

LILIUM (*Lilium species*)

Lilium is one of the most important bulbous flower, belongs to Liliaceae family, commercially grown in India for cut flowers. Recently, this crop has become popular in Manipur, Meghalaya, Arunachal Pradesh, Nagaland, and Sikkim. The world famous Siroy lily (*Lilium mackliniae*) is native to Manipur state in India.



Varieties

Alaska, Beatrix, Connecticut King, Cordelia, Elite, Paris, Menton, Massa, Mona Lisa, Orange Mountain, Yellow Giant, Casa Blanca, Tiber.

Growing environment

Lilies are grown in polyhouse or shade net houses. The maximum day and night temperature for obtaining good yield is 21 to 25 DC and 12 to 15^DC, respectively. Lilies grow well under low light intensity of 2000 to 3000 foot candle. Therefore, during summer months, shade net can be used to cut off 75 percent light and 50 percent during winter season. The optimum humidity inside the green house must be 80-85 %. Sandy loam soil with pH 6-7 is suitable.

Nursery raising

Bulbs are planted on raised beds about 15 cm above the ground level and 6-8 cm deep during winters, 8-10 cm in summer months. The bulb size generally used is between 10-12 to 14-16 cm in Asiatic and 16-18 cm in case of oriental lilies. Bulbs are planted at a spacing of 15x25 cm in the month of April-May in hills.

Propagation

Lilies can be multiplied through seeds, scales, bulblets and bulbils. Tissue culture method is used for large scale multiplication. Lilies are commonly multiplied by division of bulblets formed on the stem of most lilies just below the ground level. Detachment and planting of bulblets separately help to reproduce flowering size bulbs after a year's growth.

Nutritional requirements

Nitrogen should be applied @ 1 kg of calcium ammonium nitrate (CAN) per 100 m² and potassium nitrate (500g/500 litres of water) on weekly basis after three weeks of planting.

Irrigation

After planting, uniform moisture level is important, especially during first three weeks after planting when the shoots are 3-6 inches tall. Later, it can be shifted to drip irrigation system to avoid the wetting of foliage thereby reducing the chance of disease.

Plant protection

Fusarium stem disease: Infection takes place above the ground. The premature yellowing of the lower leaf, which turns to brown and subsequently drops are the symptom of this disease. Disinfect the infected soil by using suitable fungicides.

Botrytis rot: Small dark brown dots with a diameter of J -2 mm are visible on the foliage. Infection starts in the middle of leaf blade but also at the edge causing a deformed and retarded growth. Maintain hygienic conditions and remove weeds to avoid infection. Apply Carbendazim O. J % prior to flowering.

Harvesting and yield

Stems are generally harvested when first bud or less than 5 buds is just opening and showing color. Spikes are cut about 15-20 cm above the ground. The remaining lower portion of the plant is allowed for development of the bulbs. Lilies should be harvested in the morning to limit desiccation. Average yield of lily is one stem per plant.