
Production Technology of Tuberose

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ABSTRACT

Tuberose flowers are commonly used as a loose flower and extraction of perfumes. It is commercially propagated by bulbs. These bulbs should be treated with GA₃ @ 200ppm for early flowering, high yield with good quality flowers. The well drained sandy loam soils with a soil pH of 6.5 - 7.5 is highly suitable for tuberose. The bulb size of 1.5-2.0 cm in diameter is ideal for planting with a spacing of 0.3m x 0.3m. Basal application of FYM @ 25 t, 200 kg N, 400 kg P₂O₅ and 200 kg K₂O per hectare is suggested. Irrigation should be given at once in seven days during summer and once in 10 days during winter seasons. Harvesting of tuberose flowers commences from 80 to 100 days after planting and harvested from July onwards. The flower yield ranges between 15 to 20 t/ha in the first year, 20 and 25 t/ha in the second year and 7.5 to 10 t/ha in the third year.

INTRODUCTION

Tuberose (*Polianthes tuberosa* L.) is one of the economically significant bulbous loose flower crops grown under tropical and sub-tropical regions of India and Tamil Nadu. Tuberose flowers are commonly used in garland making, bouquet preparation, bridal makeup with flowers and other flower arrangements. The aromatic oils extracted from the flowers are commonly used in perfume industries. Based on the number of rows in petals, tuberose varieties are classified as

single flower, semi double flower and double flower types. Tuberose prefers warm climatic situations and the flower yield is adversely affected by shade.

PROPAGATION

Tuberose is commercially multiplied through bulbs. The bulbs treated with GA₃, ethrel or thiourea induced early flowering, increases the flower spikes and reduces the bulbs per plant. The bulbs treated with GA₃ (200ppm) will produce highest numbers of longer spikes and highest number of florets.

FIELD PREPARATION

The field should be thoroughly pulverised. Well decomposed farm yard manure should be thoroughly incorporated at the time of last ploughing.

SOIL

Tuberose can be raised in variety of soils from sandy loam soils to clay loam soils including the problem soils. The sandy loam soils having pH from 6.5 to 7.5 with well drained aerated soils are highly desirable for tuberose.

PLANTING

The lifted bulbs from soil should be cleaned, dried and stored properly before planting. The diameter of the bulb size should be 1.5-2.0 cm and planted with a spacing of 0.3m x 0.3m.

NUTRITION

Tuberose requires higher amount of nutrients. Basal application of FYM @ 25 t, 200 kg N, 400 kg P₂O₅ and 200 kg K₂O per hectare is suggested. However, soil test based nutrient application should be followed.

WATER MANAGEMENT

Irrigation is an important cultural practice which affects the growth and development of tuberose. It is essential to irrigate the crop before planting to maintain optimum levels of soil moisture for sprouting of bulbs. Irrigation should be given at once in seven days during summer and once in 10 days during winter seasons.

WEED MANAGEMENT

Pre-planting application of atrazine at 1.25 kg/acre is suggested to manage weeds in tuberose for high flower yield with good quality flowers.

PLANT PROTECTION

Need based pest, disease and nematode management should be followed. Disease and nematode free bulbs should be used for planting.

HARVEST AND YIELD

In tuberose, flowering starts from 80 to 100 days after planting and flowering occurred from July. Tuberose flowers throughout the year. The flowers should be harvested at bud-burst stage preferably in the early morning or late evening by using with a sharp knife. Usually, 4-6 cm basal

stem in the flowering shoot has to be left for growth of the bulbs. The lower cut end of flower spikes should be immersed in water for enhancing shelf life. The flowers are packed in bamboo basket and each basket can hold about 10-15 kg of flowers. The flower yield ranges from 15 to 20 t/ ha in the first year, 20 to 25 t/ha in the second year and 7.5 to 10 t/ha in the third year.

The flowers are graded based on stalk length, length of rachis, number of flowers per spike and weight of spikes. Straight and strong stem of uniform length and uniform stage of development are desirable in markets. Flowers should be free from bruises, diseases and pests.

CONCLUSION

The flower growers should adopt all the recommended cultural practices to get maximum yield and higher profit. If the farmer is adopting all kind of recommended cultural practices, the flower yield ranges between 15 to 20 t/ha in the first year, 20 to 25 t/ha in the second year and 7.5 to 10 t/ha in the third year.