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Background

South Africa’s smallholder seed systems are increasingly coming under pressure. Factors such as drought, crop failure, difficult storage conditions and poverty, are having a negative impact on both the amount of seed and the number of plant varieties available to farmers. In addition, as a result of agricultural modernization, farmers are increasingly purchasing more seed of modern varieties and losing locally adapted varieties along with the associated traditional knowledge and skills in selection and seed storage. Forms of traditional seed exchange among farmers can still be found, but their strength seems to be diminishing.

To turn this tide, the Department of Agriculture, Forestry and Fisheries (DAFF) of the Government of the Republic of South Africa is considering community seedbanks as a means to strengthen informal seed systems, support conservation of traditional farmer varieties and maintain seed security at district and community levels. The most recent Departmental Strategy on Conservation and Sustainable Use of Genetic Resources for Food and Agriculture proposes, among other focus areas, both ex situ and in situ conservation of plant genetic resources for food and agriculture.

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South Africa has a well-developed ex situ conservation facility, the National Plant Genetic Resources Centre (NPGRC), where accessions of plant material are maintained. The centre’s mandate has recently been extended to include community seedbanks as a strategy to promote on-farm management and conservation of traditional crops. To fulfill this mandate, NPGRC considers capacity development of its technical staff an important step. Technical staff will be better equipped to work with farmers to strengthen informal seed systems, support the conservation of traditional farmer varieties and maintain seed security. In 2013 NPGRC joined forces with Bioversity International to develop a national plan for the establishment and support of community
seedbanks. Considering that Bioversity International has been working with community seed banks of all kinds in countries around the world, NPGRC invited Bioversity International researchers to advise how to implement its conservation strategy. Previous efforts to establish community seedbanks in two of the country’s smallholder areas initiated by civil society organizations with the technical support of NPGRC had not been successful.

**From assessment to action**

Following an in-depth community assessment of trends in agricultural biodiversity conservation and use carried out in 2013, the organizational process of establishing a community seedbank in two farmer smallholder areas was started: Gumbu village in Mutale municipality in Limpopo province and Sterkspruit town of Joe Ngcabi municipality in Eastern Cape province. Farmers in both regions live and work under tough conditions including: low rainfall levels in both sites, cold and windy weather conditions in the mountainous areas in Eastern Cape, and poor accessibility to and distance from major markets in both sites. Yet, they still manage to make a living. They produce food mostly for subsistence but also succeed in producing small surpluses which they market locally. Crop and varietal diversity combined with diverse animal husbandry practices (cattle, sheep, goats) are central to their farming systems and to survival. However, in the last few decades, several crops and crop varieties have disappeared or seeds have become hard to obtain. Increasingly fewer options are available to cope with environmental variability (Vernooy et al., 2013). Farmer seed networks in both sites appear to be weak with few and infrequent exchanges of seeds. At the same time, farmers have very weak links with the formal seed sector. Accessing new crop diversity represents a serious challenge.

In both regions farmers rely on different combinations of a few major crops grown in large areas by most households (white and yellow maize, white sorghum, millet and groundnut in Limpopo) and on a larger number of crops grown in small areas (pumpkin, squash, beans, cowpeas, potatoes, melon, calabash, tobacco and many fruits and vegetables in Limpopo). The major reasons for maintaining diversity given by farmers (women and men) are: good taste and nutrition-dense (the word farmers used is “powerful”), easy to combine in the preparation of traditional dishes, drought resistant, resistant to pests and diseases, short growing cycle, low input, long-term storage capability, heritage, and intercropping. In Limpopo, some farmers have been able to purchase simple drip irrigation technology to produce vegetables for the market.

In 2014, the main activities carried out to support the establishment process in both sites included an analysis of the existing household and community practices of seed storage and identification of their strengths, weaknesses and opportunities for improvement; a discussion with farmers about how to organize an effective and sustainable community seedbank; the celebration of local crop diversity through the organization of a food fair (food fairs are new in both sites). Traditional food recipes were collected during the food fairs and published in a tri-lingual booklet in 2015 (Maluleke et al. 2015). In Gumbu
the construction of a brand new facility was initiated on land donated by the village headman. It was officially inaugurated in March 2016.

In 2015, farmers received training in community seedbank management (technical and organizational aspects including seed registration) and were introduced to the concept and practice of participatory crop improvement. We paid special attention to facilitating the organizational development process, with particular attention to local power and gender relations. We strengthened the connection between the local communities and the agricultural extension services in both sites. Farmers in both sites contributed seeds for the first collections of their community seedbanks. Seeds were labelled, documented and then stored. In Sterkspruit, a temporary facility was established and a plan made for the construction of an appropriate permanent physical structure for the planned community seedbank.

**Gumbu community seedbank**

The Gumbu village community seedbank is managed and operated by a group of 20 women farmers, who give priority to nutritious crops and varieties with good taste that are easy to combine in preparation of traditional dishes, require few inputs, are drought, pest and disease resistant, and have a short growing cycle and long-term storage quality. The women contend that the community seedbank will allow them to maintain a range of different crop species and varieties inherited from their parents, support their households in terms of food supply, and also give them satisfaction and allow them to earn some extra cash. They also remarked that exchange of seeds amongst farmers from different communities and cultures will help to stop the loss of crop diversity that is occurring in the area. The community seedbanks and complementary technical support provided by the government will allow farmers to improve seed conservation technologies, increase access to crop diversity, apply crop improvement practices and explore seed production and marketing opportunities.

**Publications**

**Articles**


**Blogs**


[http://www.tandf.net/energy/articles/strengthening_local_level_seed_access_and_availability_of_crop_diversity/](http://www.tandf.net/energy/articles/strengthening_local_level_seed_access_and_availability_of_crop_diversity/)


**Next steps**

The vision for the future is to have a strong national network of community seedbanks that work together with the NPGRC under the Department of Agriculture, Forestry and Fisheries, in collaboration with other formal sector organizations, such as the national and provincial agricultural extension service, crop improvement stations and universities and with civil society organizations. Central to the effective implementation of this strategy will be the involvement and training of extension agents in all the country’s provinces, the further capacity development of DAFF staff and the strengthening of collaboration between community seedbanks and DAFF.
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Bioversity International, Rome, Italy, and Department of Agriculture, Forestry and Fisheries, Pretoria, South Africa.