POSITIVE IMPROVEMENTS IN MELON QUALITY

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Project Code: VM23002

This project has been funded by Hort Innovation using the melon research and development levy and funds from the Australian Government. For more information on the fund and strategic levy investment visit horticulture.com.au

The Melon quality improvement program VM23002 is already delivering measurable results as the project nears its halfway mark in August 2025. Positive improvements in melon maturity compliance and increases in sales reported, with more expected as the project progresses.

Led by Delytics Ltd in partnership with Melons Australia and Rudge Produce Systems, the three-year project is funded by Hort Innovation using the melon research and development levy and funds from the Australian Government. The objective of this project is to improve the repeat purchases and value of Australian rock melons, honeydew melons and seedless watermelons by providing consumers with a consistently good eating experience. The project plans to achieve this by facilitating and monitoring the adoption of the minimum maturity standards developed in project VM21001 along the melon supply chain.

Since this second phase of the project started in March 2024, the project team have carried out several initiatives to improve melon quality and condition, and developed resources to help growers meet the new maturity standards. These have included:

- Wholesale and retail monitoring in Brisbane, Melbourne, Perth & Sydney, with real-time inspection reports and feedback to growers.
- Developed on-farm maturity monitoring, measurement and sampling guidelines using established protocols to help growers predict harvest, which are available to all growers through the Melons Australia website.
- Validating where to take samples from within a melon to get a representative Brix measurement for the whole fruit (this work has been completed for rock melons and honeydew melons, and is ongoing for watermelons).
- Supply chain Brix, temperature and shock measurement to evaluate impact on fruit condition. This has included measuring transport impacts between the field and the packing shed and through packhouse washers and sorters.
- Evaluating non-destructive maturity measurement options.
- Evaluating the use of artificial intelligence (AI) for maturity prediction.

Nielsen Harvest to Home results for the 52 weeks ending 23 February 2025 is already showing positive improvements since the project started, with melon dollar sales up 8.9% (compared to 7.7% for all fruit) and volume growth up 9.4%, which is well ahead of the 1.8% growth for all fruit.

This is a significant improvement from the Nielsen Harvest to Home results published in mid-June 2023 before this project started, which showed melons to be the poorest performing of Australia's top ten fruits at that time.

Retail and wholesale maturity inspections have also shown encouraging improvements in melon compliance. Rock melon compliance is now meeting the minimum maturity standard that was set to ensure that 80% of consumers will have a positive eating experience. Honeydew melon compliance has doubled in the past two years from an initial low of 25% and – if this rate of improvement continues – should easily meet the 70% minimum maturity standard set by the industry for honeydew by the end of the project. At 57%, Watermelon compliance has the most room for improvement. The project team have made working with watermelon growers a major focus of the next phase of the project to ensure they have the tools and support they need to meet the minimum standard of 80%. Melon growers are also reporting positive results from implementing the systems developed by this project.

Karlton Miskovich, Rock melon and Honeydew Category Manager for Rombola Family Farms says the improved quality achieved from working with the project team has improved traction in their export markets, stabilised prices, boosted sales, and drawn praise from retailers and their export markets. Karlton says, “Direct overseas sales with our Singapore partner have grown tremendously over the last 12 months and I recently had someone in Malaysia, who we don’t supply directly, reach out to tell me that they’ve seen us have great southern season with rockmelon, and absolutely loved them. That was a great piece of feedback.”

Project Lead, Mark Loeffen says, “We are very happy with the progress so far and are confident we will see even more quality improvements as we support more growers to implement the new systems developed through this project on farm.”

Growers are invited to contact the project team if they would like support with maturity monitoring or harvest prediction or would like the project team to visit their farm. Contact: mark.loeffen@delytics.com

Impact testing has shown that the shocks melons experience on-farm can be much higher than those experienced during off-farm transport.

Growers are encouraged to use the systems developed by this project to monitor the maturity of their melons before harvest, especially for watermelons.