The effectiveness of indole-3-acetic acid (IAA) synthesis by 9 species of vesicular arbuscular mycorrhizal fungi (VA-mycorrhiza), Acaulospora dilatata, A scrobiculata, Entrophospora sp., Gigaspora sp., Glomus aggregatum, Gl. etunicatum, Gl. geosporium, Gl. intraradices and Gl. manihotis in citrus seedling (Citrus reticulata Blanco) was measured by paper chromatography analysis. The rice var. KLG1 was used for bioassay determination. Infection of VA-mycorrhiza resulted in a significant increase of IAA in root of citrus seedling. Maximum level of IAA was observed in root of citrus seedling in citrus inoculated with Gl. etunicatum.

There was correlation between IAA increasing level by VA-mycorrhiza symbiosis in citrus seedling root with stem fresh weight and spore number but no correlation with height, leaf number, root fresh weight and root length. However, growth rate of citrus seedling colonized by VA-mycorrhiza was increased. The greatest seedling height, spore number and intensity of root infection was obtained from Gl. etunicatum, meanwhile the maximum number of leaf was obtained from Gl. manihotis, stem fresh weight was obtained from Entrophospora sp. and Gl. aggregatum, root fresh weight was obtained from Gigaspora sp. and root length was obtained from Gl. aggregatum.

Infection of VA-mycorrhiza resulted high significant increase of acid and alkaline phosphatase in citrus growth medium. Maximum level of acid phosphatase was observed in medium inoculated with Gl. aggregatum meanwhile the alkaline phosphatase was observed in medium inoculated with Gigaspora sp.