

## **The Influence of Substrate, of the Planted Bulb Diameter and of Interaction Substrate x Planted Bulb Diameter upon the Number of Bulbs/Plant in *Polyanthes tuberosa***

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### SUMMARY

*Polyanthes tuberosa* (Tuberose) is originally from Mexico and is the best known and cultivated species of the genus *Polyanthes* (Sonea *et al.*, 1979; Șelaru, 2007). In order to support tuberose lovers and growers, for leisure or economic purposes (Cantor and Pop, 2008), *Polyanthes tuberosa* (tuberose) was introduced in the collection of flower species of the Fruit Research Station Cluj, and was monitored over several years of growth. The study monitored morphological and decorative characters, productivity, technological and behaviour characteristics of the species and its use. In terms of multiplication of tuberose, number of bulbs per plant is a determining factor. The rate of multiplication of the species depends directly on the number of trained replacement bulbs. The bifactorial experiment focused on the influence of the culture substrate and the diameter of planted bulbs on the number of bulbs per plant, and therefore plant productivity. Based on the resulted data it can be concluded that the two experimental factors significantly influenced the average number of formed replacement bulbs/ plant. As a synthesis of results of the experiment we can conclude that the highest number of bulbs/plant, 12.6, is observed on substrates a<sub>3</sub>: 30% neutral peat + 30% manure + 40% soil and a<sub>4</sub>: 25% neutral peat + 40% manure + 15% sand + 20% soil, followed, the significant difference, the substrate a<sub>2</sub>: 50 neutral peat + 50% soil and a<sub>5</sub>: 50 % manure + 50% soil. Lowest values of the number of bulbs/plant were found on substrate a<sub>1</sub> - experimental field soil (9.8 bulbs/plant). Regarding the influence of the diameter of bulbs planted on the number of replacement bulbs per plant formed on average, higher values were found for bulbs diameters  $\geq 20$  and  $\geq 25$  mm. We can conclude that both the culture substrate and the diameter of planted bulbs influence the number of new bulbs, but the culture substrate clearly has a greater influence since the the maximum and minimum average number of replacement bulbs/plant were found at the same diameter tuberose bulb ( $\geq 25$  mm).

**Keywords:** tuberose, substrate, characters, behavior

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