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Plant Species Diversity of Homegardens in Humid and Semiarid Cuba and Its Importance for Self-sufficiency of Households

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Abstract

The cultivation of different plants in homegardens for self-sufficiency has a long tradition in Cuba, but knowledge about homegardens in Cuba is small. To analyse this more deeply, cultivated plants of 31 homegardens were surveyed in three villages in eastern Cuba in 2001. Two of the study villages were located in a humid area with an annual precipitation of about 2200 mm. The third village was situated in a semiarid area with about 450 mm precipitation. The similarity of species composition between the three study villages was calculated with the Sørensen coefficient of similarity. The plants studied in the homegardens included those for human consumption such as fruits, vegetables, tubers and cereals as well as spices and medicinal plants. Most homegardens were characterised by an agroforestry system with three vegetation layers. In total, 101 different plant species were found with an average number of 18 to 24 species per homegarden for the three villages. The minimum was seven different species in a homegarden and the maximum 49 species. Half of the species surveyed have a medicinal potential and thus enable in-situ conservation of genetic resources. A broad range of species was found in all villages, because irrigation is used under semiarid conditions, which allows the cultivation of species preferring more humid conditions. This results in a relative high similarity in species composition between the villages. Highest similarities were found for fruit trees and tubers, whereas spices and medicinal plants were lowest in the comparison between the humid and semiarid villages. Nevertheless, some species were exclusively found under semiarid or humid conditions. In general, homegarden production provided a broad and diverse basis for self-sufficiency of the households. Although homegarden production showed to be only a small source of income, it is particularly important because of low-paid outside work and minimal food provision of the state.

Keywords: Caribbean, cultivated plants, food supply, households' income, medicinal plants, species richness