



## FARMERS' COWPEA VARIETY, BAKIN HANTCHI, is a pillar of the household in the rural commune of Matankari, Niger.

"Cowpea yields from *Bakin hantchi* seed are always higher than those from improved varieties". **Issa Miringuija, a 74-year-old farmer and head of a household of 11 people.**

### The success story

Niger is the world's second largest producer of cowpea, with more than 5 million hectares planted and an annual production of 1.5 million tonnes. The crop is of vital economic importance with 74% of the national production destined for export, making it the country's third most important export after uranium and livestock products. It is also plays an important role in domestic nutritional security and is especially valued for its high protein content, which is two to three times higher than that of cereals. The leaves can also be consumed after cooking in various culinary preparations, but they are mainly used for livestock feed because of their high protein value. Further, cowpea is valued by farmers for its important role in maintaining soil fertility.

Cowpea production is most important in the regions of Zinder, Maradi, Tahoua, Tillabéri and Dosso, mainly under rainfed conditions. However, cowpea producers are constrained by the effects of climate change, soil poverty and the use of poorly performing varieties. In this case study on

cowpea which was conducted in rural commune of Matankari, Dosso region, it was found that farmers prefer to use local seeds, namely the *Bakin hantchi* variety, which is well adapted to the various constraints. In the typically Sahelian climate of this region, farmers must contend with the effects of desertification and climate change, human pressure on the land, increased impoverishment and scarcity of natural resources. Producers are doing everything necessary to preserve this seed because according to their own experience, it is superior in multiple ways to improved<sup>1</sup> varieties. They are supported in their efforts to conserve *Bakin hantchi* by SwissAid's Crop4hd project, which aims to promote agroecology and farmer seed systems.



<sup>1</sup> Improved varieties are bred for industrial agricultural systems. They have reduced genetic base compared with the high variability present in the genetic materials farmed traditionally.

The findings of this case study revealed a clear desire on the part of producers to invest in the farmers' seed system rather than the formal certified seed system, which deals in the trade of improved varieties. Farmers indicated that the local cowpea variety *Bakin hantchi* plays an important role in food and nutrition security. They showed evidence of the income generated by the cultivation of this seed, but also of the diversity of products and by-products useful to humans and animals. This case study also shows the evidence that this local seed is particularly important in the preservation of socio-cultural values in the rural commune of Matankari. The findings contribute towards documentation of the benefits of farmers' seed varieties and reveals the importance of farmer seed systems that continue to preserve, adapt and spread precious agro-biodiversity in an age of climate change and food insecurity.

## The many virtues of local cowpea according to farmers' experience

According to Bawa Bachirou, 66 years old and head of a household of 7 people, *Bakin hantchi* is a variety that was cultivated long before he was born. This cowpea variety has a medium cycle of 90 to 100 days and has a dual purpose, i.e. it produces both stover and seeds.



This heritage variety has several advantages for producers in the rural commune of Matankari. It plays an important role in food and livelihood security due to the fact that it has a very high market value for producers. Producers argue that since the time of their ancestors, having stocks of *Bakin hantchi* has allowed households to solve family problems at any time. For Dadé Ali, one of the largest agricultural producers and promoter of local seeds within the farmers' organisation Noma touchin arziki, *Bakin hantchi* continues to be a pillar within the household. Indeed, most marriages in the area are made thanks to the income from the sale of this variety of cowpea. Also, the purchase of school supplies for children is partly ensured by this income. For the producers, this *Bakin hantchi* cowpea seed is a heritage to be safeguarded for their offspring, but also and above all, to honour the memory of their ancestors. Elders say that producers of this seed are well respected in the community and usually have many friends. Women whose husbands grow *Bakin hantchi* are highly respected. The women say that as long as they grow this ecotype, they and their children will never lack clothes to wear.

The products and by-products of the *Bakin hantchi* cowpea are valued for their delicious taste and texture and are therefore preferred for consumption over the improved varieties distributed by the projects. According to farmers, the products and by-products of their cowpea are superior in terms of nutrient content compared to the improved varieties, which also 'swell the belly' and sometimes cause flatulence. The cowpea tops are also very palatable to animals.

## Income generated by *Bakin hantchi* is the basis of food security

The *Bakin hantchi* seed is a lever for achieving food security in the rural commune of Matankari because of the income it generates for farmers. During the harvest, a 100kg bag is sold for between 19,000 and 20,000 CFA francs, whereas the same bag costs around 46,000 CFA francs during the lean season. On the market, farmers prefer *Bakin hantchi* to improved cowpea varieties and as a result, the seeds never suffer from poor sales. They



are available every year on the market and from some farmers.

*Bakin hantchi* cowpea is one of the important varieties in the cowpea chain at the level of the farmers' organisation Noma touchin arziki. The cowpea haulms (stalks) are sold on the market all year round by the farmers. In Matankari, it is forbidden to look for cowpea vines in other people's fields. If farmers have some in their field, they remove it to keep it jealously, and those who do not have it will have to buy it. Cowpea seed has several levels of marketing, including post-harvest sales, sales around the rainy season and sales throughout the year.

## Drought and pest tolerance ensure high yields

Producers claim that *Bakin hantchi* seed has adapted well to the effects of climate change because it has withstood some extreme weather conditions, particularly periods of drought. This variety, despite its performance, is attacked by pests, but farmers report that it is more resistant than the seeds of so-called improved varieties. During periods of good rainfall, yields of *Bakin*

*hantchi* cowpea can reach 1.2 tonnes per hectare, and in the event of a rainfall deficit, yields can reach 0.4 tonnes per hectare. The experience of farmers suggests that *Bakin hantchi* seed always yields higher than improved varieties.

One of the major problems of cowpea cultivation is its storage and devastating losses can occur during this phase. For storage, farmers use barrels and jerry cans that they fill and seal to smother cowpea bruchids (beetle pests). Also, producers use the PICS bags<sup>2</sup> popularised by the Institut National de la Recherche Agronomique du Niger (INRAN), which are a powerful means of conservation.



## Key lesson

The findings of this study, which show the multifunctional value of *Bakin hantchi* cowpea and its superiority over currently promoted improved varieties, constitute a solid argument for the promotion and popularisation of farmers' varieties within a framework of agroecology. Farmers knowledge, practices and agro-resources need to be acknowledged and their farmer managed seed systems need to be supported. However, these are under threat from the government's approach to agricultural development, which promotes improved varieties to the detriment of local seed. In the field of scientific research, it would be important to question the evidence and highlight the advantages in a clear manner in order to better guide decision-makers in choosing the best options for improving the living conditions of the population.



<sup>2</sup> Purdue Improved Cowpea Storage (PICS) bags are engineered to maintain the viability of cowpeas for planting, minimise mould growth and accumulation of mycotoxins and control storage insect pests, thereby enabling farmers to store their grains without the use of insecticides.



## CROPS4HD

This document is an output of the CROPS4HD project ([www.crops4hd.org](http://www.crops4hd.org)): a consortium of SWISSAID, FiBL, and AFSA supported by the SDC and LED. CROPS4HD has three major components: production, market and policy advocacy.

AFSA, which is responsible for advocacy, is a broad alliance of civil society actors involved in

the fight for food sovereignty and agroecology in Africa. Its members represent small-scale farmers, pastoralists, hunters/gatherers, indigenous peoples, faith-based organisations and environmentalists from across Africa. It is a network of networks, currently with 37 members operating in 50 African countries.

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#### About Raya Karkara

Raya Karkara is a multi-stakeholder agroecology platform in Niger. "Raya Karkara was set up to strengthen the synergy between the players involved in agroecology. Its mission is to work towards the emergence of a strong and enlightened social movement for the promotion of agroecology, with a view to the effective realisation of the right to food and food sovereignty at national, regional and international levels. It is committed to supporting family farming, capitalising on experiences, sharing them and creating the synergies and alliances needed for effective and appropriate dissemination.

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