

# Home gardens: a cultural responsibility

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Home gardens are reservoirs of agrobiodiversity in rural communities worldwide and, in many cultures it is women who maintain them. This everyday task is an important household activity and ensures that families get a nourishing diet suited to their tastes and cultural traditions. Women preserve agrobiodiversity through high-density plantings of underutilized species and their home gardens are often “experimental stations” for adapting indigenous and non-domesticated varieties. This rich diversity is important not only for household food security and economic stability, but also for the health of the agroecological system. Many studies from Asia, Africa, and Latin America conclude that women’s home gardens “provide early-maturing varieties that carry families over the hungry season till the main crops mature, contain reserve resources of plant genetic materials should the main crops fail, (and function) as conservation sites for special or preferred varieties, and as testing grounds for new varieties”.

## Cultural legacy

Home gardens are a prominent feature of rural Bangladesh and are found in almost all village households. They are worked and managed exclusively by women. They are located within the walls of the family compound and function as fresh pantries from which women can harvest produce for the daily meal. Women have strong preferences for using traditional local varieties instead of modern high yielding commercial varieties in their home gardens. They consider local varieties to be uniquely adapted to local agroecological conditions, and feel that they represent a significant cultural legacy. By saving seed from home gardens and exchanging it with their neighbours, friends, and relatives they are able to maintain a considerable amount of agrobiodiversity.

In 2002, a study carried out in two villages in Bangladesh looked at the best way to promote the cultivation and conservation of species found in home gardens. Previous studies had concluded that women in Bangladesh prefer local varieties because they cook quickly and are an important source of vitamins. They also have a strong preference for the native varieties of fruit trees they manage in their gardens.

## Women’s role

The villages studied - Bishnapur and Baushid - lie in the flood plain of West-Central Bangladesh approximately two hours from the capital Dhaka. Although Bishnapur is less remote and more independent agriculturally than Baushid, both villages have the same level of home garden production.

The study, which tried to find out how women’s preferences and the choices they made in their home gardens influenced the cultivation of various crops, surveyed 75 adult women. Their average age was 35 years and most had little formal education. Nearly all the women who participated in the study were economically vulnerable and their families suffered regularly from periods of food shortages.

Home gardens in Bangladesh are often overlooked as serious sources of food. In fact, they provide successful examples of how locally adapted varieties support food security, and have an important economic, dietary, cultural, and agroecological function. They also play a role in the financial security of rural households and help reduce dependence on vegetable and fruit from the local market. Women harvest from gardens to

supplement their rice supply. Over half the women interviewed also reported marketing garden produce when there was a seasonal surplus in order to increase their household income. Several of the women specialized in selling local varieties of fruit and vegetable seed to earn extra cash.

## High-density diversity

Home gardens in Bishnapur and Baushid contain a high concentration of crop and variety diversity in remarkably small areas. Gardens are made on any ground available near the house, and often are no bigger than a few square meters. Some 60% of the women said their home gardens were less than 50 m<sup>2</sup> in size, but even so they were growing an average of 16 different crops and an astonishing number of fruit, vegetable, and spice species.

Women reported that they sowed a large number of crops per plot in order to minimize risk and maximize overall yield. In total, 25 different fruit crops, 29 vegetable crops, and 12 spice crops were cultivated in the two villages. Indigenous squashes, gourds, and greens were the most commonly grown vegetables, and local varieties of mangos, jackfruit, and papaya as well as guava, banana and grapefruit were popular in all households.

The crops grown required comparatively little room and roofs and fences were used as trellises to maximize vertical and horizontal space. Short-stature, annual vegetables occupy the lowest level, followed by shrub-like bi-annuals, such as taro. Bamboo frames support climbing vines such as squash, gourds, and beans and mixed fruit trees formed the top layer of the garden. The local varieties used by women gardeners have been selected for their ability to thrive under this type of intensive cultivation system. Although gardens were planted on marginal lands such as courtyards, the local varieties were highly productive, required few external inputs, and were able to survive the floods that regularly affect Bangladesh.

Women in Bishnapur and Baushid had a very sophisticated understanding of their agricultural systems and precise criteria for determining the varieties they use. When asked to list the most desirable characteristics of local home garden crops, their answers revealed not only a complex decision-making process but also the multiple uses for which they manage the different varieties. Because their needs are subsistence rather than commercially oriented, women emphasize taste, agroecological adaptation, culinary uses, and nutritional value. However, they also considered yield to be important and felt that local varieties performed well under home garden conditions.

Women liked local vegetable varieties because they mean something to them and are part of their culture and food traditions. Local varieties of gourds, for example, had a long growing season, could grow on rooftops, cook quickly and had fruit and leaves that were useful for a variety of purposes.

Women also preferred local varieties in home gardens because they were better adapted to local climate, soil, and disease conditions and could be grown without the fertilizers and pesticides needed for commercial varieties. In both Bishnapur and Baushid there were hardly any households that used pesticides in their home gardens and only 17% used chemical fertilizers. Women found that local varieties responded well to organic pest control measures, such as ashes, jute seed powder, and fermented rice water and thrived on organic fertilizers such as cow dung, compost, ashes, and courtyard sweepings.

It is often said that the reason why there are few high yielding varieties in home gardens is that women have not yet experimented with them. However, in Bishnapur and Baushid this was not the case. Seed for high yielding varieties was readily available yet women still preferred to rely on their local seed networks. In both villages, only 10% of women said they used one or more high yielding variety in their home gardens, although several women said they had tried them. The reasons for not continuing to grow them included not liking the taste or texture of the fruits and vegetables they produced; poor cooking qualities; the length of time and fuel they needed to cook and, in some cases, a very short growing season meant the crop could not be harvested gradually in accordance with household need.

### Women's authority

Women are responsible for all the tasks associated with developing and maintaining the family's home garden, including land preparation, weeding, harvesting and saving seed. Their work in the home garden is seen as an extension of their domestic duties and is integrated into their daily routine. One woman in Bishnapur village described her work in her home garden like this:

"I decide what to plant in the home garden. I decide what vegetables have grown well last year and I plant those. I go to the home garden and see if there are good soil conditions for

planting seeds. I pick the fruits for harvesting. I manage the fruits for ripeness, checking the progress of each fruit every day to make sure I don't miss any. When we plant seeds I need to make sure the plants are coming up. I take care of seedlings. I pick and cook fruits and vegetables. If plants die, I replace them. I weed to give more space for the plants. I prepare the ground, air the soil and make sure it is well drained. When the soil is dry I plant seeds again."

Women of all educational levels, ages, and incomes cultivate home gardens. The art of home gardening has been passed down from generation to generation through oral tradition, observation and hands-on experience. At every stage of their lives women are involved in some aspect of home gardening and the fact that women are secluded in the home, in accordance with the traditions of Bangladesh, means they cooperate on home gardening tasks. This encourages the flow of information on crop selection, planting methods, and processing. In addition, young women obtain local varieties of seeds by inheriting them from their mothers or mothers-in-law. New brides often bring horticultural seeds from their home villages when they marry thus furthering the diffusion of varieties. The high rate of seed sharing within communities and among neighbouring villages further promotes crop genetic diversity.

### Women maintain diversity

Although increased cultivation of high yielding varieties of rice in Bangladesh has led to an overall decrease in traditional field crops, such as local rice varieties, oilseeds, pulses, and millets, home gardens continue to be sanctuaries of agrobiodiversity. In both Bishnapur and Baushid, women expressed a commitment to preserving local varieties and regarded them as part of their cultural tradition and responsibility. Local varieties were an important part of the everyday diet and provided the special ingredients necessary for the dishes served at festivals. As one woman from Baushid put it "If I stop growing local vegetable varieties who will carry on the tradition?"

### Lessons for practitioners

In answer to the question - How can women's preferences for local varieties be used to help promote their continued cultivation - it can be suggested that NGOs encourage informal learning networks through which older women can pass on knowledge about the cultivation of these varieties and that they promote the training of young women in seed management for local garden crops. NGOs could also start educational campaigns to encourage the use of local varieties and in this way strengthen the understanding that high yielding varieties are not the only option.

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Photo: Author

A variety of seeds for the home garden.