



LILIUM - CULTIVATING BEAUTY IN EVERY BLOOM

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Introduction

Lilium (*Lilium sp*) one of the most important bulbous flowers, belongs to Liliaceae family and is commercially grown in India for cut flowers. This crop has gained popularity recently in several Indian states. In the flower market, lilies are in high demand both as potted plants and as cut flowers. The most popular types of lilies are the Easter and tiger lilies because they make excellent cut flowers, followed by Oriental and Asiatic hybrid lilies, and to a lesser extent, Asiatic hybrid lilies. These lilies are becoming more and more popular in India. True lilies are great plants for nearly any type of garden setting. They provide gardeners with a vast range of heights, flower forms, and colors in addition to being hardy and adaptable. They are frequently referred to as the "Queen" or "Grande Dame" of the summer garden because of how strikingly beautiful they

are in the garden. In flower language, the lilium represents purity and innocence. Lilium can rightfully be called the nobleman of the plant kingdom. The floriculture industry greatly appreciates the cultivated genotypes of the genus *Lilium* due to their diverse color, scent, and ability to thrive in a wide range of climates.

THE TIMELESS CHARM OF LILIUM

ARTISTIC BLOSSOMS: Lilium has an unparalleled visual appeal. When its petals gently unfold, a delicate bloom with an air of sophistication and grace is revealed. Lilium offers a captivating range of colors to lovers of flowers, with tons of white, pink, yellow, and orange making up its color palette.

PERSISTENCE: Its extraordinary vase life is one of its most renowned qualities. These flowers are a popular option for décor and floral arrangements because they can hold their beauty for up to two weeks or longer.

VERSATILITY: Its adaptability in different floral arrangements is evidence of its versatility. Lilies lend a touch of elegance to any arrangement, whether they are used as the focal point or in harmony with other flowers and foliage.

CULTIVATION AND CARE

SOIL AND CLIMATE: It is ideal to have soil with a good texture and adequate drainage. Although light and porous, the soil should be high in organic matter. High salt concentrations can negatively impact the growth of lilies due to their sensitivity. Lily cultivation requires well-structured soil, especially in the upper layers, and well-drained conditions throughout the

growing season. Keeping the soil's pH at the proper level is essential for root growth and nutrient uptake. For Asiatic and longiflorum hybrid groups, a pH of 6 to 7 is recommended, while for oriental hybrids, a pH of 5.5 to 6.5 is recommended. The ideal daytime temperature range is 20–25⁰C, and the ideal nighttime temperature is around 10-15⁰C for healthy plant growth and high-quality flower production. A dwarf crop with fewer flower buds per stem will be produced by higher temperatures. Direct sunlight should not be used to grow the plant. The heat of summer brings intense light, which stunts the growth of plants. It will be helpful to have a 50–75% shade screen. **BULB SELECTION:** Greater bulb size corresponds to longer stems and more flowers per stem. For the production of Oriental hybrid lilies, bulbs with a circumference of less than 10–12 cm should not be used; larger bulbs, up to 22–24 cm, should be planted for the production of Asiatic lilies.



PLANTING DENSITY: The spacing is Depending on the cultivar, size, and season, planting densities can vary from

25 to 60 bulbs/m². There is a 15 x 15 Spacing.

PLANTING DEPTH: Planting the ideal-sized liliun bulbs at a depth of 10 to 12 cm is recommended. The size of the bulb determines the planting depth. Generally, bulbs should be planted three times deeper than their diameter.

FERTIGATION: Being a bulbous crop, liliun already contains the majority of its nutrients in the bulb. Since liliun is a highly sensitive crop to salt, care should be used when applying fertilizers. Applying 12:61:00@ 2kg/100m² at least one week prior to plantation is encouraged. No additional fertilizers are needed during the first three weeks of the stem rooting process. At this point, good root development is crucial. After three weeks of planting: Calcium Nitrate @ 1 kg/100m² . After Six-week plantation: Potassium nitrate @ 1 kg/100m². If plants exhibit signs of weakness during the growing season as a result of a nitrogen deficiency, then a top dressing of Ammonium Nitrate@ 1 kg/100 m² can be applied up to three weeks before harvesting.



IRRIGATION: One of the most crucial elements in lily cultivation that encourages growth is irrigation. Just before to the bulb planting, the soil is moistened. Water the bulbs generously after planting to ensure that the soil properly holds on the roots and bulbs. It is crucial to maintain constant moisture in the top (30 cm) soil since the stem roots grow there. But there shouldn't be any standing water. During the dry spell, the water consumption may be as high as 10 litres/m² /day.

STAKING: Staking is an important operation in lily cultivation to keep the plants erect. The most practical way to support the crop is by using netting which should be gradually raised as the plants grow in height so as to get long stems during harvest.

HARVESTING: After 90 to 120 days of planting, flowers are ready for harvesting. When the first bud becomes clearly colored, it's time to harvest the

lilies. The buds will not develop correctly if this is done too soon. Cutting the flowers too late—that is, after the bulbs have fully opened—will result in damage to them during transportation. The average yield varies from 30 to 40 flower stems/m². After harvesting, cut stems should be immersing in cold water right away. If necessary, the flowers can be kept for a week at 2 to 5C, or their vase life can be greatly extended by adding 200 ppm of HQS and 5% of sucrose.

GRADING: Following harvesting, they are graded according to the length of the stem and the number of buds on each stem. At competitive prices, premium flower stems that are free of defects or insect disease outbreaks can be purchased. The length of the stem and the number of flower buds per stem are typically used to sort the lilies. To enhance the flowers' Quality to be preserved, remove the leaves from the bottom 10 to 15 cm of the stem.

LILIUM IN FLORAL WORLD:

AESTHETIC APPEAL: Beautiful and bright flowers are a well-known characteristic of lilies. Their big, eye-catching blooms are colored in a range of hues, such as pink, red, yellow, orange, white, and even bi-color combinations. Their overall visual appeal is enhanced by the distinctive forms and patterns of their petals.

SYMBOLISM: Lilies have many cultural and symbolic significance. They are frequently connected to virtue, purity, and rebirth. The Madonna Lily (*Lilium candidum*) is a representation of the Virgin Mary's purity in Christian traditions. Furthermore, lilies are commonly used at funerals as a



representation of the deceased person's soul's restored innocence.

OCCASIONS AND CELEBRATIONS:

Lilies are popular choices for various occasions and celebrations. Easter Lilies (*Lilium longiflorum*) are particularly associated with the Easter season, representing resurrection and hope. Lilies are also commonly used in weddings, bouquets, and floral arrangements for their beauty and meaningful symbolism.

GARDENING AND LANDSCAPING:

Lilies are cultivated in gardens and landscapes worldwide. They are versatile plants that can be grown in flower beds, borders, and containers. Gardeners appreciate their low maintenance, and they often thrive in well-drained soil and sunny locations.

FRAGRANCE: Many varieties of lilies are prized for their sweet and captivating fragrance. Oriental Lilies, in particular, are known for their strong and delightful scent, making them popular choices for perfumes and scented gardens.

CULTURAL SIGNIFICANCE: Lilies have cultural significance in various traditions and religions. They appear in art, literature, and religious texts, symbolizing purity, renewal, and the divine.

ECONOMIC IMPORTANCE: The cut flower industry values lilies for their marketability. Lilies are frequently used in floral arrangements and sold as cut flowers, contributing to the global flower trade.

CONCLUSION:

The captivating flower *lilium* in India provides the state's horticultural landscape with a hint of elegance, climate adaptability, and economic

opportunities. This captivating crop may be grown by farmers, benefiting the global economy and preserving the environment. A blooming future can be achieved by shifting the focus of agricultural activities to *lilium*.