

28 Sri Lanka

The Haritha Udana community seed bank in Kanthale

*C. L. K. Wakkumbure and
K. M. G. P. Kumarasinghe*

Establishment and functions

Traditionally, farmers in Sri Lanka have collected and stored seeds in their own homes using traditional simple but effective techniques and tools. Storage facilities include raised structures built outside the house on four timbers using clay, bamboo and paddy straw and used mainly to store paddy; one- or two-room structures inside the house; and racks above the stove. However, in the last three or four decades, as agriculture has become commercialized, these techniques and tools have been abandoned in many farming communities. Pressured by seed companies to adopt modern varieties and lacking support from the government to maintain local diversity, farmers have generally increased their use of introduced crops and improved varieties. This has led to a loss of crop diversity in many regions of the country. Fortunately, a number of custodian farmers in various farming communities continue to conserve some traditional and local cultivars in recognition of their sociocultural, ecological and economic value.

The community seed bank at Haritha Udana in Raj-ala, Kanthale, is one of five banks that are part of Sri Lanka's community-based biodiversity management project (Plate 19). This project was initiated and implemented by the Green Movement of Sri Lanka, a local nongovernmental organization (NGO), in collaboration with the Community-based Biodiversity Management Programme, South Asia, coordinated by Local Initiatives for Biodiversity, Research and Development (LI-BIRD) of Nepal.

The Haritha Udana seed bank was established in mid-2011. The community was well aware of the importance of local and traditional crop varieties and landraces to sustainable production systems and a nutritious, balanced diet. They also recognized the value of seeds as a resource and of their association with the local agricultural system. This knowledge provided a strong foundation for the establishment of the seed bank.

The community seed bank is governed by Haritha Udana, a community-based organization (CBO) established by the raja-ala farming community. Haritha Udana CBO is registered under the Kanthale divisional secretariat, the local administrative structure, and, thus, the seed bank has legal status. In

the beginning, 35 households contributed to the bank, but now 80 member households and about 20 non-member households are benefitting from it, directly and indirectly.

The community seed bank provides space to store seeds of almost all annual crops and varieties available in the area, including grains, pulses, legumes, leafy vegetables, medicinal plants and selected fruit crops. Seeds are borrowed and returned to the bank by farmers. Based on the size of a member's home garden, the management team decides how much seed can be borrowed. The borrowers must return three times the amount borrowed. The major roles of the community seed bank have not changed since its inception. The bank is also providing local and traditional genetic resources, such as sorghum, finger millet and cowpea (*Vigna unguiculata*) for participatory crop improvement projects, in which farmers cultivate those crops to multiply and increase the availability of seeds.

Several people from Sabaragamuwa University, Kanthale agrarian service centre, the Prabavi CBO in Lunugamwehera and the Green Movement of Sri Lanka have received seeds from the bank to distribute among other farmers and to examine the morphologic differences in the varieties of paddy, sorghum, sponge gourd and green gram, among others. However, the national gene bank (Plant Genetic Resource Centre of Sri Lanka) has not yet obtained seeds or genetic materials from the community seed bank.

Governance, management and support

The executive committee of the Haritha Udana CBO has overall responsibility for managing the seed bank and delegating tasks and responsibilities to members. The members of the executive committee are elected annually by the members.

The executive committee is responsible for ensuring the quality of the stored seeds. However, seed selection, cleaning, storage and renewal are mainly carried out by women. In Sri Lanka, women traditionally assume these roles and, in general, are more actively involved in CBOs. Men are more involved in other types of livelihood practices, such as wage labour at construction sites, in and outside the villages. Currently, 66 women and 14 men belong to the Kanthale Haritha Udana CBO.

Individual community members may borrow seeds from the seed bank, but must return high-quality seeds from their home gardens and farms following established rules. The community seed bank uses glass and plastic bottles, clay pots and polythene bags for storing seeds. The type and size of the storage containers depend on the type of crop and the amount of seed.

All members of the CBO and all farming households in the community (within the village) have equal access to seed from the community seed bank. However, the CBO gives priority to those who are actively engaged in conservation and the sustainable use of agro-biodiversity. Such provision may encourage non-members to be associated with the CBO and become involved

in local seed conservation activities. Currently, women are more active in such community-based activities in rural Sri Lanka than men.

The CBO keeps handwritten records of seed storage and exchange processes: mainly seed inflow and outflow. When seeds are received or provided to the community, an executive committee member or a delegate updates the records. She or he also keeps track of all the seed-storage containers, including crop information, variety, harvesting date and storage date to ensure smooth functioning of the seed bank. Monthly meetings, special meetings during project officers' site visits, face-to-face verbal communication, public notices in public places and telephone calls, when necessary, are used by the executive committee to interact with community members.

The Green Movement of Sri Lanka has provided technical, financial and moral support to the community seed bank, free of charge, since its inception. Government institutes, such as the Plant Genetic Resource Centre, the in-service training institute and the Kanthale seed farm have also provided technical and moral support so that the community can maintain, improve and expand the seed bank as a viable and sustainable seed resource centre. The Community-based Biodiversity Management Programme Sri Lanka provided initial monetary and non-monetary support, including training and capacity building. The money was mainly used to buy construction materials that were not available in the village. Other costs, such as land, labour, timber, etc., needed to set up the seed bank were contributed by the community.

Prospects

The results achieved so far have laid the foundation for reviving the community-based seed production that was lost due to agricultural modernization. However, the community seed bank is still at a very early stage.

The community seed bank is contributing to the sustainability of local and traditional agricultural biodiversity while helping to ensure food and nutrition security and improving livelihoods among the farming community in Raja-ala, Kanthale. To date, the farming community has achieved broader awareness and knowledge of the importance of agricultural biodiversity. For example, farmers are now more aware of the differences between mono-cropping and multi-cropping. The community seed bank plays a vital role in making the community aware of the importance of agricultural biodiversity, especially the younger generation. This awareness has motivated the community to search for, collect and cultivate different crops and landraces, varieties and wild relatives of the crops in their gardens. As well, they have revived traditional culinary methods used to prepare and cook food. The bank also supports the reintroduction of traditional and local crop varieties, neglected and wild crops – food and medicinal crops found in forest areas and natural vegetation – that were replaced by modern agriculture. Moreover, the community seed bank serves as an educational resource centre for the community in terms of sustainable agriculture and food security.

The community seed bank has also changed the attitudes of CBO members towards local and traditional landraces of crops and crop diversity. Nine landraces of paddy, almost all sorghum, yellow coloured green gram and pigeon peas have been restored as a result of the work of the bank. When exposed to the diversity of agricultural crops available in the area, most community members are interested in taking the initiative to achieve self-sufficiency in food for day-to-day life.

Seeds of the crops shown in Table 28.1, as well as bitter gourd, snake gourd and ridge gourd, are now available year round. The community is currently identifying future needs, seeking to increase the amount of seed stored, enlarging the storage facilities and improving the quality of the stored seeds for more effective use under unfavourable climatic and environmental conditions.

Intra-species and inter-species diversity of the crops in the area – mainly in the home gardens of the CBO members – has increased remarkably through the community seed bank and seed exchange mechanisms of the Haritha Udana CBO. Currently, the average number of crop species and medicinal plants in home gardens is about 45–50, a large increase from the 10–15 species of crops and medicinal plants farmers grew before the establishment of the community seed bank and the exchange process. Most member households cultivate at least two varieties of almost all crops in their home gardens.

Home gardens rich in agro-biodiversity provide the means to increase the diversity of food available for day-to-day consumption in the farming communities and to increase both food supply and the quality of the food. Before establishment of the community seed bank, people consumed 5–7 types of vegetables and fruits a week on average; now up to 12–15 species of

Table 28.1 Crop seeds available in the community seed bank

<i>Crop</i>	<i>No. of varieties</i>	<i>Volume of annual transactions (g)</i>
Yard-long bean	3	850
Cowpea	2	600
Black gram	1	2,000
Amaranth	2	100
Sward bean	1	1,250
Green gram	1	1,000
Bottle gourd	3	500
Tomato	2	150
Chili pepper (<i>Capsicum frutescens</i>)	5	100
Pumpkin	2	350
Cucumber	2	100
Okra (a.k.a. lady finger)	1	290
Sorghum	3	1,400
Wing bean	2	400

vegetables and fruits are consumed per week. The community seed bank has helped reduce day-to-day food expenditures by at least 15–20 per cent, and most members save about half the cost of vegetables and fruit. Furthermore, additional income is being generated through the sale of excess produce in and outside the villages and average household income is now about 900 Sri Lankan rupees (US\$7) a month.

The Haritha Udana community seed bank is still growing and, to date, has made little impact on agricultural policy or farmers' rights. However, the visible outcomes from the community seed bank are expected to create an environment in which to address relevant policy issues. To maintain the community seed bank effectively and efficiently, the Haritha Udana CBO must have sufficient financial and non-financial resources. The community seed bank is a team effort that requires strong capacity building, human resource development and financial resources to reduce dependency on outside sources.

The challenges associated with the development of the community seed bank are the low level of technical and financial support, difficulties in finding competent resource people when they are needed and the unabated pressure from seed companies to move towards commercial agriculture. The absence of successful community seed bank models in the country also makes it difficult to find the right direction.

Recently, some members of the Haritha Udana CBO have moved away from the community seed bank. Awakened to the utility of having access to seeds that are not governed by the market, they have begun to maintain individual seed reserves at the household level. CBO members are concerned that this could reduce the synergy and group coherence of the CBO over time. Strengthening existing mechanisms to generate income, such as a community-based biodiversity management fund and community-based seed production, may ensure the viability of the community seed bank.