sent to animal feed.
- Recycling**
Bio-based materials / bio-chemical processing.
- Waste sent to anaerobic digestion; and co-digestion; or
- Waste composted.
- Recovery**
Incineration of waste with energy recovery.
- Disposal**
Waste incinerated without energy recovery. Waste sent to landfill. Waste ingredient/product going to sewer. Waste disposed of on-farm.

We focus on preventing and reducing food waste, food donation, repurposing and upcycling edible food

The business case for action is compelling



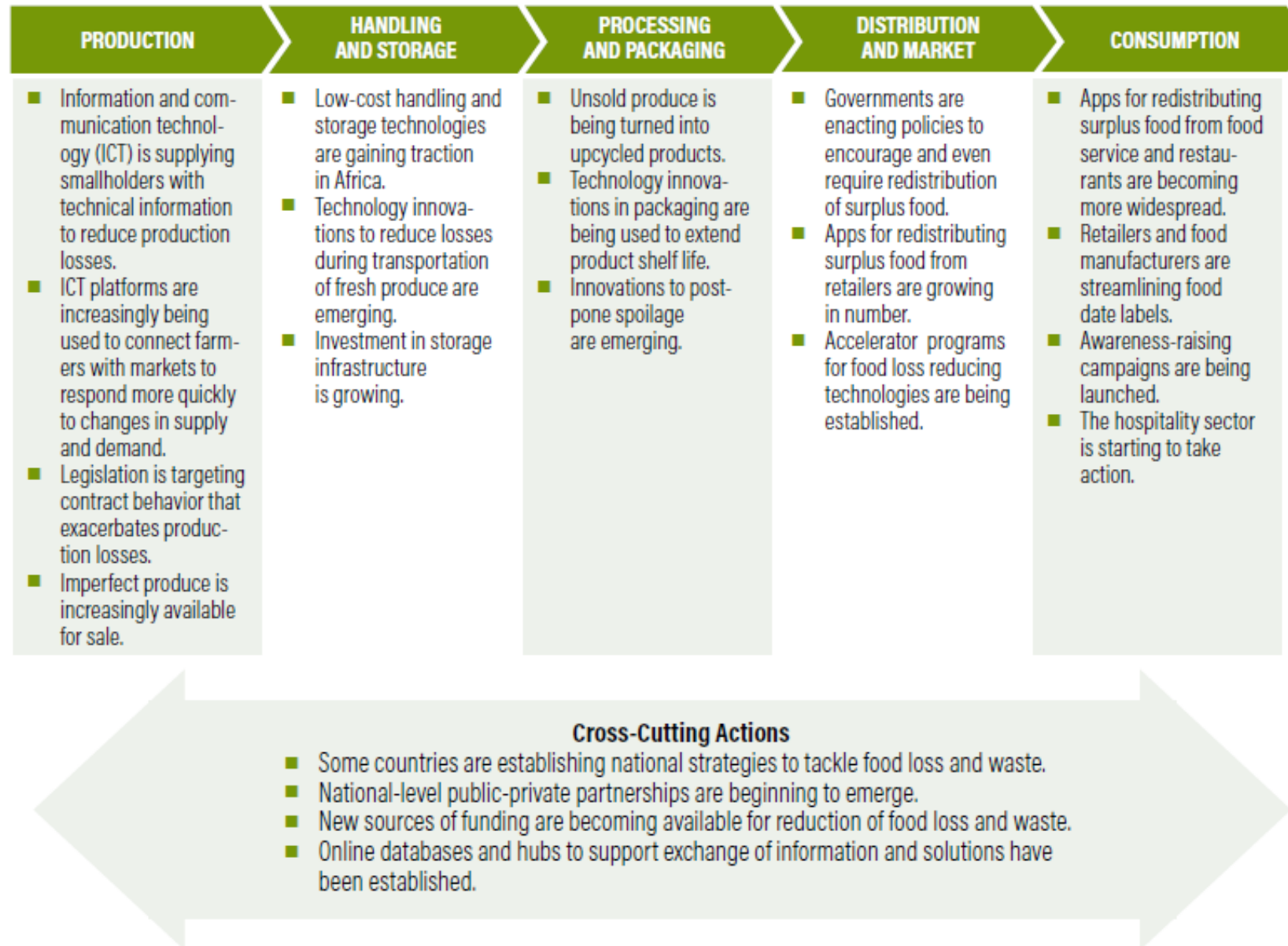
Research in 17 countries around the world has shown that **half of the businesses achieved a return on investment for food waste prevention programmes of 14 to 1 or better**, with 99% of activities delivering a net positive return. Working together, as part of a voluntary commitment program, businesses can achieve real change faster and more cost-effectively.

Source: Champions 12.3 – [The business case for reducing food loss and waste](#) (2017)

For every dollar invested in food waste prevention in Australia the average return on investment is over \$7-10.

Source: FIAL (2021) – [National Food Waste Strategy Feasibility Study](#)

Reducing food loss and waste across the value chain

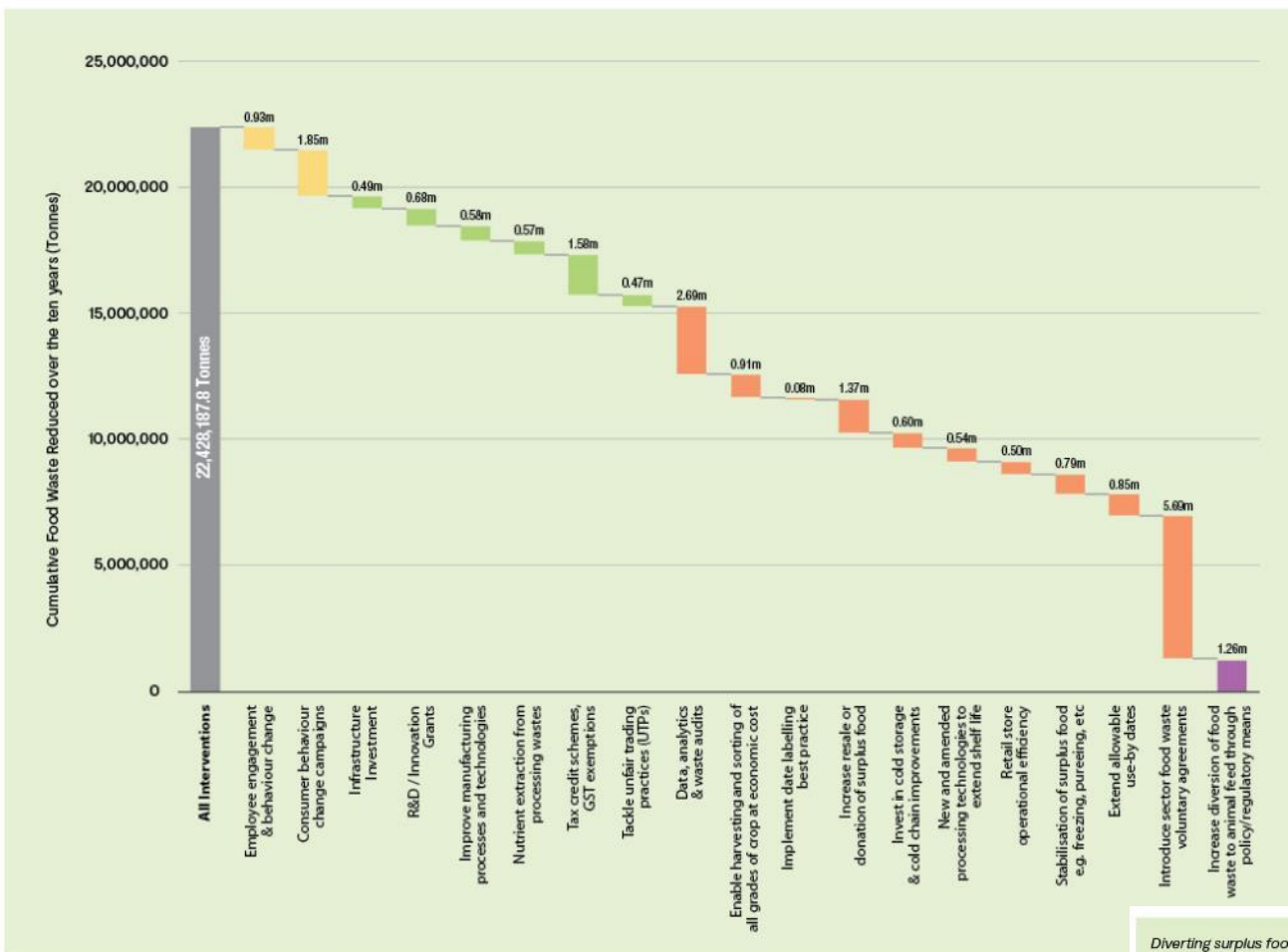


23 interventions to halve food waste by 2030



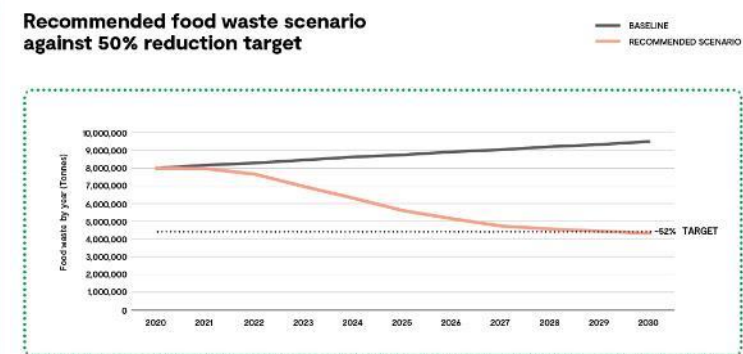
Cumulative impact of interventions in the recommended scenario

Over the course of 10 years the recommended scenario reduces food waste by approximately 22.5m tonnes.

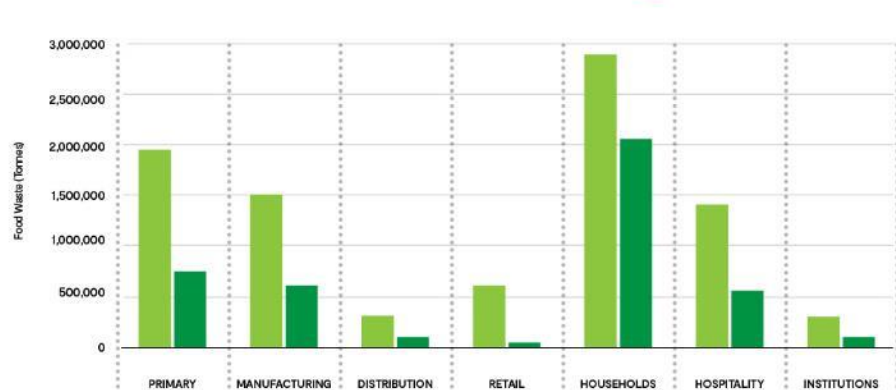


The final 23 interventions can be broadly grouped into three distinct categories:

- Behaviour change campaigns:** Nationwide campaigns that directly target key behaviours in households and businesses to reduce food waste.
- Policy Led Interventions:** Creating an enabling policy framework to facilitate industry action with legislative and regulatory change, R&D, infrastructure development and grants.
- Industry Led Interventions:** Private sector led activities driven by market forces and support from government.



Food waste by stage in supply chain baseline vs recommended scenario



Diverting surplus food that cannot be eaten by humans to animal feed was modelled on the remaining waste after other prevention interventions were implemented to ensure that true prevention at source was being prioritised.

Stop Food Waste Australia

Making it happen

**IMPLEMENT
THE VOLUNTARY
AGREEMENT:
THE AUSTRALIAN
FOOD PACT**



**COMMUNICATE,
ENGAGE AND
PARTNER FOR
IMPACT**

**DEVELOP NEW AND
IMPLEMENT THE
EXISTING SECTOR
ACTION PLANS**

**MEASURE,
EVALUATE AND
REPORT OUR
PROGRESS**

Four programs to drive change



Between 2007 and 2018 the UK's voluntary agreement program, the Courtauld Commitment, reduced food waste by 3.5Mt, saving food businesses and consumers \$19bn



AUSTRALIAN FOOD PACT

Embed new criteria into design, buying and sourcing

Provide innovative resource efficient, low waste products

Embed new criteria into design, buying & sourcing

Sustainable product design



Before

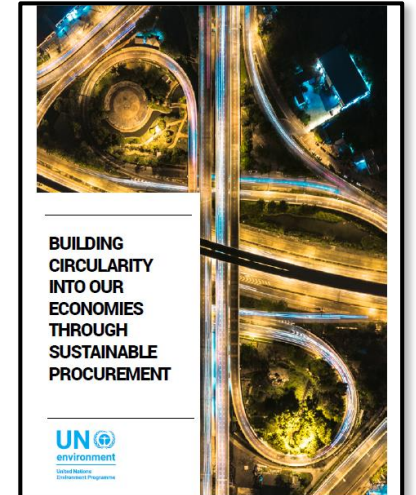


After

Buying and sourcing arrangements and standards



Reviewing customer value propositions



Sustainable buying guides



- Vac packed meat extends shelf life and enhances quality (69% reduction in packaging weight, 4 days of additional shelf-life)
- 75% reduction in use of plastics in Woolworth's meat products
- Thermochromics' smart label in Sainsbury's own label cut ham to show consumer's how fresh their ham is



The co-operative food

The Co-op takes 100% of all potatoes grown on its farms. Two packing facilities serve a range of customers with varying specifications dependant on whether it's processors, wholesalers, discounters and retailers. The benefits include a closer integration of the supply chain, better provenance and reduced loss and waste. For example:

- Smaller potatoes can be removed from batches and sold as baby roasters, smaller still or blemished potatoes can be sold in value packs or used in ready meals;
- Larger potatoes can be sold on wholesale markets generally to foodservice businesses where they are cut and used in meal preparations.

Through a producer organisation, The Co-op ensures that 100% of strawberries grown have a market at the time of optimum ripeness.

Key Benefits

- Effective whole crop buying policy makes use of up to 20% more of the crop.
- Crop security in the supply chain reduces price shocks.
- More responsive to variability in growing conditions.
- Maximise revenue streams for the business.
- Produce goes through grading faster and can therefore have a longer shelf-life, reducing retail waste.
- Reduced distribution waste as market decisions are made faster.
- Consistent availability of products.
- Greater retailer control of sales price and promotions.

The benefits of whole crop purchase arrangements

Optimizing supply chains: Walking the chain

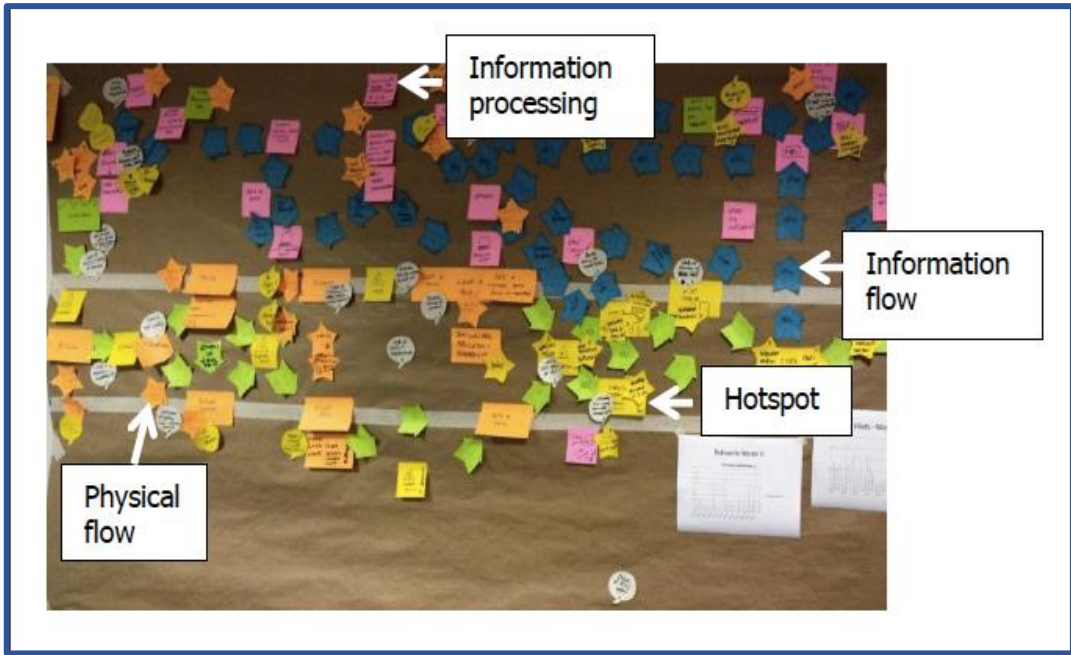
Optimise whole supply chain to produce more with less

Provide products more efficiently

Cooperative Food & Farmcare Case Study

- 15% reduction in packhouse loses and 5% increase in crop utilisation by challenging varietal norms and size specifications
- Trickle tape irrigation reduced water use by 30% and increased yield by 4%, as well as leading to crop quality improvements
- 15 refrigerated stores moved to Best-in-Class operation, saved 1M kWh a year
- Transit packaging changes saved AUD\$74K a year

Value chain waste mapping process



Farm-to-fork approach

Increasing Profitability in the Potato Supply Chain: Key Opportunities for UK Potatoes

Findings from a farm-to-fork assessment with Co-operative Food & Farms, plus wider WRAP research

Introduction
This Guide summarises practical actions to improve resource efficiency and profitability in the fresh potato retail supply chain.

In 2013/14, WRAP worked with the Co-operative Food and its integrated potato growers and packers, Co-operative Farms, to undertake a 'whole chain pathfinder project' (case study). Key findings are incorporated into this Guide, alongside wider WRAP and Potato Council (PCL) research findings.

Use this Guide to:

- Identify **WHERE** actions can be taken in the supply chain to improve efficiency and maximise the £ value from the crop
- Consider **WHAT** improvement opportunities to focus on in discussions with suppliers or in specifying products
- Understand **HOW MUCH** you could save through actions taken

The example savings presented in this Guide are based on 50,000 tonnes pre-packed potatoes, with typical operational efficiencies. Use the accompanying tool to calculate potential savings for your category.

VALUE LOST IN THE POTATO SUPPLY CHAIN

On-farm	→	3% harvester loss
Storage	→	1-5% weight loss
Packhouse	→	>20% downgrade
Retail	→	2% unsold >5% mark-down
Consumer	→	20% discarded* 26% peelings*

*Source: WRAP (2014), Household food and drink waste: A product focus

Getting maximum value from its potato crop can save The Co-operative Group up to £600,000 a year

Introduction
A global supplier 'value chain pathfinder project' has measured potato production in The Co-operative Group from farm to shelf. The project found that significant value is lost along the supply chain and demonstrated where actions these resources can be used to deliver better commercial and environmental outcomes.

Key opportunities include:

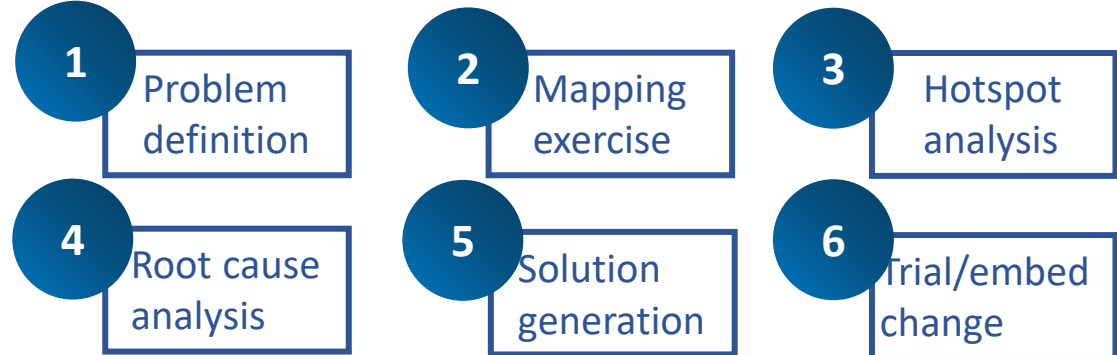
- A focus on maximising pack-out rates as well as yield to that most of the harvest crop is available for sale to consumers
- Less electricity can be used in storage without impacting quality, yields, emissions and cost
- Less water could be used to grow the crops
- Investments in transport usage can be reduced by networking, packaging and staff training
- Transport costs, fuel and emissions can be reduced
- Effective supply chain collaboration, for example through order timing and promotional planning, can save significant costs

Value lost in the potato supply chain - (based on 50,000 tonnes)

On-farm	Storage	Packhouse	Retail	Consumer
£250k	£200k	£1.5m	£1.8m	>£6.5m

Introduction | Pack-out Rates | Water & Electricity & Materials | Transport and Collaboration | page 1

AUD \$1.2m of savings per 50,000t of potatoes

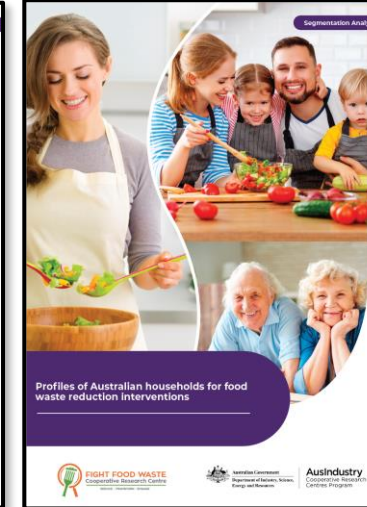
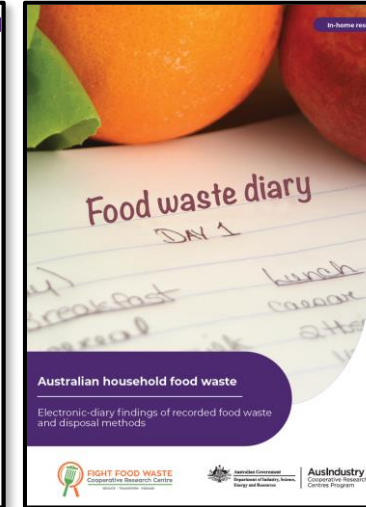
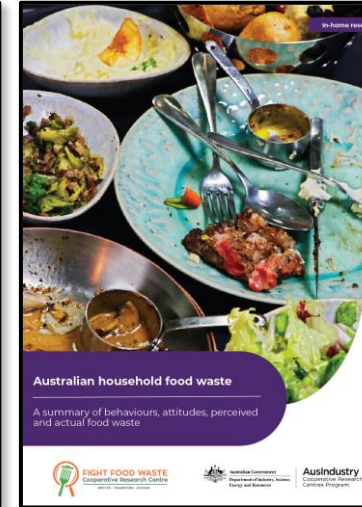
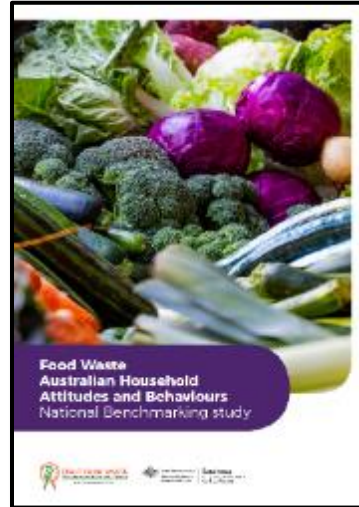


Influencing consumer and business behaviours

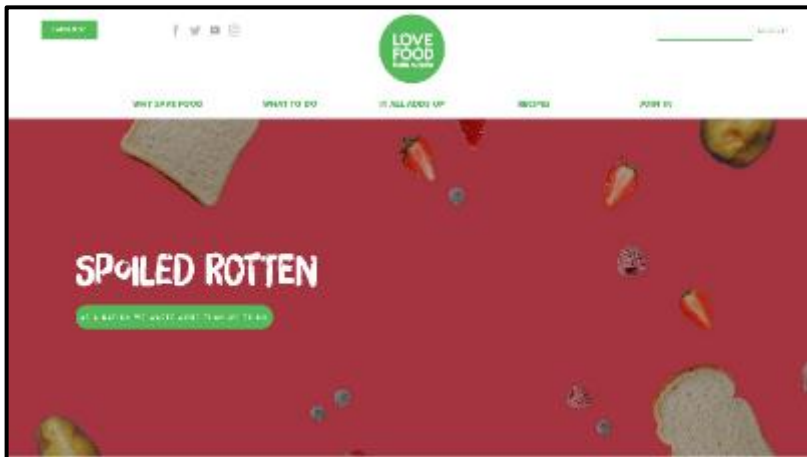
Influence consumer & business behaviours and reduce food waste

Help people to get more value from the food & drink they buy. Support business culture change process.

Consumer insight



Consumer-facing campaigns



Business-facing campaigns



Making the best use of waste and surplus food



Food rescue & peer-to-peer



YÜME



Food transformation:



Find innovative ways to make the best use of waste and surplus food

Get more value from waste and surplus food and drink



Sector Action Plans (SAPs)

Building new partnerships and coalitions

Providing a concentrated focus on significant food waste hotspots, with five pillars of activity



Strong links with all three Fight Food Waste CRC R&D programs

Status of Sector Action Plans:

In delivery:

- Food Rescue
- Food Cold Chain

Research underway:

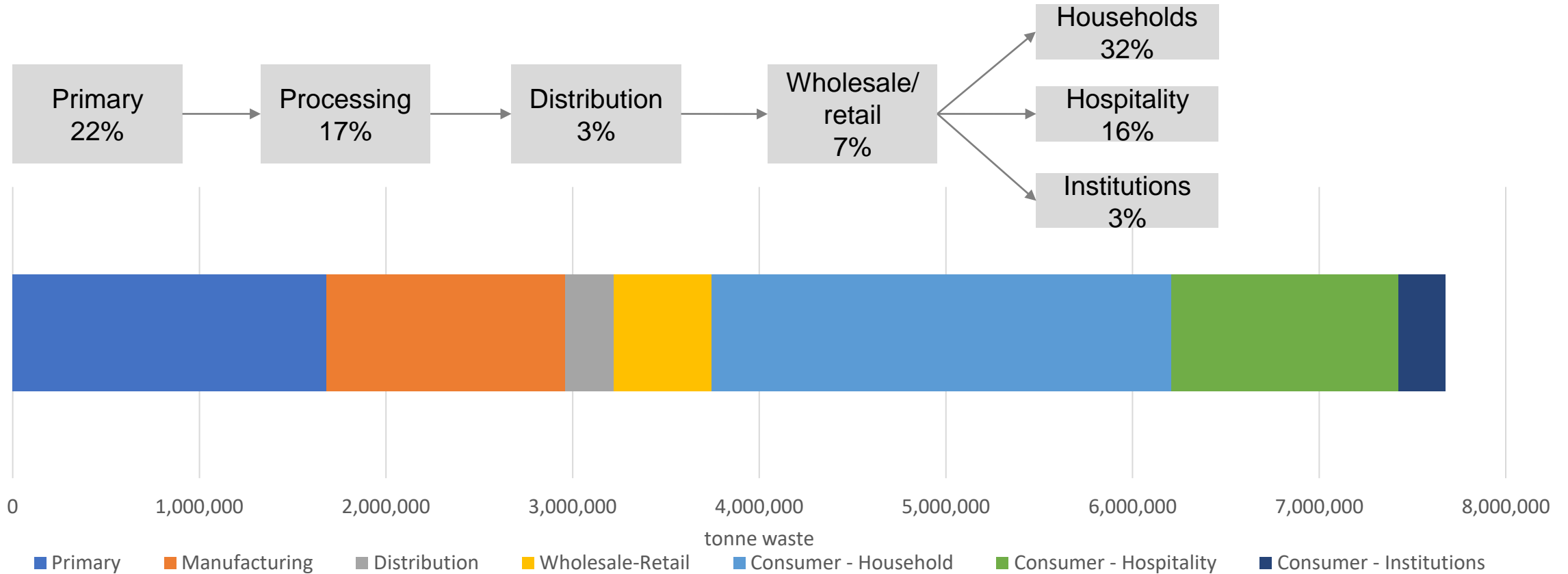
- Dairy
- Fresh Meat
- Hospitality and Food Service
- Institutions
- Bread & Bakery

Funding discussions initiated:

- Horticulture
- Seafood

Halving food loss and waste in Australia

'It is feasible...but it will require unprecedented action by governments, industry and the community'. It will also require a whole of value chain approach and a lot of collaboration.





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