

**GROWTH RESPONSE OF OKRA (*ABELMOSCHUS ESCULENTUS* (L) MOENCH) TO
ARBUSCULAR MYCORRHIZAL FUNGUS INOCULATION IN STERILE AND
NON-STERILE SOIL**

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ABSTRACT

In a pot experiment, the growth of okra inoculated with *Glomus mosseae* in sterile and non-sterile soil was investigated. Inoculation with *G. mosseae* increased plant growth, fruit yield and nutrient uptake in sterile soil more than in non-sterile soil. Arbuscular mycorrhizal fungi (AMF) colonization was highest in inoculated plants grown in sterile soil and lowest in uninoculated plants grown in non-sterile soil. Foliar nutrient yield was consistently higher in sterile soil inoculated plants than in other treatments. The increased growth in inoculated sterile soil plants is explained in the light of enhanced nutrient uptake by the AMF which could have led to increased chlorophyll synthesis and subsequent increased photosynthesis. On the other hand, the reduced growth of plants in non-sterile soil could have resulted from the negative effect of soil pathogens which either competed with the mycorrhizal fungi for colonization of the okra roots or grazed on the mycorrhizal propagules.

KEYWORDS: Okra, Mycorrhiza, Sterile and Non-Sterile Soil