NSW GOVERNMENT Department of Primary Industries

primefact

IRM2 mandarin

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Figure 1. An IRM2 mandarin tree.

Figure 2. IRM2 mandarins.

Estimated maturity period

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

Origin

IRM2 is a low-seeded Murcott mandarin developed by irradiation breeding in Queensland, Australia. It has Plant Breeder's Rights (PBR) protection.

Fruit quality

Table 1. IRM2 mandarin fruit quality* characteristics.

Skin	Yellow to orange. The rind can adhere tightly to the flesh. IRM2 typically reaches full skin colour in mid-July, whereas IRM1 does not fully colour until early August. It is relatively easy to remove the skin once an initial break has begun. IRM2 is predominantly smooth with some ridging at the stem end of the fruit. Skin is sensitive to sunburn, wind scar and repeated fungicidal sprays.
Average rind thickness (mm)	2.8
Internal quality	Rich, sweet flavour with high ˚Brix levels tending to be lower than IRM1, reaching 15 in late September. Earlier maturing than IRM1, mainly due to a lower juice acid content at the beginning of its potential marketing period in mid–late August.
Average number of seeds	2.5
Juice per cent (%)	49
˚Brix	14.8

Acid per cent (%)	1.1
Brix:acid ratio	13.5
Average fruit weight (g)	88
Average fruit diameter (mm)	56

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

Comments

Initial evaluation at southern Australia sites shows that in comparison to IRM1, IRM2:

- reaches full skin colour earlier
- is earlier to mature, with a similar maturity period to the Mor low-seeded Murcott
- has smaller fruit size and lower fruit weight
- had a tree growth rate that was much slower on seedling trees planted in autumn 2007.

Yields on a range of rootstocks were <18 kg per tree in 2010. A high proportion of fruit was lost to sunburn due to low vigour of the young trees. IRM2 top-worked to mature Valencia in 2006 with a citrange, trifoliata or Cleopatra mandarin rootstock had higher yields (Table 2) due to the vigour induced by the mature rootstocks. Size grading of fruit produced from citrange rootstock trees showed that 69% of fruit harvested was in the 53–61 mm size range.

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

Rootstock	Average yield per tree (kg)				
	2009	2010	2011	2012	2013
Citrange	30	54	51	38	41
Cleopatra	31	58	49	47	33
Trifoliata	56	69	72	60	110

*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.

A fruit staining problem occurred with low-seeded Murcotts during 2011 in Queensland. Repeated fungicidal sprays in combination with wetting agents are suspected of causing this. Irradiated Murcott selections appear to be more sensitive to this blemish than others. The problem has not been seen in the dry, less humid southern evaluation sites that are not subject to repeated fungicidal sprays.

It has been difficult to achieve 'profitable' fruit size for Murcott mandarins in southern Australia.

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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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