Effects of phosphorus, vermicompost and natural zeolite on quantitative and qualitative characteristics of *Zinnia elegans*

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Abstract

Zinnia is one of the beautiful and attractive flowers due to its length of blooming period and various colors. The effects of phosphorus (P) and vermi-compost and zeolite media on some growth characteristics and chemical composition of Zinnia were studied in a greenhouse experiment. Treatments consisted of 3 phosphorus levels (0, 5 and 150 mg P per kg soil) and 3 zeolite and vermi-compost levels (0, 5 and 10% w/w), that were arranged in a completely randomized design with 3 replications. Plants grew for two months in the greenhouse. Then, they were cut from collar and leaves and stems were separated. Leaf area, chlorophyll content, fresh and dry weight of plants, dry weight of leaves, dry weight of roots, and concentration of P, zinc and iron in the aerial parts of the plants were measured. The results showed that vermi-compost treatment had the highest amount of growth parameters and the differences were significant as compared to control and other treatments. Zeolite decreased the studied plant growth parameters as compared to the control; the least amount of growth parameters belonged to zeolite treatment.

Keywords: Ornamental flowers, Growth media, Nutrient elements.

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