Cracking cherry research

The abundance of quality cherries this Christmas could be thanks to research at the Tasmanian Institute of Agriculture (TIA).

Research Fellow Penny Measham of the TIA Perennial Horticulture Centre has led a team with groundbreaking cherry research, increasing fruit yields and maintaining quality.

Late-season rains can cause cracks in the fruit, which make them unsaleable. For some growers the labour costs of picking and sorting the cherries after a rain can be so high and the returns so low, they simply walk away.

“IT’s heartbreaking because it’s such a high-input, high-risk crop,” she said.

The amount of fruit affected is unpredictable, so growers are unsure what size their yields will be each season. Many see yield loss due to cracking as inevitable but Penny and her team have managed to reduce cracking without losing sugar content, size or firmness.

Her interest in cherries began as an undergraduate and continued into honours and her PhD. She found it was internal mechanisms in the plant that promoted large cracks with a rapid flush of water into the fruit following rainfalls.

The current research has built on this finding and although beginning with a modest aim to reduce cracking by 10 per cent, last year they were able to reduce it by 50 per cent.

“One of the nice things about this project is seeing people regain hope,” she said.

A key factor in the approach is understanding the differences between two types of cracks – side cracks and cuticular – and adapting existing growing techniques to prevent them. These include spraying, irrigation, crop-loading and pruning.

Penny said by ensuring plants had adequate water through the growing season, they were able to reduce cracking susceptibility, without affecting fruit quality.
When the trees become water-stressed the fruit shrinks in the day and swells at night, stressing the skin. It then cannot tolerate the rush of water during high rainfall and cracks as a result.

High crop loads and pruning also had positive effects.

Penny has been travelling around the country explaining the techniques to growers. Many have taken it up already.

“Growers are welcoming the news. I get lots of excited growers ringing me up after rain.”

The research has been running for three years in Tasmania, South Australia and Victoria.

The research will continue for another year and Penny is hoping to replicate the findings or better them this season.

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