

**IDENTIFYING PLANT SPECIES DIVERSITY IN HOME GARDEN
LANDSCAPES
(WITH SPECIAL REFERENCE TO KOTHMALE AND MONARAGALA DS
DIVISIONS)**

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Home Garden is a sustainable land use method used in Sri Lanka, which consists of rich biodiversity. Kandyan Home Garden is a prominent method in Kothmale, while Dry Zone Home Garden is common in Monaragala. This study examines the diversity of plant species in Home Garden landscapes in Kothmale and Monaragala. This study also examines the composition, frequency, density and distribution patterns of plant species in Home Gardens. Finally, issues related to Home Gardens are also identified. Thirty plots of equal size (16m²)-fifteen from Kothmale and fifteen from Monaragala-were identified using the simple random sampling method. In this study, Primary data were collected using field surveys, interviews and observations, while secondary data were collected from books, journals and websites. The “Shannon Wiener Index” and the “Nearest Neighbor Analysis” were used to analyze the data. Arc GIS 10.4 was used to develop the maps of the study area. According to the Shanon Wiener Index, the H value of Home Gardens in Kothmale was found to be at 3.13, while the H value of Home Gardens in Monaragala was recorded as 2.89. It revealed that the plant species diversity in Home Gardens in Kothmale is higher than that of Home Gardens in Monaragala. For the purposes of this study, plant species in Home Gardens were classified mainly into annual and perennial crops, timber, dietary, fruits, medicines and other plants. The findings of this research study also indicate a high composition of plant species in Home Gardens in Kothmale. Medicinal plants are higher in Kothmale, while dietary and fruit plants are higher in Monaragala. At the same time, betel nuts have a higher frequency in Kothmale, while coconuts have a higher frequency in Monaragala. Further, the mean plant density of Home Gardens in Kothmale and Monaragala was recorded as 2.3 and 0.5 respectively. Therefore, it could be concluded that Home Gardens in Kothmale have a high plant density than those in Monaragala. The study also revealed a random plant distribution pattern in the Home Gardens in the two areas. Finally, animal disturbances, steep-slopes, conversion of Home Gardens into other land-uses, and water scarcity were identified as the main issues related to Home Gardening in the study areas in question.

Keywords: Kandyan Home Garden, Plant Diversity, Landscape