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## Acknowledgement

Citrus production SA;  
Citrus research international and  
SAfruitfarms.

## References

*The national agricultural handbook*, 2009.  
Kasirivu, J. B. K. 2009. *Horticulture: Fruit Production*. NW, South  
Africa.



# Grapefruit



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Scientific name: *Citrus paradisi*

Common names: Grapefruit, pomelo, "forbid  
den fruit" of Barbados, smaller  
shaddock.



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REPUBLIC OF SOUTH AFRICA





## Background

### *Origin and distribution*

Grapefruit is native to the tropics of Jamaica, it was discovered 260 years ago and it is growing wild on several West Indian islands and the mountains of Haiti. Grapefruit is increasingly spreading throughout the rest of the world with time. The variety 'Marsh Seedless' is the leading grapefruit grown in South Africa. The 'Triumph' variety does better than 'Marsh' in South Africa.

### *Production areas*

Grapefruit is grown in Limpopo and Mpumalanga.

### *Soil and climatic requirements*

Generally the grapefruit grows well in warm subtropical climates. Differences in temperature affect the length of time from flowering to maturity. Thinness of peel is as a result of humidity, whilst arid climates (also low winter temperatures) results in thicker and rough peel, which results in lower juice content. An evenly distributed rainfall of about 91.4-111.7 cm is ideal. Grapefruit is grown on a variety of soils, and salinity of the soil and irrigation water retards water uptake by the root system and reduces yield.

## Cultural practices

### *Soil preparation*

Soils are usually ripped or ploughed, or even both. Soil pH correction and other ameliorants (e.g. N, P, or K) are added in a double ploughing action. Ridging is considered to provide for added drainage or where the soil is high in clay content.

### *Planting*

Grapefruit is bought from the nursery as seedlings, therefore in colder, windy areas the preferred planting time is early spring (September/ October). In hotter regions spacing of 700x300 cm or 600x300 cm is used, while in cooler regions spacing as wide as 600x300 and as close as 450 or 500x200 cm is used.

### *Fertilisation*

For satisfactory yields, fertilisers are added based on annual leaf analysis data from leaves of fruiting terminals and history of the orchard with respect to yield, fruit size, quality and previous fertilisation records. Phosphorus and potassium are applied to the soil, and magnesium and micro-elements are applied to the foliar when required.

### *Irrigation and fertigation*

Grapefruit require a rather evenly distributed annual rainfall of about 91.4–111.7 cm. supplementary irrigation is required during dry or low rainfall seasons, and drip irrigation system is best suited, with the use of drip fertigation where pH and electrical conductivity are controlled. Microsprinkler and overhead sprinkler irrigation systems are also commonly used.

### *Weed control*

Weeds compete with plants for nutrients and water, which will result in the quality being compromised, and as a result weeds should be controlled. Chemical (herbicides) and mechanical (hand hoeing) methods can be used to control weeds.

### *Pest and disease control*

Grapefruit is attacked by pests such as Caribbean and Mediterranean fruit flies, which can be controlled by irradiation. Frequent/common diseases include leaf spot, algal leaf spot, thread blight, root rot and scab, just to name a few. This can be controlled by sanitation, use of insecticides, pesticides, and by cutting.

### *Uses*

Grapefruit can be eaten fresh as an appetizer before dinner, or as a breakfast fruit. It can also be used in salads and processed into tarts, jelly, marmalade, syrup, wine, vinegar, and soft drinks.

