

Fukumoto Navel

Origin

The Fukumoto originates from Japan where it was first grown by S. Fukumoto. It was fairly popular in the warmer south western navel growing regions of Japan. It was released in California in 1990.

Ownership

Open.

General description

An earlier maturing navel with very good internal quality. External colour is excellent and substantially better than other navels; it is almost mandarin like in its deep orange to red rind colour. Reports from California indicate that there is some form of incompatibility with Fukumoto on trifoliolate hybrids, although to date no disease has been linked to this disorder. To date this problem has not been observed in South Africa except on C35 rootstock. In case problems do start to develop as in California a new selection has been imported for evaluation under our conditions. Existing plantings in South Africa are being kept under observation; the oldest commercial orchards were planted in 2003. The Fukumoto has not been planted on a large scale in South Africa to date which may well be fortunate should the Californian problem occur here.

Tree characteristics

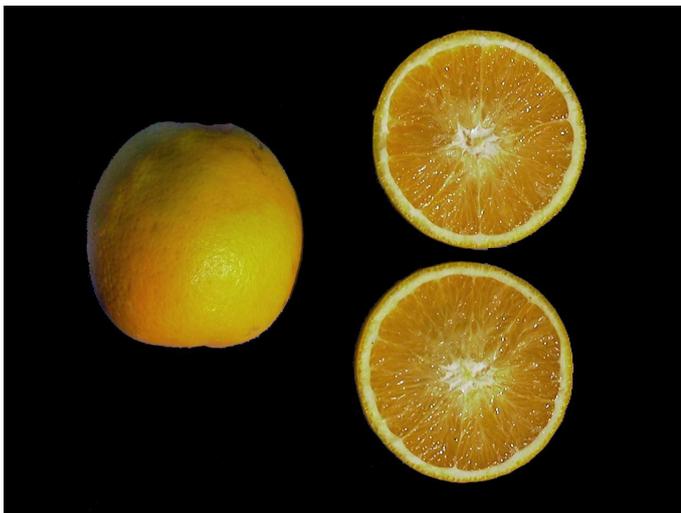
The tree is similar in growth, shape and yield to other navel selections. Vigour is also similar to normal navels.

Rootstock options

From surveys conducted in South Africa to date, it is not warranted to rule out Carrizo citrange, but in view of the Californian experience, as well as the limited South African experience, it may well be safer not to use C-35 citrange at this stage. Growers in high quality navel areas can probably make use of non trifoliolate rootstocks, provided that soil type and replant situation allow for this choice. Swingle citrumelo should be avoided.

Fruit characteristics

Fruit size is a uniform large and navel ends are medium to small. Fruit shape is round to slightly elongated. The fruit rind colour is uniform and develops a deep orange to red colour at maturity making this a highly attractive fruit. Peelability and rind oil is reasonable and similar to most other navel selections. Internal flesh colour is orange, and flesh texture is tender like other navels. The flavour is very good with high sugars, acid levels and a ratio of 10:1 early in May. Fruit size ranges from 75 to 85 mm (Counts 72 to 56) with normal crops in navel areas.



Fukumoto fruit showing typical shape, rind texture and rind thickness. Note the flattened navel end.



Six year old Fukumoto navel tree on Carrizo citrange showing healthy growth and no signs of incompatibility.



Version 1: May 2012

Production

Yields of 50 to 60 tons per hectare are normal for mature orchards. Young trees bear well.

General

The Fukumoto does not require crop manipulation and it is not susceptible to any pests and/or diseases other than those common to other navel selections. Harvest, packing and shipping requirements as well as post harvest disorders are as for other navels.

Status, Area Suitability and Availability

Commercial - suitable navel areas. Limited quantities of propagation material are available from the Citrus Foundation Block.

Key References

The information in this fact sheet is based on evaluations by Citrus Research International.

Evaluation Data

Internal Quality - Fukumoto on Carrizo citrange - Count 64						
Date	Juice %	Brix	Acid	Ratio	Seed	Colour
02/04/2009	44.3	9.8	1.26	7.8	0	2-4
07/04/2009	49.8	10.3	1.25	6.6	0	2-3
16/04/2009	47.8	11.3	1.11	10.2	0	1-2

Count Distribution

Count	40	48	56	64	72	88	105	125
%	1.0	3.0	6.0	17.0	28.0	33.0	12.0	0

Production

41.4 Kg per tree and 36 tons per hectare at 5.75 x 2 m spacing.

Export %

Grade	Percentage
1	47
2	20
3 & 4	33

Note: These data are from 6 year old trees in the Sunlands region of the Sundays River Valley in the East Cape.

Comments

The Fukumoto is a very good quality, attractive navel that could be of value in starting the season with fruit of superior quality and appearance. The incompatibility problems being encountered in California (CA) with Fukumoto on trifoliolate hybrid rootstocks are mainly on C35 citrange. In South Africa the only incompatibility problems found to date have been on Swingle citrumelo where trees appear healthy but have a clear indication of incompatibility at the bud-union. The existing trial trees of Fukumoto on C35 are also more dwarfed than the surrounding navel varieties on the same rootstock which may indicate incompatibility. The 6 year old orchards evaluated in the SRV are on Carrizo citrange and to date there have been no signs of the incompatibility that had been found in CA. From comments made by a number of CA citrus growers and technical people it would appear that well managed orchards planted using superior quality trees are performing well with no incompatibility problems evident.



Disclaimer: Information contained in this publication is provided as general advice only. For application to specific circumstances, professional advice should be sought.