

Title: Plant Diversity and Income Generation of Homegardens in Kilinochchi District, Sri Lanka

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Abstract: Homegardens are considered as one of the sustainable land use systems in Sri Lanka. Sustainable production and good socio-economic condition can be achieved by homegardening. There were no data regarding the available species density and involvement of homegarden in daily needs in Killinochchi district. The district comes under DL3 agro-ecological zone. The study was carried out in three Divisional Secretariat (DS) divisions as proportion of number of Grama-Niladhari (GN) divisions to estimate diversity of plant species in homegardens. Total of 150 households were investigated using structured questionnaires. Data were analyzed by using excel spread sheet and Minitab 2014 and statistical analysis of variance also done. The result of this study shows the fulfillment of needs of households in study area partially achieved by production from their own homegardens. High species density was observed in the areas where sufficient water is available. Average income (73, 756±225) from household was not linearly linked with average size of homegarden (0.35±0.0019). Annual crop such as vegetables (35%) play a greater role in income generation compare with perennials. Mayavanoor Grama-Niladhari division found to be as leading one for having highest percentage of farmers for coconut (93%), banana (73%) and mango (47%). The highest plant species diversity (1108) was found in Ambalnagar Grama-Niladhari division by having more economically important species. The best homegarden was identified by having animal husbandry in small or in large scale. Farmers faced the problems of lack of water availability, climate uncertainty and market failure in their cultivation. Though better choice of crops and different land use patterns adopted make them survive and sustain with their production.

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