The positive effects of vermicompost and humic acid on quantitative and qualitative traits of lisianthus (*Eustoma grandiflorum*) after transplanting

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Abstract

In order to improve the quantitative and qualitative traits of lisianthus (*Eustoma grandiflorum* "Mariachi Blue") a factorial experiment ws performed as completely randomized design at three levels of vermicompost (0, 5 and 10% v/v) and humic acid (0, 2 and 4 kg/m^3) with three replications, under the greenhouse conditions. Evaluated traits were number of Leaves, buds and branches, peduncle length and diameter, vase life, internodes length, shoot height, main stem diameter and fresh and dry matter weights of stem and roots. Results showed that vermicompost significantly affected peduncle length and diameter, number of leaves, height and dry matter of shoot and humic acid affected flower diameter, shoot dry matter, and dry and fresh weights of roots. Also, the interaction effect of vermicompost and humic acid had a significant effect ($p<0.01$) on traits such as internode length, peduncle length, number of leaves, main stem diameter, flower diameter, shoot dry and fresh weight and dry and fresh weight of roots. It seems that humic acid has an important role in nutrients absorption, yield parameters and quality of lisianthus. Considering the positive effects of 5% vermicompost and 2 kg/m^3 humic acid treatments, in can be suggested to apply these organic fertilizers after transplanting stage of lisianthus.

Keywords: Generative traits; Vase life; Organic fertilizers; Root dry and fresh weight.

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