

Organizing access to local seeds in a context of crisis

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Natural disasters such as long spells of drought can cause crop failure, food shortages and shortage of seeds. In these situations, foreign seed is usually brought in as emergency aid, with little consideration for agro-ecological and socio-cultural factors. When a crisis hit the Dogon people of Mali a few years ago, however, local actors successfully identified, bought and redistributed locally-adapted seeds, a process that avoided farmers becoming dependent on external seed suppliers, enabled them to recover from the crisis and strengthened the sustainability of their agriculture.

Crisis

The Dogon are renowned for their rich culture and traditions. For centuries they have cultivated the rocky lands and plains around the plateau area on the border between Mali and Burkina Faso. Local agriculture is based on millet, a rainy season crop, and vegetables produced during the dry season on the remaining soil moisture. The Dogon have developed seed varieties that are well adapted to the thin soils and arid climate of the region and they depend heavily on these varieties for the success of their harvest.

In late 2002, after two consecutive years of drought, the state services in charge of agriculture were distributing cereals for free to overcome the severe food crisis on the Dogon Plateau. They observed that many farmers lacked seed and that millet stocks for home consumption had run out. Farmers had used up a lot of seed because they had to re-sow their fields due to poor germination caused by drought. As a result, the German NGO *Deutsche Welthungerhilfe* (German Agro Action), responsible for the food aid programme, decided to establish an additional programme that dealt specifically with seed aid.

Strategies

Before it launched a seed aid programme, German Agro Action decided to make an inventory of the agronomic and socio-cultural context of seed procurement and use amongst the Dogon. It found that farmers have a marked preference for local seeds. There are three different agro ecological zones in the Dogon region, each with its specific climate and soil. Over time, specific local varieties have been developed which are adapted to the conditions in each respective zone. The preservation of these varieties is of critical importance to the local population. Farmers were suspicious of seeds brought in from outside the area: 'When we heard that we would get seeds everybody was afraid that they would bring in seeds from other regions which will not yield here.'

German Agro Action also found, however, that cultural factors blocked the free flow of local seeds. Farmers were reluctant to acknowledge their lack of seed and there was a taboo on trading local varieties commercially. Seed might be bartered, for example cowpea against millet, or in extreme case, seeds might be exchanged for a piece of land. However, transactions were carried out with great discretion and by family elders.

The study indicated that the Dogon did not have a system that, given the severity of the current crisis, could satisfy the demand for seed of sufficient quality and quantity. The only way to improve the availability of seeds of locally-adapted varieties

with the particular characteristics valued by local farmers was to mobilize the seed stocks that were still available within the communities themselves. German Agro Action made an inventory of the need for seed in different parts of the region and the extent to which seeds could be supplied from local sources. They also inventorized local cultural practices in seed management.

Adaptations

Dogon communities are spread over a wide geographical area. There are more than 400 villages and the total population is over 300 000. Based on the results of the study, it was estimated that some 50 tons of millet seed was needed in order to plant the 10 000 ha of farmland at the normal rate of 5 kg/ha. For the farmers to have seed in time for planting, it would have to be distributed within three months. Also, the distribution system would have to be transparent. German Agro Action's local partner MOLIBEMO, a federation of village producer organizations representing 85 farmers' groups, voiced its concern regarding two issues in particular: Firstly, the difficulty of collecting enough seed of guaranteed quality, and secondly, how to achieve an effective re-distribution of seeds in spite of the strong cultural taboos prohibiting sale.

The first issue was tackled by bringing the seed suppliers, i.e. those Dogon farmers who kept sufficient seed stocks, in direct contact with those in need. This put the responsibility for seed choice with the beneficiaries rather than with German Agro Action. The second issue was dealt with by involving village and regional institutions, such as the mayor and the district council, religious and traditional leaders, and the agricultural extension service. Mediating persons or "caste men" who play a special role in village life, especially in times of crisis, were also involved. They encouraged a sense of confidence amongst farmers as well as cautioning them against the outright sale of seeds.

Village committees of "wise persons" including village chief, religious chief and respected individuals, identified and negotiated with potential suppliers about seed supply and distribution. They assessed the quality of the millet panicles on offer and supervised their packaging and labelling. They certified seed quality and origin before distribution took place. They also verified the list of beneficiaries and the mayors took on the responsibility of supervising activities at village level. Regional committees were charged with the collection of seed from different villages and were responsible for creating a central list of suppliers and beneficiaries. They also participated in the planning and distribution of the seeds. MOLIBEMO staff, using their long local experience, coordinated the overall process and ensured it was well executed.

The issue of the taboo on the sale of seed was dealt with by introducing a voucher system. This approach was inspired by the earlier experiences of the *Catholic Relief Services* (CRS) in East Africa. CRS used seed vouchers and fairs to overcome seed shortages and this had proved to be an effective alternative to the more standard approaches to agricultural rehabilitation that rely on importing certified commercial seeds.

The approach adopted in the 21 districts of the Dogon region consisted of collecting local seeds and controlling and certifying

their quality. Distribution was supervised and took place through administered markets where vouchers replaced cash. The use of seed vouchers encouraged transparency and ensured control over a distribution system operating over vast geographical distances. Participatory processes had been used to develop a schedule or calendar to guide the timing of distribution to the main villages in the districts.

Those involved in the organization of the seed markets had been appointed by the local population. Farmers who owned seeds organized themselves into a group and selected their own representative. People who did not have seed also sent a representative to collect the seed. In large families, a representative took responsibility for collecting the seed quota of all the households in the family unit. This increased the efficiency of the exchange and was in keeping with local culture and traditions.

Seeds were distributed to beneficiaries for free. Each beneficiary received a receipt stating his or her own name, and the names of the seed supplier, the committee representatives and the local NGO. The seed suppliers were "paid" by the local NGO on presentation of the receipts acknowledging that the seeds had been delivered. A reference price for the vouchers was fixed by the local NGO at one third above the local market price of high quality millet destined for consumption. The price was announced beforehand. Overall, 45 tons of millet seeds from local varieties were collected and distributed over a three-month period. Local producer groups and organizations benefited both directly and indirectly from this newly created seed market while the seed aid funds boosted the local economy.

Conclusion

The success of the local seed aid programme was the direct result of involving local structures and actors; and of the leading

role they played in the organization of the seed market and the voucher system. They defined the modalities of exchange and took care to respect local habits and ensure transactions were transparent. They also guaranteed the quality and origin of seeds. This increased the confidence of beneficiaries in the system. The involvement of mediating persons and structures was critical to the communication process and ensured strong links were established between the local NGO, the local structures and the population.

Seed aid operations in other contexts and areas may wish to build on the lessons of the Dogon experience. These were fivefold:

- 1) Study the local traditions, habits and customs regarding seed exchange, to learn about any possible taboos concerning the sale of seeds;
- 2) Identify and work with experienced local partners;
- 3) Have farmers monitor and evaluate the quality of the seeds for distribution, and search solutions regarding issues of seed supply;
- 4) Adapt the general approach to the local context by building on the participation of local actors; and
- 5) Rely on the population to put the operation in practice in order to ensure transparency, creating a climate of confidence and encouraging a dynamic exchange between the project and the target groups.

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Community seed banks

SEARICE in the Philippines works with rural communities to re-establish the role of farmers in the conservation of traditional seeds and the development of new varieties. Prior to 1970, farmers played a major role in conserving, developing and spreading plant genetic resources. During the Green Revolution, however, small-scale rice farmers were offered credit if they planted high-yielding rice varieties recommended by the government, and purchased prescribed pesticides and fertilizers. This led to a rapid loss of indigenous rice varieties.

In an effort to restore farmers' inherent right to save, use, exchange and sell seed, SEARICE supports the establishment of community seed banks. Building on farmers' knowledge of seed conservation and traditional practices in seed selection, varietal adaptation, seed storage and the rehabilitation and domestication of wild crop species, it encourages the restoration of a diversity that satisfies gastronomic, socioeconomic and environmental needs.

In Mindanao, the country's southernmost island, SEARICE established Participatory Plant Breeding and Participatory Varietal Selection projects. Centre-based and community-based seed banks were established to support community efforts to systematically collect, conserve, develop and utilize plant genetic resources. The community seed banks give farmers access to and control over seeds and strengthen local seed supply systems.

In simple terms, a community seed bank is a seed collection where farmers deposit seeds for the benefit of the community. It is owned by the community and ensures that seed supply and diversity are maintained. Materials and varieties stored in community seed banks are often offshoots of materials used by farmers in communal trials.

Farmers select varieties for planting in their fields and seeds from each new harvest are stored in the community seed bank to replace those distributed at planting time. This ensures that stocks and seed viability are maintained and that the genetic materials stored will evolve to meet changing environmental conditions.

Community seed banks are managed in different ways. Often a committee of farmers – trained in seed management – are responsible for record keeping, maintaining distribution lists and collection forms as well as updating inventories and reports of meetings. Agreements between members of a community seed bank are informal but SEARICE also advises farmers on current plant genetic resource legislation including Plant Variety Protection laws and the implications of Intellectual Property Rights.

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