

Cherry Propagation Techniques: A Comprehensive Guide

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Cherries are thought to be native to Europe and western Asia and are now grown widely around the world. Cherries belong to the Rosaceae family and the genus is *Prunus*, subspecies *Cerasus* and section *Eucerasus*. There are two mainly species of cherry fruits referenced such as sweet (*Prunus avium*) and sour (*Prunus cerasus*) cherries. Among the two species, of global trading importance are sweet and sour cherries. Cherry fruits are cultivated worldwide and mostly two cultivars are used for human consumption and processing. Both sweet cherry (*Prunus avium*) and sour cherry (*Prunus cerasus*) enjoy great popularity world due to rich refreshing flavour and recognised health benefits. Commercial cultivation of sweet cherry is generally more difficult and expensive than sour cherry as high levels of care must be taken throughout the supply chain to achieve premium quality fruit for serving in the fresh market. In both sour and sweet cherry, the Properties chemical composition and uses is different. Sour cherries are mostly used in processed form such as canned products and juices. In comparison with sour cherries have a lower content of simple sugar (8g to 100/g), sweet cherries have a higher content of simple sugar (13g-100/g).

Major cherry Producing countries worldwide

Turkey was the largest producer of cherries in the world, producing about 833 thousand metric tons. The European Union was the second leading producer, with 831 thousand metric tons produced.

Major cherry Producing states in India

The Kashmir valley contributes to 95 percent of the total cherry production in India. Jammu & Kashmir, Uttarakhand, Himachal Pradesh, Uttar Pradesh and Assam are the popular cherry producing states in India due to profitable income for every farmer. Kashmir annually sends around 3,500-4,000 metric tonnes of cherries to other states of India.



Cultivation Area of cherry

Cherries are primarily grown in the northern regions of India, particularly in the states of Jammu and Kashmir, Himachal Pradesh, and Uttarakhand. In Jammu and Kashmir, the districts of Srinagar, Anantnag, Budgam, and Baramulla are the major producers of cherries. In Himachal Pradesh, the districts of Shimla, Kinnaur, and Kullu are known for cherry cultivation. In Uttarakhand, the districts of Nainital and Dehradun are the major cherry-producing areas. Additionally, some parts of Punjab and Haryana also have small-scale cherry cultivation.

Climate Required

Cherries require cool weather conditions with temperatures ranging between 15°C to 25°C during the growing season. They also require a period of winter dormancy with temperatures below 7°C to induce flowering.

Soil Condition

The soil should be well-draining, rich in organic matter, and have a pH between 6.0 to 7.5. Adding compost or manure to the soil before planting can help improve soil fertility.

Nutritional value

Raw sweet cherries are 82% water, 16% carbohydrates, 1% protein, and negligible

in fat (table). As raw fruit, sweet cherries provide little nutrient content per 100 g serving, as only dietary fiber and vitamin C are present in moderate content, while other vitamins and dietary minerals each supply less than 10% of the Daily Value (DV) per serving, respectively (table). Compared to sweet cherries, raw sour cherries contain 50% more vitamin C per 100 g (12% DV) and about 20 times more vitamin A (8% DV), beta-Carotene in particular (table).

Varieties of Cherries Grown in India

There are several varieties of cherries that are grown in India, mainly in the states of Jammu and Kashmir, Himachal Pradesh, and Uttarakhand. Some of the popular varieties of cherries grown in India include:

- **Sweet cherries:** Sweet cherries are the most popular type of cherries grown in India. Some of the common varieties include Lapins, Bing, Rainier, and Stella.
- **Sour cherries:** Sour cherries, also known as tart cherries, are also grown in India, but are less common than sweet cherries. Montmorency is a popular variety of sour cherries grown in India.
- **Wild cherries:** Wild cherries are also found in India, particularly in the Himalayan region. They are smaller in size compared to cultivated cherries and have a sour taste. The wild cherry varieties found in India include *Prunus coracoids* and *Prunus avium*.
- **Hybrid cherries:** Hybrid cherries are also grown in India, which are a cross between sweet and sour cherries. The hybrid varieties include Regina and Kordia.

Propagation of Cherry Plants

- **Grafting:** This is the most common method of propagating cherry plants. In this method, a scion (a young shoot) of the desired variety is grafted onto a rootstock of a compatible cherry tree. The graft union is wrapped with a grafting tape and allowed to grow until the two parts have fused together.

- **Budding:** Budding is another method of grafting, in which a bud from the desired variety is grafted onto the rootstock. This method is usually done in late summer or early fall.
- **Cuttings:** Softwood cuttings can be taken from cherry plants in early summer and rooted in a propagation bed or a pot filled with potting mix. Hardwood cuttings can also be taken in the winter and rooted in a greenhouse or propagation bed.
- **Layering:** In layering, a low branch of the parent tree is bent down and covered with soil. The branch will root and can be cut off from the parent tree to form a new plant.



Fig 1: Grafting propagation technique



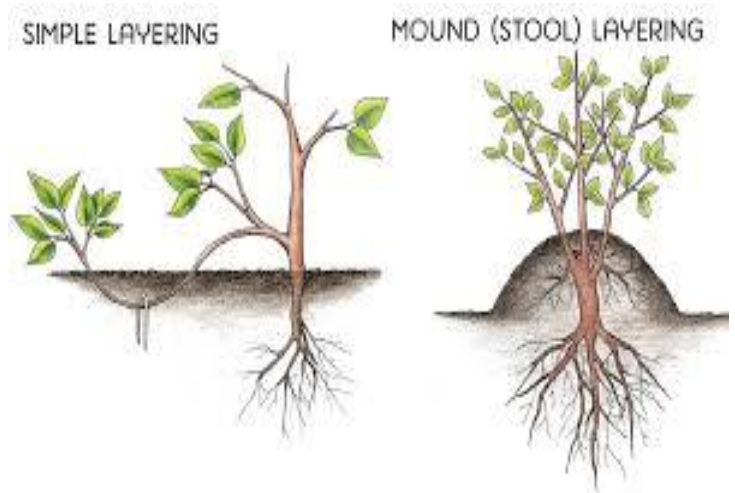
Fig 2: Budding propagation technique



Fig 3: Cutting and Layering propagation techniques

Health Benefits of cherry fruits:

- Cherry are a good source of vitamin C and fibre
- Cherry help in reducing inflammation



- Cherry prevents muscle damage
- Cherries may improve brain function
- Cherries may help better sleeping
- Cherries reduce the risk of heart stroke
- Cherries may prevent cancer

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