

Title: INFLUENCE OF SUCCESSIONAL GRADIENT ON THE DIVERSITY OF RHIZOBACTERIA OF A TROPICAL DRY FOREST

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Abstract:

Tropical dry forests are considered unique environments possessing specific characteristics as high-grade leaf deciduousness and two well-defined annual seasons (dry and wet); are declared priority for scientific research since around 52% have already been converted to pasture and crops, and the fragmented remnants. On the ground is a range of microbial populations of these, the growth promoting rhizobacteria in plants (PGPR) have attracted special interest, because they stimulate the growth of plants by the production of hormones and increasing the availability of nutrients. The objective of this research was to evaluate the diversity and abundance of rhizobacteria, in the soil of three successional stages (early, intermediate and late). In depth of 20 cm were collected four soil samples per plot, a total of 4 plots by stage, 3 located in the State Park Lagoa do Cajueiro-PELC (Matias Cardoso / MG) and the Biological Reserve Jaíba-RBJ (Jaíba / MG). Bacterial colonies were isolated in medium PCA (Plate Count Agar) after a 24 hours incubation period in a stove at 35 °C and the CFU counts were performed and then morphotyping. A total of 705 colonies obtained was possible to differentiate 25 morphotypes, in PELC these, 21 were found in soil of intermediate stage, 18 early-stage and 17 late stage, in contrast, the RBJ shows the greatest diversity of morphotypes (17) was got late stage, the lower (4) in the intermediate, and 10 in the initial stage. Taking into account the data of plenty the average CFU / g soil in the middle stages were higher in both parks (12×10^4 and $13,8 \times 10^4$) more than twice that observed in the initial stages $5,5 \times 10^4$ and $7,1 \times 10^4$ and late $5,4 \times 10^4$ and $2,6 \times 10^4$, respectively. Despite the higher abundance in both parks have been obtained at intermediate stages of succession, diversity was not proportional per stage, since in the mean late stages CFU / g of soil were smaller in absolute numbers for the other stages, yet the average diversity of morphotypes was similar to those found when compared to the intermediate stage. So it can be inferred that the sucessionalidade can effectively interfere with the abundance and diversity of rhizobacteria present in TDF soils.

Key words: Tropical Dry Forest; rhizobacteria; successional gradient; plant growth promoting.

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