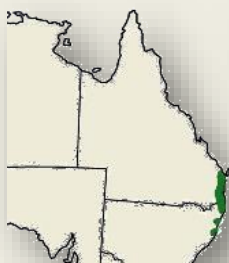


Macadamia nuts come from Australia, *NOT* from Hawaii!!

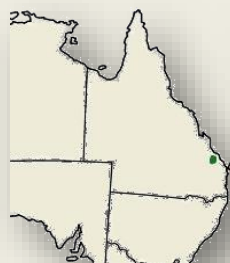
In Australia, we know that *Macadamia* nuts come from native Australian rainforest trees, and they were of importance to Indigenous Australians who were responsible for the distance dispersal of the trees. However, elsewhere in the world, many believe they come from Hawaii, where they were first introduced in 1922 for windbreaks and were later farmed commercially from 1925. It was not until 1997 that *Macadamia* nut production in Australia finally topped that of Hawaii. This is surprising when you hear that the first commercial *Macadamia* orchard in Australia was planted much earlier, in 1882, by Charles Staff, at Rous Mill near Lismore in north-eastern NSW. The secret to successful production seems to have been the innovation of grafting high yielding, good quality stocks onto seedlings in 1937. More recently, between 2012 – 2015, South Africa became the world's largest producer of *Macadamia* nuts.



Macadamia in flower
Photo: Carolyn Murtagh



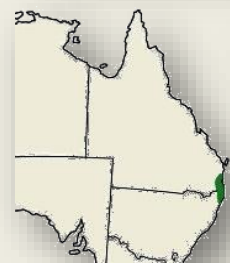
M. integrifolia
Edible



M. jansenii
Poisonous



M. ternifolia
Bitter, inedible



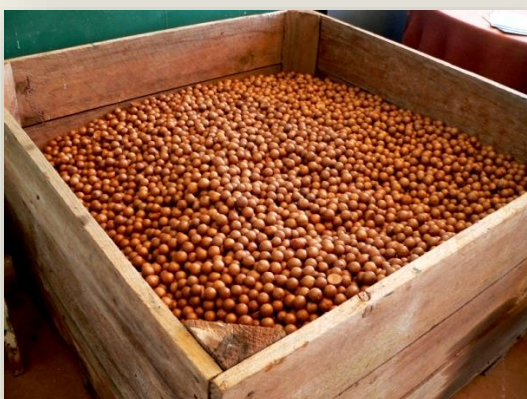
M. tetraphylla
Edible

We should feel a close bond with *Macadamia* as the genus belongs in the plant family **Proteaceae** and is closely related to Australian *Banksia*, *Grevillea* and *Hakea* and South African genera including *Protea*, *Leucodendron* and *Leucospermum*.

There are four recognised species of *Macadamia*: *M. tetraphylla* and *M. integrifolia* from the rainforests of north-eastern NSW and south-eastern Queensland; *M. ternifolia* from SE Queensland; and the recently discovered *M. jansonii* from near Gin Gin, west of Bundaberg. Of these, only the raw nuts of two species, *M. integrifolia*, and *M. tetraphylla*, can be eaten. These two species freely hybridise and there are now many hybrids and cultivars grown commercially.

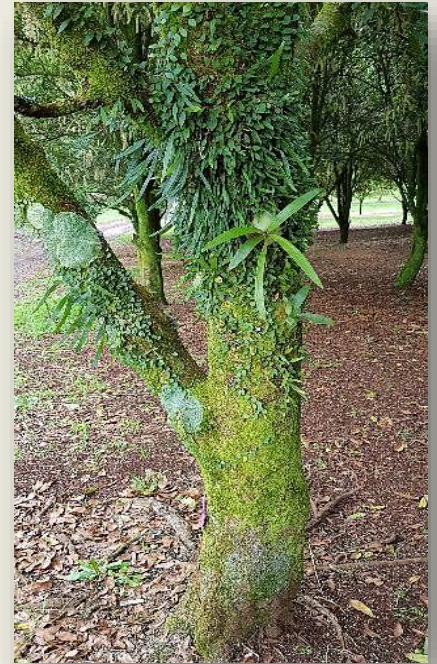
In contrast, *Macadamia ternifolia*, the Gympie Nut, has small, inedible, intensely bitter nuts, and *Macadamia jansonii*, the Bulburin Nut, or Jansen's Nut, described as a new species in 1991, has poisonous fruits and is now listed as an endangered species.

A recent study of *Macadamia* using chloroplast genome sequencing, showed that most of the world's *Macadamia* nut production can be traced back to grafted cultivars selected in Hawaii, most likely only one to three generations from the original wild source in Australia. The study suggested that almost all Hawaiian cultivars could be traced back to one wild site, and possibly even a single tree.



Although we have vast *Macadamia* nut farms, the four closely related species are now considered to be endangered in their native habitats. Except for *Macadamia jansonii* which occurs as a single recorded population of ~ 100 trees in Bulburin National Park, Miriam Vale in Queensland, the other three species have overlapping distributions where hybridisation is known to occur. Cultivated *Macadamia* nut trees have less genetic diversity than those

growing in the wild, and thus it is wild grown trees that may have greater ability to respond to changing environmental conditions, hence the importance of protecting them in their natural environments. However, botanists now believe that even though wild populations of *Macadamia* have been lost in the years since Europeans arrived in Australia, trees planted in parks and home gardens may be the source of genetic material that can be used for future plant breeding.



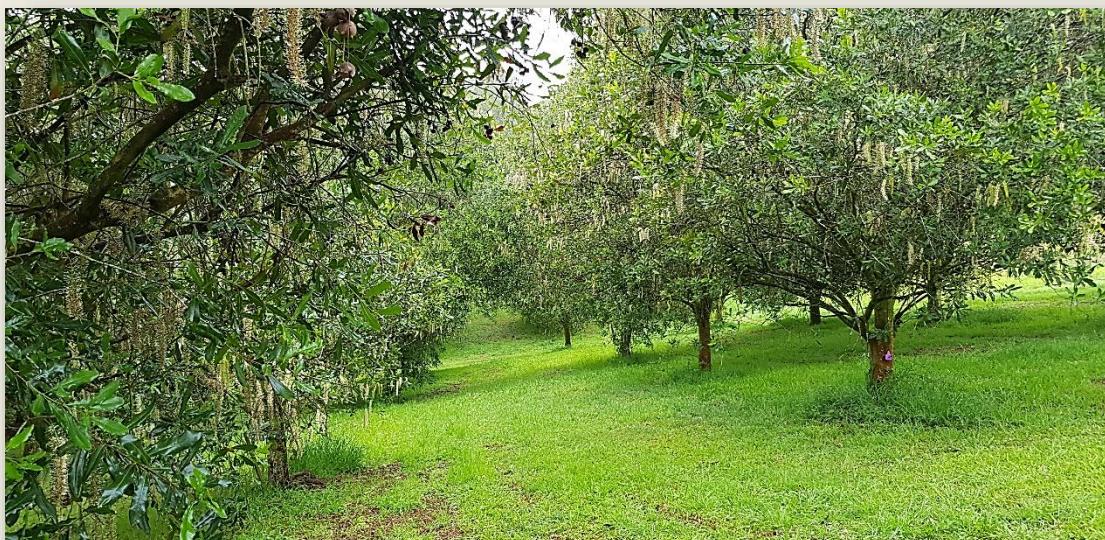
Macadamia nut trees that may possibly be of wild origin are now being sought in suburban backyards, old orchards, parks and gardens. Trees, particularly those 100 years old or more, are more likely to be of wild origin, rather than cultivated, and they can be registered at the on-line portal of Atlas of Living Australia: [The Wild Macadamia Hunt | Project | BioCollect \(ala.org.au\)](https://www.wildmacadamias.org.au/) and also see [Wild Macadamia Hunt \(arcgis.com\)](https://www.arcgis.com/).

Macadamia Nut Conservation Trust: <https://www.wildmacadamias.org.au/>
Suncoast Gold Macadamias: <http://www.suncoastgold.com.au/aboutus.php>
United States Department of Agriculture, Agricultural Research Service, Basic Report: 12131, Nuts, Macadamia nuts, raw.

Wikipedia: <http://en.wikipedia.org/wiki/Macadamia>

Nock C J, Hardner C M, Montenegro J D, et al. 2019. Wild origins of *Macadamia* domestication identified through intraspecific chloroplast genome sequencing. *Frontiers in Plant Science*, 10: <https://www.frontiersin.org/articles/10.3389/fpls.2019.00334>

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