

Variety J, or MIV1-J, is one of four new elite macadamia varieties released after thorough testing for nine years by the Queensland Department of Agriculture and Fisheries in regional variety trials.

It is an early producing *Macadamia integrifolia* variety with a very large kernel. Trial results over the nine years showed a mean total kernel recovery of 44.8%.

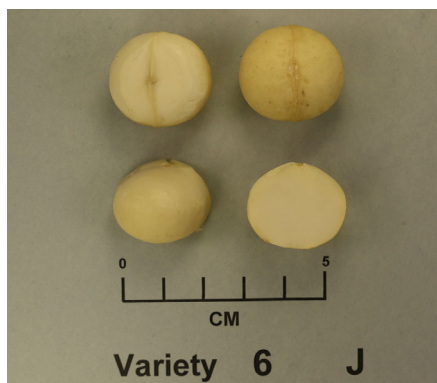
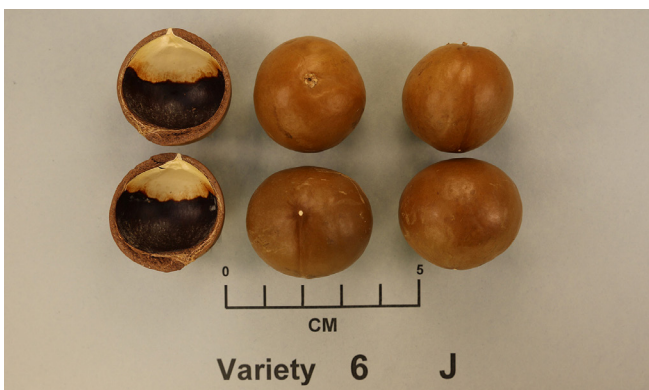
Performance

At Bundaberg, Variety J was ranked third out of 30 varieties in overall cumulative kernel yield and was fifth in kernel canopy efficiency. At Alstonville (a site without irrigation), J ranked third out of 30 varieties for kernel yield in 2017 and fourteenth for cumulative kernel yield. It was much better for cumulative kernel yield than varieties 344 and 741 at Alstonville, but not as good as 246 or 816.

Using a nut-in-shell (NIS) value of \$4/kg, total kernel yield per hectare over the nine-year trial period was \$58,763 at Bundaberg, and \$50,229 at Alstonville (cumulative yield NIS x percentage kernel recovery). This is for 312 trees per ha. Please note that the average NIS price over the past 11 years is \$4.72 per kg.



Variety J is a tall, slightly spreading to round tree with a moderately dense canopy.



Shell and kernel size, Variety J

Growth habit

Variety J is a tall, slightly spreading to round tree with a moderately dense canopy. It is an early nut producer, and nut-drop pattern is consistent with a mid- to late-season peak. Nuts, which are of medium thickness, cluster mainly in singles and doubles. Kernels are very large and, in the trials, mean total kernel recovery was 44.8%. Compared with other varieties, J has a lower percentage of whole nuts during processing.

Nut drop

Figures 1 and 2 (over page) show nut-drop pattern in 2016 for Variety J at the trial sites at Bundaberg and Alstonville. These patterns were consistent over the nine-year trial period so provide a good indication of nut drop.

Pest and disease resistance

Variety J had an AVG score of zero at a susceptible site at Bundaberg. Its susceptibility to husk spot is extremely low (0 at Alstonville and 0.25 out of 5 at Bundaberg), and ratings for husk rot at both Bundaberg and Alstonville were 0.25 out of 2. Its mean percentage fruitspotting bug damage at Alstonville was 0.4%.

Fact Sheet :: VARIETY J

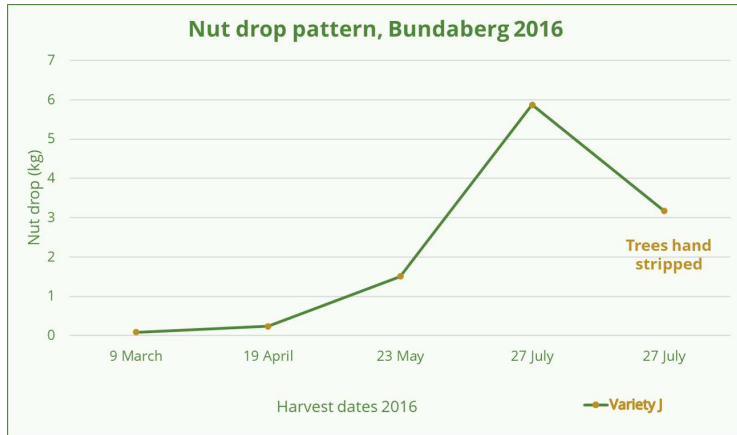


Figure 1. Nut-drop pattern for Variety J at Bundaberg, 2016. Note that the two points for 27 July reflect the fact that nuts were harvested from the floor (highest point) and stripped from the trees on the same day.

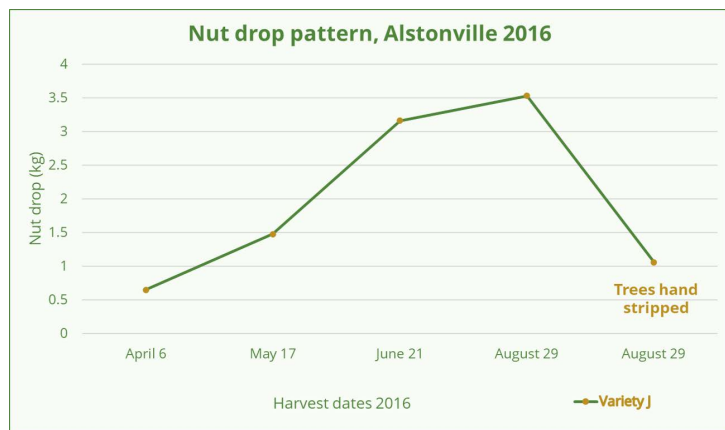


Figure 2. Nut-drop pattern for Variety J at Alstonville, 2016. Note that the two points for 29 August reflect the fact that nuts were harvested from the floor (highest point) and stripped from the trees on the same day.

Project funding

The project Macadamia Regional Variety Trials Series 3 Phase 2 was funded by Hort Innovation using the macadamia research and development levy and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

Regional suitability

In trials, Variety J performed well at Bundaberg and at Alstonville, so it appears to be suited to a wide geographical range.

Extended testing

This variety has been carefully assessed for 21 years - nine years of regional variety trials and, before that, 12 years in progeny blocks.

Disclaimer

Information for this Fact Sheet has been sourced from long term Regional Variety Trials conducted by DAF, and funded by Hort Innovation. Commercial nut producers have also provided feedback. Variety performance will vary in different locations, soil types, environments, planting densities and especially with different orchard management practices. Australasian Plant Genetics (APG) provides the above information as a guide only and accepts no responsibility for its accuracy and for on-farm performance.

This testing extends to trees used as budwood sources, which have been DNA tested for trueness to type. Blocks of trees have been planted as future sources of budwood for grafting in both Queensland and New South Wales. Australasian Plant Genetics (APG) will make every effort to provide budwood for grafted trees and budwood is expected to be in good supply.

Availability

Variety J has Protection under the Australian Plant Breeders' Rights Act (PBR Act) and is currently licensed to 14 nurseries, distributed from New South Wales to Mackay.

A royalty of \$4.00 (plus GST) will be added to tree price and purchasers will be required to sign a non-propagation agreement before collecting grafted trees. Part of the royalty collected (less management fees) will be passed back to the Australian macadamia industry to be used for RD&E projects, which are determined by the industry and Hort Innovation.

Please note that there are significant royalty discounts to \$3.00 per tree (plus GST) for large orders of more than 5,000 trees and also for high density plantings.

Test on farm

Variety J commercialisation is managed by APG. While APG is confident that Variety J will perform well in most growing areas, it recommends that its suitability to local conditions and to individual farm management systems be tested by growers by planting trial plots. Trees can be ordered from nurseries licensed by APG - see <https://macadamiainnovation.com.au/> for details. Crop inputs need to be matched to expected higher yields.