

Effects of zeolite and vermicompost on growth characteristics and concentration of some nutrients in *Petunia hybrida*

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Abstract

Petunia is one of the most popular flowers in the urban greeneries. The effects of zeolite and vermicompost media on some quantitative and qualitative characteristics of petunia were studied in a greenhouse experiment. Treatments consisted of three levels of zeolite (2.5, 5 and 10 % w/w) and three levels of vermicompost (2.5, 5 and 10 % w/w). In control treatment, no zeolite and vermicompost was added to soil. The experiment was carried out as a completely randomized design with 3 replications. Plants grew for two months in the greenhouse. Then, they were cut from collar and leaves and shoots were separated. The measured characteristics were dry weight of shoots, dry weight of roots, number of flowers, number of leaves, flower diameter, plant height, and concentrations of total nitrogen, phosphorus, potassium and calcium in shoots. Results showed that application of vermicompost and zeolite increased dry weight of shoots, dry weight of roots, number of flowers, number of leaves, flower diameter, plant height, and concentrations of total nitrogen, phosphorus, potassium and calcium in plants. Vermicompost at the rate of 10% produced maximum amount of plant-growth parameters. Therefore, it is recommended to consider the zeolite and vermicompost for cultivation of petunia.

Keywords: Green space, Ornamental plants, Growth medium.

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