

The Guava Plant

*Prof. Dr. Mohamed
S.S. El-Boray*

Head of Pomology
Dept., Fac. Of Agric.,
Mansoura Univ.



Guava Plant

Scientific Nama : *Psidium guajava L*

Family: Myrtaceae

Common Names: Guava, guyava, kuawa.

Origin: Tropical Americas

World Production and Distribution

- n World production figures are lacking.
- n Guava is widely distributed throughout the tropics, India and Mexico major producers



What Is a Guava Plant?

- n Guava the "poorman's fruit" or "apple of the tropics" is a popular tree fruit of the tropical and subtropical climates.
- n Trees of most guava cultivars vary in vigor and size, bearing habit, and fruit yield, shape, size, quality, maturity season, and storage ability.



What Is a Guava Plant?

- n The guava is an evergreen tree reaching a height of 3 - 10m.
- n The simple leaves of guava are aromatic when crushed, are opposite, 10 to 15 cm long, and 3 to 5 cm wide. with prominent parallel veins.
- n The white flowers are either solitary or in groups of two or three, arising from the leaf axils of younger branches.



What Is a Guava Plant?

The perfect flowers are slightly aromatic, 25 to 30 mm in diameter with four incurved white petals and a large tuft of white stamens with yellowish anthers, are borne solitary or in clusters of 2-3 in leaf axils on new growth from mature wood.



Pollination

Self-pollination is obvious (60% to 75%) since even isolated trees produce good crop; however, the distribution of cross-pollination by bees, is about 35%.



The Guava Fruit

- n Guavas are an excellent source of vitamin C and also contain iron, calcium, and phosphorus.
- n TSS range 8-13, acid 0.2-0.4





The round, oval, or pear-shaped fruit exudes a strong, sweet odor when ripe. It may be 5 to 10 cm long.

It has a thin, light-yellow skin, usually blushed with pink. Under the skin is a layer of somewhat granular flesh, 3 to 12.5 mm thick, which varies in color from white to near-red, with a juicy, acidic and sweet and flavor.

The central pulp, the same color or slightly darker than the granular flesh, is juicy and normally filled with very hard, yellowish-creamh seeds, 3 mm long, which are imbedded in the soft pulp. however some guavas are seedless.



When immature, and until a very short time before ripening, the fruit is green, hard.

Food Value Per 100 g of Edible Portion

Calories	36-50
Moisture	77-86 g
Crude Fiber	2.8-5.5 g
Protein	0.9-1.0 g
Fat	0.1-0.5 g
Ash	0.43-0.7 g
Carbohydrates	9.5-10 g
Calcium	9.1-17 mg
Phosphorus	17.8-30 mg
Iron	0.30-0.70 mg
Vitamin C, total ascorbic acid	183.5 mg
Thiamine	0.050 mg
Riboflavin	0.050 mg
Niacin	1.200 mg



How the Guava Plant is Used



How the Guava Plant is Used

- n The raw fruit is eaten as food.
- n The fruit is also prepared as food in many other ways: guava jellies; guava juice and guava syrup.
- n There are countless recipes for using guavas in cakes, puddings, sauce, ice cream, jam, butter, marmalade, ketchup, and other products.



Medicinal Uses of Guava

- n The roots, bark, leaves and immature fruits are commonly used to treat gastroenteritis, diarrhea and dysentery.
- n Crushed leaves are applied on wounds, ulcers and rheumatic joints. The leaves are chewed to relieve toothache. The leaf extract by boiling is taken as a remedy for coughs, throat and chest ailments; gargled to relieve oral ulcers and inflamed gums; and also taken as an treatment for leucorrhoea. It has been effective in halting vomiting and diarrhea in cholera patients. It is also applied on skin diseases.
- n A combined decoction of leaves and bark is given to expel the placenta after childbirth.

Guava Cultivation

- n Guava seed remain viable for many months. They often germinate in 2 - 3 weeks but may take as long as 8 weeks.
- n Guava is generally propagated from seeds but trees are variable in both plant and fruit characteristics.
- n Guavas prefer a frost-free location and need full sun.
- n They cultivate in many soil conditions, but be better in rich soils, high in organic matter.



Guava Cultivation

- n Guavas prefer well-drained soil with pH range of 5 to 7.
- n The tree will take temporary water-logging but will not tolerate salty soils.
- n The most common tree spacing are 3 x 5 m and 5 x 6 m.
- n Temperature has a major effect on growth 15-30°C range. Fruit set opt. 24-28°C



Guava Cultivation

- n Fertilization scheduled based on leaf and soil analysis and growth stage
- n Regular pruning of bearing tree is essential.
- n Pruning the tree and removing water shoots and suckers are usually all that is necessary, since the fruit is borne on new growth.
- n Desirable tree shape should be maintained by regular but light pruning of unwanted wood.



Guava Cultivation

- n Since guava bears fruit on new growth from mature wood, it is important to keep a balance between the amount of vegetative growth and mature wood to ensure production the next season, and maintain fruiting regularity.
- n Thinning in the early stages of fruit growth increases size of remaining fruits, reduces trunk breakage, and promotes regular bearing. Hand thinning is the most common procedure for guava, since chemical thinning agents have not yet been worked out.



Guava Cultivation

- n Foliage diseases, root-rot, guava whitefly, guava moth, Caribbean fruit fly, mealy-bugs, scale, common white flies, and fruit flies can be problems for the guava.
- n In warmer regions guavas will ripen all year. For the best flavor, the fruit is allowed to ripen on the tree, although it can also be picked green-mature and allowed to ripen off the tree at room temperature.