# Ekologi perkarangan : struktur, pola perkarangan, dan hubungan faktor sosial ekonomi masyarakat terhadap keanekaragaman jenis tanaman di sekitar Cagar Alam Lembah Harau, Sumatera Barat

Elvi Misjihadiah, author



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Abstrak

Homegarden Ecology : The Structure, Pattern of Homegarden and Correlation Between Economic - Social Factors of People Community Around Lembah Harau Nature Reserve West Sumatra and Plant Diversity. A research has been done on the structure and pattern of homegarden and correlation between economic - social factors of people community and plant diversity. The research was conducted in two villages around the Lembah Harau Nature Reserve (LHNR), Harau subdistrict, the regencies of Lima Puluh Kota, West Sumatra. The villages are Desa Harau, located in the north side of LHNR, and Desa Tarantang Lubuk Limpato, located in south side and the west side of LHNR. The data were collected from October 2000 up to January 2001.

The research was non experimental with a Stratified Random Sampling Method. Data of plant density, frequency, and dominance were used to calculate Important value index, Shannon diversity index (H), Jaccard similarity index (ISJ), and Shannon equitability index (E). The community economic - social factors data, as independent variables, and the plant diversity, as a dependent variable, were analyzed using the multiple regression analysis to produce the regression equality model.

This research found 270 species of plants from 76 family. The plants were grouped into 11 categories. There were 33 species of fruit plants, 23 species of industrial plants, 29 species of vegetable plants, 60 species of traditionally medicinal plants, 3 species of food plants, 21 species of flavor plants, 62 species of ornamental plants, 5 species of plants for spiritual events, 8 species of traditional cosmetic plants, 55 species of weeds, and the remaining 47 species grouped into miscellaneous plants. The patterns of homegarden usage were different in two villages. In Desa Tarantang Lubuk Limpato the tree level was dominated by industrial plants and the belta level was dominated by fruit plants.

On the other hand, in Desa Harau the tree level was dominated by fruit plants and the belta level was dominated by industrial plants. Artocarpus dadah, Artocarpus elasticus, Ficus ampelas, Ficus annulata, Ficus auranticea, Ficus benjamina, Ficus glandulifera, Ficus parietalis, Ficus caulocarpa, and Ficus aurata from Moraceae family were grown and spread surround the homegarden and their bennefit are still unknown by the local society. The pattern of plant stratification showed the stratification pattern was similar to a forest. Based on the formation of canopy coat, there were five strata, i.e. stratum A (>20m), stratum B (15-20m), stratum C (10-15m), stratum D (5-10m), dan stratum E (0-5m).

The diversity of plant species at homegarden for tree level were strongly correlated with size of homegarden and income of respondent (R2=0,601)_ At belta level, besides of size of homegarden and income of respondent, long period of resident also had a strong correlation (R2=0,721) with the diversity of plant. At seedling level and ground cover there were weak correlations of the plant diversity with size of house (R2=0,073).

Plant species which dominated homegarden was probably caused by the change of homegarden function. Increase of economic condition of people may cause decreasing in plant diversity at homegarden, especially

indiginous plant species.