

Plant Genetic Diversity in Home Gardens and Its Contribution to Household Economy in Western Part of Ethiopia

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Abstract : Home gardens are important social and cultural spaces where knowledge related to agricultural practice is transmitted and through which households may improve their income and livelihood. High levels of inter- and intra-specific plant genetic diversity are preserved in home gardens. Plant diversity is threatened by rapid and unplanned urbanization, which increases environmental problems such as heating, pollution, loss of habitats and ecosystem disruption. Tropical home gardens have played a significant role in conserving plant diversity while providing substantial benefits to households. This research aimed to understand the relationship between household characteristics and plant diversity in western Ethiopia home gardens and the contributions of plants to the household economy. Plant diversity and different uses of plants were studied in a random sample of 111 suburban home gardens in the Ilu Ababora, Jima and Wellega suburban area, western Ethiopia, based on complete garden inventories followed by household surveys on socio-economic status during 2012. A total of 261 species of plants were observed, of which 41% were ornamental plants, 36% food plants, and 22% medicinal plants. Of these 16% were sold commercially to produce income. Avocado, bananas, and other fruits produced in excess. Home gardens contributed the equivalent of 7% of total annual household income in terms of food and commercial sales. Multiple regression analysis showed that education, time spent in gardening, land for cultivation, household expenses, primary conservation practices, and uses of special techniques explained 56% of the total plant diversity. Food, medicinal and commercial plant species had significant positive relationships with time spent gardening and land area for gardening. Education and conservation practices significantly affected food and medicinal plant diversity. Special techniques used in gardening showed significant positive relations with ornamental and commercial plants. Reassessments in different suburban and urban home gardens and proper documentation using same methodology is essential to build a firm policy for enhancing plant diversity and related values to households and surroundings.

Keywords : plant genetic diversity, urbanization, suburban home gardens, Ethiopia

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