

Mango

Climate requirements

Due to their monsoonal background, Mango trees are adaptable and grow in a variety of soils and climates.

- They can survive in temperatures ranging from 5 °C to 45 °C.
- Ideal temperature is between 27 °C and 36 °C.
- They can tolerate a range of altitudes up to 1,200 m with specific varieties of mangoes having different altitudinal preferences.

Soil requirements

- Mango trees thrive on well-draining, organic-rich soils with a pH range of 5,5 to 7,5.
- Sandy loam or loamy soils with sufficient drainage and aeration is ideal for their long tap root which can grow up to 6 m deep.
- They require soils that are at least 1 m deep.

Fertiliser and water requirements

- Fertiliser and irrigation application during the critical growth stages are important for water use efficiency (WUE), partial fertiliser productivity (PFP), and fruit quality.
- Applying fertiliser at the fruit expansion stage has a greater effect on fruit yield and WUE
- Applying fertiliser at the fruit-ripening stage improves the contents of total sugar, vitamin C, carotenoids, fruit water, and soluble solids.
- Mango needs 11 000 m³ of water per ha per year if soils are kept at field capacity. A good water use efficiency is > 5 kg/m³.
- Avoid prolonged spells of under-irrigation and dry conditions, mango does not respond quickly when water stress is relieved through irrigation.

Varieties

Alphonso: Highly prized variety from India. Sweet, rich flavour, vibrant orange flesh, with a creamy texture. Late to mid-season harvesting.

Tommy Atkins: Mild, slightly tangy taste. Known for its firm flesh and greenish-red skin with occasional dark red blushes. Early season harvesting. Good cropping.

Shelly: Israeli cultivar (managed by Westfalia – royalty fees). Medium to large (400-800g), early variety, round fruit with orange background and red blush. The flesh is orange with a firm texture, high yield and exceptional shelf life. (30 days after picking at room temperature). Relatively disease resistant but do get sunburn.

Kent: Sweet and rich flavour with a hint of tartness. Large, with greenish-yellow skin that develops a red blush as they ripen. Mid-season harvesting.

Haden: Considered the first commercially grown mango variety in Florida. Sweet and tangy flavour. Red and green skin when ripe. Early to midseason. Alternate bearing, disease sensitivity. Good fruit quality.

Keitt: Large, sweet, juicy flesh. Known for green skin even when fully ripe and have a relatively low fibre content. Late season harvest. Handles a range of climatic conditions. Heavy bearing. Susceptible to bacterial blackspot and lenticel discolouration in cold storage.

Palmer: Medium to large (500-850 g), orange-yellow with bright red blush. Mild flavour with a pleasant aroma. Late-season harvesting, harvesting may be earlier due to early colouring.

Global Markets

- Brazil is a major producer and exporter of mangoes. Tommy Atkins mango is one of the most cultivated varieties in Brazil, along with Palmer, Keitt, and Kent.
- The UK has a large and growing market for mangoes. Popular mango varieties consumed in the UK include Kent, Keitt, Tommy Atkins, and Alphonso.
- Germany, France and the Netherlands are the largest mango markets in Europe importing Kent, Keitt, Tommy Atkins, and Alphonso.
- Mexico is a major player in the global mango market, exporting substantial volumes of mangoes to the United States and other countries. The Ataulfo (Honey) mango and Tommy Atkins are among the popular varieties from Mexico.

- China is another major mango producer, particularly in the southern regions of Guangdong, Guangxi, and Hainan. The country has been steadily increasing its mango production and export volumes over the years.
- India is the world's largest producer of mangoes, accounting for a significant share of global mango production. The country boasts numerous mango varieties, with Alphonso, Kesar, and Totapuri being some of the most well-known and highly sought-after varieties in international markets.

Peak Production Period: In major mango-producing countries like India, Mexico, and Thailand, the peak production seasons typically fall between March and September. During these months, mango supply surges, leading to increased domestic consumption and higher export volumes.

High Demand Period: In many countries, mangoes are in high demand during the summer months when consumers seek refreshing and nutritious fruits. Therefore, mango markets often experience a surge in demand during the summer season, varying by region. Festive seasons also drive demand in some countries. Mango consumption sees a boost during festive seasons, where mangoes are considered special treats. For example, in India, the demand for mangoes spikes during festivals like Diwali and Eid.

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