

TITLE: INFLUENCE OF THE INOCULATION OF DIAZOTROPHIC BACTERIA UNDER THE POPULATION OF ARBUSCULAR MYCORRHIZAL FUNGI IN RHIZOSPHERE OF CALOPO

AUTHORS: LEITE, D. C.; MOURA, J. B.; SOUZA, R. F.; LOPES FILHO, L. C.

INSTITUTION: FACULDADE EVANGÉLICA DE GOIANÉSIA, (AV. BRASIL Nº 2020, ESQ SANTOS DUMONT, CEP 76.380-000, GOIANÉSIA, GO BRAZIL)

ABSTRACT:

Callopogonium mucunoides is a creeping legume and in Brazil it is used as fodder in the central region, being associated with the braquiária. It is also used as green fertilizer for crops requiring large quantities of nitrogen in the soil and when planted among orange groves and other fruit is efficient in controlling invaders. The experiment was conducted in the Laboratory of Agricultural Microbiology of the Evangelical Faculty of Goianésia. The experimental design used entirely randomized with four replications arranged in two treatments being an application of diazotrophic bacteria (*Rhizobium Tropici* and *Azospirillum brasiliense*) and a treatment without application in sowing of *Callopogonium*. For laboratory analysis, samples were removed from 50 cm³ of rhizospheric soil with root during the flowering period. For determining the percentage of colonization, the roots were clarified and stained with 0.05% of blue-de-Trypan in Lactoglycerol and the colonization evaluation was made in a stereoscopic microscope, following the technique of intersection of the quadrants. The AMFs spores were extracted by the damp sieving method followed by centrifugation at sucrose 50%. The identification of the genera of fungi mycorrhizal fungi were carried out from the morphological characteristics of spores with polyvinyl-glycerol pure and mixed with Melzer and classified according to the definitions of the International Culture Collection of Arbuscular and Vesicular-Arbuscular Mycorrhizal Fungi. The inoculation of diazotrophic organisms did not provoke statistical differences between treatments in spore density indices and mycorrhizal colonization rate. In the soil inoculated with diazotrophic bacteria, were identified the genus *Claroideglomus sp.*, *Diversispora sp.* and *Sclerocystis sp.* The genera *Diversispora sp.* and *Scrobiculata sp.* have been identified in samples without application of fasteners. The genera *Acaulospora sp.*, *Glomus sp.*, and *Gigaspora sp.* are present in both samples.

Keywords: *Callopogonium mucunoides*, MAF, Tillage

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