

Improving Melon Quality from Harvest to Consumer



Mark Loeffen
Project Code: VM23002



The Melon Quality Improvement Program (VM23002), led by Delytics Ltd in partnership with Melons Australia and Rudge Produce Systems, has entered the second half of its delivery with strong momentum. The project continues to drive industry-wide improvements in fruit maturity, on-farm measurement and non-destructive testing - all aimed at giving consumers a consistently good eating experience and encouraging repeat purchases of Australian melons.

Measurable Improvements in Fruit Maturity

Fruit maturity across major markets continues to strengthen. Watermelon compliance, which had risen from 47% to 68% by the end of 2025, is tracking positively as growers work toward the industry's 80% minimum maturity standard. Rockmelon compliance remains at the level that ensures 80% of consumers have a positive eating experience, while honeydew compliance continues its steady climb toward the 70% target. By February 2026, half of all growers were meeting the industry's minimum maturity standards, reflecting broad improvement across all melon types.

Retail and wholesale monitoring has continued throughout the season, with samples assessed every two weeks in Perth, Sydney, Melbourne and Brisbane for Brix, firmness, liking, skin and flesh condition. Growers continue to value the near real-time feedback, with many reporting that the individualised reports are helping them make timely adjustments to improve fruit maturity and consistency.

Strong Grower Engagement

On-farm maturity measurement and harvest prediction work has expanded significantly since February. The project team conducted two weeks of intensive monitoring across southern growing regions in March, demonstrating the sampling and measurement protocol and providing growers with early harvest predictions, even for blocks without visible harvest indicators.

Ensuring growers have access to the tools and confidence needed to measure maturity on-farm remains a key project focus. Several growers have indicated they either do not have a Brix meter or are not fully comfortable using one. Because Brix is a fundamental indicator of maturity, the project team continues to offer guidance and support to ensure growers can measure maturity reliably on-farm.

Valuable Market Maturity Insights

Retail and wholesale maturity monitoring continues to provide valuable information on how fruit quality changes from harvest to consumer. Data is uploaded to the project website as results become available, and growers whose fruit can be identified continue to receive individualised reports. Feedback has been positive, with many growers finding the insights useful.

Advancing Non-Destructive Measurement Technologies

A major focus of recent work has been the evaluation and refinement of non-destructive measurement tools. This has included:

- Extensive NIR testing to build a data set for future on-farm protocols.
- On-farm trials of the SunForest NIR device, which has shown strong potential as a non-destructive measurement solution for all melons.
- Work underway with the Korean manufacturer of the SunForest NIR gun to customise calibration models for Australian melon varieties.
- Development of the first calibration model for the SunForest NIR gun with work ongoing to collect and process the additional large volume of data required to build models that span the whole season.

The project team is also actively pursuing a practical, accurate non-destructive alternative to refractometers, which are still the most reliable tool for on-farm maturity measurement at this stage.

Looking Ahead

With strong grower engagement, expanding data sets and promising advances in non-destructive testing, the project is well positioned to deliver further gains through the remainder of 2026. Project Lead Mark Loeffen says the team remains committed to delivering practical, evidence-based tools for growers. The project team will also work with industry partners to develop assurance processes that give supermarkets confidence their minimum standards are being met.

Growers seeking support with maturity monitoring, harvest prediction or non-destructive measurement technologies are encouraged to contact the project team at mark.loeffen@delytics.com.



Brisbane-based project team member, Gerard Piper, selecting samples at wholesale and carrying out maturity assessments.