

Variety G, or MIV1-G, 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 thin husk. Trial results over the nine years showed a mean total kernel recovery of 42.6% and whole kernel recovery in the mid-range of varieties.

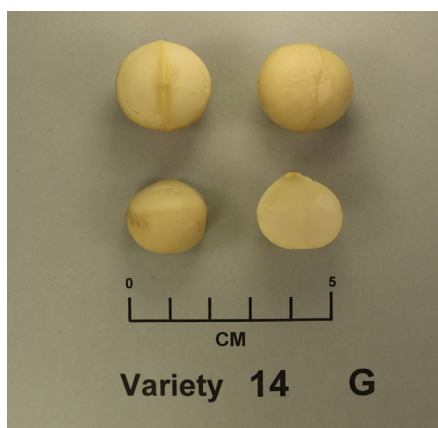
Performance

At Bundaberg, Variety G had the highest cumulative kernel recovery over nine years and the third highest kernel canopy efficiency. At Alstonville (a site without irrigation), it performed almost as well as at Bundaberg, and better than the varieties 246, 344 and 741.

Using a nut-in-shell (NIS) value of \$4/kg, total kernel yield per hectare over the nine-year trial period was \$61,555 at Bundaberg, and \$62,235 at Alstonville (cumulative NIS yield 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.



Shell and kernel size
Variety G



Variety G
at 9 Years,
Bundaberg

Growth habit

Variety G is an early-bearing medium to large tree with a moderately open canopy. Nuts cluster mainly in singles and doubles and drop mid to late in the season. Its sticktight rating in trials was low to moderate, so there is a possibility of sticktights occurring.

Nut drop

Figures 1 and 2 (over page) show nut-drop pattern in 2016 for Variety G 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 G had an abnormal vertical growth (AVG) score of zero when grown at a susceptible site in Bundaberg for nine years. Husk spot susceptibility is low and ratings for husk rot were zero for Bundaberg and 0.5 out of 2 for Alstonville.

Regional suitability

In trials, Variety G performed well at Bundaberg and at Alstonville, so it seems it can be grown over a wide geographical range.

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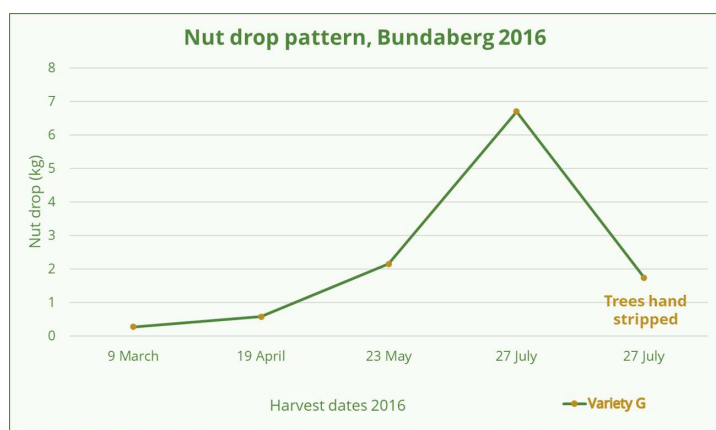


Figure 1. Nut-drop pattern for Variety G at Bundaberg, 2016. Note that the two points for 27 July reflect the fact that nuts were harvested from the floor (highest point) and stripped from the trees on the same day.

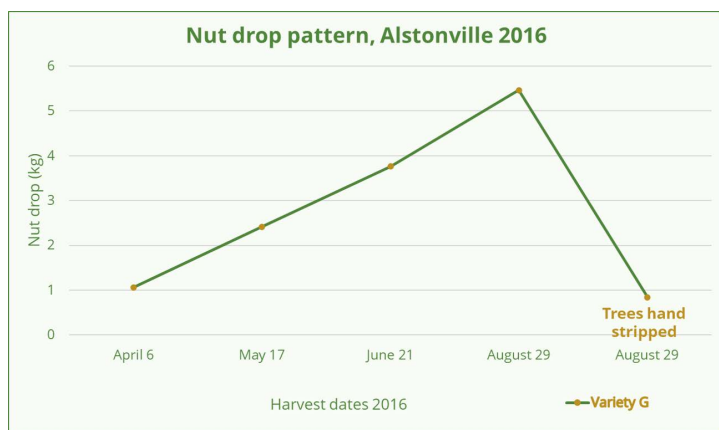


Figure 2. Nut-drop pattern for Variety G at Alstonville, 2016. Note that the two points for 29 August reflect the fact that nuts were harvested from the floor (highest point) and stripped from the trees on the same day.

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.

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.

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.

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.

Australasian Plant Genetics (APG) will make every effort to provide budwood for grafted trees from approved budwood suppliers, and large amounts of budwood are available.

Availability

Variety G 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 the 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 G commercialisation is managed by APG. While APG expects that Variety G 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.