

## **Modeling of home gardens in the wet zone low country for better economic gains**

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Home gardens in Sri Lanka play an important role in the household economy both in the dry zone and the wet zone. Wet zone home gardens are more diverse than those in the dry zone but they are being continuously replaced by settlement expansion and industrial development. Although the home gardens in the wet zone are crucial ecosystems their economic performance is not optimal. The poor performance of the gardens leads the owners to neglect the garden and subsequently convert them into other uses. This study was carried out in order to formulate the best home garden models with maximum benefits in the WL-3 agro ecological region.

94 home gardens were selected randomly within Gampaha and Colombo districts for the survey. A survey was carried out canvassing a questionnaire to collect information from the sampled home gardens. Information on the size of the home gardens, crop types, their extent, age, yield, were collected for the estimation of the economic value of the existing home gardens. Space and shade/light requirements of the tree crops were recorded. Best home garden models for land areas of 20, 40, 80, and 160 perches in extent with maximum benefits were formulated using the estimated economic values and the other physical requirements of the crops.

According to the results derived from these models it was seen that the use of the total extent of the home garden with monocultures gives a minimum economic benefit with less biodiversity when compared with the home gardens with a maximum number of crop species. The best garden with maximum returns per unit was 160 perch in extent with coconut and Gotukola a combination that provides over RS1 million as the annual income.