

Narcissus Flower: Facts, Botany, Uses and Cultivation Techniques

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Introduction:

Flowers hold as much importance in our lives as fruits and vegetables. Flowers help reduce increasing stress in our daily lives. Nowadays, their cultivation is becoming a profitable business. Narcissus is also a beneficial flower, and by cultivating it, farmers can earn additional profits. Narcissus is a deciduous cold-resistant plant and produces fragrant and extremely attractive flowers. Its plant has leaf-like petals, and without leaves, a stem or scape emerges from its middle part. From the upper part of this scape, one to eight flowers of the species come out. These flowers are mainly used as cut flowers. Besides, narcissus is also planted along with pots, borders, and roadsides.

Varieties: Sir Winston Churchill, Tahiti Baret, White Ice Porcelains California Sun, Bridal Gown, Dutch Master, Cheerfulness, Texas Semi-double.

The uses of the Narcissus flower include:

- ✓ **Ornamental purposes:** Narcissus flowers are commonly grown for their beauty and fragrance in gardens and landscapes.
- ✓ **Floral arrangements:** They are used in bouquets, floral arrangements, and as cut

flowers due to their attractive appearance and long-lasting blooms.

- ✓ **Medicinal properties:** Some species of Narcissus have been traditionally used in herbal medicine for various purposes, although caution is advised as many parts of the plant are toxic if ingested.
- ✓ **Perfumery:** Narcissus essential oil, extracted from the flowers, is used in perfumery for its aromatic properties.
- ✓ **Symbolism:** Narcissus flowers are often used symbolically in art, literature, and cultural traditions to represent themes such as rebirth, renewal, and self-love.

Climate and Soil: For commercial cultivation of narcissus, loamy or sandy soil is used. The soil should have a pH value between

6.5 to 7.5, and proper drainage is necessary. Adequate sunlight is required for its cultivation. Flower production does not depend on day and night. However, long days are helpful in making longer stems. For narcissus cultivation, a temperature of 11-17 degrees Celsius, proper fertilization, and suitable irrigation for flowering are recommended.

Propagation: Propagation and

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dissemination of narcissus are usually done through seeds and bulbs. Seeds are extracted and sown in the greenhouse. It takes time for bulbs to develop into bulbous shapes. Seed propagation is used to develop new varieties by pollination.

For commercial cultivation of narcissus, bulbs are used. For germination, bulbs are stored at a temperature of 20 degrees Celsius and then at 20-22 degrees Celsius for 4-6 weeks. It takes about 3-4 years for bulbs to reach the required size. Bulbs can be divided into clusters or spread by small bulbs or offsets. Other propagation methods such as scoring and chipping or twin scaling are also prevalent.

Scoring involves making a deep T-shaped wound at the site of bulb implantation from July to September, resulting in 15-20 small bulbs from the segments of bulb scales. These small bulbs take about 2-3 years to develop into full bulbs. In this method, the process is called scooping.

Planting Time: Planting is done in mid-September to October, using fully developed bulbs. Before planting bulbs, attention should be paid to ensure that each bulb weighs more than 25 grams. The planting distance should be pant-to-pant 20 cm and 10 cm between bulbs. Approximately 40-45 bulbs can be planted in a square meter plot.

Depth and Treatment: Special attention should be paid to the depth of bulb

planting. Bulbs should be planted based on their size. Fully developed bulbs of 10-14 cm in size are planted at a depth of about 8-10 cm. To prevent from any fungal diseases, bulbs should be treated in a carbendazim solution for an hour before planting.

Irrigation, Fertilization, and Manuring: Excessive irrigation should be avoided immediately after bulb planting, otherwise, there is a risk of bulb rot. Light irrigation should be done twice a week as germination begins. Nitrogen, phosphorus, and potassium should be given at the rate of 250, 625, and 625 kg per hectare, respectively, along with 10 kg of farmyard manure per square meter.

Half the amount of nitrogen should be given at the time of bulb planting and the remaining amount should be given at the time of leaf emergence. The first half of nitrogen and the full amount of phosphorus and potassium should be given at the time of bulb planting.

After bulbs are planted, as soon as the leaves begin to wilt or dry, the bulbs should be lifted from the ground. These bulbs should be soaked in water and treated with a solution of 1 gram of carbendazim per liter of water and 2 grams of diethane per liter of water for 30-60 minutes. After lifting the bulbs, they should be placed on plastic sheets in the shade for about 7 days before being sent to the market. The

bulbs of narcissus should be stored in ventilated bags or nets at a temperature of 90 degrees Celsius and 75% humidity for 6-8 weeks.

Flower Production: On average, about four cut flowers and eight bulbs are obtained per hectare. The flowers are cut in the goose neck stage, meaning 10-15 cm above the ground. After cutting the flowers, they should be placed in a bucket filled with water. The varieties with clusters of buds should be cut in the double bud stage. Cutting is usually done in the morning. The shelf life of cut flowers is about 7-8 days. Different clusters of ten flowers each should be wrapped in perforated polyethylene bags and sold directly. For a good shelf life, flowers should be soaked in a solution of 25 ppm silver nitrate and 6-10% sugar for 2-4 hours before sending them to the market. After cutting, flowers can be stored for up to 3 days at a temperature of 1-20 degrees Celsius. The optimum temperature for complete flower opening is found to be 10-16 degrees Celsius.

Bulb Rot: Bulb rot is found in a considerable amount in narcissus. If the temperature exceeds 21 degrees Celsius, then the bulbs should be treated with a 0.5% solution of captan. Along with this, the treatment of dipping bulbs in a 2.0% solution of phenyl mercuric acetate for 2 minutes is also beneficial. A pest called bulb mite affects

the bulbs and tissues through the soft tissues of the bulbs. Treatment of bulbs in hot water for 3 hours can prevent this pest.

