

INITIAL GROWTH OF *Jatropha curcas* L. SEEDLINGS INOCULATED WITH MYCORRHIZAL FUNGI

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The searching for alternative sources of energy in order to replace fossil oil makes the biodiesel obtained from plants a feasible option. The plant called pinhão-manso (*Jatropha curcas* L.) is a promising tree for the biodiesel production. Therefore, studies are needed with the aim to increase the development of the *Jatropha curcas* L. crop. It is known that the inoculation of mycorrhiza in the rhizosphere of plants during the production of the seedlings can improve their growth and subsequent field establishment. The objective of this work was to evaluate the influence of the inoculation of mycorrhizal fungi in initial growth of *Jatropha curcas* L. seedlings. For this, we carried out two assays. In the first assay it was compared the sterilized soil and the unsterilized soil, where the plants were grown for 85 days. In the second assay it was compared the sterilized soil and the sterilized soil inoculated with soil containing spores of the mycorrhizal fungi *Scutellospora heterogama*, *Glomus clarum*, *Glomus etunicatum* and *Acaulospora* sp, where the plants were grown for 82 days. The soil used was collected in the *Campus* of the Federal University of São João del-Rei. The two assays were conducted carrying out five replicates. After the growth periods, dry mass of the shoots were measured. Furthermore, it was determined the percentage of mycorrhizal colonization of the plant roots using the checkered plate method. For the first and second assays the colonization by mycorrhizal fungi was statistically higher (Tukey test at 1% of probability) in plants growing in unsterilized and unsterilized and inoculated soils, respectively. For the first assay, the values of dry weight of shoots showed no statistical difference between the treatments (Tukey test at 5% of probability). For the second assay, the value of dry weight of shoots growing in sterilized and inoculated soil was statistically higher (Tukey test at 5% of probability) when compared to shoots growing in sterilized soil without fungi inoculation. These results show that the native mycorrhizal fungi species can colonize *Jatropha curcas* L. roots but do not influence the growth of the seedlings, unlike what occurs with inoculated fungi, that colonizes *Jatropha curcas* L. roots and improve the growing of their shoots.

Keywords: *Mycorrhiza*, *Jatropha curcas* L., *seedlings*

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