

PRODUCTION TECHNOLOGY OF ORNITHOGALLUM (*Ornithogalum thyrsoides*)



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Ornithogalum (*Ornithogalum thyrsoides*) commonly known as chinchinchee, star-of-Bethlehem or wonder-flower is a bulbous flower of exquisite beauty. *Ornithogalum thyrsoides* belongs to family Hyacinthaceae and is native of South Africa. The plant has around five to seven fleshy leaves that die back after flowering and range from between 15cm and 30cm in length. The leaves are lance-shaped and smooth in texture. Their star-shaped, bell-like flowers are very decorative, blooming individually in circles carried at the top of leafless stems. Flowers are white or creamy-white, usually with a brown or green centre and appear in February to March months.

Uses

Ornithogalum is a showy bedding plant which can also be grown as a potted plant. Due to its long lasting flower stalks, they are also suitable for use as cut flowers and is also extensively cultivated for the floriculture trade. It is ideal for export as the flowers keep well and have an extended vase life. Besides, the cut stems of *ornithogallum* are an excellent material for drying and can be used in various dry flower crafts.

Climate

Ornithogalum prefers sunny site for proper growth and flowering away from the shade. The optimum temperature for growing *ornithogallum* is 20-25°C during day time and 9-15°C during night. It cannot tolerate frost.

Soil and its preparation

Sandy loam soils rich in organic matter, well drained, friable having pH in the range of 5.0 to 7.0 is considered best for the cultivation of *Ornithogalum*. The soil should be thoroughly ploughed to the depth of about 20-30 cm and kept open to sun for at least 15 days.

Propagation

Ornithogalum is commercially propagated by bulbs. A single bulb produces an average of 3-4 flower grade bulblets in the next season depending on its size.



Planting time: The best time for planting bulb is mid October under Jammu conditions. It takes about 120-150 days from planting of bulbs to produce spikes.

Bulb size: Healthy bulb measuring 3-4 cm diameter is preferred for planting.

Treatment of bulb: Before planting, bulbs should be dipped in a solution containing Bavistin (0.1%) and Dithane -M-45 (0.2%) for half an hour to prevent fungal attack. Bulbs dipped with GA3 @ 50ppm for 12 hours prior to planting gives early flowering with good quality flowers.

Planting depth and spacing: Bulbs should be planted 4-5 cm deep on raised beds to ensure proper drainage. Provide a spacing of 15 cm from bulb to bulb and 20 cm from row to row while planting in beds.

Manures and fertilizers

Farm yard manure @5kg per square meter (25 quintal/kanal) should be incorporated one month before planting. Apply 20 gm nitrogen, 30 gm each of phosphorus and potash per square meter.

Full dose of Phosphorus and Potassium should be applied as basal dose, whereas nitrogen in 2 equal split doses (one at planting and other at 45 days after planting).

Intercultural operations

Irrigation

Soil should have sufficient moisture to enable easy rooting and sprouting. Light irrigation with watering can may be done as and when required to keep the soil moist. Water logging should be avoided as it may lead to rotting of bulbs.

Weeding and hoeing

The beds or field should be kept clean by regular weeding and hoeing. Weeding and hoeing should be done manually, with the help of 'khurpa' or hand hoe. At least four to 5 hoeings is required during the entire cropping

season to keep the soil loose for better development of the newly formed bulbs.

Harvesting of spikes

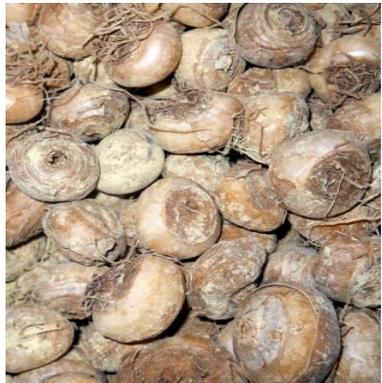
Harvesting of spike should be carried out when the lower most floret is half open for distant market and for nearby market, spikes can be harvested when lowermost 2-3 florets are open. Spikes should be cut in morning or evening hours when the temperature is mild. Harvesting should be done with sharp edged secateurs or knife. Care should be taken not to crush the stem.

Post harvest handling

Spikes of ornithogalum lasts for about 10-15 days in plain water at room temperature. Pulsing treatment of 3% sucrose + 400 ppm 8-HQC (hydroxy quinoline citrate) helps in extending the vase life of cut spikes.

Lifting of bulbs and storage

Bulbs are lifted when the foliage dried up after flowering. Care should be taken to avoid damage to the bulb while lifting. The aerial part is twisted off and the adhering soil and shriveled old bulbs are removed. Bulbs after lifting are kept in trays, separately in a dry shady but well ventilated place for about a month. After proper cleaning, bulbs are dusted with Dithane -M-45 (0.2%), and stored.



Pot culture:

To grow indoors as a houseplant, plant 6 bulbs in an 8" pot and place where they will receive least 4 hours of direct sun. They do best in cool temperatures. After foliage turns brown, withhold water and fertilizer and allow to rest in containers until time to repot in autumn.



Dry flower and floral craft:

For drying, cut stems should be harvested when all the florets are fully opened. The spikes can be dried easily by hanging upside down in a dry and well ventilated place away from sun. They can also be dried by embedding in suitable desiccant such as silica gel. Properly dried spikes can be dyed in different colours using food dyes or fabric colours and are used in making floral arrangements.

