

Influence Of Bulb Size On Vegetative Growth Of Tuberose (*Polianthes Tuberosa* L.) Cv. Single

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ABSTRACT

An experiment consisting three different sizes of bulbs was carried out at C.C.S. University, Meerut (U.P.) to assess the comparative Influence of these size of bulbs to find out the optimum bulb size for improving the yield of tuberose. Small bulbs (2-3 cm in diameter) showed early emergence of shoots. Other results revealed that numbers of sprouts/ clump (5.33 and 6.02) number of leaves/clump (48.87 and 47.02) length of longest leaf (59.65 cm and 61.21cm) and height of plant (50.99 cm and 52.15 cm) were highest with largest size bulbs.

Key words : Tuberose, Bulb size, Shoots, Clump, Sprouts, Vegetative growth.

INTRODUCTION

Tuberose (*Polianthes tuberosa* L.) an important commercial flower crop of India, is popular for its sweet fragrance and good keeping quality. The commercial cultivation of tuberose is being carried out on several states of India viz., West Bengal, Karnatka, Tamil Nadu, Andhra Pradesh, Maharashtra, Uttar Pardesh, Haryana, Uttrachal and Delhi etc. The cv.Single with high essential oil content is considered most suitable for essential oil. It is well known that agro techniques play an important role in the production of commercial flower such as tuberose. In addition the size of bulb is known to influence the yields in tuberose. The relation ship of bulb size and growth characters or importance of bulb size in tuberose has been reported by Sadhu and Das (1978), Yadav *et. al.* (1984) and Mukhopadhyay *et. al.* (1986) etc. However literature pertaining to the influence of bulb size on growth of tuberose under the agro-climatic condition of Meerut Region is scanty. Therefore keeping these aspects in view this experiment was carried out with three different sizes of bulbs to find out the optimum bulb size for the cultivation of tuberose.

MATERIALS AND METHODS

This investigation was carried out at Horticultural Research Farm of Department of Horticulture, Institute of Advance Studies, Chaudhary Charan Singh University Meerut (U.P.). The experiment was laid out in the field in a

Factorial Randomized Block Design with three sizes of bulbs viz. 2-3 (B₁), 3-4 (B₂) and 4-5 (B₃) diameter in centimeter. The treatments were replicated thrice. Observations on growth parameters like number of days taken to bulb sprouting, Number of sprouts per clump, Number of leaves per plant, Length of longest leaf and height of plant were recorded and data were analysed statistically.

RESULTS AND DISCUSSION

The influence on growth due to variation of bulb size are presented in tables.

The results obtained on number of days taken to sprouting clearly indicate that smaller sized bulbs (2-3 cm. diameter)

Number of days taken to bulb sprouting

Table 1 : Number of days taken for sprouting of bulbs as Influenced by bulb size in tuberose cv. Single.

Treatments	Number of days taken for sprouting	
	Ist year	IInd year
Bulb size (Dia. in cm)		
2-3 (B ₁)	10.76	9.78
3-4 (B ₂)	11.40	10.51
4-5 (B ₃)	15.73	14.94
S.Em. (±)	0.12	0.07
C.D at 5%	0.36	0.20

were found to take significantly less time for sprouting. The results obtained in this study are in complete agreement with the work done by Kamerbeek (1962) and

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