

# Eureka Lemon

## Origin

The Eureka lemon comes from California where it was selected from a group of seedlings originating from Italy. The selection in South Africa is the Frost Nucellar Eureka, the only known nucellar selection of the various Eureka selections available. Currently Eureka constitutes just over 70% of total lemon plantings in South Africa, whereas a few years ago nearly all lemon plantings were Eureka.

## Ownership

Open.

## General Description

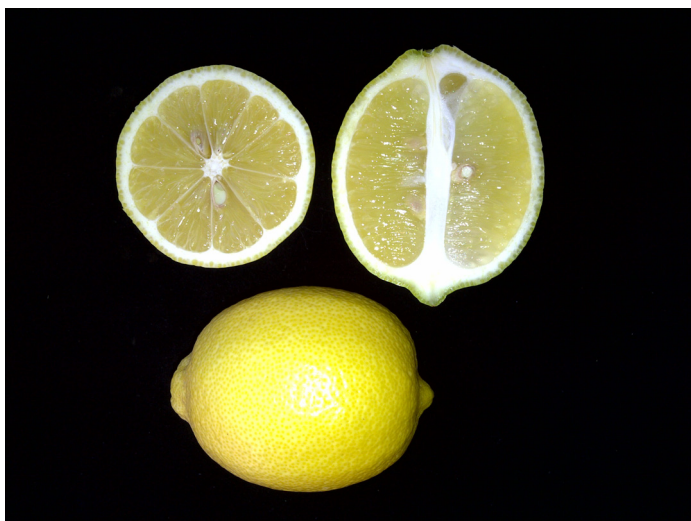
The most widely planted lemon selection, which is highly productive, with a prolonged harvest period and produces fruit of good size. The fruit is good quality with a high juice percentage. The trees are vigorous.

## Tree Characteristics

The tree is vigorous with a spreading growth habit and more sparsely foliated than other selections. It is less cold resistant and not as thorny as Lisbon. In the colder regions, during winter, it suffers from winter chlorosis, which is not a problem.

## Rootstock Options

Eureka is not compatible with trifoliolate orange and its hybrids except Benton citrange, X639 (Cleopatra mandarin x trifoliolate) and Minneola x Trifoliolate. Eureka on the latter two hybrids has performed well in South Africa. The majority of plantings are on Rough lemon and to a lesser extent Volckameriana.



Eureka Lemon fruit showing typical shape, rind texture and seed counts.

## Fruit Characteristics

The Eureka can have three sets per tree producing fruit from as early as late February in warmer areas to as late as mid/late September in cool areas, most of the crop being harvested from mid May to mid June and mid July to mid August, depending on climatic area. Fruit size is medium between 48 – 72mm averaging 60mm. The fruit is often borne on terminal clusters making it more susceptible to wind blemish and sunburn. It has a smooth rind and fruit shape can be round to fairly elongated with a small neck and extended shoulder (nipple). Fruit colour is pale green at harvest and later turns yellow. The juice levels are normally high, being above the 40% minimum for export, due to a fairly thin rind provided planted in suitable areas, i.e. not too cold such as the Grabouw area. The flesh is a greenish yellow colour which is acidic in flavour. Seed varies from 3-5 seeds/fruit.

## Production

Production is good with yields up to 80 tons/ha on mature trees (10 years plus).

## General

No crop manipulation is required by Eureka lemon, however, it is susceptible to sunburn and wind blemish. Thrips can be a problem in certain areas as well as Citrus Black Spot. The Eureka is fairly tolerant to greening disease. Harvest, packing and shipping requirements are as for orange cultivars. However, Peteca spot can be a problem in certain years. The cause of this condition is still not known with any certainty. Endoxerosis which is a form of granulation can occur in well coloured, over mature fruit, depending on area and climate.



Thirteen year old Eureka Lemon tree on Rough Lemon showing typical vigorous growth and tree shape (height 2.9 m)



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### Status, Area Suitability and Availability

Commercial - suitable lemon areas. 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.

## Evaluation Data

### Internal Quality

Data still to be included.

### Count Distribution

<b>Count</b>	<b>64</b>	<b>75</b>	<b>88</b>	<b>100</b>	<b>113</b>	<b>138</b>	<b>162</b>	<b>189</b>	<b>216</b>
<b>%</b>	4	7	14	20	23	18	7	4	3

### Production

For 10 year old trees, 192 Kg per tree and 80 tons per hectare at 6m x 4m spacing (417 trees/ha).

### Export %

<b>Grade</b>	<b>Percentage</b>
1	75
2, 3 & 4	25

### Comments

The Eureka lemon is less vigorous than Lisbon types and the selection in South Africa has small to no thorns, depending on tree vigour and climate. Eureka lemons have been a success in South Africa, particularly in the Sundays River Valley, the country's largest lemon production area.



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