Research article

The role of women in traditional farming systems as practiced in homegardens: a case study in Sylhet Sadar Upazila, Bangladesh

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Abstract

Forests cover only 6 to 8 percent of the total land area of Bangladesh. While agricultural expansion continues to massively deplete the natural forests, a well-managed homegarden practice is vital for reversing the existing trend and promoting the ecological balance of the country. An understanding of the role of women in homegarden management within a traditional farming system is important in expanding and improving the practice. This paper seeks to explore the participation of women in homegarden management activities, understanding the impact of homegardens on women's income and livelihoods and assessing women's awareness of homegarden-oriented activities that support forest conservation. The study demonstrates a number of important conclusions: (1) women are mostly involved in homegarden management-related activities (2) women are interested in conserving homegardens because they obtain such substantial benefits as food security, income, health care, and environmental benefits (3) women were found to be aware of home-garden conservation and tuned to motivating husbands, children, and neighbors to conserve the agro-biodiversity of homegardens. Findings suggest that increased involvement of women in a broad range of homegarden 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 homegardens.

Keywords: *Agroforestry, forest conservation, traditional farming system, women, Bangladesh*

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Introduction

Home-gardens are increasingly recognized as ecosystems for *in situ* conservation of agro-biodiversity. In Bangladesh where natural forest cover is less than 10 percent, homegardens, which are maintained by at least 20 million households, represent one possible strategy for biodiversity conservation [1]. The conservation of cultivated plants in homegardens not only preserves a vital resource for humankind but also provides significant economic and nutritional benefits for the rural poor [2]. Homegardens are a common feature in rural Bangladesh where they cover about 0.27 million ha [3]. The importance of homegardens in Bangladesh is enormous in the wood sector, and this is recognized in all quarters [3]. Bangladesh is now almost devoid of forested land, except in a few selected areas of the country. The area under forest is 2.53 million ha (17.5% of the country's total area). About 1.53 million ha of forests are designated as government forest land but in reality only 6% to 8% of the total land area of Bangladesh merits the term "forested" [4]. Because of the small area and rapid destruction of forests [5], it is difficult to meet the country's huge demand for timber, fuel, food, and fodder [5]. In such a situation, homegardens play a vital role in providing firewood, fodder, medicine, fruit, and timber. It is estimated that about 70% of timber, 90% of fuelwood, 48% of sawn and veneer logs, and almost 90% of bamboo requirements are met from homegardens [6], which consequently play an important role in the economic life of the country [7]. Despite their importance in local farming systems, homegardens 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 [8]. In Bangladesh, there are few programs specifically targeted to improve the overall productivity of homegardens [9].

Despite recommendations by researchers, decision-makers have considered homegardens as a low-priority activity. For example, the first forest policy of British India, adopted in 1894, did not mention homegarden management. A similar attitude of indifference was observed in the subsequent forest policies of 1955 and 1962 during the Pakistan regime and in the first national forest policy of Bangladesh, enacted in 1979 [10]. However, the latest national forest policy adopted in 1994 emphasized the encouragement of homegardens through provision of technical assistance, and pledged to promote development of labor-intensive forest-based cottage industries in rural areas [10]. The national agricultural policy also gave emphasis on homegardening practice [11].

Homegardens offer a practical response to the following challenges: massive degradation and depletion of forest resources; the rural energy crisis; optimum utilization of already scarce land and environmental improvement and landscape enhancement. Thus, the development and encouragement of homegardens should be one aim of the general policy with regard to natural resource conservation and management [6]. Despite the ubiquity of homegardens in Bangladesh, published research on them is relatively new and has focused on their roles in social forestry, preservation of biotic diversity, and gendered management [12].

Besides their obvious importance in farmers' livelihoods, common sense observation of homegardens also reveals that women play a key role in their management. In this context, it appears important to assess the role of women in homegarden management in rural households to formulate appropriate policy instruments for sustainable management of homegardens. The present study seeks to address this lacuna. We analyzed the different dimensions of the role of women in homegardens, such as the participation of women in management activities, understanding the impact of homegardens on women's income and

livelihoods, and women's awareness of homegarden-oriented activities that support forest conservation.

Methods

Study area

Sylhet Sadar, the most populous upazila (sub-district) of Sylhet district, occupies an area of 517.43 km^2, with 19.22km^2 of government forest area (Fig. 1). Mean annual minimum and maximum temperature are 17.6°C and 33.0°C, respectively. Total population is 554,412 (1071 person km^{-2}), women being 263,271 (47.5%) of this. The literacy rate is 50% for men and 37.6% for women. Average homestead area is 0.03ha [13].

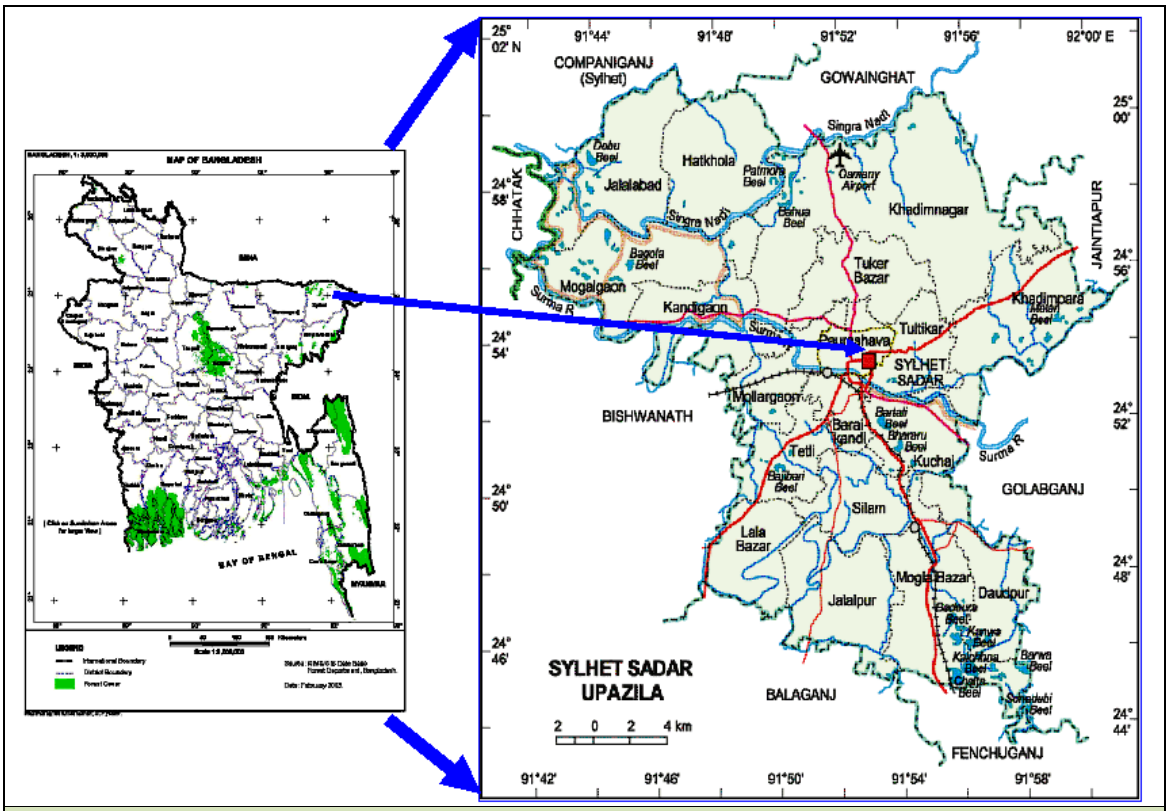

Fig 1. Location of the Sylhet Sadar Upazila

Sampling design

A two-stage sampling design was employed; four villages, viz. Shekh Para, Tilagar, Akhaliaghat, Dolia (primary units; PUs), were selected from 689 villages in the first stage (Table 1). During a reconnaissance survey it was found that some households are not engaged in any management/cultural operations in their homegardens because they are not dependent on these for their livelihoods. Other households are more or less engaged with homegardens. From each village, 20 households (secondary units; SUs) were selected from those engaged with homegardens. Village size ranged from 108 to 141 households; therefore, we sampled 14% to 18% of households in each village (Table 1). With a checklist and a draft questionnaire, a pilot survey was conducted in the four selected villages in October 2008. Based on the information [14] from the pilot study, a semi-structured questionnaire for the field survey was finalized. Primary information was collected between October and December 2008. The final

survey and four focus group discussions were completed with the participation and informed consent of female members of the households. Responses to open questions were collected on a variety of demographic and socio-economic indicators: household composition, age, education, primary and secondary occupations, interactions with the homegarden, awareness of the benefits obtained from homegardens, roles of women in homegarden conservation and the expected benefits and training from government and non-governmental organizations. On each topic, the respondents were free to express their views.

Table 1. Information about different parameters of the sample villages

Items	PSU 1 (Shekh Para)	PSU 2 (Tilagar)	PSU 3 (Akhaliaghat)	PSU 4 (Dolia)
Location	Tuker Bazar Union	Tultikar Union	Tuker Bazar Union	Khadimnagar union
No. of households	141.00	108.00	109.00	120.00
Household size	7.06	4.97	7.57	7.10
Average homegarden size (ha)	0.09	0.06	0.13	0.15
Population	996.00	537.00	825.00	852.00
Literacy level (%)	21.60	71.90	47.80	31.33
No. of households sampled	20.00	20.00	20.00	20.00
Major forest products	Fruit, fuelwood, timber, bamboo	Fruit, fuelwood, timber, bamboo	Fruit, fuelwood, timber, bamboo	Fruit, fuelwood, timber, bamboo

Results

Women at home and at work

We identified literacy levels of the respondents from the village. Among the 80 women interviewed, 41% were illiterate, 47% were educated at the Grade/Class 5 level or below, 6 percent were educated up to Grade/Class 7, 4 percent attended school through Grade/Class 10 and 2 percent were educated at the higher secondary level. Most of the women (about 75%) were engaged only in household activities. Approximately 25% 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 non-agricultural 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 (Table 2).

The study further revealed that only 21 women out of the 80 interviewed 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%).

Table 2. Primary and secondary sources of income for respondents' households

Source	Primary Income Sources		Secondary income sources	
	Number of households	Percentage of households	Number of households	Percentage of households
Subsistence agriculture	38.00	47.00	23.00	29.00
Wage labor	19.00	24.00	5.00	6.00
Agriculture and labor*	13.00	16.00	-	-
Vegetable cultivation	-	-	11.00	14.00
Poultry rearing	-	-	16.00	20.00
Cattle rearing	-	-	5.00	6.00
Service	10.00	13.00	-	-
Business and small trade	-	-	15.00	19.00
Timber collection	-	-	5.00	6.00
Totals	80	100	80	100

*Note: "Agriculture and Labor" indicates that the household splits its time evenly between agricultural and non-agricultural work on an annual basis.

Women in the homegarden

When we asked the women about the roles of men and women in plantation activities in the homegarden, they responded that both men and women play a significant role in plantation activities. It was found that labor-intensive activities like digging holes (55%), pruning (53%), and planting species (52%) were done by men, while watering (65%), fertilizing (52%), weeding (56%), and fencing (53%) were mainly done by women. Women spend most of their time in pre-harvesting activity. The average time they spend in the homegarden is 6~8 hour/week while men spend four to five hours a week.

It is observed that a majority (57%) of the women are involved in dead-branch collection and most men are involved in collection of fallen (52%) and standing (58%) trees. As illustrated in Appendix 1, women are heavily involved in all aspects of homestead production, from the selection of land to decisions regarding which crops to grow and to harvest. Traditionally, chili pepper was planted for commercial sale and other crops were grown for home consumption. Women also cultivate horticultural crops for commercial purposes in their homegardens. Seed selection is performed by women. Appendix 2 illustrates seed selection, storage techniques, and pest control techniques used by women in the study area. 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 coconut, banana, and papaya leaves. Men are responsible for the construction of small covered enclosures to protect chili pepper plants. Women have responsibility for the maintenance of the chili pepper crop within these enclosures. 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, fuelwood, vegetables, and spices are harvested as needed.

The study revealed that 52% 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 (Table 3).

Table 3. Homegarden medicinal plants mostly used by the women for their family in the studied villages

Vernacular name	Scientific name	Parts used	Name of diseases
Amloki	*Emblica officinalis*	Fruits	Blood dysentery, vomiting, loss of appetite
Arjun	*Terminalia arjuna*	Bark	Burning, dysentery, hypertension
Bashok	*Adhatoda vasica*	Leaves	Cough, asthma
Bel	*Aegle marmelos*	Fruits	Gastric, flatulence
Bohera	*Terminalia belerica*	Fruits	Dysentery, asthma, cough
Horitoki	*Terminalia chebula*	Fruits	Asthma, heart disease
Mehendi	*Lawsonia alba*	Leaves	Skin disease, head ache, jaundice
Nim	*Azadirachta indica*	Bark, leaves	Fever, skin disease, diarrhea, insect biting
Patho kuchi	*Kalanchoe pinnata*	Whole plant	Cough, flatulence
Tentul	*Tamarindus indica*	Fruits	Loss of appetite
Thankuni	*Centella asiatica*	Whole plants	Dysentery
Tulsi	*Ocimum sanctum*	Leaves, root	Cough, cold
Amra	*Spondias pinnata*	Bark, leaves	Dysentery, pain at joints

Plant species composition in homegardens

Homegardens were found to have a very high specific biodiversity. Some 24 tree species and 18 medicinal plants were found in the study area. Families, especially women, have always cultivated a variety of timber, fruits, vegetable, medicinal plants and spices in their homegardens (Appendix 3).

Table 4. Role of women in motivating others in conserving homegardens

Women's motivational activities	Number	Percentage*
Motivate neighbors	77	96.00
Motivate husband	70	88.00
Motivate other women	25	31.00
Motivate children	12	15.00
Motivate brother	22	27.00

*Note: Due to multiple responses, percentages do not add up to 100%.

Role of women in forest conservation: proximity to homegarden area

Most women encouraged both their neighbors and their husbands to conserve homegardens by planting diverse plant species and by taking proper care of the gardens (Table 4). About a third encouraged other women to conserve the homegardens. In addition, 22 women motivated their brothers to conserve homegardens.

Approximately 49% of the women believed that women play a larger role than men in homegarden conservation, while 38% believed that men played a larger role than women, and 13% believed that men and women play equal roles. We found that women were interested because they thought that homegardens could help them to earn and save money. However, many were also interested in preserving the environment (85%) and reducing biotic pressure on forests (97.5%) (Table 5).

Most of the women (94%) were interested in receiving training to know about species suitability, the appropriate mixture of crops, and information related to high-yielding varieties. Most (91%) also were interested in receiving financial support for small-scale homegarden-based industries, while 82% wanted extension education programs. Many women (85%) wanted awareness-raising programs through mass media to help in understanding the importance of homegardens. Moreover, women wanted different types of training and benefits like raising nursery (76%), silvicultural practice (19%), cultural practice (69%), and supply of quality planting materials (90%).

Table 5. Reasons for interest in conservation of homegardens

Reasons	Number	Percentage*
Source of food/food security	35	44.00
Save money	45	56.00
Source of alternative income	15	19.00
Ensure progress of their family	25	31.00
Soil stabilization	54	67.00
Preserve environment	68	85.00
Shade	75	94.00
Reduce pressure on forest	78	97.00

*Note: Due to multiple responses, percentages do not add up to 100%.

Discussion

Homegardens show actual and potential values in the provision of food, medicine, and other household necessities [15] as well as in the conservation of plant genetic diversity [16]. The perceived threat of genetic erosion to plant resources for food and agriculture can be reduced through homegardens, since they ensure conservation of useful plants [16]. This potential of homegardens can only be achieved when they are managed properly.

The cultivation and management of homegardens by women is a widespread phenomenon among settled groups the world over [12]. In developing countries, the role of women in the use/management of agricultural and forest resources is usually greater than that of men who are generally only directly involved in timber extraction and other hard work tasks. Women are usually responsible for a large part of food production. It is considered the women's job to provide the family with rudimentary and basic initial needs in terms of health care and

education. In line with the above, we found that women also play a key role in the management of homegardens and processing of tree products for self-use as well as income generation to meet household needs. It can be said that women have a central role in homegarden management [17]. Recently, women in the poor households have been identified as the "victims" as well as "managers" of household food security [18] as women dominate homegarden production and adopt diverse and intense household resource-use strategies to cope with food deficit situations and other household necessities [19].

There is a clear sharing of tasks between woman and man for the management of homegardens [20]. The cultivation and management of homegardens by women is a widespread phenomenon among settled groups worldwide [21]. This clearly plays a significant role in forest conservation since all the wood and other non-timber tree products which are harvested in the homegardens do not need to be collected from forests. Cultivation and management practices where women play a significant role in homegardens are well documented, e.g., decision-making in case of species choice, utilization patterns of medicinal plants, seed selection, storage and pest control techniques, and behavioral patterns of fuel wood collection. This might help the inclusion of women in forest-management programs [22]. For example, medicinal plants are an importantly gendered knowledge held by women (such as health care and diffusion of knowledge), with a potential use in natural forests as well. [23]. Homegardens in Bangladesh confirm findings from other parts of the world that women play a significant role in natural resource management because of their diverse skills, their knowledge, and their experiences [24].

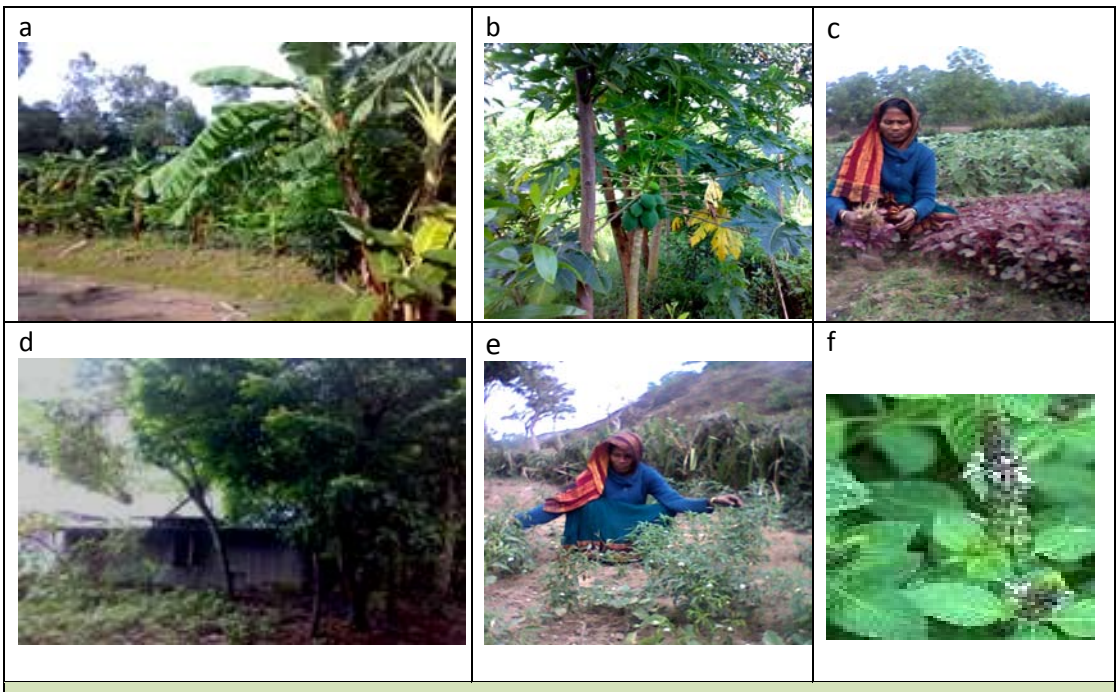

Fig 2. Images of several homegarden species present in the studied villages and their uses; (a) banana plantation to stabilize the pond bank (b) papaya (*Carica papaya*), give money and food source, (c) woman plucking *Amaranthus tricolor,* (d) mahagoni (*Swietenia mahagoni*) plantation around the homestead for timber and shade, (e) woman plucking *Capsicum frutescens* from her homegarden, (f) Tulsi (*Ocimum sanctum*), a medicinal plants available in the studied villages and use for cough treatment.

Implications for conservation

The role of women in traditional management practices has increasingly been appreciated globally as a strong incentive for biodiversity conservation. That role has good potential in enhancing conservation and sustainable use of natural resources, including homegardens, and therefore as a remedy for numerous forest conservation problems [12]. The possibility to adopt this approach in different conservation areas creates an opportunity which should be explored. In the study area, women have an intense interaction with homegardens, given their heavy involvement in collecting and producing food, fuel, timber, and medicinal remedies, and also given their interest and motivating character in forest conservation (Fig. 2). This study has portrayed the role of women in the use, conservation, and traditional management practices in the homegarden, which can be used as an entry point to build an economically viable and ecologically sustainable homegarden management system. Based on the present study, the following general recommendations are made:

1. The role of women in every sphere of conservation should be measured and necessary support should be provided to ensure sustainable homegarden conservation.

2. To maximize the potential of homegardens, agriculture and forestry professionals as well as extension workers should broaden their activities and work more closely with women.

3. The dissemination of technical information should target women, as they are the drivers of homegarden management. The supply of quality seedlings, effective institutional support, and efficient marketing facilities of homegarden products are all important, so that women can enhance homegarden production and get proper returns from production.

4. Clear governmental policies, national guidelines, strategies, and plans for the involvement of women in homegarden management should be formulated and implemented. This includes the 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. Facilitating a better access to all forms of credit, particularly in the informal sector, should also be implemented, as it has been shown that this supports individual initiative and entrepreneurship.

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Appendix 1: Gender Role in homegarden activities

Activity	Men	Women	Children
Pre harvest			
Plot selection	+	+	
Clearance	+	+	+
Burning of the dried waste		+	
Fencing	+	+	
Digging well	+	+	
Land preparation		+	
Planting	+	+	
Species/Crop decision	+	+	
Fertilizing	+	+	
Nursery preparation		+	
Watering the plants	+	+	+
Mulching with leaves		+	
Weed removal and pest control		+	
Pruning		+	
Harvesting	+	+	+
Post harvest			
Sorting for seed		+	
Sale	+		
Seed storage		+	

Appendix 2. Womens' Indigenous knowledge about seed selection, storage and pest control techniques for selected crops

Species/Crop	Seed selection	Seed Storage	Pest control
Pumpkin (*Cucurbita maxima*)	Select a good size fruit	Hang fruit under high ceiling in shade	Spread ashes (the residue that remains when something is burned) over the plants
Eggplant (*Solanum melongena*)	Choose a healthy plant and good colored fruit	Allow fruit to ripen, remove and dry seeds, store seeds in glass bottle for few months	
Papaya (*Carica papaya*)	Select a large size fruit	Extract seeds and plant immediately since seeds lose fertility rapidly	
Chili (*Carica frutescens*)	Keep aside best fruit	Remove and dry seeds, store seeds in glass bottle for few months	
Bean (*Dolichos lablab*)	Select a good and healthy fruit	Allow fruit to dry and remove seed, store seed in bottle for few months	
Amra (*Spondias pinnata*)	Keep aside best fruit	Remove and dry seeds, store seeds in glass bottle	
Amloki (*Emblica officinalis*)	Keep aside best fruit	Allow fruit to ripen, remove and dry seeds, store seeds in glass bottle for few months	
Payara (*Psidium guajava*)	Select a large sized and well ripened fruit	Allow fruit to ripen, remove and dry seeds, store seeds in glass bottle for few months	
Mahagoni (*Swietenia mahagoni*)	Select a large size fruit	Extract seeds and plant immediately since seeds lose fertility rapidly	
Narikel (*Cocos nucifera)*	Choose a healthy plant and a good size fruit which is disease-free	Keep the fruit in cool conditions	
Akashmoni (*Acacia auriculiformis*)	Keep aside best fruits	Extract seeds and store them in a bottle	
Rain tree (*Samanea saman*)	Select good size fruits	Extract seeds and store them in a bottle	
Sil koroi (*Albizzia procera)*	Keep aside best fruits	Extract seeds and store them in a bottle	
Kanthal *(Artocarpus heterophyllus)*	Keep aside best fruits	Extract seeds and plant immediately since seeds lose fertility rapidly	
Am (Mangifera indica)	Keep aside best fruit	Extract seeds and plant immediately since they lose fertility rapidly	

Appendix 3. Homestead species preferred by women in the study area

Common Name	Botanical Name	Abundance	Performance	Usage
Aada	*Zingiber officinale*	C	+++	SP, Me
Akand	*Calotropis procera*	FC	++	Me
Akashmoni	*Acacia auriculiformis*	C	+++	GT, GFu, MPT
Am	*Mangifera indica*	C	+++	F, CT, Fo, Me, MPT
Amloki	*Emblica officinalis*	C	+++	F, Me, MPT
Anarash	*Annas comosus*	R	+	F, Me
Arjun	*Terminalia arjuna*	FC	+++	MT, Me, MPT
Baijja	*Bambusa vulgaris*	C	+++	Thatching, house post
Banana	*Musa acuminata*	C	+++	F
Bean	*Dolichos lablab*	C	+++	V
Bel	*Aegle marmelos*	C	+++	F, Me, MPT
Bohera	*Terminalia belerica*	FC	+++	Me
Boroi	*Zizyphus mauritiana*	C	+++	F, MPT,
Bottle gourd	*Lagenaria siceraria*	FC	++	V
Cabbage	*Brassica oleracea var.botrytis*	FC	+++	V
Chalta	*Dillenia indica*	FC	++	F, CT, MPT
Champa	*Michelia champaca*	C	+++	GT, Fr, MPT
Chapalish	*Artocarpus chaplasha*	FC	++	GT, Fr, MPT
Dhania	*Coriander sativum*	C	+++	SP
Dhatura	*Datura metal*	FC	++	Me
Eggplant	*Solanum melongena*	C	+++	V
Ful kopi	*Brassica oleracea var.capitata*	FC	+++	V
Gamar	*Gmelina arborea*	FC	++	GT, Fr, MPT
Garjan	*Dipterocarpus turbinatus*	C	+++	GT, Fr, MPT
Halud	*Curcuma longa*	FC	++	SP, MPT
Indian spinach	*Basella alba*	FC	+++	V
Jalpai	*Elaeocarpus robustus*	FC	++	F, Me, MPT
Jam	*Syzygium sp.*	C	+++	F, GT, Me, MPT
Jambura	*Citrus grande*	C	++	F, MPT
Jarul	*Lagerstroemia speciosa*	FC	+++	GT

Kanthal	*Artocarpus heterophyllus*	C	+++	F, GT, Fo, MPT
Ladies finger	*Abelmoschus esculentus*	C	+++	V
Lai shak	*Brassica rugosa*	C	+++	V
Lal shak	*Amaranthus tricolor*	C	+++	V
Lebu	*Citrus aurantifolia*	C	+++	F
Mahagoni	*Swietenia mahagoni*	C	+++	GT, Fr, MPT
Mahal	*Bambusa longispiculata*	C	+++	Thatching, house post
Mangium	*Acacia mangium*	C	+++	MT, GFu, MPT
Marich	*Capsicum frutescens*	C	+++	SP
Mitinga	*Bambusa tulda*	FC	++	house wall, tools
Mula	*Raphanus sativus*	C	+++	V
Narikel	*Cocos nucifera*	C	+++	Drink, mats, brooms, F, MPT
Neem	*Azadirachta indica*	C	+++	MT, Me, MPT
Papaya	*Carica papaya*	C	+++	F, Me
Pathor kuchi	*Kalanchoe pinnata*	R	+++	Me
Payara	*Psidium guajava*	C	+++	F, Fo, LGFu
Pudina	*Mentha viridis*	C	+++	SP
Pumpkin	*Cucurbita maxima*	C	++	V
Radish	*Raphnus sativus*	FC	++	V
Rain tree	*Samanea saman*	C	++	MT, GFu, MPT
Sarpaganda	*Rauwolfia serpentina*	R	++	Me
Sil koroi	*Albizia procera*	FC	++	GT, Fr, MPT
Silborue	*Bambusa balcooa*	FC	++	Beam, tools, house post
Tejpata	*Pimenta acris*	C	+++	SP, MPT, GFu
Tentul	*Tamarindus indica*	R	++	F, Me
Thankuni	*Centella asiatica*	C	+++	V, Me
Tomato	*Lycopersicon lycopersicum*	C	+++	V
Tulsi	*Ocimum sanctum*	C	+++	Me

KEY: C = common, FC = fairly common, R = rare; +++ = very good, ++ = good, + = not so good; F, fruit; CT, cheap timber; MT, medium timber; GT, good timber; GFu, good fuelwood; Me, medicine; MPT, multipurpose tree species; LGFu, low-grade fuelwood; Fr, furniture; Fo, Fodder; V, vegetable; SP, Spices