



TopNut

Your Global Nut Specialists

MCT1 | Factsheet

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MCT1 is a new elite Australian macadamia variety expected to increase productivity by up to 50%. MCT1 is protected under the Plant Breeders' Rights Act, is owned by the Wild Macadamia Conservation (WMC) and managed in Africa by TopNut.

The selection originated from a seedling progeny trial in 1982 whereafter it was planted as a trial by several growers in the Gympie and Bundaberg regions in Australia. In 2017, after 20 years of sustained high productivity, MCT1 was released for commercial plantings in Australia and has been widely adopted throughout Australia's macadamia growing regions. With more than 1 million trees currently established in Australia, it has been accepted as an industry benchmark due to its consistent exceptional performance.

Summary

- Precocious variety with commercial yields from year 3 to 4.
- High kernel recovery of between 40% - 50%.
- Consistent high production.
- Combines high in-shell yield with high total kernel recovery.
- Improved productivity and therefore profitability for producers up to 40% - 50%.
- Precocity makes it suitable for replanting and replacement.
- *Macadamia integrifolia* (7/8) with *Macadamia tetraphylla* (1/8).

NOTE: Production and quality data is from the Gympie and Bundaberg orchards in Australia.



Nut characteristics:

Nut fall pattern

Middle to slightly late in the season (May to August)

Nut-In-Shell (NIS) size Shell

Moderate

Very thin and even

Nut In shell/kg

Average of 135 nuts per kg in-shell

Kernel recovery

Average in Australia in 2023 of 47%

Kernel size

19,5 mm. Ranges from 18 mm to 23 mm

Kernel shape

Uniform creamy white with a slightly flat base and pointed crest

% whole kernel

Average from 40 to 50%, depending on drying regime and cracking equipment

Husk

Thin and even

Tree characteristics:

Tree structure

Compact with an open tree canopy
The limb structure suggests tolerance to severe wind

Tree size

Small to medium sized

Flowering

Mid to late

Productivity

Very precocious and highly productive

Growth habit

Vigorous and hardy

Hybrid

Macadamia integrifolia (7/8) with
Macadamia tetraphylla (1/8).



Tree Management considerations:

- Due to high crop loads, higher inputs are required.
- Irrigation is recommended in areas where rainfall is limited or unreliable.
- Trees respond well to Ethephon treatment, but needs to be monitored closely for maturity before application.
- Does not appear to be susceptible to Abnormal Vertical Growth (AVG).
- Has not shown any susceptibility to husk spot.
- Appears to be resistant to pre-germination.
- Nuts mature later in the season.

Pollination:

- Genetic testing of nuts found that 98% of MCT1 kernels were produced by cross-pollination.
- Queensland Department of Agriculture & Forestry (QDAF) Regional Variety Trials including the MCT1 variety indicate low self-compatibility.
- Recommend planting with other varieties to optimise pollination potential.
- Existing MCT1 orchards with sustained high yields are planted with the following cross-pollinators: A4, A16, A203, A268, 814, Beaumont and Nelmac2.

The combined precociousness and consistency in high yields suggests that MCT1 is able to produce an income per tree that is 40-50% higher than current commercial varieties.

No evidence of poor nut set or cropping has been observed across orchards with bearing MCT1 and a wide range of varieties.



Cracking the top nut

Royalties:

- MCT1 is owned by the Wild Macadamia Conservation (WMC), is protected by Plant Breeders' Rights, and managed globally by the Australian Nurserymen's Fruit Improvement Company (ANFIC) Ltd.
- Royalty rates will be determined on a territory by territory basis in consultation with the global variety manager, the variety owners and the Master Licensee in that territory.
- Royalties earned by WMC are used for ongoing conservation of wild macadamia species.

Management and Plant Breeders' rights:

- TopNut manages all aspects of the commercialisation and protection of MCT1 in Africa.
- MCT1 can only be bought from **licensed nurseries**.
- All scion wood provided to licensed nurseries is cut from trees that have been authenticated by DNA testing.
- Only **licensed growers** will be able to plant MCT1.
- Growers will need to sign a non-propagation agreement.

Tree availability:

- TopNut has imported large quantities of scion wood from Australia and has successfully propagated trees at a licensed nursery.
- TopNut has established MCT1 screening blocks in all the major macadamia territories in Africa to evaluate MCT1's performance.
- Due to very high demand, supply may be limited in the short term. Commercial tree orders opened in early 2024 with availability from 2025

Disclaimer:

- The information regarding MCT1 in this factsheet is sourced from Australia (from observations in long term commercial orchards, QDAF Regional Variety Trials and ANFIC).
- Variety trials often have optimal cross-pollination and therefore the results may not be replicated by producers in solid blocks with limited cross-pollination.
- MCT1 shows very promising results and currently the variety is being evaluated in South Africa and African countries.
- Variety performance varies in different locations and it may not be suitable to all growing regions.
- TopNut provides this information as a guide only and takes no responsibility for its accuracy and for performance on individual farms.



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