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The historical Dalchowki community seed bank

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Purpose, activities and management

Established in 1994, Dalchowki is the site of Nepal's first community seed bank. Dalchowki village is about 25km south of Lalitpur district headquarters. Although not far from the country's capital, southern Lalitpur represents one of the most remote areas in terms of access to basic facilities and public services. The Dalchowki community seed bank was established through the Integrated Community Development Program (ICDP) implemented by USC Canada. Farmers in the area were growing several local varieties of cereals, pulses, oilseeds and vegetables. USC Canada, which was working with these communities, observed that some of the local crop varieties were in danger of disappearing because of the gradual introduction of improved and hybrid seeds along with chemical fertilizers and pesticides. The movement of farmers into nearby cities and generally poor seed management practices were contributing to the problem. ICDP decided to pilot a community seed bank in Dalchowki village district to address this issue by promoting seed security and the conservation of crop genetic resources. The main function of the seed bank was to collect, enhance and multiply seeds of local varieties. ICDP chose the community seed bank approach, as it was seen to be effective in terms of sensitizing, empowering and mobilizing communities and in promoting the use of local seeds and crop varieties.

The seed bank has been identifying custodian farmers in and around Dalchowki and mobilizing them to grow and conserve local varieties, particularly of broad-leafed mustard (rayo), radishes, small peas, faba beans and a perennial variety of local cauliflower. It has collected and conserved seeds of 17 varieties of seven cereals, 12 varieties of six legumes, six varieties of three oilseed crops and 22 varieties of 14 vegetables. In 2012, 70 farmers (37 women and 33 men) deposited seeds in the bank, and 21 farmers (14 women and seven men) 'borrowed' 1.1t of seeds to grow on their land. In addition, the seed bank has collected local varieties of finger millet to assess their diversity, and it has multiplied seeds with support from the 'Local initiatives for food security transformation' project implemented in the area by a nongovernmental organization (NGO) called Group of Helping Hands

(SAHAS) Nepal. The seed bank has also started to collect, evaluate and characterize rare and unique crop varieties with technical support from SAHAS Nepal, the national gene bank and USC Canada.

In addition to seed conservation, the Dalchowki community seed bank also produces and sells seeds of local crops, such as maize, rapeseed and some vegetables to meet local demand. It receives technical support from SAHAS Nepal and the District Agriculture Development Office in acquiring seed and maintaining its quality. The seed bank has established a revolving fund of US\$2,050, part of which is used to provide small loans to its members and purchase seeds from group members. The seed bank has a mandate to buy seeds of rare crop varieties and store them for a year.

The Dalchowki Community Development Committee, made up of villagers and registered as a community-based organization, has overall responsibility for managing the seed bank. An 11-member executive committee elected by the general committee provides governance and management of the seed bank on a voluntary basis. Currently, 48 farming households are affiliated with the seed bank, and take part in organizing various activities. Seeds are distributed to members on the condition that they return twice the amount borrowed. The seed bank sells a small amount of seeds to outsiders at the current market price. The seed bank tries to maintain records of transactions with farmers, crops and varieties; prices are set by the executive committee. Income from the sale of seeds is not sufficient to cover the full cost of running the seed bank, but it helps with basic operational expenses.

During the past 19 years, the seed bank has had ups and downs. Although standards and rules were developed to increase community participation in management, implementation has not been effective because of limited technical and managerial capacities. Political unrest in the country has also greatly affected members' efforts to further develop and effectively manage the seed bank. In 2006, when armed conflict was resolved, the Dalchowki Community Development Committee re-established the executive committee and renewed its activities, including reviving the seed bank, with great enthusiasm. In 2009, an independent review of the community seed bank, carried out with support from USC Canada, recommended ways to strengthen management and operations. The report suggested ensuring a more dynamic and inclusive leadership and improving relations with other community groups, cooperatives, local government and other stakeholders.

Community seed bank members who are responsible for seed production are also responsible for selection and cleaning. The Dalchowki Community Development Committee organizes monitoring visits to ensure high-quality seed production. A community biodiversity register, documenting the traits, associated local knowledge and uses of all food crops, is maintained. It has been difficult to keep proper records of all seed transactions because of a lack of human resources. As the executive committee members are volunteers, they are unable to spend enough time keeping and updating records. To strengthen its functions and reach more farmers, the committee must develop workable

guidelines to mobilize group and cooperative members to conserve rare crop seeds, maintain seed quality and manage information properly.

Support, networking and the policy environment

The Dalchowki community seed bank has received long-term support from USC Canada to develop its basic facilities and strengthen its capacity. Funds made available through the ICDP were used to purchase 1,000m² of land and construct two buildings: a community centre for holding meetings and training sessions, and the seed bank. The seed bank is a two-story concrete building with storage capacity for 28t of seed, four offices and kitchen facilities. USC Canada funding was also used to set up the US\$2,050 revolving fund, which is used for management and operations, particularly for collection and distribution of local crop seeds, as well as to provide small loans to its members. The ICDP also supported the purchase of a hygrometer, thermometers and other materials necessary for seed storage and management. The ICDP's strategy was to make the seed bank sustainable through technical, financial and institutional empowerment. After the period of political unrest, the seed bank initiated collaborative arrangements with relevant NGOs, such as SAHAS Nepal and government agencies, such as the Lalitpur District Agriculture Development Office and the national gene bank operating under the Nepal Agriculture Research Council.

The Lalitpur District Agriculture Development Office has provided support for training farmers associated with the seed bank. In 2012, the seed bank established a partnership with the national gene bank and received technical and material support for the collection, documentation and conservation of seeds of rare and unique crops found in the area. The national gene bank also provided support for the establishment of a field gene bank for perennial crops. Despite all this assistance, there is still a need for better community support and mobilization of local resources to sustain and increase seed bank functions.

The seed bank collaborates with a local organic farmers' cooperative to market surplus seeds. It shares office space with the cooperative and is mobilizing financial resources for its members. The seed bank is also a member of the recently formed National Network of Community Seed Banks of Nepal.

The national policy environment has become more favourable for community seed banks. The Department of Agriculture has mainstreamed the banks in its plans and programmes as a strategy to increase access to high-quality seeds and conserve local crops. The recently amended National Seed Act and regulation has relaxed its provisions to allow registration of local crop varieties. The Dalchowki seed bank is currently preparing to register a local variety of broad-leafed mustard called Guzmuzze (Plate 14). The local government, particularly the Village District Committee and other formal and informal institutions, are taking a positive view towards helping the seed bank strengthen and expand its activities for the benefit of the larger farming community.

Achievements and prospects

The communities of Dalchowki, Sankhu and Chaughare have benefitted in many ways from the Dalchowki community seed bank. It has helped increase awareness about the value of, and the need to conserve, their local seeds and has taught them new ways to produce and manage healthy seeds. It has also encouraged farmers to use local crops and resources that reduce the need for external chemical inputs. The number of households saving their own farm seeds has increased significantly since the Dalchowki seed bank was established. However, there is still a need for a systematic assessment of the level of contribution of the seed bank in terms of promoting crop diversity and seed security.

Seed bank activities have been helpful in organizing farmers and promoting sustainable agriculture in the area. These farmers have adopted and continue to practice ecological farming. Recent activities of the Dalchowki seed bank, such as seed production and fund mobilization, are direct incentives for members and have led to improved access to quality seeds and credit. In 2012, the seed bank collected and distributed more than 6t of seeds of which 1t was of local crop varieties. Since the seed bank was established, there has been an increase in the diversity of crops, such as maize, millet, bean, rapeseed, soybean and pea. Women farmers play an important role in the seed bank; they have received training in seed selection, crop breeding and using diversity to adapt to stressful environments. About 60 per cent of women are engaged in seed production and selling, and this has contributed to their empowerment in the community.

Based on advice from support agencies and reflections on the past, the Dalchowki seed bank has developed a plan to operate as a resource centre, offering diversified services, such as training and workshops, and links with agro-ecotourism to help sustain its functions. The seed bank is benefitting from some financial support from the Dalchowki Village District Committee for maintenance of its physical resources. It also rents office space to a local cooperative and to SAHAS Nepal to generate some income. Since 2012, the seed bank has been producing seeds of maize, bean and rapeseed for sale and realizes a small profit margin of about 10 per cent. These revenue resources all together cover maintenance costs. To operate more successfully, the seed bank is still seeking additional support from SAHAS Nepal, USC Canada, the national gene bank, the District Agriculture Development Office and similar development organizations.