

Jincheng orange

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Dave Monks and Graeme Sanderson, Research Horticulturists, Dareton



Figure 1. Jincheng oranges.

Estimated maturity period

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

Origin

The Jincheng orange is a variety developed in China and was introduced into Australia as a processing orange. It was introduced to Australia as a public variety.

Fruit quality

Table 1. Jincheng orange fruit quality* characteristics.

Skin	Slightly pebbled to coarse. A low crop load will increase the coarse texture of the skin and rind thickness.
Average rind thickness (mm)	6.0
Internal quality	Reported to have a high °Brix and juice content that makes it suitable for juice processing. °Brix levels can reach 12–13 at full maturity with acid levels below 1.0%.
Average number of seeds	10
Juice per cent (%)	46
°Brix	10.1
Acid per cent (%)	0.92
Brix:acid ratio	11.0
Average fruit weight (g)	227
Average fruit diameter (mm)	75

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

Comments

°Brix levels reached 12.1 in mid-August 2011 from trees on trifoliata rootstock at the Riverina evaluation site. The corresponding juice acid level of 1.3% is typical for fruit grown on trifoliata rootstock. At the Sunraysia harvest in 2012, °Brix only reached 10.5 at the end of July with acid % remaining high at 0.95 from top-worked trees on citrange rootstock.

- The Jincheng orange was very slow to crop on top-worked trees at the Sunraysia evaluation site.
- The fruit was generally seedy.
- Grafts have retained juvenile characteristics of excessive thorniness and vigorous vegetative growth.
- The Bintangcheng variety was established along with Jincheng as top-worked grafts and produced fruit within three years. Bintangcheng also 'settled down' and had less thorny new growth in comparison to Jincheng.
- Jincheng was the most difficult and 'dangerous' tree to manage in the evaluation trials due to the presence of thorns over the majority of the canopy. This problem occurs on both top-worked trees and nursery-grown field planted trees.
- Mechanical harvesting may be an option to overcome the thorniness issue, but fruit puncturing during harvest would still require processing of fruit within 24 hours of harvest to reduce the chance of fruit breakdown and juice spoilage.

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

Rootstock	Average yield per tree (kg)	
	2011	2012
Citrance	41	86
Cleopatra	40	84
Trifoliata	75	103

*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.

Jincheng was viewed by two Chinese scientists at the Sunraysia site in 2012 and doubts were raised as to variety identification. There is a possibility that a mutation may have occurred and a variant was under evaluation.

Budwood distribution of Jincheng by Auscitrus has been suspended, field evaluation finished and trees have been removed.

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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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