

# Mandared mandarin

March 2020, Primefact 1761, First edition

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Figure 1. A Mandared mandarin tree.



Figure 2. Mandared mandarins.

## Estimated maturity period

Region	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sunraysia												

## Origin

The Mandared mandarin is a triploid hybrid of Nules clementine x Tarocco blood orange developed in Italy. Mandared has Plant Breeder's Rights (PBR) protection and is managed in Australia by the Australian Nurserymen's Fruit Improvement Company (ANFIC).

## Fruit quality

Table 1. Mandared mandarin fruit quality\* characteristics.

Skin	Easily peeled, pebbled. Softens and can become puffy with age. Some red 'blush' development on fruit.
Average rind thickness (mm)	3.1
Internal quality	Soft flesh, anthocyanin pigment development at maturity. The acid content stayed high throughout the maturity window, and did not drop even as rind quality deteriorated.
Average number of seeds	1.2
Juice per cent (%)	52
°Brix	12.6
Acid per cent (%)	1.37
Brix:acid ratio	9.2
Average fruit weight (g)	242
Average fruit diameter (mm)	80

\*Juice quality levels considered adequate for harvest and developed by sequential analysis of fruit from top-worked evaluation trees.

## Comments

- Some external blush and internal pigmentation developed on-field trees in 2015 and 2016.
- Low numbers of fruit produced at the first harvest in 2015.
- The extreme thorniness on the young field and top-worked trees makes the variety very difficult to manage. The thorny nature will reduce as trees age but there would be on-going issues with 'picker resistance', thorns piercing the fruit and possible erratic yields.

Table 2. Fruit quality of Mandared mandarin top-worked to Valencia orange on Poncirus trifoliata rootstock, Dareton Primary Industries Institute, NSW 2015-16.

Date	% Juice	°Brix	% Acid	Brix:acid ratio	BrimA
22.6.2015	51	10.8	1.31	8.2	92
29.7.2015	53	12.4	1.38	9.0	114
10.8.2015	52	12.7	1.35	9.4	120
7.6.2016	50	12.0	1.46	8.2	102
4.7.2016	52	12.4	1.38	9.0	113
18.7.2016	53	12.3	1.35	9.1	114
29.07.2016	54	12.6	1.38	9.1	117
Mandarin Minimum Standard	35	–	–	–	110

**The development of varieties to create a blood mandarin category is a priority in several international citrus breeding programs.**

## Acknowledgements

Australian Nurserymen's Fruit Improvement Company (ANFIC)

Citrus Australia Ltd (CAL)

Department of Primary Industries and Regional Development, WA

Hort Innovation Australia

**Hort  
Innovation**  
Strategic levy investment

**CITRUS  
FUND**

This project has been funded by Hort Innovation using the citrus research and development levy and funds from the Australian Government. For more information on the fund and strategic levy investment visit [horticulture.com.au](http://horticulture.com.au)

Reference number: PUB20/171

State of New South Wales through the Department of Planning, Industry and Environment ("Department") 2020. The content has been developed by the Department using funds provided by Horticulture Innovation Australia Limited ("Hort Innovation").

The information contained in this publication is based on knowledge and understanding at the time of writing (December 2019) and was generated from field and nursery trees at Dareton Primary Industry Institute, Sunraysia, NSW, unless otherwise stated. Where quantitative data are presented (e.g. % Juice or rind thickness) they are based on measured properties. Where qualitative data are presented (e.g. thorniness or tendency to split), they are based on observations or brief notes recorded in the field.

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