

# Home garden: A traditional agroforestry practice in Nepal

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More than 80% populations of the country are involved on agriculture based profession in Nepal (CBS, 2001). Nepalese farmers have cultivated trees on farm from time immemorial and these practices are dubbed as agroforestry. However, Farmers of Nepal have been practicing different agroforestry models in different geography and locality. Home garden is more popular agroforestry model compared to other practices and is common practice in all most locality in Nepal. This case study is prepared on the basis of primary information and secondary information. Components, practices, socio-economic benefits, species conservation and sustainability aspects were analyzed in this study.

Home garden is practiced as a mixture of crops (mostly vegetables, herbs, NTFPs), trees (fruit and or fodders trees), and provide diversify products to the cultivators. The study found 131 species of crops are maintained in home garden. It has played a crucial role in the improvement of the livelihoods of small scale farmers and disadvantaged families in the rural areas. Home garden has helped to conserve many species in a small areas with providing diversify needs to the farmers. This practice is important to fulfill nutrients, foods, fuel wood, fire wood and fodder. Besides, this practice provides place for species conservation and may helpful for better ecological functioning in mean time.

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## Background

Nepal is a Himalayan country located at south Asia region in the world. Agriculture is the main profession of the it's citizens with more than 80% communities are dependent on agriculture based livelihood economy. In Nepalese agriculture model farmer keep few goats, cattle as well to generate manure for their farm land. People use fuel wood for cooking purposes and fodder for feeding domestic animals. These Agriculture practices are interrelated with forestry practices.

Due to the strong demand of the forest products from villagers, there was high deforestation rate in Nepal during 1970s. Pressure on forestry for food, fodder, fuel wood, and grazing animals was higher. This time was noticeable as tragedy of common in forest areas. During that period of time, annual deforestation rate in Nepal was 2.7%.

Proving alternative options of forest products to the local communities was the prime concern of service provider and donor communities to reduce the pressure on natural forests. Government of Nepal brought and enforced community forestry approach in forest management to give ownership of the forest management to local communities who primary users of the forest. Similarly, Government and non governmental organization started to encourage Agroforestry practice to provide forest products as supplementary of national forest. These AF practices are using by farmers of Nepal since time immemorial in some areas. These practices are driving from the traditional knowledge of the communities, areas of the available land, configuration of the land; infrastructure development (irrigation facilities, road networks etc), culture and household needs. These factors have helped to make most of the farming systems complex and interlinked with forest resources, and encourage farmers to adopt various forms of farming practices. These land-use systems and technologies, where woody perennials (trees, shrubs, palms, bamboos, etc.) are deliberately used on the same land management unit as agricultural crops and/or animals, either in some form of spatial arrangement or temporal sequence are collectively called as agroforestry (ICRAF, 1993).

Out of different AF practices, home gardens are well-established land use systems in Nepal, maintained very close to the homestead (Shrestha et al. 2001). These practices are common in Nepalese context since history but the practice is not well documented and conservation aspects and economic value of the practices is not well assessed.

The main aim of this paper is, therefore, to understand how the home garden owners maintain and use the different plant species at local level. The current study has also explored the contribution of home garden model of agroforestry to the livelihood of the farmer. The study was focused on following questions;

- How farmer fix the home garden and what is the average size of home gardens?
- Why do farmers grow many species of plants in variable proportion?
- Why are these species maintained in the home garden (Economic, ecological, social reasons)

## **Methodology**

Various tools of participatory data collection methods were followed to gather field data. Opinion of the individual farmer as well as group regarding home garden practices was collection from formal and informal discussion. A check list was used to conduct guided discussion. Expert consultation was also done to gather broader views and issues of the home garden.

Different literatures including books, project reports, technical working papers etc were reviewed to identify the current scenarios of Home garden.

The field observation was done to see the existing situation and cross check the people opinion with real field. This was done in transect of the study areas.

## **Finding and Discussion**

### **Coverage of the Home Garden**

Home garden is the common AF practices in Nepal. It is said that more than 80% people who are farmers, are practicing Home garden model in very close to the homestead.

### **Average Land Size**

People are maintaining home garden in different size. The average size of the home gardens were reported as 415 m<sup>2</sup>. However, this size is small in terai and larger in hill areas with different land holding sizes of the household and higher land fragmentation practices of Nepal.

### **Species Composition**

A total 131 species were recorded in home garden. Vegetables, fruits trees, fodder trees etc. The major crops of the home garden were vegetables followed by fruit trees (Tab.1).

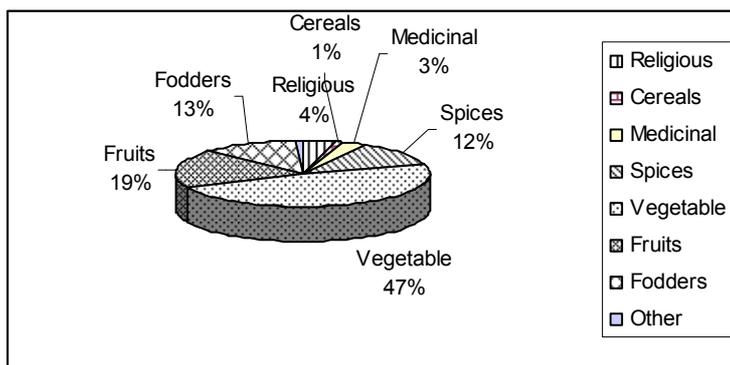


Table 1. Composition of various species in home Garden

### Socio Economic Impacts

Growing diverse species in home gardens is the use value of the species to the households such as of economic importance, food and nutritional and medicinal value. Main objective of the home garden is to grow multiple value products from the close homestead and use for daily consumption and small sale as well to generate small income. In home garden, they are growing fodder and fuel wood to use when they are encountering emergency.

### Ecological Impacts

This practice is important to conserve diverse species in single unit of the farmer. As they are maintaining various annual, biannual and perennial plants in the Land, they have been applying different technologies for land preparation, planting and harvesting of the products.

Existing practices could have some negative implication to the soil structures, soil quality. Similarly, maintaining various plant species in a single land unit could generate harmful effects to each others.

### Common Issues

The home garden is an important system to support livelihood strategies of the farmers. However, it has been associated several commons issues to be addressed for its sustainability. Some of them are as following:

- Maintaining proper composition of the crops in the farm land
- Massive production of different species from single land unit may help to increase soil degradation in long run but this is not studied well
- Obtain and use the crop seeds to cultivate regularly
- Most of the farmers are producing similar kind of products from their farm land but they are not able to sell their products in local market because it is too smaller amount to sell it larger market place.
- Home garden are producing several spices, medicinal and aromatic plants also. These products are naturally grown in forest also and farmers are

obliged to pay royalty to district forest office if they want to export the products outside than their home district.