

TITLE: MYCORRHIZAL COLONIZATION IN DIFFERENT PLANT COVERAGE  
IN DIRECT PLANTING WITH AND WITHOUT ADDING NITROGEN

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ABSTRACT: The challenge of deploying agroecosystems in the Cerrado is to reconcile attributes related to the quality of the soil with high productivity, avoiding its degradation, which is identified by altering the physical, chemical and biological attributes of the soil, due primarily to the decrease in organic matter content. Coverage plants can influence the biological functioning of the soil and, consequently, in its quality and arbuscular mycorrhizal fungi (AMFs) are one of the main microbiological parameters that can be closely related to vegetable sanity, thus being considered a good indicator of influences soil management systems. The objective of this work was to evaluate the mycorrhizal colonization in different plant coverage in direct planting with and without adding nitrogen. The experiment was conducted in red dystrophic latosol, a clay soil in the experimental area of Embrapa Cerrados. The experimental design was in randomized blocks, in the scheme of subplots, with three replications. The following coverage plants were used feijão-bravo- do-ceará (*Canavalia brasiliensis* M.), guandu (*Cajanus cajan*), crotalária-juncea (*Crotalaria juncea*), millet (*Pennisetum glaucum*), sorghum (*Sorghum bicolor*), with and without applications of nitrogen in coverage in the previous culture, which was the corn. The absolute control of the experiment was the treatment without use of hedge plants (spontaneous vegetation). For determining the percentage of colonization, the roots were clarified and stained with 0.05% of blue-de- Trypan in lactoglicerol and the colonization evaluation was made in a stereoscopic microscope, following the technique of intersection of the quadrants. There was no significant difference between the coverage plants and the application or not of N in coverage in the crop of maize, before planting the coverage plants. Mycorrhizal colonization varied between 63.07 and 78.97% in different species.

Keywords: Fungi; MAF; Tillage.