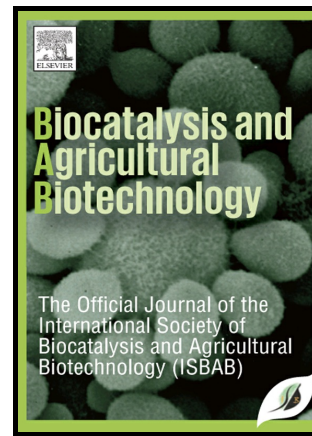


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Synergistic Effect of Arbuscular Mycorrhizal Fungi on Growth and Physiology of Salt-Stressed *Trigonella foenum-graecum* Plants

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Abstract:

A pot experiment was directed to investigate the impact of arbuscular mycorrhizal fungi (AMF) on growth and physiological traits of fenugreek (*Trigonella foenum-graecum* L.) plants exposed to varying salt concentrations (0, 75 and 150 mM NaCl) and also to study the effect of these salt concentrations on AM root colonization. The results revealed that the increase in salt concentration caused a decrease in growth responses, water status and chlorophyll content. However AMF inoculation enhanced the growth, proline content and levels of antioxidant enzymes and phosphatase in fenugreek plants compared to non-AM treated ones. These effects were related to the mycorrhizal colonization levels in the colonized plants. Also under salt stress, mycorrhizal dependency of fenugreek plants grown at both lower (75 mM NaCl) and higher salt concentration (150 mM NaCl) was clearly higher than those in control soil. Finally, from these results, we suggested that AMF inoculation was effective in improving the tolerance of fenugreek to salinity.

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