INFLUENCE OF ARBUSCULAR MYCORRHIZA FUNGI IN PHOSPHORUS ABSORPTION BY CORN

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ABSTRACT:
Arbuscular mycorrhizal fungi are important in the obtainment and mobilization of nutrients from the soil, especially phosphorus, which is an essential nutrient for the production of corn grains, but in soils with low fertility, it has a low availability to the crop. The objective of the present work is to evaluate the absorption rates of phosphorus by corn in low fertility natural soil, through the inoculation of arbuscular mycorrhizal fungi native to Cerrado. The experiment was excuted in pots under greenhouse conditions at the Universidade Estadual da Região Tocantina do Maranhão, at Imperatriz-MA. The soil samples for the extraction of native arbuscular mycorrhizal (AMF) fungi were collected in 4 areas with Cerrado *strictu sensu* vegetation. The design was randomized in a 2x3 factorial with two corn hybrids, three inoculations with AMF (non-AMF, with-AMF native and classified AMF) and 4 replications totaling 24 experimental units. The treatments received complete mineral fertilization, except treatments with AMF that did not receive phosphate fertilization. The concentration of P in the aerial biomass was determined with 45 days, through spectrophotometry method. The results were submitted to analysis of variance and Tukey 's test at 5% of probabilities. The absorption of P by biomaasa of the plant were significantly for the AMF factor, and treatment with AMF+classified with was the highest P in the aerial part of the plant, 0.24 g / g, not differentiating from the s / AMF treatment. However, it is worth noting that the treatment without AMF received complete fertilization, this demonstrates the efficiency of FMA in absorbing P of the soil even in low concentration, equivalent to the phosphate fertilization. AMF inoculation can serve as an alternative fount to phosphate fertilization, thus reducing the consumption of agricultural inputs in corn.

Key words: Cerrado. Sustainability. Fertilizing

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