

22 Mali

The USC Canada-supported gene and seed banks of the Mopti region

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Background and evolution

Mopti is a Sahelian region where food insecurity is a chronic problem for many reasons: the failure to value small farmers' knowledge, the impact of climate change, the degradation of farm lands and insufficient and irregular rainfall. Although these challenges are faced throughout Mali, the situation is more acute in regions such as Mopti, and small farmers there are under intense pressure to ensure that their seed – and, consequently, food – is secure. Agricultural production is under threat, primarily from drought, soil degradation and insect invasions. In Douentza, one of the eight cercles (administrative units) in Mali, agriculture and livestock breeding constitute the main economic activities of the local population of approximately 248,000 people.

USC Canada's Seeds of Survival (SoS) programme (Chapter 37) has been working with farming communities in the region since 1993 to reinforce the resilience of small farmers, both male and female, in their fight against food insecurity and to improve their livelihoods. SoS emphasizes the protection and renewal of local seeds and the value of farmers' knowledge through farmer-to-farmer exchanges. It is working with farmers in two cercles in the Mopti region – Douenza and Mopti – to set up community gene and seed banks, in addition to other activities to restore soils, mitigate climate change effects and improve incomes (Plate 12).

Eight community gene and seed banks have been established: six in Douentza cercle and two in Mopti cercle (Table 22.1). The SoS programme works with farming communities to carry out these community-based genetic resource conservation initiatives, with the technical and financial support of USC Canada, which is funded by the Canadian International Development Agency and other donors. To enable this approach, based on small farmer knowledge, to develop and respond to the needs of the local people, the first step was to establish each bank as a cooperative society, so that they could be legally recognized by the government of Mali and benefit from the various advantages attached to such recognition.

Table 22.1 Community gene and seed banks in Mopti region established through USC Canada's Seeds of Survival programme

<i>Bank location</i>	<i>Cercle</i>	<i>Year established</i>
Badiari	Douentza	1995/96
Doumbara	Douentza	2002/03
Pétaka	Douentza	2002/03
Gono	Douentza	2007/08
Koubewel	Douentza	2007/08
Dianwely	Douentza	2008/09
Ouomion	Mopti	2002/03
Pathia	Mopti	2012/13

Functions

The community gene and seed banks were organized out of a growing awareness among farming communities of the need to preserve their genetic heritage, which was threatened with extinction by climate change effects and insufficient and irregular rainfall. The first banks were established to respond to the risk of diminishing diversity of local agricultural seeds, the source of all seed production. The banks that have been established more recently, 2007–2013, were a response to threats related to genetically modified and hybrid seeds.

All of the banks play the same roles. Each is composed of both a gene bank and a seed bank, which together fulfill the six functions listed below.

Functions of the gene banks

- Conserve the diversity of agricultural seeds produced by small farmers, both men and women.
- Conserve traditional tools and products for the sustainable conservation of agricultural seeds.
- Transmit farmers' knowledge regarding the sustainable conservation of agricultural seeds through continuous learning.

Functions of the seed banks

- Conserve the seeds of farmers who do not have appropriate storage facilities.
- Supply seeds to farmers who face seed shortages during the sowing period (in the form of loans or sales at a reasonable price).
- Improve members' living conditions through loans in the form of credit.

Operations and management

The community gene and seed bank of Doumbara, the second oldest bank in the area, was launched as a cooperative society on 15 December 2003 under the

name Faso Yiriwa, which means community development. It began with 40 founding members from 15 villages of the commune of Dangol-Boré, but because of the distance of some villages from the bank (over 30km), some of the initial members withdrew. However, the number of actively involved participants has increased, reaching 64 by 31 July 2013. The bank conserves 13 varieties of four species: three of millet, three of rice, four of cowpea and three of sorghum. In addition to biological material, each bank also keeps equipment, such as a scale, a spring balance and a 50m measuring tape, and management tools, such as a stock register, a sales ledger, a loan recovery accounts book, a payments ledger, a members' list, meeting minutes and a community biodiversity register.

Faso Yiriwa is currently supplied by 18 seed producers (men) and two women's groups, composed of ten and 36 women, from seven participating villages. They multiply the seeds in their villages and then deposit a certain quantity in the bank to be sold. To become financially self-sufficient, the bank retains 20 per cent of the total revenue earned from the sale of seeds.

The operating rules of cooperative societies must be made public: each member pays annual dues of 1,200 Central African Francs (CFA; or US\$2.46) and a membership fee of CFA 2,000 (about US\$4). A general assembly is convened at least once a year. During the annual meeting, the sale prices of seeds are decided in the presence of the seed multipliers. The seeds are brought to the bank after harvest, and each producer covers the cost of that transfer. Revenues from the sale of seeds, dues and membership fees are loaned to members of the cooperative society at an annual interest rate of 10 per cent. As of 31 December 2012, the net income of individual banks was between CFA 25,000 and CFA 252,970 (about US\$50–518). The various banks' supply procedures vary from one location to another according to the customs and economic means of their members. For certain banks, such as the one in Doumbara, the members multiply the seeds in their villages and deposit a portion in the bank to be sold. The bank retains 20 per cent of the revenues generated from the sale of seeds. Other banks sell or lend a certain amount of seed to farmers who, after the harvest, return double the amount initially received to the bank. This is one means of facilitating access to seeds by the most vulnerable people.

Although many issues remain to be resolved, both women and men use material from the banks. No farmer, male or female, is excluded; however, priority is given to bank members. The use of the material by women and men is shaped by local customs. Women are interested in minor and market garden crops, such as sesame, cowpea, chili, shallots, tomatoes, etc., whereas men grow major crops, such as millet, sorghum, rice, manioc, etc. Women often grow species that are used as ingredients in sauces and other products, which allows them to maintain a small business and earn income to cover family expenses.

Management of each bank is based on the internal regulations of the cooperative society, which are applied by a general assembly, a board of directors and an oversight committee. The general assembly is the decision-making

body and meets at least once a year with additional meetings on special occasions. The board of directors is in charge of implementing the decisions made by the general assembly, while the oversight committee ensures that the decisions are carried out correctly.

The knowledge and skills of the members are reinforced through field schools (where seeds are multiplied for the banks), exchange meetings, seed fairs, exchange visits and various training sessions on valuing and sustainably managing agricultural biodiversity. The banks work in cooperation with other similar local and regional initiatives through gene and seed bank networks, as well as with USC Canada's SoS programme. This programme works in partnership with other organizations from the subregion such as Biodiversité Échanges et Diffusion d'Expériences, Coordination Nationale des Organisations Paysannes du Mali, Coalition pour la Protection du Patrimoine Génétique Africain and the climate change network of Mali.

In Douentza cercle, village management, monitoring and activity assessment committees exist in all of the villages covered by the SoS programme and are in charge of coordinating all programme activities. With regard to the banks, the committees mobilize villages to manage seed multiplication fields destined to supply community gene and seed banks. They also are responsible for informing and raising the awareness of the population with regard to the evolution of the banks, on one hand, and, on the other, monitoring and applying decisions made by villages regarding the maintenance and development of seed conservation and supply infrastructure. They also serve as the interface between the communities and partners.

Network members, who are also members of the village management, monitoring and activity assessment committees, are specifically charged with addressing all issues concerning the community gene and seed banks: their functioning, difficulties encountered, corrective measures and contacts with different banks at the local, regional and subregional levels. This work is facilitated by the SoS programme through the village committees' coordinating body, which is the supreme authority at the cercle level.

This coordinating body is composed of network members and representatives of the village management, monitoring and activity assessment committees. It is responsible for developing partnerships between farmer collectives and partners (administration, technical services, elected officials, projects, programmes, nongovernmental organizations). It also oversees the development of strategies to mobilize the resources needed to plan, implement and monitor activities to guarantee the empowerment of various groups.

Since the 2012 rebellion in northern Mali, which led to the departure of the SoS programme and its development partners from Douentza, various farmers' organizations have assumed the task of implementing and monitoring activities. They have taken on the role of interface between the programme and the population through the implementation, monitoring and reporting of activities carried out by the programme and other displaced partners. This situation has allowed farming communities, who have nothing to gain from the conflict, to

continue to benefit from the programme's support, consolidate gains and carry on with planned activities.

Networking

Currently, the strength of the eight community banks lies in the network that works in partnership with other community banks in southern Mali, where rainfall is higher than in Douentza and Mopti. This partnership allows them to carry out certain key activities to valorize and save farmer seeds, notably organizing seed fairs, multiplying seeds unsuited to the prevailing climate in other areas with a more favourable climate and exchanging seeds and advice to improve the productivity of different varieties. In terms of outputs, the most notable are the following:

- Farmers, both male and female, have appropriated this approach, which focusses on their knowledge, with regard to valuing and conserving agricultural biodiversity.
- Varieties that were not cultivated because of climate constraints are now produced in other locations where the climate is more favourable.
- Crops are more diverse because of the exchange of seeds and ideas among farmers during seed fairs, visits and exchange workshops.
- Farmers' knowledge is now preserved for future generations.
- Everyone, regardless of his or her position in society, has the right to access seeds to grow and feed their families and to contribute to the fight against food insecurity.

As of 31 December 2013, 178 farmers (100 men and 78 women) have been direct beneficiaries of these banks. Several challenges remain: consolidating self-sufficiency (now underway), setting up a sustainable strategy to boost the numbers of young girls and boys involved in bank activities and improving the literacy level of bank managers to ensure the appropriate use of management tools and the shared governance of bank activities.