



## FARMERS' MILLET VARIETY BRINGS HEALTH, WEALTH AND ABUNDANCE TO THE FARMERS OF MATANKARI, NIGER

“The Matan Hatchi seed is our Gado, which means heritage, and we will not abandon it for anything in the world.” **Farmers of Matankari**

### The success story

Candle millet or pearl millet, *Pennisetum glaucum* (L.) R. Br is a cereal that is much more tolerant to drought stress than other cereals that can grow under drastic environmental conditions, such as poor soils, high temperature and irregular rainfall<sup>1</sup>. It belongs to the genus *Pennisetum*, which includes about 140 species<sup>2</sup>. Millet is the main cereal grown and consumed in Niger. However, production is subject to numerous constraints, such as climatic uncertainties, pest pressure, poor soils and seeds that are inappropriate for the current context of climatic variability.

The approach that the state of Niger has taken towards agricultural development is evident in the agricultural policy, *Les Nigériens Nourrissent les Nigériens* (3N). Amongst other things, the policy aims to implement the National Seed Policy to make seeds available and accessible to the vast majority of Nigerien farmers. The improved<sup>3</sup> seeds that are promoted through this policy are not necessarily the

choice of small-scale producers. Their promotion may even undermine peasant seed systems, which serve social and cultural functions, whilst stewarding and spreading agro-biodiversity that is both adapted to local conditions and adaptable to changing conditions. Further, unlike improved seed varieties, farmer managed seed can be saved and recycled without losing vigour, contributing to seed security and sovereignty.



<sup>1</sup> Halilou, H., & Karimou, I. (2019). Millet [*Pennisetum glaucum* (L.) R. Br] cultivation and its constraints to production: a review. *International Journal of Biological and Chemical Sciences*, 13(1), 503-524.

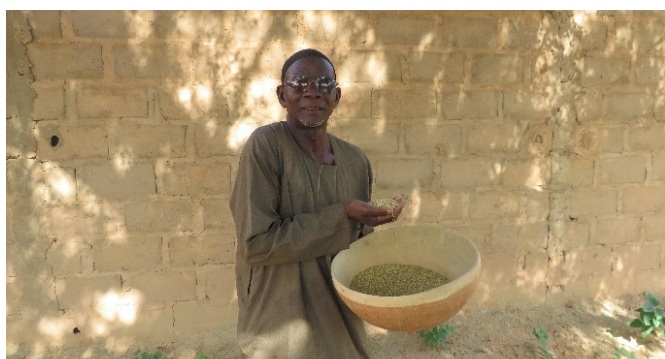
<sup>2</sup> Brunken, J., De Wet, J.M.J. and Harlan, J.R. (1977). The morphology and domestication of pearl millet. *Economic Botany*, (June), 163-174.

<sup>3</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.



This case study which aimed to document the benefits of farmers' preferred local varieties was conducted in the rural commune of Matankari, which is located in the Dosso region of Niger in the Sahelian zone. Here, producers are challenged by already present effects of increasing desertification and climate change, the conflicts over water that this reality brings, impoverishment and scarcity of natural resources. These constraints can hinder socio-economic and cultural development. Within this context, the local millet variety Matan Hatchi is valued as the preferred variety for its adaptive abilities to the austerity of the semi-arid and arid climate, to the poverty of the soils and to the pressure of crop pests. It is also esteemed for its superior taste and nutritional content, contributing to the cultural identity of the community. The efforts of farmers in this locality to conserve this valuable variety are supported by SwissAid within the framework of the promotion of agroecology. These small producers consider agroecology to be an effective means of increasing food availability and strengthening their resilience in the face of the resurgence of food insecurity, but also with the aim of preserving their tradition.

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



The local millet variety, *Matan Hatchi*, is the most widely used agricultural product for household consumption in the area. It is the main crop in the rural commune of Matankari. The farmers' organisation, Noma touchin arziki (which means agriculture is wealth, in Hausa), promotes this farmers' seed. According to Dadé Ali, recognised by the mayor of the Matankari commune as the guardian of farmers' seeds in the area, Matan Hatchi is a seed capable of producing even in precarious conditions.

This variety is known to fetch the best prices on the market as it is prized above all others. The price of 100 kilograms (kg) varies between 16,000 and 31,000 FCFA depending on the period. Farmers also testify to the importance of this variety for food security, saying that it is known for its abundance and easy ability to fill pots. In addition, the straw of this farmers' variety is an excellent fodder for animals, but also good for building huts, enclosures or granaries. When asked why this variety is called Matan Hatchi (which in the Hausa vernacular means "female millet"), the farmers replied that, "the Matan Hatchi variety is like a beautiful woman who gives children in her own image."

## The superior nutritional and culinary benefits of Matan Hatchi

Farmers note that this variety is rich in nutrients and that the bran is also very rich and therefore preferred by animals. They reported that children who are fed from Matan Hatchi show good vigour, while those who are fed from improved varieties lack vigour (described as *Raggo*, which means a person without strength in the Hausa vernacular). This difference, they say, is easy to observe during traditional wrestling matches in which children and youth participate.

Another notable quality of Matan Hatchi is the large, ball-shaped seeds that are rich in lipids. The seeds are easily discernible from improved varieties, which have stunted ears and small, pointed seeds. During preparation, a creamy crack

can be seen above the ball, which is not found in the improved varieties. The taste is sweet.

## The role of Matan Hatchi in climate change resilience and pest management

The Matan Hatchi seed has been cultivated since the creation of the village of Matankari and is perpetuated from generation to generation. It is considered an identity in the Aréwa (the geographical area to which the rural commune of Matankari belongs) in general, as it is very rarely found elsewhere outside of this area. Farmers have relied on the resilience of this variety, which has been able to adapt to the effects of climate change and through periods of drought. It is known to produce on both clay and sandy soils and is highly coveted for its productivity.

The leaves of Matan Hatchi are hairy and scratch the human body when rubbed, whereas the improved varieties are smooth. This is a form of resistance to crop pests according to the farmers. Matan Hatchi is highly resistant to caterpillars,

locusts and zou (a pest that sucks milk from seeds at night) because of the compactness of the ears. This seed is resistant to water stress and to phytopathological diseases such as smut, mildew, Striga and *Tolyposporium penicillariae*. This seed adapts well to sandy and nutrient poor soils. Organic fertilisation with manure or pudding is the only way to boost yields.



## Key lesson

The results of this case study highlighted the undeniable importance of the local variety *Matan Hatchi* in the commune of Matankari. It is clear from this study that this farmers' variety of millet is considered a socio-cultural identity and above all, a heritage for the farmers to safeguard. The conservation of these values is a way of paying tribute to their ancestors who safeguarded and bequeathed this seed to future generations.

These results are encouraging in the context of climate change and constitute a solid argument for the promotion and popularisation of agroecology. In light of these results, local authorities, the state and its partners are called upon to take into account the concerns of the population in agricultural policies, which do not recognise the multifunctional benefits of farmer managed seed systems and therefore promote

agricultural development programmes that may threaten their existence. 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.







## 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.

### ACKNOWLEDGEMENTS

Dr. SEYNI BODO Bachirou ([bachiroubodo@yahoo.fr](mailto:bachiroubodo@yahoo.fr)), University Boubacar Bâ of Tillabéri, Niger ; Dr. ABDOU GADO Fanna, University Abdou Moumouni of Niamey; BOUBACAR AMADOU Nouhou, University Abdou Moumouni of Niamey and ISSA ARZIKA Housseini, University Abdou Moumouni of Niamey.



### WHO IS AFSA?

AFSA brings small-scale farmers, pastoralists, fisherfolk, indigenous peoples, faith groups, consumers, youth and activists from across the continent of Africa to create a united and louder voice for food sovereignty.

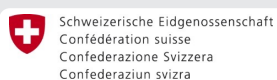
AFSA encourages the use and reproduction of this case study for non-commercial use provided that appropriate acknowledgment of the source is given.

For more information and more African case studies see our website [www.afsafrica.org](http://www.afsafrica.org)

### IMPLEMENTING PARTNERS



### SUPPORTERS



Swiss Agency for Development and Cooperation SDC



### CONSORTIUM PARTNERS

