

Effect of some *Trichoderma* spp. isolates on promoting growth of cucumber seedlings under greenhouse conditions

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Abstract

This experiment was performed to investigate the effect of some *Trichoderma* spp. isolates as growth promoters of cucumber (*Cucumis sativus* L.) seedlings under greenhouse conditions. Inoculants of 19 *Trichoderma* spp. isolates were prepared from disinfected wheat grain. The upper half of the soil in pots (containing field soil and sand) was mixed with these inoculants at 3% ratio and the pots were irrigated with tap water for 28 days. After four weeks, the seedlings were sampled for growth comparison on stem length, root length and total fresh weight. The results showed that some isolates improved significantly the cucumber seedlings' growth and others had inhibitory effect. Application of *Trichoderma* spp. 17 and *T. longibrachiatum* increased stem length more than 74% as compared to control. Also, these isolates increased significantly ($P < 0.05$) the total fresh weight about 40% and 25%, respectively, as compared to control. Furthermore, *Trichoderma* sp. 19 decreased significantly the stem length, root length and total fresh weight as compared to control. These results show the ability of Persian *Trichoderma* spp. isolates in promoting cucumber growth and its potential for other plants.

Keywords: Plant Growth Promoting Fungi, Inoculum, *Trichoderma*.

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