

Maintaining Macadamia Quality On-Farm



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Action

Benefit

Pre-harvest Cleanup

Monitor the maturity of nut falling to time your pre-harvest cleanup to maximise quality and profitability.

It is important to perform maturity tests to check if the fallen nuts are mature and of sufficient quality to deliver to the factory (most processors offer this as a free test). On-tree maturity should also be monitored if you intend to spray with Ethrel®.

Harvest Frequency

Aim to complete harvest rounds more often than every four weeks.

Research has shown that harvesting less than or equal to every four weeks can improve sound kernel recovery by up to 2.5%. Frequent harvests also mean less sorting in the shed and can reduce shed losses by up to 4%. (Ref: *Adoption of Quality Management Systems MC03008*). More frequent harvest rounds also improves production of whole kernel. (Ref: *Improving Whole Kernel and Kernel Handling to Increase Quality of Macadamia MC01040*).

Harvesting

Do one pass only in each harvest round. Do not mix harvest rounds. Each harvest should be sorted and consigned separately as soon as possible.

Increased harvest frequency can be achieved by using a one-pass harvest regime. One pass means that you can harvest the whole orchard more quickly and therefore come back for the next harvest round at shorter intervals. One pass harvesting and more frequent harvest means the shed runs more efficiently with a more even flow of nuts coming in, less sorting and better quality, giving a faster throughput. Growers who have switched from double pass to single pass harvesting report significant savings in time and improvement in quality.

Dehusk Within 24hrs of Harvest

This is a critical step as heat builds up from respiration, this happens very quickly with nut-in-husk which causes rapid quality loss and heavy penalties.

Sorting

Check kernel quality to determine if sorting is effective and necessary.

Monitoring kernel quality after the first sort will indicate if a second sort is necessary. To monitor quality take a handful of nuts every half hour, place in a bucket and at the end of the day, or during a break, randomly select a hundred nuts and crack and sort into categories. NSW DPI has a simple computer based sorting calculator available on their website (www.dpi.nsw.gov.au). Monitoring rejects from air sorter/water sorter and manual sorting indicates if good nut is being rejected and also identifies the main causes of rejects.

Storage

Do not store NIS on-farm for more than two weeks, unless you can reduce the NIS moisture to below 10% within two weeks.

It is best to consign NIS to processors as soon as possible after harvest (regardless of the moisture content). Some growers hold nuts on farm trying to get the moisture content down to 10%. This practice is no longer recommended as the kernel quality declines resulting in higher unsound levels and poor shelf life. Consigning at higher moisture contents does not affect your weight for payment.

Storage

NIS bed depths should not exceed 2.5 metres.

Bed depths greater than 2.5m give uneven and slow drying with the result of higher unsound levels. Where growers have large silos it is recommended that they only partially fill the silo and consign smaller loads to the factory.

Storage

Silos should be suitable for drying NIS with adequate airflow.

The correct fan capacity for the diameter of the silo and the depth of NIS is essential to ensure adequate even drying. Silos should have sufficient fan size to achieve an air velocity of 1.0 m/s through the NIS. Poor airflow reduces quality and increases unsound levels. (Ref: *Drying Macadamia NIS On-Farm MC97011* pp 73).