

Variety R, or MIV1-R, 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 a slightly later maturing *Macadamia integrifolia* variety with a medium to thick husk. Trial results over the nine years showed a mean total kernel recovery of 37.8% and a high percentage of whole nuts compared to other varieties.

Performance

At Bundaberg, Variety R was ranked 16 out of 30 varieties for total cumulative kernel yield and was fourth lowest for kernel canopy efficiency. At Alstonville (a site without irrigation), it was the fourth most productive variety measured by total kernel yield and performed much 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 \$50,433 at Bundaberg, and \$59,342 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 R



Variety R is a short, slightly spreading, generally round tree.

Growth habit

Variety R is a short, slightly spreading, generally round tree with a medium to large, dense canopy. With its consistent mid to late nut-drop pattern, it produces nuts slightly later than the three industry varieties G, J and P. Nuts cluster in compressed to slightly open bunches. It has a medium to thick husk, medium-sized kernels and a mean total kernel recovery of 37.8%. Compared to the three new industry varieties, R has a greater percentage of whole nuts. It has few sticktights.

Nut drop

Figures 1 and 2 (over page) show nut-drop pattern in 2016 for Variety R 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 R had an abnormal vertical growth (AVG) score of zero when grown at a susceptible site at Bundaberg. It scored 0.25 out of 5 for husk spot at Bundaberg and 0.25 for husk rot (on a 0 to 2 scale). At Alstonville, 0.56% of nuts were affected by husk spot, and it had a 0.25 rating for husk rot. Mean percentage fruitspotting bug damage at Alstonville was 2.2%.

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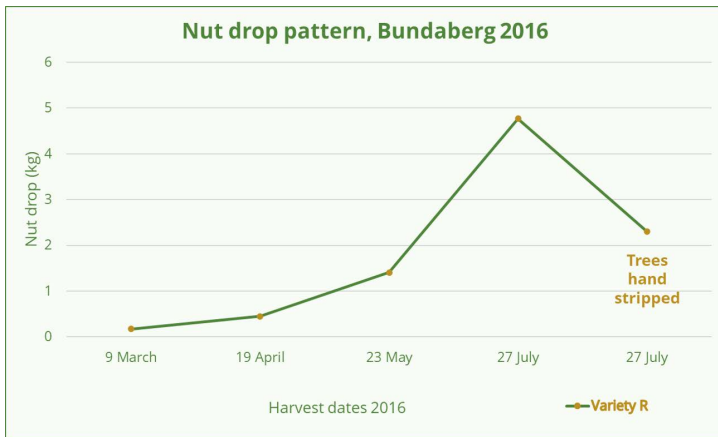


Figure 1. Nut drop pattern for Variety R at Bundaberg, 2016. Note that the two points for 27 July reflect the fact that nuts were harvested from the floor (highest point) and stripped from the trees on the same day.

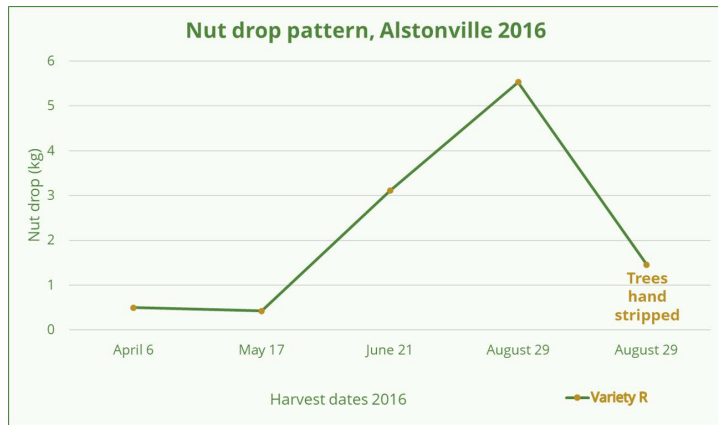


Figure 2. Nut-drop pattern for Variety R at Alstonville, 2016. Note that the two points for 29 August reflect the fact that nuts were harvested from the floor (highest point) and stripped from the trees on the same day.

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

From trial results, Variety R is thought to be more suited to the northern NSW growing region.

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 fact sheet was produced by the Australian macadamia industry communications project using the macadamia research and development levy and contributions from the Australian Government.

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 R 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 5000 trees and also for high density plantings.

Test on farm

Variety R commercialisation is managed by APG. While APG is confident that Variety R will perform well in all 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.

