

Soil/Phytophysiology Relationship in Southeast of Chapada Diamantina, Bahia, Brazil

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Abstract : This study aims to characterize the physicochemical aspects of the soils of southeastern Chapada Diamantina - Bahia related to the phytophysiological aspects of this area, rupestrian field, small savanna (savanna fields), small dense savanna (savanna fields), savanna (Cerrado), dry thorny forest (Caatinga), dry thorny forest/savanna, scrub (Carrasco - ecotone), forest island (seasonal semi-deciduous forest - Capão) and seasonal semi-deciduous forest. To achieve the research objective, soil samples were collected in each plant formation and analyzed in the soil laboratory of ESALQ - USP in order to identify soil fertility through the determination of pH, organic matter, phosphorus, potassium, calcium, magnesium, potential acidity, sum of bases, cation exchange capacity and base saturation. The composition of soil particles was also checked; that is, the texture, step made in the terrestrial ecosystems laboratory of the Department of Ecology of USP and in the soil laboratory of ESALQ. Another important factor also studied was to show the variations in the vegetation cover in the region as a function of soil moisture in the different existing physiographic environments. Another study carried out was a comparison between the average soil moisture data with precipitation data from three locations with very different phytophysiological aspects. The soils found in this part of Bahia can be classified into 5 classes, with a predominance of oxisols. All of these classes have a great diversity of physical and chemical properties, as can be seen in photographs and in particle size and fertility analyzes. The deepest soils are located in the Central Pediplano of Chapada Diamantina where the dirty field, the clean field, the executioner and the semideciduous seasonal forest (Capão) are located, and the shallower soils were found in the rupestrian field, dry thorny forest, and savanna fields, the latter located on a hillside. As for the variations in water in the region's soil, the data indicate that there were large spatial variations in humidity in both the rainy and dry periods.

Keywords : Bahia, Brazil, chapada diamantina, phytophysiological aspects, soils

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