

# GLOBAL JOURNAL OF BIOLOGY, AGRICULTURE & HEALTH SCIENCES

(Published By: Global Institute for Research & Education)

# www.gifre.org

# Assessment of Women's Role in Management of Home Garden in Sorabhag V.D.C. Morang, Nepal

Subodh Khanal<sup>1</sup> & Sabita Pokharel Khanal<sup>2</sup>

<sup>1</sup> Assistant Professor, Tribhuwan University, Institute of Agriculture and Animal Science, Paklihawa Campus, Bhairahawa, Rupendehi, Nepal <sup>2</sup> Purbanchal University, Management Campus, Biratnagar, Morang, Nepal

## **Abstract**

Home garden is highly promoted in Nepal as it is highly feasible and suitable in Nepalese topography and societal make up. Women are involved in agricultural activities as men are forced to immigrate for bread winning activities. So, understanding of the role of women in home garden within a traditional farming system is pivotal in expanding and improving the practice. This paper seeks to explore the participation of women in home garden activities, understanding the impact of home gardens on women's income and livelihoods and assessing women's awareness of home garden-oriented activities that support forest conservation. Based on the study we can conclude that women participate in management activities and are also interested in conserving and obtaining substantial benefits as food security, income, health care, and environmental benefits. Moreover, we can conclude that increased involvement of women in a broad range of home garden management activities is not only beneficial for their own socio-economic well-being, but also imperative for sustaining the livelihoods of their communities and for preserving the agro-biodiversity in broader level.

Keywords: Home garden, women, management

## 1. Introduction

Home garden is increasingly being popular for in-situ conservation of agricultural biodiversity and enhancing the livelihood of resource poor communities. It not only preserves a vital resource for humankind but also provides significant economic and nutritional benefits for the rural poor (Kumar & Nair, 2006). However, home garden are often overlooked by scientists and development agents because of their small size, apparent insignificance, and unclear perception by many people as individual household subsistence mechanisms. (Bunderson, Wakeel, Saad, & Hashim, 1990).

Out of different agroforestry 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.

Besides their role in farmers' livelihoods, studies also reveal that women play a key role in their management. In this note, it is pivotal to assess the role of women in home garden management in rural households. The main aim of this paper is, therefore, to understand different dimension of women's role in home garden. Moreover, the study specifically aimed at understanding following questions:

- How different species is are maintained in home garden at local level?
- What is the level of participation of women in management activities?
- What is the impact of home garden on women's income and livelihood?
- What is the women awareness level on home garden oriented activities that supports conservation?

## 2. Methodology

For the documentation of traditional knowledge on agro biodiversity, site was selected at Morang district. The Sorabhag VDC was purposively selected for the purpose. It is at distance of 20 km from Biratnagar. Karsiya is the main market place of the selected V.D.C.

Different tools of participatory rural appraisal were used to collect information in this regard. Both formal and informal discussion was done in individual and group level to collect the opinion of farmers regarding home garden practices. In the process of questionnaire design, pretesting of questionnaire was done to ensure whether questions are adequate for the findings we need or not. Only after pretesting final questionnaire was set. 90 farmers were selected and designed questions of final questionnaire were asked with them. A check list was used to conduct guided discussion. Expert consultation was also done to gather broader views and issues of the home garden. Thorough desk study was done 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 area.

## 3. Result and Discussion

## 3.1 Gender analysis

The respondents selected were more or less in participatory way. 57% male and 43% female were selected for the purpose. However, according to CBS, 2011 51.26 % female are present in the selected V.D.C.

#### 3.2 Educatinal analysis

24.1% respondents were illiterate, 55.2 % of the respondents were able to just read and write, and 20% have lower secondary school education. According to CBS, 2011 the literacy rate of this V.D.C. is 53.82%. Among women respondents interviewed, 45% were illiterate, 47% were able to just read and write, 6 % upto lower secondary education and only 2% with SLC level or above.

## 3.3 Ethnicity analysis

Most of the respondents selected were Yadav, terai dalits and tharu in the study area as shown in the figure below.

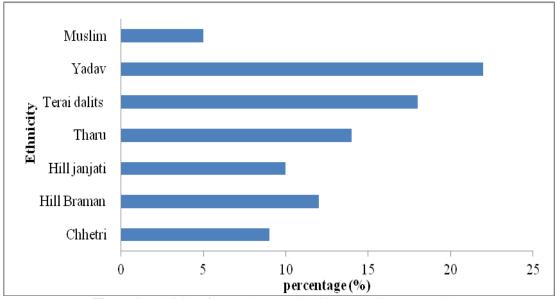


Figure 1. Ethnicity of respondents at Sorabhag V.D.C. Morang, 2015

There are about 125 castes or ethnic groups in Nepal, according to census Chhetri is the largest ethnic group accounting for 16.6% of total population, followed by Hill Brahman 12.2%, Magar 7.1%, Tharu 6.6%, Tamang 5.8%, Newar 5%, Kami 4.8%, Muslim 4.45%, Yadav 4% and Rai 2.3% (CBS, 2011).

# 3.4Age analysis

While dealing with age group, 42.5% of respondents were of the age group 28-45 years. This is the active group of the society who have enthusiasm to do work. According to the census data 30.8% of people of this V.D.C. are from 25-49 years (CBS,2011).

#### 3.5 Occupational analysis

Most of the women (about 80 %) were engaged only in household activities. Approximately 20% of the women were engaged in both household maintenance and income-generating activities (i.e., poultry rearing, vegetable cultivation, sewing, fruit species cultivation). According to the respondents, agriculture was the main source of income for most households, while day labor (both agricultural and nonagricultural wage work, e.g., in sawmills) was the next most important source of primary income. Secondary sources of household income included agriculture, poultry rearing and trade.

The study further revealed that only 25% of women earned some money through wages, while the rest of the women did not earn money independently of their husbands and families. Among those women who did earn money, the majority of them earned it from vegetable cultivation (38%), poultry rearing (24%), fruit species cultivation (19%), small business (10%), and cattle rearing (10%).

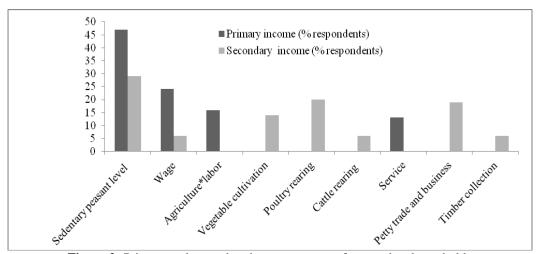


Figure 2: Primary and secondary income sources of respondent households

#### 3.6 Scenario of home garden

Home garden is the common agroforestry practices of Nepal. It is said that more than 80% people who are farmers, are practicing Home garden model in very close to the homestead. The average size of the home gardens were reported as  $415 \text{ m}^2$ . 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.

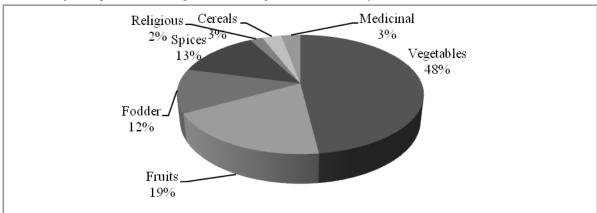


Figure 3: Composition of various species in home garden in Sorabhag V.D.C. Morang

#### 3.7 Involvement of women in home garden

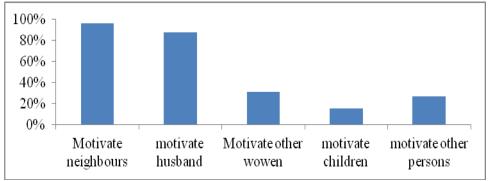
Upon exploration on role of men and women, respondents mentioned significant role of both. It was found that labor-intensive activities like digging holes (65%), pruning (56%), and planting species (59%) were done by men, while watering (55%), fertilizing (59%), weeding (56%), and fencing (51%) were mainly done by women. Women spend most of their time in pre-harvesting activity. The average time they spend in the homegarden is  $6\sim8$  hour/week while men spend four to five hours a week.

Majority of women (58%) were found to be involved in of the women are involved in dead-branch collection and most men are involved in collection of fallen (53%) and standing (58%) trees. Women were found to be heavily involved in all aspects of homestead production, from the selection of land to decisions regarding which crops to grow and to harvest. Women also cultivate horticultural crops for commercial purposes in their home gardens. Seed selection is performed by women. Families exchange seeds among themselves, usually at the time of fruit selection. Pests, low productivity, and poor fertility of seeds are common problems expressed by the women. Women believe that the remaining ash from different kinds of fuel like fuel wood and cow dung is sufficient for the growth of new crops. Mulching is carried out by women and men, using banana and papaya leaves. Women also have responsibility for pest control and use a simple indigenous remedy: application of ashes to plants infected by pests. Most of the harvesting is carried out by women. Fruits, tubers, timber, fuel wood, vegetables, and spices are harvested as needed.

The study revealed that 53% of the women participate in decision-making in selecting species for homegardens. They mainly prefer timber species, fruit-bearing species, and vegetables. They also grow medicinal plants in their homegardens. They use these plants for treating dysentery, cough, fever, and other diseases. The major medicinal plants grown in home garden were *Emblica officinalis, Terminalia bellirica, T. chebula, T. arjuna, Aegle marmelos Lawsonia alba, Azadiracta indica, Acorus calamus, Tamarindus indica, Centella asiatica, Ocimum sanctum e.t.c.* 

#### 3.8 Role of women in home garden conservation

Role of women was not only confined to selection of species but also in motivating other people in conserving home garden.



**Figure 4:** Role of women in motivating others in conserving home garden.

Approximately 53% of the women believed that women play a larger role than men in home garden conservation, while 28% believed that men played a larger role than women, and 19% believed that men and women play equal roles. Apart from saving from purchase and earning many women (85%) believed that home garden also assist in safeguarding environment and reducing pressure on forests. Majority of women respondents (96%) were in want of training related to home garden with prime focus on species suitability, multi cropping system and high yielding varieties and improved breeds. They are also kin in receiving financial support and extension activities (86%) for running home garden based activities. Many women (89%) wanted awareness-raising programs through mass media to help in understanding the importance of home garden. Moreover, women wanted different types of training and benefits like raising nursery (75%), silvicultural practice (29%), cultural practice (83%), and supply of quality planting materials (96%).

Management of home garden by women is a widespread phenomenon among settled groups the world over (Borg, 1989). It can be said that women have a central role in home garden management in developing countries (Yos, 1998). Recently, women in the poor households have been identified as the "victims" as well as "managers" of household food security (EIU, 1997) as women dominate home garden production and adopt diverse and intense household resource-use strategies to cope with food deficit situations and other household necessities (UNDP, 1997).

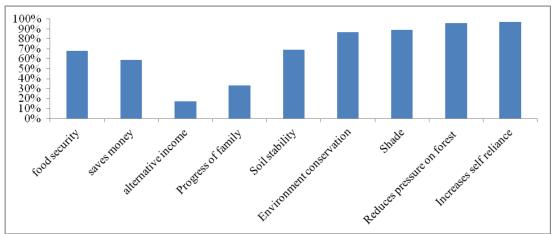


Figure 5: Reasons for practicing home garden by respondents

## 4. Summary and Conclusion

Average landholding size is only 0.6 ha in Nepal, so home garden can be a viable option in diversifying livelihood and also assist in on farm conservation. In maintaining biodiversity and traditional management practices, women are appreciated across the globe. This role is to be valued in enhancing conservation and sustainable use of natural resources, including home garden. The possibility to adopt women in management of resources creates an opportunity which should be explored. This study has portrayed the role of women and provided the glimpse in the use, conservation, and traditional management practices in the home garden, which can be used as an entry point to build an economically viable and ecologically sustainable agricultural management system. On this note, women should be facilitated in terms of basic education, promotion of women's literacy training, nutrition and health, and supporting women's participation in key decision-making positions, particularly as they pertain to access to resources.

## References

Borg, B. (1989). Women's Role in Forest Resource Management. Project Working Papaer No. 1. Thailand: Regional Wood Energy Development Program in Asia, Thailand.

Bunderson, T., Wakeel, A., Saad, Z., & Hashim, I. (1990). Agroforestry practices and potentials in western Sudan. In W. Budd, W. Ducchart, I. Hardsesty, & F. Steiner, *Planning for Agroforestry*. (pp. 227-246). Elsevier, Oxford.

CBS. 2011. National population and housing census. Central Bureau of Statistics. Kathmandu, Nepal. Available at https://www.cbs.gov.np/wp-content / uploads /2012/ 11/2 National Report.pdf

EIU. (1997). Bangladesh: Country Profile. London: The Economist Intelligence Unit.

Kumar, B., & Nair, P. (2006). Tropical Home gardens: A Time Tested Example of Sustainable Agro forestry. . Springer, Netherlands .

UNDP. (1997). Human Development Report. New York: Oxford University Press.

Yos, S. (1998). Ecological Crisis. Bangkok: Cob Fai Publication .