

Owari Satsuma

Origin

The Owari is of unknown Japanese origin, presumably named after the old "Owari" province (now Aichi). South Africa has the Frost selection, introduced from California and distributed in trials in various regions of South Africa during the 1960s by Prof Piet Oberholzer of the University of Pretoria. The most significant of these trials was to be a small block planted about 1970 at Baddaford near Fort Beaufort in the East Cape Midlands as it was from this planting that the first consignment of superior quality Satsumas was exported to the UK, proving that South Africa was able to produce quality Satsumas. Virus free material was released in 1983. Although the Owari did not prove to be popular in Japan the Satsuma industry started with this selection in both Spain and South Africa.

Ownership

Open.

General Description

A mid to late maturing Satsuma selection, of good quality, maturing mid April to early May in the cool citrus production areas. The trees are small and produce good yields of medium fruit size.

Tree Characteristics

The trees are small and compact, but not dense and with dark green leaves. Trees are precocious and bear very good yields.

Rootstock Options

It is important to use good quality inducing rootstocks, depending on soil type and whether plantings are on new or replant ground. Rootstocks used in South Africa

include Carrizo/Troyer citrange and Cleopatra mandarin. Swingle citrumelo can have a delaying effect on fruit colour development. Trees on Australian trifoliolate are small and have been known to snap off at the bud union due to a severe benching, especially when the trees are older. It has also been reported that there is delayed incompatibility with Owari on citranges after 15-20 years in California. These problems have not been observed in South Africa and one theory is that budding heights in South Africa are higher reducing these effects.

Fruit Characteristics

Fruit size varies from 70 to 50 mm (counts 1X to 4) with most fruit being in counts 1 to 3. Owari fruit is larger than Miho Wase, but smaller than Kuno. Fruit shape is flat, but can have a pronounced neck when grown in warmer, inland areas. The rinds can be coarse and rind colour pale at the beginning of the harvest season, particularly in borderline climates or with incorrect management practices. Internal colour is deep orange and flesh juicy with good internal quality when grown in suitable areas. The fruit is seedless and very easily and cleanly peeled. If left to hang it becomes loose skinned (puffy), but is more robust than other Satsuma selections. Maturity in the Cape areas is mid April to early May.

Production

Yields of 50 to 60 tons per hectare are normal for mature orchards.



Owari fruit showing typical flat shape, rind thickness and rind texture.



Four year old Owari tree on Carrizo citrange showing typical shape and growth with a very good yield (Tree height 2.0m).



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General

Deficit irrigation may be necessary to enhance sugar levels. As with all Satsumas, nitrogen should not be applied too late. Satsumas are degreened successfully. No specific pest and disease problems have been noted under South African conditions, except for fruit piercing moths (*Serrodus partita*) that occur erratically approximately every 10 years. The moths live in the semi desert regions and in years when abnormally high rainfall occurs in the late summer the moths breed profusely due to over abundance of vegetative growth on the indigenous wild plum trees (*Pappea capensis*). This causes a migration of the moths away from their breeding grounds and in so doing they pass through regions such as the East Cape citrus areas where they cause varying degrees of damage on early maturing cultivars such as Satsumas. Control options are limited and there is little that can be done to eradicate the moths once on the move. For further details refer to the section on Fruit Piercing Moths by S. D. Moore in the Production Guidelines. Sunburn can be a problem in dry climates with terminal fruit being the worst affected. Wind blemish can reduce exportable fruit. Satsuma mandarins have a short harvest period which usually lasts 2 - 3 weeks, although selective picking can extend this period. If hung too late in wet conditions rind breakdown (water spot) can occur. Harvest, packing and shipping requirements as well as post harvest disorders are as for other Mandarins.

Status, Area Suitability and Availability

Satsuma is the cold hardiest of all the mandarin selections. It appears to be especially suited to southern Africa's cooler coastal zones where it is planted commercially and is marginal in the cool inland production areas. Fruit shape is flatter in cold areas and close to the coast. 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 - Owari on Carrizo citrange - Count 1/2 - Western Cape						
Date	Juice %	Brix	Acid	Ratio	Seed	Colour
08/03/2011	56.6	9.2	1.92	4.8	0	8
06/04/2011	58.4	9.3	1.21	7.7	0	6
11/05/2011	53.4	11.5	0.88	13.1	0	1-2

Count Distribution

Count	1XX	1X	1	2	3	4	5
%	7	5	21	26	22	14	5

Production

117.1 Kg per tree and 63 tons per hectare at 5.75 x 3.25 m spacing.

Export %

Grade	Percentage
1	61.45
2	4.79
3	7.85
4*	22.38

Note: These data are from 9 year old trees in the Gamtoos Valley for 2008 season.* Mainly oversized, coarse fruit

Comments

The Owari was the first Satsuma selection planted in South Africa. It has been replaced mainly by improved, earlier maturing selections.



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