

THE MICROCLIMATE IN SELECTED CULTIVATION SYSTEMS IN THE SHIFT EXPERIMENTAL AREA NEAR MANAUS-AM

O MICROCLIMA NO INTERIOR DE SISTEMAS CULTIVADOS SELECIONADOS NA ÁREA EXPERIMENTAL DO PROJETO SHIFT

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Microclimatic variables were measured in selected cultivation systems and at the centre of the 19ha area during the dry and wet seasons of 1994. The peach palm (*Bactris gasipaes*) system, with a density of 2,500 plants/ha, the agroforestry systems with rows of mahogany (*Swietenia macrophylla*) and Brazil nut (*Bertholletia excelsa*) trees 5m apart and the secondary forest were chosen for this experiment, as they represent intermediate stages in relation to the primary rainforest. The peach palm system showed the greatest interception of solar radiation, resulting in lower soil temperatures compared with the control area, the soil of which was partially covered. The amounts of solar radiation measured close to the soil surface in the agroforestry systems were similar to the values observed above the canopy at noon, due to the width of the rows and the height of the surrounding vegetation, resulting in air temperatures and humidities similar to those outside. The secondary forest, which regenerated after abandonment of the rubber trees planted 10 years ago, did not show the marked vertical decouple in temperature and humidity previously observed in the primary forest, which has trees 35m tall and a density of 538 plants/ha.

SPECIES COMPOSITION AND DIVERSITY OF THE VEGETATION OF DIFFERENTLY USED TERRA FIRME SITES NEAR MANAUS-AM

COMPOSIÇÃO E DIVERSIDADE DE ESPÉCIES DA VEGETAÇÃO DE ÁREAS DE USO DISTINTO NA TERRA FIRME PRÓXIMA A MANAUS-AM

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Key objectives in the applied sector of the project include the study of the possibilities for sustainable agricultural use of *terra firme* sites and the gaining of insight into functional interrelationships of such agro-ecosystems. An essential basis for this is thorough knowledge of the flora and vegetation of the experimental area, because they are an integral part of those systems. Floristic and structural analyses of the spontaneous vegetation were made for the experimental plantation, several adjacent secondary forest sites of differing age and use history (8 years and older) and a primary forest site. The poster compares five plots of 1500-1600 m² each, representing stages of increasing duration and intensity of use. The species, growth-form and taxonomic composition of the vegetation and the number of species are analysed. Prognoses of the development of the vegetation of *terra firme* sites under prolonged cultivation are made on the basis of the results.