



TopNut

Your Global Nut Specialists

MCT1 | Factsheet

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MCT1 is a premium Australian macadamia variety, protected under the Plant Breeders' Rights Act, and owned by Wild Macadamia Conservation Ltd (WMC). In Africa, it is managed by TopNut.

Developed from a seedling progeny trial in 1982, this hybrid cultivar (7/8 macadamia integrifolia and 1/8 macadamia tetraphylla) was tested in the Gympie and Bundaberg regions of Australia. Released for commercial planting in 2017 after 20 years of high productivity, MCT1 has become an industry standard with over 1 million trees established in Australia and is celebrated for its consistent and exceptional performance.

While South African data remains region-specific, early results show MCT1 outyields industry-standard cultivars and offers comparable or superior kernel recovery rates. These results position MCT1 as a top choice for new macadamia orchards.

Summary

- Precocious variety with commercial yields from year 3 to 4.
- Consistent high production, out-yielding industry standard cultivars.
- High kernel recovery of between 40% - 50%.
- Combines high in-shell yield with high total kernel recovery.
- Yields higher than Beaumont, with kernel recovery similar to A4.

Yield & quality:

Figure 1 and Table 1 from the SAMAC Empangeni trial site in South Africa, highlight the superior performance of MCT1, with Figure 1 showing high yields per tree (kg DNIS) and Table 1 demonstrating excellent total kernel recovery percentage, whole nut percentage and kernel mass.

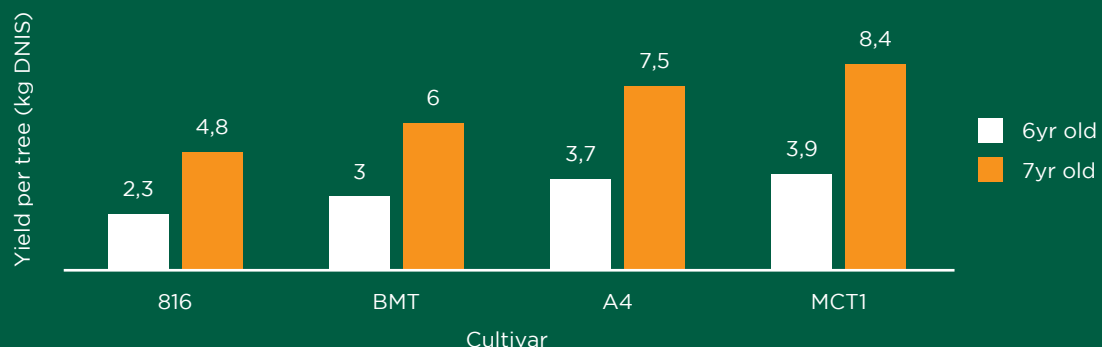


Figure 1. Yield per tree (kg DNIS) for the SAMAC Empangeni trial site.

Cultivar	Tree age	Total Kernel recovery %	Whole nut %	Kernel mass (g)
BMT	7,5	36%	36%	2
MCT1	7,5	48%	63%	3,4
A4	7,5	49%	67%	3,5
816	7,5	50%	73%	3,3

Table 1. Total kernel recovery percentage, whole nut percentage and kernel mass from nuts harvested from the SAMAC Empangeni trial site.



Nut characteristics:

Nut fall pattern	Middle to slightly late in the season
Nut-In-Shell (NIS) size	Moderate
Shell	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	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
Tree size	Small to medium
Flowering	Mid to late
Productivity	Very precocious and highly productive
Growth habit	Vigorous and hardy
Hybrid	7/8 <i>Macadamia integrifolia</i> and 1/8 <i>Macadamia tetraphylla</i>



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.
- Nuts mature later in the season.

Pollination:

- Genetic testing of nuts found that 98% of MCT1 kernels were produced by cross-pollination.
- Australian Regional Variety Trials, including the MCT1 variety, indicate low self-compatibility.
- Recommend planting alongside other varieties to enhance pollination potential.
- It is advised that MCT1 is planted with one or more of the following cross-pollinators: A4, A16, A203, A268, Nelmak2 and Beaumont.



Cracking the top nut

Royalties:

- MCT1 is owned by Wild Macadamia Conservation Ltd (WMC) and 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 MCT1 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 testing and non-propagation agreement.

Licensed nurseries:

Mpumalanga

Future Tree Nurseries

Cell: +27 82 609 8192

Email: admin@ftnurseries.com

KZN & Western Cape

Cultivating Solutions

Cell: +27 82 255 2331 / +27 79 609 9804

Email: info@cultivatingsolutions.co.za

Limpopo

Redsun Hortitech

Cell: +27 82 892 4894

Email: info@redsunhort.co.za

Disclaimer:

- The information on MCT1 in this factsheet is drawn from both Australian and South African sources, including observations from long-term commercial orchards, QDAF Regional Variety Trials, ANFIC, and macadamia cultivar trials conducted by SAMAC.
- Variety trials often have optimal cross pollination and therefore the results may not be replicated by producers in homogeneous blocks with limited cross pollination.
- Although MCT1 shows very promising results, the variety has not been tested in all areas of South Africa or Africa as yet.
- 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.



TopNut

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