Women, men and agrobiodiversity

Like in Mount Cameroon, in many developing countries the division of roles is particularly strongly marked. Photo: Guenay Ulutunçok

In the mountain areas of Nepal, women collect fodder for the animals, feed and graze them, clean the sheds and compost the dung. Children, mainly girls, take the animals for grazing. Elderly women are responsible for milking and prepare butter and ghee, a type of butterfat. The older men take decisions on the marketing of produce and the breeding of animals (Tulachan and Neupane 1999, in: FAO Manual).

In most traditional and modern farming systems there is a fixed division of labour, as in Nepal. Men and women may be responsible for different crops or for different tasks related to a crop. In many cases men plough the fields while women prepare the seedbeds with hoes. Weeding is often a task for women and children, while spraying or fertiliser application is mainly carried out by men. For harvesting all available hands are needed. Gardens are usually run by women.

Men tend to focus on market-oriented cash crop production, while women are often responsible for the family's subsistence needs. A study from Mali shows that this applies not only where very different plants, such as manioc and coffee, are concerned; labour can be divided in this way for one and the same plant. In the Bafoulabé region in the west of Mali rice was traditionally a "women's plant". It was grown along the riverbanks or in fields that were under water in the rainy season. The women worked the fields either on their own or in groups. They possessed a vast store of knowledge about the native varieties they cultivated and could distinguish between 30 varieties on the basis of growing cycle, growth type, plant height, number of stalks, yield, grain size, shape and colour, cooking characteristics, uses and the taste of the end product. The men knew very little about the traditional varieties of rice but were firmly in control of the cultivation of three improved varieties of rice that had been introduced into the village.

Key terms

Gender

Gender is not determined biologically; it is a central organising principle of societies and often governs the processes of production and reproduction, consumption and distribution. Gender issues focus on the relationships between men and women, the various roles of women, their access to and control over resources, the division of labour between men and women, their interests and needs. All these things affect the mutual relationships of household members, family well-being, planning, production and many other aspects of everyday life.

Participatory Plant Breeding

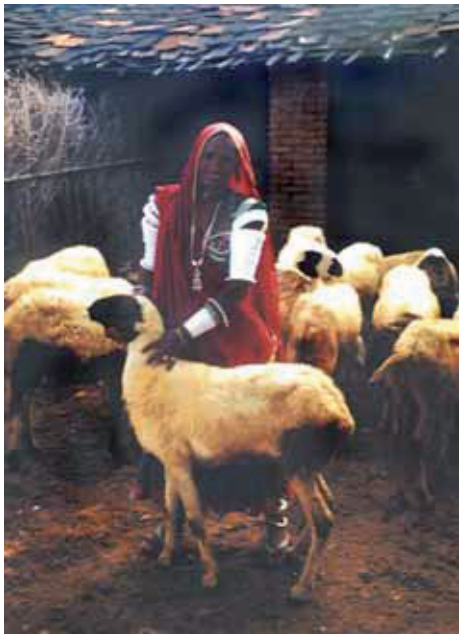
Farmers and professional breeders differ in the knowledge they possess and in the breeding techniques they use. Participatory breeding means using methods to which farmers, breeders, scientists and other interested groups contribute their knowledge. Such methods started to develop some two decades ago.

Farmers' Rights

Farmers have always saved part of their harvest as seed or grain to be planted the following year. This was and is a central element of agriculture – and the legitimate right of farmers. It is a right that came under serious threat in the mid-1980s when the first patents on plants and plant material were registered. In 2001 the right was established as part of the "Farmers' Rights" included in the International Treaty on Plant Genetic Resources for Food and Agriculture (cf. the corresponding Issue Paper "Farmers' Rights" in this series).

giz Sustainable management of resources in agriculture

On behalf of Federal Ministry for Economic Cooperation and Development



Women are responsible for looking after the smaller animals. Photo: Ilse Köhler-Rollefson

Women and children often look after the smaller livestock species while men are responsible for cattle, buffalo, yaks or camels. How roles are assigned and who takes decisions relevant to agrobiodiversity will depend on the specific situations and culture. Depending on gender roles, the man or the woman may be the agrobiodiversity conserver, or they may share the task between them.

Nutrition and health needs are most often the responsibility of women. It is therefore usually women who hold the knowledge of the plants and animals that serve these needs, whether with regard to their culinary, nutritional and curative properties or in connection with their agronomic and environmentally related characteristics.

The variety of plants and animals contributing to subsistence is generally far larger than the range of products sold in the markets. When addressing agrobiodiversity conservation issues, therefore, it is primarily women who must be reached.

Maintaining biodiversity

There are many ways in which women in agriculture – and men too – can be supported in their role as conservers of agrobiodiversity. Participatory breeding, seed banks and livestock markets, tourism, home gardens, cooking, medical and religious traditions, to name but a few, are all areas with potential for successful development cooperation.

• Participatory breeding

The knowledge that farmers have enables them to outperform professional breeders. With growing experience in participatory breeding it has become evident that local varietal knowledge can be very detailed and can play a crucial part in livestock and crop breeding.

An example of this comes from Rwanda. There are in Rwanda more than 600 varieties of bean, with many differing characteristics. Since beans are regarded as "women's plants" the information about them is firmly in women's hands. In a CIAT (International Centre for Tropical Agriculture) plant-growing project scientists focused on working with women farmers. The aim was to cultivate new bean varieties adapted to the needs of the local population. Working together, the women and the scientists identified the characteristics needed to improve the beans, carried out the experiments and evaluated the results. The results amazed the scientists. The varieties selected and tested by the women farmers over four cultivation cycles demonstrated better results than those chosen by the scientists.

• Seed banks

In some places communal seed stores have existed for a long time. Most, however, have been set up in recent times in connection with conservation objectives or in response to seed shortages. The national gene bank usually cooperates with the communal seed banks either to provide the communal institutions with sufficient amounts of suitable seed or to help the gene bank regenerate its collection.

In order to function successfully, the operators of seed banks must understand exactly how tasks are apportioned between men and women.

Women are the main food producers

In poor families with two adults, more than half the available income comes from the labour of women and children. Furthermore, women spend most of their earnings on meeting the basic needs of their families. Women produce 80 percent of the food in Africa, 60 percent in Asia and 40 percent in Latin America (Howard 2003).

Women are the sole breadwinners in one-third of all households in the world. Male migration from rural areas to cities in search of paid employment has led to a predominantly female rural population in many areas. As men's participation in agriculture declines, the role of women in agricultural production becomes ever more dominant.

• Seed fairs and livestock markets

Seed fairs are one of the most successful means of supporting agricultural biodiversity conservation around the globe. They also lend themselves to gender-specific work. They provide women with an opportunity to visit the event; they can present their own products and share their knowledge. Such events are often the start of an agrobiodiversity programme involving women who may otherwise be more difficult to reach due to social and religious restrictions. Farm animal markets offer similar opportunities but usually address male farmers.

• Home gardens

In many places gardens are tended by women, who cultivate a wide range of plants for various purposes. Home gardens are looked after with much more care than the fields that are further away. They are often fertilised with compost or manure, and watered where possible. Culinary and medicinal herbs, leafy and other vegetables, legumes, fruit and nuts – the variety available in the garden provides something for every occasion: nutritious food and medicine for the family's own use, for social and religious purposes and often also for sale. Supporting women and their home gardens is an important and practicable approach to *in situ* conservation.

• Traditional cooking and local recipes

Different uses and modes of preparation require different characteristics in the plants used. For example, potatoes used to make soup need to be mealy, while salad potatoes should be firm. Similar distinctions apply to other food plants. Nevertheless, international experts still know little about traditional cooking and local recipes, about methods of processing and storage, or about how this knowledge arises and is passed on. This was the subject of a study carried out by a female scientist at the Bunda College of Agriculture in Malawi. She discovered that around three dozen different green leaf vegetables are eaten, either fresh or dried. The dried leaves are traditionally preserved by forming them into a ball; this is covered with leaves to protect against pests and then stored by being hung up in the kitchen under the roof. It is a technique that had almost been forgotten. Home economics advisors who attend cookery classes at Bunda College are now once again passing on this traditional knowledge.

Heavy responsibility, limited rights

Through their daily activities, experience and knowledge local farmers, and especially women, have a major stake in protecting agricultural biodiversity. However, they are still hampered by a lack of rights relating to access to and control of the resources that they rely on to meet their needs. National policies fail to take due account of the increasing responsibility of farmers for food production and the management of natural resources. Improvement of women farmers' access to land and water resources, to education, advice, training, credit and appropriate technology is essential if agrobiodiversity conservation is to be improved. Sound and equitable agricultural policies to provide incentives for the sustainable use of genetic resources are also needed.

Agrotourism not only provides an opportunity to conserve biodiversity but also represents an additional source of income for women.
Photo: Guenay Ulutunçok

Tourism

Every year at the time of the November full moon thousands of tourists and pilgrims flock to the desert town of Pushkar in the Indian state of Rajasthan. They come to the camel market and to the religious ceremonies that take place in honour of Brahma. The camel market is a traditional breeders' market that over the years has become a tourist attraction.

The operators of the "potato park" near Cusco in Peru seek to attract those who come to visit the ancient Inca cities. Six communities in the Pisac valley have combined to manage the park jointly. Tourists learn about the potato through guided tours of the fields and displays in the potato museum, and in the restaurants they can enjoy regional dishes prepared in the traditional manner. As well as conserving some 400 native varieties of potato, the scheme also ensures that women's knowledge of preparing and processing the vegetables is not lost.

International agreements provide a framework

A range of international agreements regulates the conservation and sustainable use of agrobiodiversity. Most of these agreements, however, take little account of gender issues.

- The United Nations Convention on Biological Diversity in its preamble acknowledges the key role played by women, especially in the developing world, in the management and use of biological resources.
- The FAO International Treaty on Plant Genetic Resources for Food and Agriculture makes no specific reference to gender.
- The FAO Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture makes detailed reference to the differing roles of women and men in the conservation of agrobiodiversity. It was drawn up in 1996 at the "Plant Summit" and covers the four areas of conservation and development *in situ*; conservation *ex situ*; use of plant genetic resources including under-utilised varieties; institutional and personnel-related capacity building including raising awareness of the value of the available resources. Countries that ratify the agreement undertake to implement the global action plan at national level.
- The FAO Global Strategy for the Management of Farm Animal Genetic Resources provides a framework for assisting countries but does not go into the gender-specific issues.

Women are essential to success

Individual countries must in future formulate their agricultural policies in a way that does not exclude women. This is essential if states are to produce sufficient food for their growing populations. The fact that gender aspects have so far been neglected has had serious consequences not only for biodiversity but also for gender equality.

The gender-aware design of biodiversity conservation measures involves more than just taking account of traditional seed, old native varieties and traditional knowledge. If the roles of men and women are properly considered, many negative impacts on women can be avoided. Family nutrition and health are improved if a range of nutritious plants is cultivated. Improvements in production systems can increase the income of women farmers. If more attention is paid to the knowledge and skills of women, their position in society is strengthened.

Preparing coffee in the traditional way, in Ethiopia: An illustration of the role of women in safeguarding traditional knowledge.

Photo: Guenay Ulutunçok

The Issue Paper series "People, Food and Biodiversity" aims to:

- stimulate an interest in the conservation and sustainable use of biological diversity,
- present quickly and clearly concrete actions and experiences,
- explain new concepts and issues relating to the topic of biological diversity,
- encourage and stimulate the mainstreaming of this topic within development cooperation projects and programmes.

We look forward to your suggestions and experiences so as to enable us to improve this series.

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