

Mango

The mango tree, also known as *Mangifera indica*, is a widely cultivated fruit tree in India. It belongs to the Anacardiaceae family and is known for its juicy, sweet, and pulpy fruit. Mango is not just a fruit, but a cultural icon in India and holds a significant place in the country's cuisine, art, and literature.

Tree Characteristics	Details
Common Name	Mango
Scientific Name	<i>Mangifera indica</i>
Maximum Height	Up to 35 meters
Diameter When Mature	Up to 1.5 meters in girth
Years it Takes to Grow	5-6 years for fruiting, 10-15 years to reach full maturity
Economic Benefit to Farmers	Provides livelihood to thousands of farmers and supports the economy of many regions in India.

Physical Characteristics



The mango tree is a large evergreen tree that can grow up to a height of 40 meters, with a dense and spreading crown. The tree has a thick trunk with a grey-brown bark, and the leaves are oblong, dark green, and shiny. The mango tree is characterized by its small, fragrant, white or yellowish

flowers that bloom from November to January. The fruit is large and oval-shaped, with a smooth, green, and sometimes red or yellow skin, depending on the variety.

Ecological Role



The mango tree is a vital component of the tropical ecosystem, providing shade and shelter to many plant and animal species. The tree's leaves and fruit are a source of food for a wide range of insects, birds, and mammals. Mango trees also help to prevent soil erosion and improve soil fertility due to their extensive root system.

Importance to Birds, Animals, and Insects



Mango trees attract many species of birds, including parakeets, mynas, and barbets, which feed on the tree's flowers and fruit. The fruit is also a favorite among fruit bats, monkeys, and squirrels. Insects such as bees, butterflies, and flies are attracted to the tree's flowers and assist in the pollination process.

States in India Where the Tree is Found Naturally

The mango tree is native to India and is found naturally in almost all parts of the country, except for the higher altitudes of the Himalayas. Some of the major mango-producing states in India include Uttar Pradesh, Andhra Pradesh, Maharashtra, and Bihar.

States where it is commercially grown



Mango is one of the most widely grown fruit trees in India,

with commercial cultivation occurring in almost all states. However, the major mango-growing states in India are Andhra Pradesh, Telangana, Uttar Pradesh, Karnataka, Bihar, and Maharashtra. These states together account for more than 80% of the total mango production in India.

Commercial growing of tree

Mango is grown on a wide variety of soils, including clayey, loamy, sandy, and lateritic soils, with a pH range of 5.5 to 7.5. The tree can be grown in areas with an annual rainfall of 75-375 cm. However, it thrives best in areas with rainfall ranging between 100-125 cm. The tree requires a dry period of 2-3 months for inducing flowering. Mango trees can be propagated through seeds or grafting. Grafted trees start bearing fruit in 3-4 years while seedling trees can take up to 8-10 years.

Different stages of tree growth in details



The mango tree goes through several stages of growth before it is ready to bear fruit. The first stage is the vegetative stage, during which the tree puts on new growth in the form of leaves, stems, and branches. The second stage is the reproductive stage, during which the tree produces flowers that eventually develop into fruit. The third stage is the fruit development stage, during which the fruit grows and matures. The final stage is the ripening stage, during which the fruit becomes ready to harvest.

Uses of mango in industry

Mango has a wide range of uses in the food and beverage industry. Mangoes are used to make a variety of products, including juices, jams, jellies, marmalades, chutneys, pickles, and canned fruits. Mango pulp is also used in the production of ice cream, yogurt, and other dairy products. In addition, mango kernels are used in the production of mango butter, while the leaves are used in the production of herbal teas.

How farmers are benefited by growing it under agroforestry

Agroforestry is a farming system that integrates trees with crops or livestock. Growing mango trees under agroforestry has several benefits for farmers. First, mango trees provide shade, which helps to reduce soil temperature and evaporation, thereby conserving soil moisture. Second, mango trees provide an additional source of income for farmers, as mangoes are a high-value crop. Third, the roots of mango trees help to improve soil structure and fertility by increasing organic matter content and enhancing nutrient cycling. Fourth, the leaves of mango trees can be used as a source of green manure, which helps to improve soil fertility.

Harvesting

Mangoes are usually harvested when they are mature but still firm. The fruit is harvested by handpicking or by using long poles with nets attached to the end. Mangoes can be harvested when they are still green and allowed to ripen off the tree, or they can be left on the tree until they ripen. Mangoes can be stored for several weeks at 12-15°C with a relative humidity of 85-90%.

Mango trees are known for their high-quality timber, which is used for a variety of purposes. The wood is hard, durable, and resistant to pests, making it ideal for use in furniture, flooring, and construction.

In addition to its durability, mango wood is also prized for its attractive grain patterns and warm colors, ranging from pale yellow to dark brown. These qualities make it a popular choice for decorative items such as bowls, vases, and carvings.

Mango wood is also commonly used as fuel, either as firewood

or for charcoal production. In some regions, it is even used as a source of medicinal products, such as extracts for treating diarrhea and dysentery.

Conclusion

The mango tree is an important fruit tree in India, with a wide range of uses in the food and beverage industry. It is commercially grown in almost all states in India and provides a valuable source of income for farmers. Growing mango trees under agroforestry has several benefits, including improving soil fertility and providing an additional source of income. With proper care and management, the mango tree can provide high yields of delicious fruit for many years.