The effects of arbuscular mycorrhizal fungi and different phosphorus levels on some growth aspects of Lisianthus

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Abstract

In order to study the effects of mycorrhizal fungi on quantitative and qualitative traits of roots, shoots and flower of Lisianthus, the inoculation with two mycorrhizal fungi isolates (*Glomus mosseae* and *G. intraradices*) and their blend was experimented under different levels of phosphorus (10, 20 and 40 mg/kg soil) in a factorial trial, based on a randomized complete blocks design, under greenhouse conditions. The results indicated that inoculated Lisianthus plants had better growth and higher biomass compared to the non-mycorrhizal plants. Inoculation with arbuscular mycorrhizal fungi significantly reduced number of required days to flowering and increased flowering stem characteristics including length and number of flowering stems, number of flowers, mean flower diameter and fresh weight of flowers per plant. The results revealed that under optimum level of phosphorus, mixture of the two arbuscular mycorrhizal fungi performed better than either of them in increasing the efficiency of the studied indices.

Keywords: Fungal isolates, Biomass, Ornamental plant, Organic, Sustainable horticulture.

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