FIELD WATER RELATIONS OF SPECIES OF SECONDARY VEGETATION UNDER FALLOW IN NORTHEASTERN PARÁ, BRAZIL.

RELAÇÕES HÍDRICAS EM CONDIÇÕES DE CAMPO DE ESPÉCIES DA VEGETAÇÃO SECUNDÁRIA SOB POUSIO NO NORDESTE PARAENSE, BRASIL

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It has long been recognized that seasonal variation in plant water status is closely related to the seasonal development of numerous tropical trees and shrubs, as opposed to temperate woody species, which are sensitive to temperature and photoperiod. Considering the particularly dynamic structure of secondary vegetation growing during fallow periods as part of the "slash-and-burn farming system", still widespread in most of Amazonia, it is expected that a considerable range of plant water relations occurs, following the secondary succession and its consequences to the partitioning of rainfall and energy within the vegetation. To assess the water relations pattern of secondary vegetation components, in northeastern Pará, Brazil, seasonal monitoring of leaf water potential () was performed, by pressure-bomb technique, on leaves of components of three secondary vegetation chronosequencies (*i.e.* 2 to 3 year-old, 4 to 5 year-old, and 10-11 year-old "fallow"). The species included in the study are common to those secondary successions (*i.e. Phenakospermum guianense* Endl., *Davilla rugosa* Poir., *Lacistema pubescens* Mart., and *Vismia guianensis* (Aubl.)Choisy) and three other found in the two younger vegetations (*Banara guianensis* Aubl., *Myrcia bracteta* (Rich.)DC, and *Cecropia palmata* Willd.). Consistent seasonal variation was observed for all studied species, with decreasing values during the dry season. The lowest average value was found in *M. bracteata* (-2.5 MPa), followed by *B. guianensis* (-2.4MPa). Preliminary results from water relations parameters obtained by pressure-volume curves are also reported for *D. rugosa*.

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