



## **Analysis of physical parameters related with water infiltration in tropical soils located in edges forest in urban areas**

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A very important factor for water infiltration into the soil in urban forest systems and suffering constant anthropogenic pressures is the analysis of soil compaction where these forests are or will be established. In this context, this work aimed to promote studies on physical parameters related to distribution of pores, compaction and soil biological activity in forest remnants border areas located in urban watersheds in Campinas / SP - Brazil. The Forest of Santa Genebra (22°49'45 "S and 47°06'33" W) has an average altitude of 680m and tropical climate of altitude, has an area of 251 ha and a nine kilometer perimeter. It constitutes 85% of Semideciduos forests and 15% swamp forest. Due to its location close to urban centers, roads and agricultural areas under direct influence of the anthropic means. For the present study analyzes were performed: particle size, soil density, porosity, matters organic, of biopores, and root distribution (primary, secondary and tertiary) and seedlings in 40 points on the perimeter of the forest equidistant 200m remaining edge. The analysis of the results allowed us to observe that areas suffer direct influence of human activities surrounding. With the results set correlations between the different parameters in order to allow a better understanding of the dynamics of water infiltration into the soil under these conditions and the quantity of tertiary roots, biopores and soil density were the best indicator of environmental quality as suffer direct influence of the surrounding areas, especially those near the most urbanized regions. In general, it can be observed that human activities such as deforestation and vehicle traffic, animals and people, promoted soil compaction and consequent changes in water infiltration into the soil in areas of edges of this remnant of these consequences affect direct numerous parameters that directly influence the dynamics of an ecosystem restoration that is now significantly affected by the occupation of their surroundings.