Indicator value of anthropogenic vegetation in the Amazon

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The main study object in the project "Recultivation ..." is the 17 ha experimental mixed cropping plantation. An evaluation of the effects of the experimental variants on the useful plants and the plantation systems calls for knowledge of the extremely complex interactions between useful plants and spontaneous vegetation and of other environmental factors. A preliminary analysis of the spontaneous vegetation revealed that species composition and structural traits of the vegetation were closely linked to the pre-use of the sites and recent management measures. It therefore appeared logical to take a vegetation science approach to the ENV-23/2 project on studies on the indicator value of species in the spontaneous vegetation of the plantation.

The lecture presents the conceptual basis underlying this approach, which attempts to provide a comparative, functional description of different types of anthropogenic vegetation in Terra Firme sites of the Central Amazon and of the plant types occurring in these sites. The main objective is to device a system whereby individual species of vascular plants and structural traits of vegetation can serve as indicators of site conditions, especially for the intensity and type of pre-use of sites and hence with that for the actual suitability of the sites for agriculture. The classification of frequently occurring plant species on the basis of growth-form types and characteristics of generative and vegetative propagation was a first step towards this goal. The approach required floristic, syn- and autecological studies at a broad range of sites. The data sets and some of the results of their analysis to date are presented and discussed.