

Dolci navel orange

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Figure 1. A Dolci navel orange tree.



Figure 2. Dolci navel oranges.

Estimated maturity period

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

Origin

The Dolci navel orange originated from a limb mutation from a Washington navel orange tree on a property at Leeton, NSW, by a member of the Pacific Fresh citrus packing group. Dolci navel has Plant Breeder's Rights (PBR) protection and is managed in Australia by Variety Access.

Fruit quality

Table 1. Dolci navel orange fruit quality* characteristics.

Skin	Brown–olive colour, slightly pebbled, peels similar to a Washington navel orange.
Average rind thickness (mm)	5.3
Internal quality	Sweet taste related to the low acid content of the fruit. Flesh texture is similar to a Washington navel. Consistently high juice content. Good palatability.
Average number of seeds	0
Juice per cent (%)	51
°Brix	10.9
Acid per cent (%)	0.82
Brix:acid ratio	13.4
Average fruit weight (g)	320
Average fruit diameter (mm)	84

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

Comments

- Trees were top-worked at Dareton Primary Industries Institute's southern Australia evaluation site in 2011.
- Fruit for assessment was produced in 2014 and was consistent with the brown skin mutation on the original mother source tree.
- The maturity period is early mid-season and would class the Dolci navel as an early Washington navel type.
- The trade name 'Dolci', which can mean sweet in Italian, was chosen for the marketing program to highlight a positive eating quality.
- The limb mutation is being commercialised as a novelty citrus product, predominantly planted in the Riverina region of NSW.
- Commercialisation is in the early stages and only on a limited scale as market reaction is being sought for the national and international potential of the selection. Initial reaction is usually based on a visual response to the skin colour and often tends to be negative. Fruit tastings have usually overcome this first reaction as eating quality is high at full maturity.

Table 2. Fruit quality of Dolci navel orange top-worked to Valencia orange on Carrizo citrange rootstock, at Dareton Primary Industries Institute, NSW, during 2014–2017. See 'Estimated maturity period' to interpret this data.

Date	% Juice	°Brix	% Acid	Brix:acid ratio	BrimA
23.5.2014	53	9.6	0.86	11.2	102
3.6.2014	51	10.9	0.81	13.4	126
12.6.2014	53	10.4	0.67	15.6	128
26.6.2014	54	10.5	0.67	15.6	129
14.7.2014	53	10.5	0.67	15.6	129
18.5.2015	52	10.4	0.86	12.1	115
29.5.2015	48	10.7	0.79	13.6	125
11.6.2015	51	10.6	0.77	13.8	124
22.6.2015	49	11.6	0.81	14.4	138
6.7.2015	49	12.0	0.71	16.9	151
17.7.2015	48	11.9	0.62	19.2	155
29.7.2015	48	11.6	0.61	19.1	151
6.5.2016	49	10.5	0.74	14.3	125
16.5.2016	51	11.0	0.79	14.0	130
27.5.2016	43	11.2	0.72	15.6	137
7.6.2016	46	11.4	0.74	15.5	140
21.6.2016	49	12.0	0.66	18.2	154
4.7.2016	49	11.6	0.63	18.5	150
5.6.2017	52	10.6	0.98	10.8	110
15.6.2017	52	10.7	0.93	11.5	115
26.6.2017	52	10.8	0.84	12.8	122
7.7.2017	51	11.6	0.86	13.4	134
Orange minimum standard	38	9.0	–	9	90

The olive skin colour can relate to a sweet, high-quality eating experience, so harvest timing and internal quality standards for marketing need to be established for this new variety.

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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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