NSW GOVERNMENT Department of Primary Industries

primefact

TDE 2 (Shasta Gold) mandarin

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Figure 1. A TDE 2 (Shasta Gold) mandarin tree.

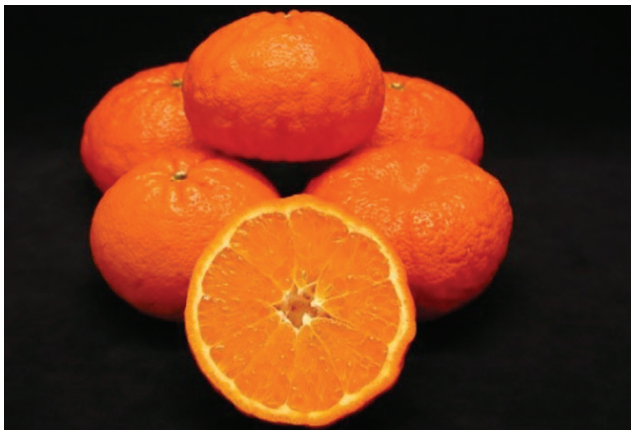

Figure 2. TDE 2 (Shasta Gold) mandarins.

Estimated maturity period

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

Origin

The TDE 2 is a hybrid triploid selection of (Temple tangor × 4n Dancy mandarin) × Encore mandarin bred by the University of California, USA. TDE2 has Plant Breeder's Rights (PBR) protection and is managed in Australia by Nu Leaf IP Pty Ltd.

Fruit quality

Table 1. TDE 2 mandarin fruit quality* characteristics.

Skin	Easy peel, deep orange colour, pebbled. Coarsest skin texture and highest rind thickness of the 3 TDE hybrids.
Average rind thickness (mm)	4.1
Internal quality	˚Brix was 11.2–12.4 during the estimated maturity period, with acid content of the fruit remaining relatively high at 0.9–1.2% in 2010. Internal quality improved in 2011 with ˚Brix between 12.3–13.4 and acid 0.8–1.2%. In 2012, ˚Brix was between 12.9–13.9 and acid approximately 1.0%.
Average number of seeds	<1
Juice per cent (%)	50
˚Brix	12.5
Acid per cent (%)	1.0
Brix:acid ratio	12.5
Average fruit weight (g)	261
Average fruit diameter (mm)	89

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

Comments

- TDE 2 is the latest maturing of the TDE hybrids.
- The strong alternate bearing habit of the TDE hybrids in some environments (from overseas data) means that extra canopy management strategies, such as pruning and fruit thinning, may be required. Alternate bearing did occur on evaluation trees that were fruit thinned and receiving a high level of horticultural management in 2012.
- Fruit remains on the trees in good condition for an extended period and achieved the best internal quality as determined by ˚Brix and ˚Brix:acid ratio of the three hybrids in 2010.
- It was more difficult to distinguish between the three TDE hybrids on internal and eating quality during the 2011 and 2012 seasons.
- The thorniness of the trees will pose a problem at harvest. An early pruning program to establish a limb framework would help to alleviate the thorny nature of young trees and make harvest activities less difficult as trees mature.

Table 2. Average yield per tree* on trees top-worked to Valencia orange.

Rootstock	Average yield per tree (kg)		
	2010	2011	2012
Citrange	31	99	37

*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.

There is no commercial interest in TDE 2 in Australia. Commercialisation of the TDE hybrids has halted in the USA.

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