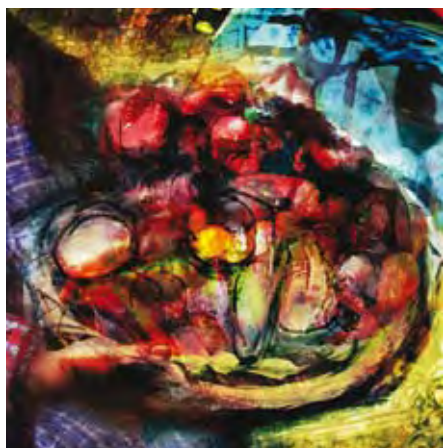


**An IFAD-funded project to help farmers in the Sahel make better use of agricultural biodiversity has opened new doors for women in Mali, improving their access to markets and strengthening their role in the local seed system.**

## Saving seeds in the Sahel



In the Sahel, producing a good harvest that will meet a family's needs for food and income is not an easy task. Harsh climate, poor soil and outbreaks of pests and diseases make this a difficult environment in which only a few crops can thrive. In such tough conditions, having access to a stock of high-quality seed of varieties that are adapted to local conditions becomes indispensable.

IFAD (the International Fund for Agricultural Development) funded a project entitled Empowering Sahelian Farmers to Leverage their Crop Diversity Assets for Enhanced Livelihood Strategies that worked with farmers in three countries—Burkina Faso, Mali and Niger—to improve their access to local crop diversity and to build their capacity to manage this resource to improve their livelihoods.

The project came to a close in 2007, and efforts in Mali were studied to assess their impact.

In Mali, the project focused on millet and sorghum, the two most important cereal crops for food security, as well as cowpea and bambara groundnut. More than half of Mali's land is desert or semi-desert, subject to droughts and with poor soils. Farmers not only have to cope with drought and other climate-related stresses, they also have to grapple with locusts and other pests that frequently threaten their harvests.

“One of the main things the project did was to improve farmers' access to quality seed of local varieties of staple crops and to strengthen the social links that drive the local seed system,” explained Raymond Vodouhe, who coordinated the project from Bioversity's



*Women farmers note the characteristics of millet varieties growing in their diversity field. They will share this information with the rest of the village at the end of the day.*

R. Vodouhe/Bioversity International

office in Benin. The project also looked at the role of markets in the local seed system and at ways of strengthening the links between farmers and seed markets.

Much of Mali's seed system for local cereal crops is informal, meaning that seed exchange occurs between farmers without the intervention of government institutions. Seed of local varieties is rarely bought or sold on the market; when it is, it is only in small quantities and in local village markets. One reason for this is that the process for registering varieties is difficult and selling uncertified seed was, until recently, forbidden. The other reason is social; in some villages buying seed, especially from a neighbour, is frowned upon because the practice goes against traditional values of sharing seed. Together these factors make it difficult for farmers to acquire seed through market channels.

A study by the socioeconomic team of the IFAD project confirmed that no certified seed was available in local markets in the project area. In more arid, risky environments farmers can sometimes buy uncertified seed at weekly village markets, especially after a poor harvest; small vendors sell grain from the stores on their farms, and this can be used for seed. But farmers generally exchange seeds among themselves and with farmers from neighbouring villages, thus ensuring that varieties are locally adapted and will suit their needs. With no certification system in place, this exchange is based on trust and relies on an intricate social network. Most seed of local landraces of staple cereals like sorghum and millet is

acquired through this kind of informal exchange. In times of difficulty—for example strife, migration or simply a succession of poor harvests—this social network can fall apart, which greatly limits farmers' access to seed.

Even locally, however, it may be difficult to turn to markets because of the social stigma attached to buying seed. People believe that every family should have its own stock of seed; if you need to buy seed, you are failing socially.

"To be without seed is to be destitute," noted Melinda Smale of the International Food Policy Research Institute, lead author of the market study. Nevertheless, local markets could be an important mechanism for reducing the vulnerability of farmers when seed is hard to find. The project therefore focused on strengthening the market-based informal seed system and the traditional knowledge on which it is based, working closely with farmers in the process. One of the ways it did this was by introducing 'diversity fields' into the villages of Boumboro, Pétaka and Tassiga in Mali.



R. Vodouhe/Bioversity International

*After a morning's work in the diversity fields, farmers gather to share experiences and to record their findings.*



R. Vodouhe/Bioversity International

These diversity fields are plots of land managed by the community in collaboration with researchers and agricultural extension workers. A chosen field is planted with traditional and improved crop varieties jointly selected by farmers and researchers. Groups of farmers from the village take turns to manage the field each day, recording their observations and experiences and sharing these with researchers and the rest of the village. Together, researchers and farmers select the varieties that best suit local needs for taste, yield and resistance to pests and diseases. Farmers from neighbouring villages are encouraged to visit the diversity field and to participate in the discussions, strengthening social links between villages in the process. There is also a continuous process of training that includes selection of seed stocks and preparation of the seed for marketing.

Diversity fields help each village to build up its own stock of high-quality seed and its capacity for managing crops and varieties. Farmers can fall back on their own seed stock when



*Participants at a diversity fair showcase the local varieties grown in their diversity fields. By making farmers from different villages aware of the range of varieties that are available, such fairs help strengthen the informal seed system.*

*R. Vodouhe/Biodiversity International*

supplies are short and any surplus can be sold on the market to earn some extra income. Diversity fields also help increase the diversity available for sale in markets, by improving farmers' access to a wide range of varieties adapted to their local growing conditions and tastes. Diversity fields are particularly important for developing the capacity of women farmers to harvest and market their seed. "Women farmers benefit greatly from diversity fields because they are often the ones in charge of managing the food crops and of selling any surplus seed on the market," explained Vodouhe.

There is some evidence that women from villages that participated in the project sold more seed in local markets than those from villages that hadn't participated. "Word soon got out about the high-quality seed being sold," said Vodouhe. That, combined with knowledge of their provenance, made the seed more attractive to buyers.

Money earned from selling seed also played an important role in ensuring the nutrition and health of households. The market study revealed that women typically used the money they earned to buy condiments and vegetables to accompany their staple foods. "The

condiments contain nutrients that are important for the family's nutrition and health," noted Smale.

The market study concludes by stressing the need for more supportive policies that promote markets as a complementary way of acquiring seeds when the village-based seed exchange system fails. Buying in markets means farmers can make impersonal transactions in times of need, without fearing social stigma attached to buying from a neighbour. On the production side, diversity fields will help ensure that seed sold through market channels is of high quality, reliable and suited to farmers' needs.

According to Vodouhe, "Future efforts will need to focus on ensuring that the diversity fields continue to operate with support from the formal sector". Strengthening market links and providing farmers with a seed system they can tap into when times are difficult will be another key area for future work.

**Further information**  
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