Evaluation of soil organic matter in some agricultural production systems of the eastern Amazon: Objectives, hypothesis and methodology

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Most of the agriculture practiced in the Brazilian Amazon is based upon slash and burn cultivation of the forest. The planting of food crops is followed by periods of fallow so the soil may recuperate its natural fertility. An understanding of the causes of the impoverishment of soil fertility may permit the use of agricultural practices that allow the farmer to maintain the same fields under cultivation for longer periods and therefore reduce pressures on the natural forest. This study proposes an evaluation of the dynamics of the soil organic matter by fractionating fulvic acids, humic acids and humines and by organic - P. Soil analysis. Soil samples collected in plots of 96 m² from depths of 0 -2.5 cm, 2.5 - 5 cm, 5 - 10cm, 10 -20 cm, 20 -30 cm and 30-50 cm will be analyzed in seven repetitions composed of three simple samples. The treatments to be studied are defined in the following manner: field at the beginning of cultivation; field with two years of planting; abandoned field with leguminous plants planted for ground cover; abandoned field enriched with *Acacia auriculiformis*; and an alley-crop cultivation system which includes *Acacia auriculiformis* and maize.

Climatic Evaluation in Northeast Pará, Igarapé Açu. (ENV-25/7)

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This report is a preliminary climatic evaluation of Igarapé Açu which is located in Northeast Pará, for agricultural purpose. The main description is based on the meteorological station of Capitão Poço which has climatological records from the last 13 years. The two places have similar rainfall regimes with averaged annual rainfall around 2,500 mm. The mean annual air temperature is 26° C and the mean monthly variation is never higher than 5° C.

The study area is unique in that the Intertropical Zone that is formed by the convergence of the Northern Hemisphere and the Southern Hemisphere trade winds, is responsible for the most rainfall in the area and seasonal variability of high pressure caused by its weakness and movement to the north in the winter results in the occurrence of a dry season in the area.