

Economic potential of useful plants for the use in sustainable tropical polycultures in Amazonia

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The ecological conditions of the humid tropics of Amazonia bear the necessity to design mixed cultivation systems of several useful plant species which have to be ecologically adapted and have to have an economical potential which guarantees a sustainable stability of the economical situation of low scale producers.

In the near of Manaus, Brasil, recently a polyculture system is being implanted which includes more than 10 perennial and four annual or biannual plant species. Some of them are still relatively unknown in European countries. All of them are shown on photographs and their economic potential described.

In detail one can find: *Hevea* spp. (Euphorbiaceae), rubber production, timber; *Theobroma grandiflorum* (Sterculiaceae), pulpa for juice, icecream, desserts, seeds for chocolate; *Bactris gassipaes* (Arecaceae), fruits, palmito, leaves (fodder) food colourings, weaving material; *Bertholécia excelsa* (Lecythidaceae), nuts, timber; *Bixa orellana* (Bixaceae), dyestuffs, sunscreens; *Cocos nucifera* (Arecaceae), oil, copra, coconut milk, oil cake, weaving material, fibres, timber, particle board; *Schizolobium amazonicum* (Caesalpiniaceae), timber, charcoal; *Swietenia macrophylla* (Meliaceae), timber; *Carapa guianensis* (Meliaceae), timber, oil; *Carica papaya* (Caricaceae), fruits, papain, carpain, feeding stuffs; *Manihot esculenta* (Euphorbiaceae), starch, vegetables; *Vigna sinensis* (Fabaceae), green fodder, vegetables; *Zea mays* (Poaceae), Starch, edible oil, feeding stuffs; *Pueraria phaseoloides* (Fabaceae), cover plant, green manure. Additionally to these ecologically adapted plant species the exotic *Citrus sinensis* (Rutaceae), fruit, pectin, is planted.

The criteria for the plant selection included several ecological and practical aspects of the plant management but as well the following: The products must be accepted by the people of the Amazon region. The produced goods must have a commercial value and must have the suitability to being transported.