NSW GOVERNMENT
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primefact

Nectar mandarin

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Figure 1. A Nectar mandarin tree.

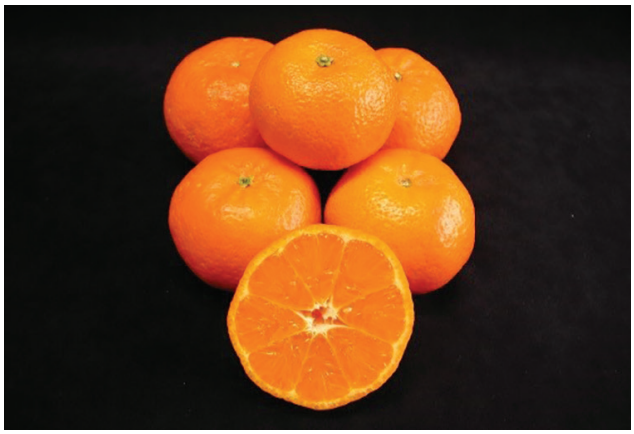

Figure 2. Nectar mandarins.

Estimated maturity period

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

Origin

The Nectar mandarin was developed in Israel from the Wilking mandarin. Nectar 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. Nectar mandarin fruit quality* characteristics.

Skin	Relatively easy to peel, orange–yellow, slightly pebbled.
Average rind thickness (mm)	2.7
Internal quality	Rich, sweet flavour with high juice content. Sweet with good acid balance. Highly palatable.
Average number of seeds	<1
Juice per cent (%)	48
˚Brix	13.1
Acid per cent (%)	1.0
Brix:acid ratio	13.1
Average fruit weight (g)	128
Average fruit diameter (mm)	67

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

Comments

- The Nectar mandarin is almost seedless, even in mixed plantings.
- The tree is upright, spreading and dense with fruit produced within the canopy. This feature could be an advantage in the hot, sunburn prone regions of Australia.
- Fruit production began at year three from planting.
- Trees will require a high level of management to maintain fruit size, reduce alternate bearing and develop a productive canopy.
- Tree branches are not thorny.
- Some basal fruit split.
- Nectar's habit of producing a lot of the fruit within a dense canopy makes it difficult to estimate the amount of fruit set, along with the level and timing of fruitlet removal.
- Nectar is also unusual as it is slow to reach the cell expansion phase of fruit development.
- Nectar has a mid-season maturity period but begins the cell expansion phase at a time similar to late varieties such as low-seeded Murcotts and Mandalate mandarin. Waiting until all fruit has reached the cell expansion phase might be too late to effectively manage the crop load and achieve size benefits from fruitlet removal.

Table 2. Average yield per tree* on nursery propagated field trees (Sunraysia).

Rootstock	Average yield per tree (kg)				
	2009 (4-y-old trees)	2010 (5-y-old trees)	2011 (6-y-old trees)	2012 (7-y-old trees)	2013 (8-y-old trees)
C35 Citrange	19	1	32	8	23
Citrange	23	18	48	32	44
Citrange (Queensland site)	–	24	26	35	–
Cleopatra	2	6	12	1	26
Swingle	21	2	63	4	59
Trifoliata	2	9	51	5	59

The fruit produced at the Queensland evaluation site had a larger natural fruit size compared with fruit produced in southern states. Mandarins tend to achieve larger fruit size in the more sub-tropical climate of Queensland. The specialist mandarin growers in Queensland may be better able to manage the Nectar variety. Gibberellic acid (GA) sprays were used successfully to improve rind condition and extend the harvest period.

Table 3. Average yield per tree* on trees top-worked to Valencia orange (Sunraysia).

Rootstock	Average yield per tree (kg)						
	2009	2010	2011	2012	2013	2014	2015
Citrange	47	No harvest	62	32	56	45	No harvest
Cleopatra	22	No harvest	29	16	24	11	No harvest
Trifoliata	48	No harvest	54	39	74	33	No harvest

*Average yield per tree results are from a small number of evaluation trees and should only be used as a general indication of the variety's potential yield.

The alternate bearing pattern that was shown at the southern trial site in 2010, 2012, 2014 and low yields in 2014 and 2015 reinforces the need for a high level of crop management with Nectar. A combination of management practices such as pruning, flower suppression and fruit thinning will be essential for success.

The difficulty in achieving commercially acceptable fruit size in southern Australia may see most of the plantings occur in Queensland. Commercial-scale plantings were established in Queensland with the first marketable fruit produced in 2013.

Acknowledgements

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