



Tropentag, October 6-8, 2009, Hamburg

“Biophysical and Socio-economic Frame Conditions
for the Sustainable Management
of Natural Resources”

Ethnobotanic Examination of Tropical Home Gardens in Calakmul, Campeche, Mexico

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Abstract

Tropical home gardens are unique land use systems with high agrobiodiversity and important contributions to livelihood sustainability. Problems addressed in this work are the loss of biodiversity and traditional knowledge of plants and poverty in the research area.

Applied research questions shall clarify, i) what and how many plant species are used in the home gardens, ii) what are the differences between the home gardens, ...

In 2008 an ethnobotanical research was conducted in 20 home gardens in 4 villages in Calakmul (Campeche, Mexico). The inhabitants are exclusively farmers and immigrants with different origins.

Data was recorded on the botanical composition, structure and infrastructure of the home gardens, on the socioeconomic background and on the traditional knowledge of the farmers (use of plant species, garden management and preparation of the products of the home gardens). A Ranking was applied to show the valuation of the farmers on different functions of the home gardens.

A total of 310 plant species were found, of which the most abundant families were the Leguminosae (29 species), the Euphoribaceae (16 species) and the Palmaceae (13 species). The herbaceous plants were most abundant with 119 species, followed by trees (93 species) and bushes (57 species). The most frequently found species were *Citrus sinensis*, *Chenopodium ambrosioides* and *Spondias mombin*. The most frequent use of plants is ornamental (41%), followed by food (35%) and medicinal use (30%). 28 plant species were exclusively found in home gardens of Mestizos and 5 plant species appeared exclusively in Chol home gardens. The number of species varies between farms (32–141 plant species) and villages (111–203 plant species).

The botanical composition of the home gardens is strongly related to the cultural background of the farmers. Nevertheless age, gender or culture (being Chol or Mestizo) does not have an impact on the farmers' valuation of the different functions of home gardens.

The high number of plants found in the home gardens and the amount of traditional knowledge imply that the products of the home gardens fulfil many needs in the livelihood systems of the farmers of Calakmul.

Keywords: Biodiversity, ethnobotany, sustainable livelihood, tropical home gardens

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