



ARC

Training Centre for  
Innovative Horticultural Products

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## Keeping Fresh Food Fresh

### Key Points

- The best packaging promotes, protects and preserves food.
- Improved packaging can help maintain food quality and extend shelf-life
- Sensors that monitor temperature, light levels and gases can optimise modern transport and supply chains
- The ARC Training Centre for Innovative Horticultural Products is conducting research into a variety of ways to preserve fruit and vegetable quality and extend its shelf-life

### Modern packaging for modern supply chains

Fruit producers and sellers are very keen to get their product to market in the best condition, to provide food with the highest quality and the longest shelf-life for their customers. A big challenge remains in storing food cheaply, safely and under controlled conditions.

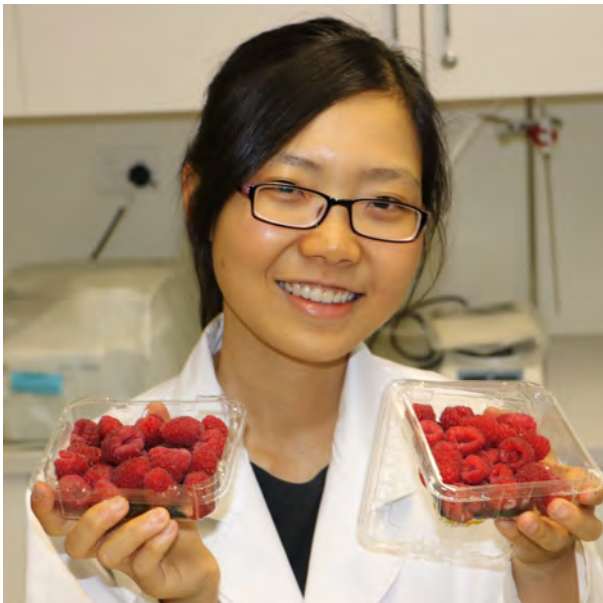
Packaging can be essential to keep fresh food in the best possible condition and maintain consistency throughout the supply chain.

Innovative packaging technologies include:

- **Intelligent packaging** – where the packaging shows consumers the produce freshness,
- **Active packaging** – where conditions inside the packaging are manipulated in responses to changes in the fruit.

Active packaging may be important in the future as factors such as ethylene levels may prove crucial in storing many fruits and vegetables.





## Core area of research

Keeping high quality fresh fruit and vegetables in their best possible condition is a key concern of the Australian Research Council (ARC) Industrial Transformation Training Centre for Innovative Horticultural Products, a collaboration between the ARC, University of Tasmania and a range of industry partners including Woolworths.

Training Centre and University of Tasmania PhD candidate Ky Nha Huynh is studying how packaging affects fruit and vegetable shelf-life and quality.

She is working alongside Woolworths and their supply partners. Her project aims to demonstrate new and alternative approaches within commercially acceptable confines of cost and consumer expectations.

A key part of her project is investigating how fruit changes as it proceeds through the supply chain.

## Temperature to store your fruit

Storing fruit at optimum temperatures is crucial in maintaining quality and improving shelf life.

Other preservation techniques such as packaging, and controlling light and moisture, also aid in keeping fruits fresh, but combining these with the appropriate storage temperature will produce the best results.

Apple	0	Lemon	12— 14	Pineapple	7— 10
Apricot	-0.5 — 0	Lime	10 — 13	Plum	-1 — 0
Banana	13 — 14	Orange	3 — 8	Raspberry	0
Blueberry	0	Peach	-1— 0	Strawberry	0
Grape	-1 — 0	Pear	-1 — 0	Watermelon	10 — 15

Source: [http://postharvest.ucdavis.edu/Commodity\\_Resources/Fact\\_Sheets/](http://postharvest.ucdavis.edu/Commodity_Resources/Fact_Sheets/)

## Other PhD Projects in the ARC Training Centre

- Improving the quality & shelf life of fresh-cut fruit
- Re-assessing organic standards
- Reducing potato greening
- Extending the shelf-life of cherries
- Banana supply chain damage

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