

## PROJECT SUMMARY

### Snack Tomatoes New Product Development through Eco-Co-Design Project

#### KEY POINTS

- Snack tomatoes are a versatile ingredient for value-added food products and can be formulated into a variety of shelf-stable foods
- Engagement with consumers and collaboration with the industry partner enabled successful proof-of-concept development for relish, juice and semi-dried tomato products created using on-farm tomato surplus;
- Through this research, the Queensland Department of Agriculture and Fisheries (DAF) supported the development of solutions to food waste for growers in regional Queensland.

#### THE CHALLENGE

Tomatoes are highly perishable, which creates pressure for growers to minimise food waste in their businesses. As a primary tomato grower in the Bundaberg region for over a decade, Sunripe yields more than 10,000 tons of fruit annually, however not all fruit leaves the farm.

#### THE OPPORTUNITY

The Queensland Department of Agriculture and Fisheries (DAF) supported Sunripe by providing technical expertise and funding resources to build research capacity in this space. Through collaborative research and development activity with End Food Waste CRC and DAF, Sunripe have explored approaches to develop a range of value-added consumer products from second and third-grade tomato farm waste to tackle this challenge.

## OUR RESEARCH

The Agri-Food & Data Science Product Development team at DAF explored opportunities to create value-added products through a series of industry workshops and consumer focus groups to guide product development concepts and close collaboration with Sunripe

The team carried out an eco-co-design process, whereby the research team and industry partner worked closely with end-market consumers to guide the refinement of product concepts that would be accepted by consumers. The key steps of this methodology encompass exploration, product development, evaluation and pre-launch activities.

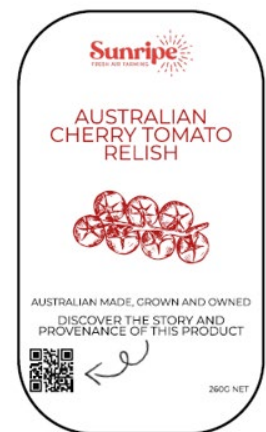


Figure 1. Tomato relish presented as a consumer focus group concept

## OUTCOMES

Through the project DAF identified seven key valorisation pathways to utilise excess tomatoes. Through initial consumer focus groups relish, juice and semi-dried concept products were short-listed for development. The physico-chemical and microbiological properties of concepts were evaluated for up to a 6-month shelf life to ensure product quality. The project provided a base framework for Sunripe used in the further research development and product refinement.

- Industry workshops ensured collaboration with industry partner, Sunripe, through project development.

- Consumers identified relish, juice and semi-dried product types as highly desired categories.
- The product development phase identified suitable tomato varieties for different product types.
- Finished product specifications, formulation specifications and processing flows, were developed for all short-listed product types.
- All proof-of-concept treatments had acceptable physico-chemical qualities and microbiological qualities over a 6-month shelf life.

The outcomes provide opportunities for new commercial prospects, minimisation of supply surplus and provision of an incremental revenue stream for Sunripe. By leveraging these initiatives, Sunripe can optimise their business and reduce their environmental footprint by reducing food waste.

## IMPACT

Sunripe aim to launch new tomato value-added products in 2025. This conversion of currently wasted food into upcycled food products will help Sunripe farm to reduce waste and create circular economy jobs through contract manufacturing.

## PROJECT TEAM

Colin Leung (QDAF)  
Philippa Harmon (QDAF)  
Kerridyn Hooker (QDAF)  
Andrew Cusack (QDAF)  
Margaret Currie (QDAF)  
Ishita Pramanik (QDAF)  
Simone Moller (QDAF)  
Philippa Lyons (QDAF)  
Samara De Paoli (Sunripe)  
Luke De Paoli (Sunripe)

## PROJECT REPORTS/PUBLICATIONS

Leung, C. et al (2023). *Snack Tomatoes New Product Development through Eco-Co-Design. – Final Project Report.* Queensland: End Food Waste Australia.

## PROJECT PARTICIPANTS



## PROJECT WEBPAGE

[SNACK TOMATOES NEW PRODUCT DEVELOPMENT THROUGH ECO-CO-DESIGN - End Food Waste Australia](#)  
» [End Food Waste Australia](#)

EFWCRC Publication 2024\_026