

Mango in Sri Lankan Homegardens: How Predominant are they?

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Mango (*Mangifera indica* L.), is a fruit tree with significant importance in Sri Lanka, is cultivated both in orchards and homegardens. These homegardens, similar to secondary forests, host mango trees through natural regeneration or household interventions. Demanding minimal management, mango provides nutritional support and a valuable income source to households. They also contribute in carbon storing and offer various ecosystem services. The study was conducted through a survey which encompassed 435 homegardens across four districts in Sri Lanka representing 16 agro-ecological-regions. Mango tree diversity was assessed in terms of abundance, dominance, density and similarity to evaluate the prominence level of mango trees in the homegardens. Mango trees were observed in 85%, 59%, 87% and 60% of the homegardens respectively, in Hambantota, Jaffna, Matale, and Ratnapura districts accounting a total of 965 mango trees in 313 homegardens. This represents 25% of fruit trees recorded in homegardens. Average number of mango trees/homegarden ranged from two to five, where Hambantota district exhibiting the highest average. Mango trees were found as the second most prevalent plant species in homegardens in both Hambantota and Jaffna, while ranking at fourth and fifth prevalence levels in Matale and Ratnapura, respectively. The majority of mango trees (64%) were dominating the understory of homegardens. Compared to the other tree crops, mango demonstrated a higher density, occurrence, dominance, and similarity in Jaffna, attributed to lower species-richness and tree-abundance. Furthermore, above-ground biomass (AGB), diameter-breast-height, and basal-area of mango trees varied across the districts, thus contributing differently to total AGB. Overall, homegardens in Sri Lanka play a crucial role as vital reserves for population and diversity of mango trees, potentially preserving unique genotypes through the efforts of custodian farmers. Providing guidance on proper care and effective management practices for mango trees in homegardens can yield a range of economic and environmental benefits.

Keywords: Diversity, Dominance, Fruit, Homegarden, Mango

Acknowledgement: This research was funded by the Australian Center for International Research (ACIAR) project titled 'Developing food loss reduction pathways through smart business practices in mango and tomato value chains in Pakistan and Sri Lanka' in collaboration with University of Peradeniya and, National Science Foundation, Sri Lanka (NTRP/217/CC&ND/TA-04/P-02/01).