

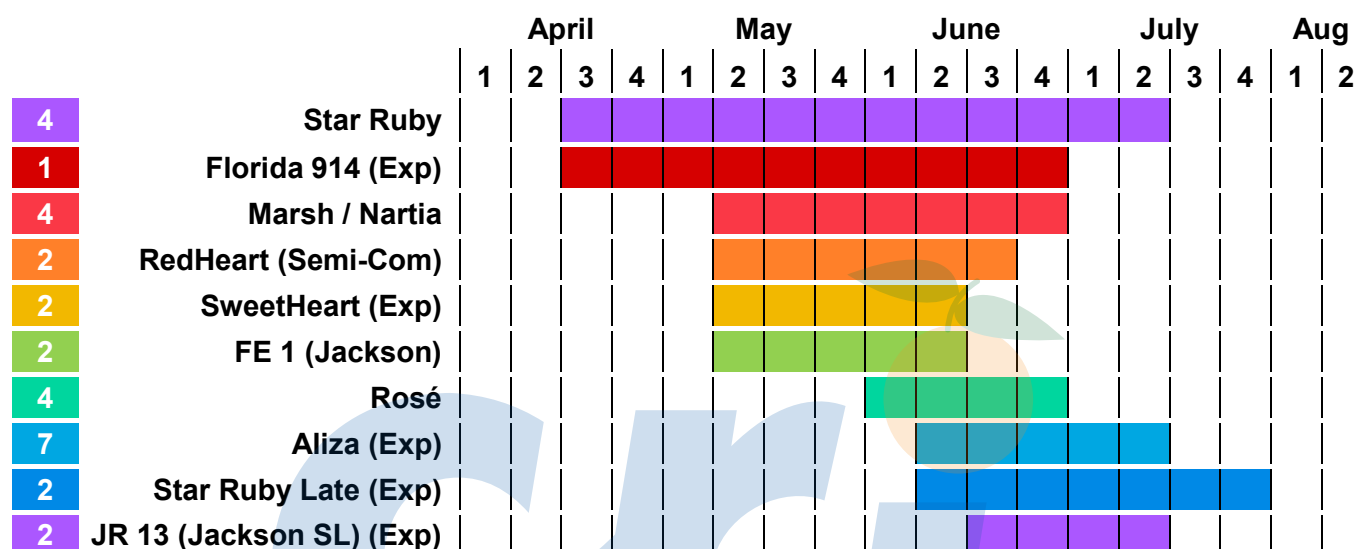
Grapefruit





Grapefruit Maturity Periods

Limpopo



Key:

Exp	Experimental Cultivar
1	CGA Cultivar Company
2	Citrogold
3	Eurosemillas
4	Open
5	Stargrow
6	XLnT
7	Citrus Genesis

Updated: July 2024



Flame Grapefruit

Origin

The Flame originated as a seedling of Henderson; the seed was collected in Texas and planted in Florida in 1973. Flame was released in Florida in 1987 and imported to South Africa from California in 1990. Budwood was released in South Africa during 1993.

Ownership

Open.

General Description

The Flame is similar to other grapefruit trees except for its improved internal colour which is similar to Rio Red and Nelruby.

Tree Characteristics

The tree is similar in other aspects to other red selections, except for Star Ruby.

Rootstock Options

Suggested rootstocks are Swingle citrumelo and Carrizo/Troyer citrange, depending on soil type and whether plantings are on new or replant ground. Rootstocks inducing lower sugars levels are not advised.

Fruit Characteristics

Fruit size is a uniform large with smooth rinds. Fruit shape is round to flat, depending on climate, and fruit rind colour is fairly uniform developing a red blush at

maturity similar to Henderson, but darker than Redblush. Internal flesh colour is a medium to dark red. Flame has low seed counts. The flavour is good in late May to early June in suitable climatic areas. Internal quality is slightly superior to Star Ruby. The majority of fruit vary from 98 to 84 mm (Counts 32 to 48).

Production

Yields of 60 tons per hectare are expected for mature orchards.

General

The Flame does not require crop manipulation. It is not susceptible to any pests and/or diseases other than those common to other grapefruit selections, i.e. CTV. Harvest, packing and shipping requirements as well as post harvest disorders are as for other grapefruit.

Status, Area Suitability and Availability

Commercial - suitable grapefruit (hot & humid) areas. No propagation material is currently available at the Citrus Foundation Block due to lack in grower demand.



Flame fruit showing typical shape, rind blush, rind thickness, internal colour and low seed counts.



Eighteen year old Flame tree on Swingle citrumelo showing typical tree shape and yields (tree height 3m).

Updated: May 2012

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Key References

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

Evaluation Data

Internal Quality

Information still to be included.

Count Distribution

Information still to be included.

Production

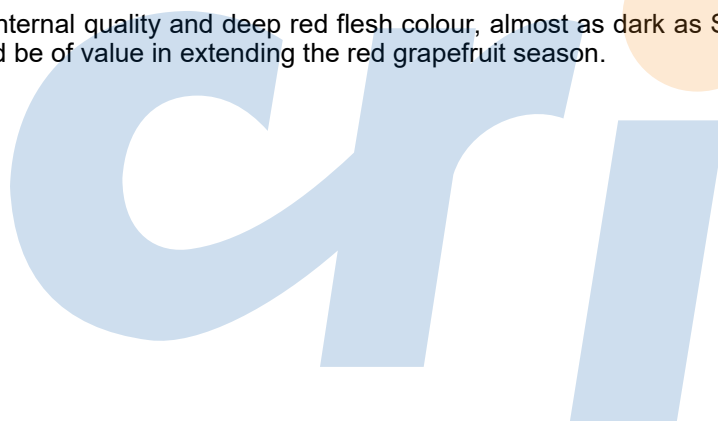
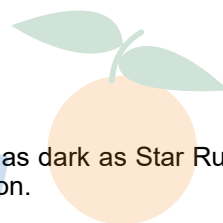
Information still to be included.

Export %

Information still to be included.

Comments

The Flame has very good internal quality and deep red flesh colour, almost as dark as Star Ruby. It matures from mid May to early June and could be of value in extending the red grapefruit season.



Jackson Grapefruit

Origin

Jackson is a virtually seedless limb sport of Triumph grapefruit. Triumph was the first named grapefruit selection and was most probably one of the original grapefruit seedlings grown in Florida. Its lack of bitterness and exceptional flavour suggest it may have been an orange-grapefruit hybrid.

Ownership

Leon Esselen - Esselen Nursery, Malelane, Mpumalanga.

General Description

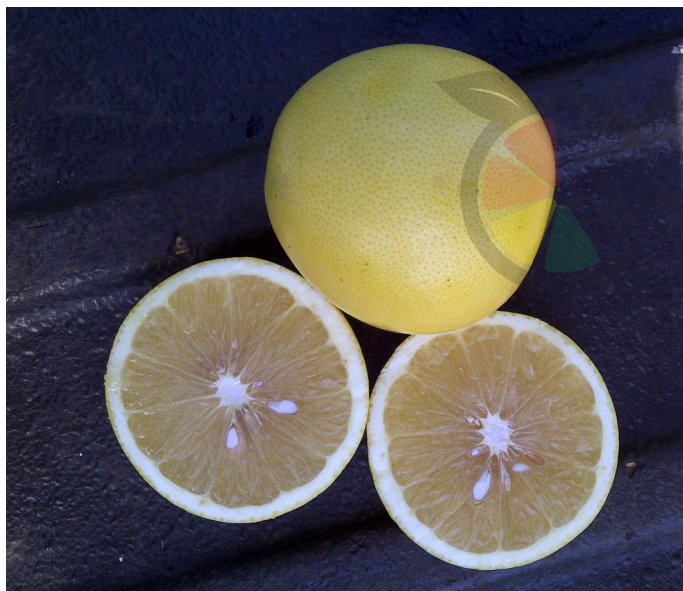
Jackson is similar to other grapefruit in growth and shape, but boasts a unique flavour, with a dash of lime, high sugars and low naringin levels, lacking bitterness. Fruit size is smaller than other grapefruit selections.

Tree Characteristics

Compared to Star Ruby, the trees have smaller leaves, and are more compact. As a result trees can be spaced closer together.

Rootstock Options

Suggested rootstocks are Swingle citrumelo, Carrizo/Troyer citrange and C35 citrange, depending on soil type and whether plantings are on new or replant ground. Rootstocks inducing lower sugars levels are not advised.



Jackson fruit showing typical shape, internal colour and low seed counts

Fruit Characteristics

Fruit size is a uniform medium to medium large with smooth rinds. Fruit shape is round to flat, depending on climate, and fruit rind colour and flesh colour are similar to Marsh but with a deep yellow to gold external colour at maturity. Jackson has very low seed counts. The flavour is excellent with high Brix levels (increases substantially with maturity) and lower naringin than Marsh and matures mid June in suitable areas. The majority of fruit vary from 77 to 80 mm (Count 64).

Production

Difficult to determine at this stage. Still being evaluated.

General

The Jackson does not require crop manipulation. It is not susceptible to any pests and/or diseases other than those common to other grapefruit selections, i.e. CTV. Harvest, packing and shipping requirements as well as post harvest disorders are as for other grapefruit.

Status, Area Suitability and Availability

Experimental - suitable grapefruit (hot & humid) areas. Limited quantities of propagation materials are available from the Citrus Foundation Block.



Fifteen year old Jackson tree on Carrizo citrange showing typical tree shape and yields (tree height 2.5m).

Updated: May 2012

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Key References

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Evaluation Data

Internal Quality

Information still to be included.

Count Distribution

Information still to be included.

Production

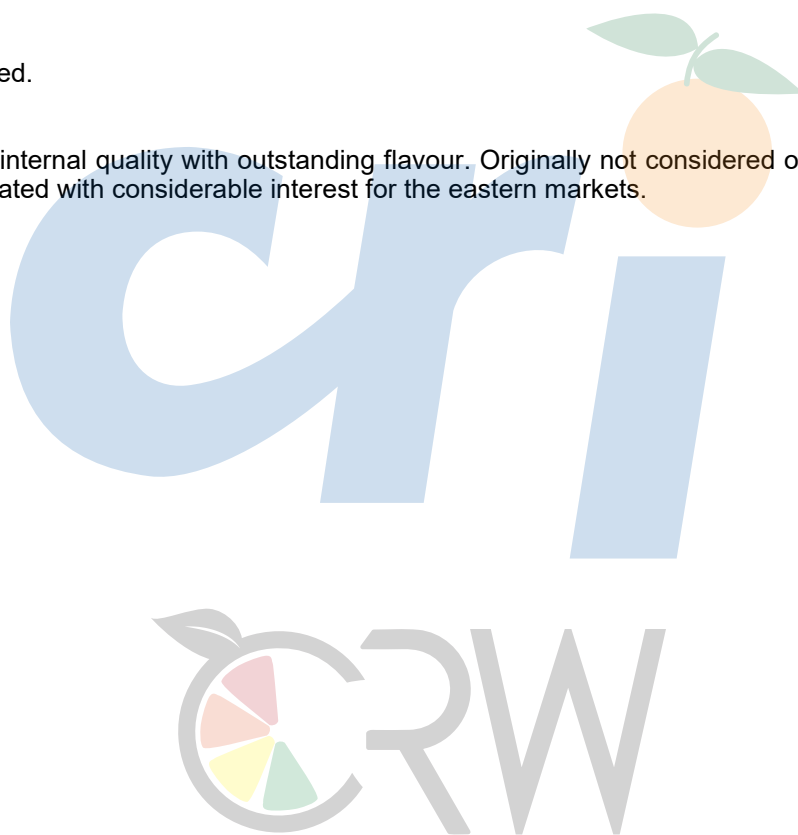
Information still to be included.

Export %

Information still to be included.

Comments

The Jackson has excellent internal quality with outstanding flavour. Originally not considered of commercial value, the Jackson is now being evaluated with considerable interest for the eastern markets.



Marsh Grapefruit

Origin

A chance seedling of Duncan grapefruit discovered in 1860 in Lakeland, Florida. Marsh grapefruit was introduced to South Africa in the early 1900s while Frost Nucellar Marsh, the selection used by the industry, was imported in 1935. Marsh was initially planted extensively in South Africa, but plantings are now being reduced in favour of the red grapefruit selections.

Ownership

Open.

General Description

Marsh is similar to other grapefruit selections being productive, vigorous in growth and spreading in tree shape.

Tree Characteristics

The tree is similar in other aspects to other grapefruit selections, except for Star Ruby which is a more compact tree.

Rootstock Options

Suggested rootstocks are Swingle citrumelo and Carrizo/Troyer citrange, depending on soil type and whether plantings are on new or replant ground. Rootstocks inducing lower sugars levels are not advised.

Fruit Characteristics

Fruit size is a uniform large to very large with smooth rinds. Fruit shape is round to flat, depending on climate, and fruit rind colour is a pale yellow colour at maturity.



Marsh fruit showing typical shape, internal colour and low seed counts.

Internal flesh colour is a pale off white to ivory colour. Marsh has low seed counts. The flavour is good with Brix of 8.5 to 10.5 at maturity and the harvesting period is from mid April to early June in suitable areas. The majority of fruit vary from 98 to 84 mm (Counts 35 to 50).

Production

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

General

Marsh does not require crop manipulation. It is not susceptible to any pests and/or diseases other than those common to other grapefruit selections, i.e. CTV. Harvest, packing and shipping requirements as well as post harvest disorders are as for other grapefruit.

Status, Area Suitability and Availability

Commercial - suitable grapefruit (hot & humid) areas. While grapefruit demand has changed to red selections Marsh still makes up a substantial percentage of total grapefruit plantings. Commercial 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.



Twelve year old Marsh tree on Swingle citrumelo showing typical tree growth and crop (tree height 2.5 m).

Updated: May 2012



Evaluation Data

Internal Quality - Marsh on Swingle citrumelo - Count 45 - Swaziland						
Date	Juice %	Brix	Acid	Ratio	Seed	Colour
15/05/2009	51.1	9.9	1.41	7.0	3.2	2-3
19/05/2010	46.0	9.7	1.38	7.0	3.4	2-3

Count Distribution

Count	27	32	36	40	48	64
%	12	11	28	27	18	4

Production

95.4 Kg per tree and 53 tons per hectare at 6 x 3 m spacing.

Note: Counts and production data from Tambuti trial on Swingle citrumelo during 2009 season.

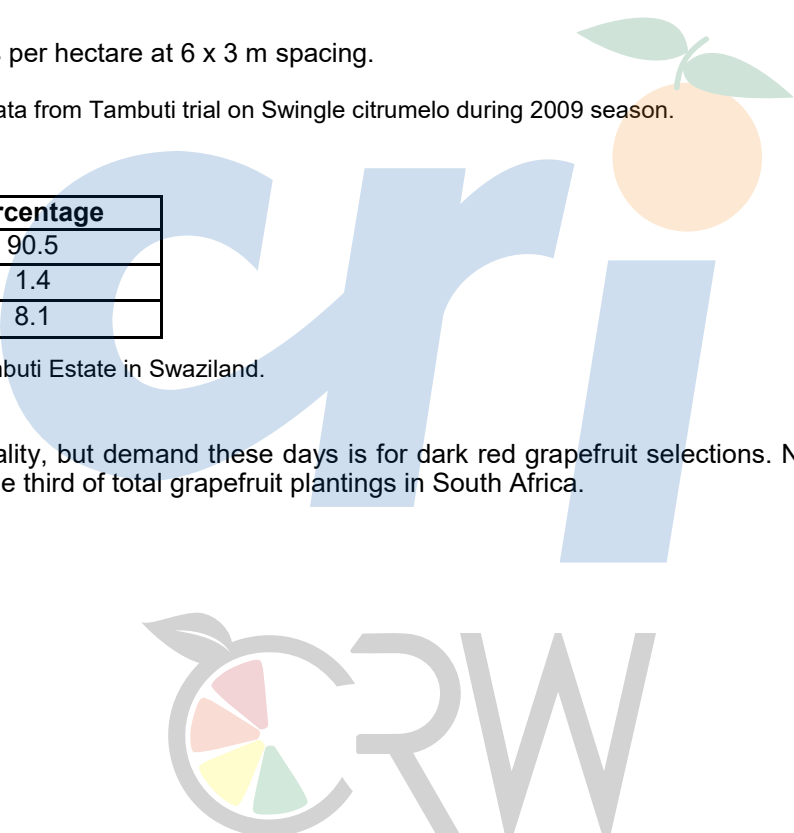
Export %

Grade	Percentage
1	90.5
2	1.4
3 & 4	8.1

Note: These data are from Tambuti Estate in Swaziland.

Comments:

Marsh has good internal quality, but demand these days is for dark red grapefruit selections. Nevertheless Marsh still constitutes approximately one third of total grapefruit plantings in South Africa.



Nelruby Grapefruit

Origin

The Nelruby is a nucellar Ray Ruby selection selected by Dr Hannes de Lange at the ARC ITSC Messina Research Station, South Africa in 1978. The Nelruby is similar in quality and fruit size to Redblush, but it has a uniform much deeper red flesh colour, but not as dark as Star Ruby.

Ownership

Patented - ZA 9396.

General Description

The Nelruby is similar to other grapefruit trees except for its improved internal colour. Rind blush is also darker than other red grapefruit selections except for Star Ruby.

Tree Characteristics

The tree is similar in other aspects to other red selections, except for Star Ruby. Young trees bear well.

Rootstock Options

Suggested rootstocks are Swingle citrumelo and Carrizo/Troyer citrange, depending on soil type and whether plantings are on new or replant ground. Rootstocks inducing lower sugars levels are not advised.

Fruit Characteristics

Fruit size is a uniform large with smooth rinds. Fruit shape is round to flat, depending on climate, and fruit

rind colour is fairly uniform developing a red blush at maturity. Internal flesh colour is a uniform deep red. Nelruby has low seed counts of one to three per fruit. The flavour is good with Brix levels of 9.0 to 9.5 and ratios of 7.2 to 8.3 in late May to early June in suitable grapefruit areas. The majority of fruit vary from 95 to 82 mm (Counts 36 to 56).

Production

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

General

The Nelruby does not require crop manipulation. It is not susceptible to any pests and/or diseases other than those common to other grapefruit selections, i.e. CTV. Harvest, packing and shipping requirements as well as post harvest disorders are as for other grapefruit.

Status, Area Suitability and Availability

Commercial - suitable grapefruit (hot & humid) areas. Commercial quantities of propagation material are available from the Citrus Foundation Block.



Nelruby fruit showing typical shape, rind blush, rind thickness, internal colour and low seed counts.



Fifteen year old Nelruby tree on Swingle citrumelo showing typical tree growth (tree height 3m).

Updated: May 2012

Key References

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

Evaluation Data

Internal Quality - Nelruby on Swingle citrumelo - Count 40 - Swaziland						
Date	Juice %	Brix	Acid	Ratio	Seed	Colour
25/05/2010	54.1	9.5	1.05	9.05	2.9	2

Count Distribution

Count	27	32	36	40	48	64
%	13	17	29	20	18	3

Production

95.2 Kg per tree and 52 tons per hectare at 6 x 3 m spacing.

Note: Counts and production data from Tambuti trial on Swingle citrumelo during 2008 season.

Export %

Information still to be included.

Comments

The Nelruby has very good internal quality and deep red flesh colour. It should be of value in extending the red grapefruit season.

Redblush (Rosé) Grapefruit

Origin

The Redblush (Rosé) was a limb sport of Thompson (pink Marsh) grapefruit discovered in Texas in 1926. It was initially planted on a fairly large scale but is now being replaced by red selections with improved internal and external colour.

Ownership

Open.

General Description

The Redblush is similar to other grapefruit trees. Rind blush and flesh colour are lighter than other red grapefruit selections.

Tree Characteristics

The tree is similar in other aspects to other grapefruit selections, except for Star Ruby.

Rootstock Options

Suggested rootstocks are Swingle citrumelo and Carrizo/Troyer citrange, depending on soil type and whether plantings are on new or replant ground. Rootstocks inducing lower sugars levels are not advised.

Fruit Characteristics

Fruit size is a uniform large with smooth rinds. Fruit shape is round to flat, depending on climate, and fruit rind colour develops an uneven light blush at maturity. Inter

Internal flesh colour is a pink/pale red in suitable climatic areas. Redblush has low seed counts varying from 1 to 4 seeds per fruit. The flavour is good with Brix levels of 10.5 to 11.0 and ratios of 7.0 to 8.0 in late May to early June in grapefruit areas. The majority of fruit vary from 90 to 80 mm (Counts 40 to 56).

Production

Yields of 60 tons per hectare are expected for mature orchards.

General

The Redblush does not require crop manipulation. It is not susceptible to any pests and/or diseases other than those common to other grapefruit selections, i.e. CTV. Harvest, packing and shipping requirements as well as post harvest disorders are as for other grapefruit.

Status, Area Suitability and Availability

Semi commercial - suitable grapefruit (hot & humid) areas. As the demand is now for darker fleshed grapefruit there is no longer any demand for Redblush. Propagation material is currently not available from the Citrus Foundation Block.



Redblush fruit showing typical shape, internal colour, some rind blush and low seed counts

Updated: May 2012

Key References

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

Evaluation Data

Internal Quality

Information still to be included.

Count Distribution

Information still to be included.

Production

60 Tons per hectare at 6 x 3 m spacing.

Export %

Grade	Percentage
1	80.0
2	10.0
3 & 4	10.0

Comments

The Redblush has good internal quality, but only pink to light red flesh colour. This coupled with the availability of darker fleshed selections has resulted in there no longer being a demand for Redblush in South Africa.

Star Ruby Grapefruit

Origin

In the search for red grapefruit with improved flesh colour, Dr Dick Hensz at the Texas A & I University Citrus Centre developed the Star Ruby in 1959. This was achieved by irradiating Hudson grapefruit seed. The result was a tree with bushy, compact growth that produced fruit with a deep red flesh and rind colour. It was named and released in 1970 and was introduced as seed to South Africa in 1972. The nucellar seedlings grown from the 12 imported seeds were evaluated and Star Ruby was released to the industry in 1982. Subsequently the nucellar selection was put through shoot tip grafting and cross protected with the Nartia mild CTV isolate and established at the Citrus Foundation Block.

Ownership

Open.

General Description

A more compact tree than other grapefruit selections that develops some leaf chlorosis and produces fruit with an excellent deep red flesh colour. Fruit size is slightly smaller than other red grapefruit selections and yields are very good. The Star Ruby makes up a substantial part of the South African grapefruit industry.

Tree Characteristics

The tree is less vigorous than other grapefruit types and tends to bear more fruit inside the tree.

Rootstock Options

Suggested rootstocks are Swingle citrumelo and

Carrizo/Troyer citrange, depending on soil type and whether plantings are on new or replant ground. Rootstocks inducing lower sugars levels are not advised.

Fruit Characteristics

Fruit size is a uniform large with smooth rinds. Fruit shape is round to flat, depending on climate, and fruit rind colour is fairly uniform developing a deep red blush at maturity. Internal flesh colour is a uniform deep red. Star Ruby has very low seed counts. The flavour is very good, maturing in mid April to mid May in suitable areas. The fruit maintains its quality on the tree until mid June. The majority of fruit vary from 98 to 82 mm (Counts 32 to 56).

Production

Yields of 60 tons per hectare are expected for mature orchards. Young trees bear well.

General

The Star Ruby does not require crop manipulation and is not susceptible to any pests and/or diseases other than those common to other grapefruit selections, i.e. CTV. Harvest, packing and shipping requirements as well as post harvest disorders are as for other grapefruit.

Status, Area Suitability and Availability

Commercial - suitable grapefruit (hot & humid) areas. Commercial quantities of propagation material are available from the Citrus Foundation Block.



Star Ruby fruit showing typical shape, thin rinds and ultra low seed counts.

Updated: May 2012

Key References

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

Evaluation Data

Internal Quality - Star Ruby on Carrizo citrange - Count 40 - Swaziland						
Date	Juice %	Brix	Acid	Ratio	Seed	Colour
22/05/2007	58.1	10.5	1.30	8.1	0.2	2
22/07/2007	60.3	8.9	1.20	7.4	0.2	1

Note: These data are from Tambuti Estate in Swaziland

Count Distribution

Count	27	32	36	40	48	56
%	14.7	10.6	25.1	23.9	18.6	7.1

Note: From Tambuti trial - averages SC & C35

Production

60 Tons per hectare at 6 x 3 m spacing.

Export %

Grade	Percentage
1	96.3
2	2.0
3 & 4	1.7

Note: These data are from Tambuti Estate in Swaziland

Comments

The Star Ruby has for many years now been one of the main grapefruit selections planted in South Africa. Due to its very good internal quality and deep red flesh colour it is in demand in numerous export markets. It is a very good quality grapefruit that currently comprises over 55% of total grapefruit plantings.