

The power lies in the hands

of the **small
scale
farmer**

*Grace Barina, a member of
Golimori Farmer Field School
grinding okra seeds to make
coffee*





Communities in Uganda's West Nile sub-region are changing their approach to ensure they are food and nutrition-secure. From farmer field schools (FFS) to community seed banks, kitchen gardens and cooking demonstration classes, they have found the winning card. They are proving that Africa can and will be able to feed its own. It starts with knowledge, practice and planning. Theirs is a journey of rediscovering Local Food Plants (LFPs), also referred to as Neglected and Underutilised Species (NUS), and bringing them back on their menus.

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Approaching Maxwell Kejaga and Grace Barina's compound in Sube Village, Ofuwa sub-county, Adjumani district, we're greeted by a tantalising nutty aroma. The scent hints at freshly roasted coffee beans, sparking our excitement for a comforting cup of brewed coffee. Intrigued by the source of this fragrance, we discover that the women are roasting okra (Lady Fingers) seeds to make okra coffee.

'This is an example,' Albert Obuoja explains, 'of the different ways members of the farmer field schools are creatively utilising local food crops to provide nourishment for their families. We save money by transforming okra seeds into natural, organic, and healthy coffee.' Obuoja is a facilitator of the Golimori Farmer Field School.

'The men harvest the seeds, while the wives roast and grind them to make coffee. Everyone is happy. However, okra, despite its many benefits, is often disregarded due to bitterness, unpleasant textures, or wild growth,' he says. 'It is for such reasons that we were inspired to explore creative cultivating methods and recipes for these food crops to ensure sustainable food and nutritional security.'

Teopista Mazira, 38, is a wife and mother of seven. She tends to her 2-acre farm with her 3-month-old baby snugly strapped to her back. She shares her journey of embracing the nutritious benefits of okra and scaling up its cultivation. Her face lights up as she talks about it. It not only provides nutritional value to her family's meals but also contributes to her economic stability. She also grows tomatoes, sorghum, millet, maize, and rice.

'I never cooked okra for my family before as it was expensive. I thought it only grew wildly and disliked its slippery nature. In 2022, I learned about its health benefits and nutritional values through farmer field school training. Afterwards, I obtained seeds from my grandmother and planted a whole plot,' she explains.

Now, she confidently discusses its benefits and engages in seed multiplication, considering it a valuable treasure. 'We can cook it in various ways, as I discovered during cooking demonstration classes. It can be dried and used in powder form, mixed with different foods or drinks. Pregnant women find it helpful in easing labour pains. We even make coffee from its seeds.'

The formal seed system often overlooks their needs, with indigenous people, and smallholder farmers—especially women—having little input in the plant breeding process

In addition to being a farmer who can feed her family, Mazira has also become a businessperson. Her family's food and nutrition security have significantly improved. 'Regardless of the season, I can provide my family with a balanced diet,' she says. Like all members of the school, she recognises the invaluable role they play in enhancing food and nutrition security within her community and surrounding areas.

In 2020, the Eastern and Southern Africa Small Scale Forum (ESAFF-Uganda) implemented the farmer field schools approach in the West Nile sub-region. This initiative aims to improve small-scale farmers' access to Plant Genetic Resources (PGR) and promote the use of local food plants, enhancing food and nutrition security. The FFS in Adjumani district is among the 54 established by ESAFF-Uganda in Amuria, Apac, and Adjumani districts.

These community-driven schools build farmers' capacity in agro-economy, crop research, production, value addition to food, seed banking, and group saving and loaning through the Village Saving and Loans Association (VSLA). They specialise in research on various plants, including leafy vegetables, beans, rice, millet, sorghum, maize, and potatoes, aiming to develop drought-resistant, high-yielding, early-maturing, pest and disease-resistant seeds adaptable to different soil types. These studies involve participatory variety selection and enhancement in plant breeding.

'They were established as a response to the challenges faced by farmers in accessing seeds. Having learned about an FFS project in another community through their membership in ESAFF-Uganda, some members expressed the need for a similar initiative in their community,' explains Margaret Masudio, chairperson of ESAFF-Uganda Adjumani district.

Sustainable change through Farmer Field Schools

Tandru Passi is one such remarkable school. Established in 2017 as a savings group, it evolved into a fully-fledged school in 2020. Presently, its focus lies in the study of millet seeds. After two seasons, they found what they believe is their best variety of millet; the NARO Mill 5. It takes 85 days to mature and is drought-resistant.

'We no longer worry about going to bed hungry. Even during droughts, we have local food plants to feed our families. Relationships are better and cases of GBV, resulting from husbands not giving money for food, have reduced,' says Evaline Ababiko, another

member. 'We know the neglected food crops and have drought-resistant, quick-maturing varieties. With these, we can provide our families with food and nutrition.'

At Amanzuluku, Richard Kinyara, the chairperson, is now a happy rice farmer. 'After three seasons of research, we finally found the variety that meets our objectives of drought tolerance, pest and disease tolerance, early maturing, and high yield. We studied nine varieties and chose the best one for promotion among members.' This research has not only provided farmers with testing opportunities but also helped them learn best practices in rice production. Today, Kinyara and other rice farmers are preparing their fields to start large-scale rice cultivation.

The FFS has bridged the gap between the local and refugee communities by providing land for them to grow their food. As food rations from aid organisations decreased in the past three years, refugees struggled to have enough to eat. Seeing their plight, the members welcomed them into the group.

Ariyo Jessica, a 20-year-old beneficiary, rents a piece of land from a member to grow food for her family. 'With reduced food rations, we had to find ways to feed ourselves. Joining the FFS allowed me to grow food for my parents and siblings on a piece of land provided by a member. We are a family of eight, and the food rations we used to receive only lasted for about two and a half weeks.' Ensuring food security for the refugee community goes beyond its primary goal. The FFS has also fostered peace, harmony, and lasting relationships between communities.

Small-scale farmers in developing nations play a crucial role in global food production, yet they are disproportionately vulnerable to food scarcity. Power dynamics within the production and distribution of food, exacerbated by unequal land ownership and the impact of climate change, further aggravates these disparities. Limited access to high-quality, locally adapted, and climate-resilient seeds is a significant challenge for smallholder farmers.

Hellen Adiyo and Juliet Abiyo, members of Golimori Farmer Field School, at the group's weekly meeting



A proud and smiling Teopista Mazira in her flourishing garden



The partner organisations work directly with the farmers to ensure that the skills acquired in the training cascade down to the grassroots

The formal seed system often overlooks their needs, with indigenous people, and smallholder farmers—especially women—having little input in the plant breeding process. Additionally, regulatory hurdles hinder the use of farmers and improved varieties for seed production and marketing by communities. Recognising the complexity of these issues, the programme forms partnerships with national NGOs, government institutions, academic bodies, and breeding and research institutes.

The Dikiri ne Etego FFS provides evidence of knowledge sharing and application. With 30 members, it focuses on promoting LFPS for food and nutrition security. Their quarter-acre demo garden showcases diverse crop varieties, aiming for seed multiplication. Despite limited space, they maximise land use. 'The FFS's work is based on participatory variety selection, enhancement, and food security and nutrition. The third pillar aims to revive neglected underutilised species (LFPS) that were once grown and eaten by previous generations,' Oweka explains.

Consolate Rachiu and her husband Michael Ozele, both members, established a home kitchen garden after receiving training from the FFS at the end of 2022. On days when they have no harvest from their bigger farm, which is closer to the border of the Democratic Republic of Congo, she always finds food in her kitchen garden. The cherry on top has been learning how to prepare all the LFPS in different ways. 'The first time I prepared pasted *jiri* in a pot, after taking part in a cooking demonstration class, my family loved it, yet they used to find it bitter.'

Since 2010, they have been engaged in small-scale farming but had never considered having a kitchen garden. Instead, they relied on the crops grown on their farm. However, the introduction of a kitchen garden has revolutionised their approach to food. 'Now, I provide my family with a balanced diet,' says the mother of three.

Seed banks - promises of wealth, hope and food security

In Pakele, Adjumani District, a small orange building by the roadside stands out among the traditional grass-thatched huts that make up the homesteads. A plaque on the front reads, 'Constructed and equipped by Eastern and Southern Africa Small Scale Farmers' Forum - Uganda (ESAFF).' Next to it is additional writing that says 'with support from African Women's Collaborative and OXFAM.'

This building houses the Pakele Community Seed Bank. Inside, there is a variety of seeds. 'This is wealth,' says Margaret Masudio, chairperson of ESAFF Adjumani, as she points to the jars filled with different types of food crop seeds. Located a day's drive away, the Mic Parwoth community-managed seed bank in Nebbi overflows with neatly arranged seeds of various food crops.

'The land where the seed bank was constructed was a gift from one of the members. It used to be housed in a different place,' says Alfred Onegi, the group secretary. The seed banks, initiated by the FFS and funded by Oxfam via PELUM Uganda, not only provide seeds to small-scale farmers but also impart knowledge.

'Farmers also learn about optimal quantities per acre, expected yields, market sourcing, and saving through the Village Saving and Loan Association (VSLA),' Richard Ofungi, the chairperson says. 'Additionally, the seed banks aim to support members' children's education by offering loans guaranteed or repaid based on the stored seed quantity.'

The seed banks work with registered farmer's groups or individuals. Depending on the community, they pay a membership fee of between USD 1.30 to 10. The money is used to maintain the seed bank and cover other daily costs. At harvest, members bring their seeds which are exchanged or sold to other farmers. In cases where farmers cannot afford to pay the membership fee, they are loaned the seeds.

However, they are mandated to pay back twice the quantity they borrowed after harvest. This is done to increase the quantities of seeds in the seed bank and to reach out to more farmers. Through the seed banks, communities in the West Nile sub-region have found innovative ways through which they are rendering households, especially those of small-scale farmers, resilient and more food secure.

Saving infant lives with Local Food Plants (LFPS)

'That is 'cocosunga' (climbing bean) and the other is 'mugu' (climbing yam),' Beatrice Dropia says, pointing at two local food plants. She is the chairperson of 'Uribadrika' (do not confuse us) Farmer Field School in Kololo village, Adjumani district. 'They had disappeared, but we found them and are regrowing them. Our forefathers used to eat them and they never went hungry. We had forgotten about them, yet they are very nutritious.'

Halfway through her explication, she calls out to a group member: 'Agnes is living proof of how important and nutritious these plants are.' She then asks Agnes Achan to tell her story—how a local and formerly neglected food crop, 'kerekede' (Hibiscus), saved her infant son's life. 'After giving birth to my first child,' she begins, 'I had no breast milk and could not afford to buy milk for him. I did not know what to do. Then one day a neighbour came to my house and asked if I knew a plant called 'kerekede'. I had never heard of it. She told me to find it and use it to feed my son.'

'I went, picked it, and soaked it in water as I had been advised. I sieved it to ensure there were no residues left and started feeding my son as you would with a bottle of milk.' Her son regained his health as a result. 'You should see him now, he is a 6-year-old healthy big boy in school.' Once again, she is nourishing her second

6-month-old son with hibiscus juice due to insufficient breast milk.

After joining the Uribadrika FFS and participating in various trainings, she started growing hibiscus to generate income. She invested in solar power for her home, paid her son's school fees, and even set up a savings account.

Sowing Diversity equals Harvesting Security - empowering small-scale farmers

Oxfam, its partners, and communities identified a gap in accessing quality seeds in Uganda. This led them to change the narrative and ensure food and nutrition security among the communities.

'At the time, we were implementing a strategic partnership programme funded by the Dutch Ministry of Foreign Affairs. It aimed to promote food sovereignty through community-managed seed security,' Charles Opiyo, Resilience and Livelihoods Manager at Oxfam Uganda, explains. 'The farmers desired indigenous seeds. However, we discovered that most of what they had access to were not suitable for replanting. Thus, when the opportunity arose, Oxfam and its partners sought to empower them by managing, developing, and accessing genetic materials for food security more sustainably, despite the challenges of climate change.'

This led to the establishment of the SD=HS programme in Uganda. 'Although the programme had been successfully implemented in other countries, it had not yet been introduced in Uganda. Our goal was to establish it to enhance crop diversity within the community, thereby ensuring food security. By promoting diversity, we aimed to mitigate the impact of climate change and drought, preventing individuals from facing complete devastation in such situations,' he says.

Margaret Masudio during a training session with members of Golimori FFS



Oxfam Novib and Oxfam Uganda's role, Opiyo explains, has been to provide technical support in the schools. 'This support is tailored to bringing farmers together, so they share experiences by facilitating the learning process. We train our partners so they can work with the farmers to build capacities and ensure these skills cascade down to the grassroots.' This is made possible through partnerships that have been forged with ESAFF, PELUM, and CEFORD.

The partner organisations work directly with the farmers to ensure that the skills acquired in the training cascade down to the grassroots. 'Our job is to ensure they have the training and capacity to make their choices. It starts with crop improvement using participatory methods. They choose those varieties of seeds that suit their agroecological conditions through participatory variety selection,' he says.

'Farmers are not restricted in their choice of plant varieties. They follow specific criteria like maturity time, pod production, and cooked variety shelf life, to carefully select the most suitable ones.' They also receive training in variety enhancement to improve local varieties affected by time and climate changes.

'After variety selection and enhancement, they focus on multiplication and making a business out of all this. This leads them to engage in local seed production and marketing, then into ensuring that local food plants which are not staple, contribute to improving household food and nutrition security,' Opiyo says.

To ensure success, an enabling environment is created by all institutions involved. 'If a farmer improves their variety but faces institutional bottlenecks, we ensure that the policy environment favours them. These four components make up the SD=HS programme.'

To achieve this, he affirms that they have engaged various stakeholders from different ministries and government entities to reinvigorate discussions on plant genetic resources policy for agriculture. Stakeholders included the Ministry of Agriculture, Water and Environment, and Uganda Wildlife Authority, among others. 'This has helped revive discussions on the need to pass the genetic resources policy to some extent,' he states.

Through activities like participatory plant breeding, policy changes, and initiatives such as okra-seed coffee and community seed banks, the SD=HS programme, along with its partners and farmers, strives to create a fairer and more resilient food system.

Still carrying on - Nebbi's success story

Four kilometres from the border with the Democratic Republic of Congo, lies the Nebbi District. 'The focus of those who were part of the project is food and nutrition security. The farmers continue to benefit from FFS and demonstration farms supported by seed banks. Even after the project's completion, farmers pass on acquired knowledge and train others,' Jude Deogratius Oweka explains.

He is the Project Officer for the Sowing Diversity = Harvesting Security (SD=HS) project and oversees its implementation in the Nebbi District through PELUM and its partner CEFORD (Community Empowerment for Rural Development). SD=HS is a collaboration between Oxfam Novib and national organisations that support all smallholder farmers in accessing, developing, and utilising plant genetic resources to enhance food and nutrition security in the face of climate change.



Left: Innocent Achan showing off, the rich, dark, fertile soils of Adjumani
Below: A display of the different meals prepared from LFPs



Betty Luguwa during a LFPs cooking demonstration activity in Pেকে

SD=HS

The Sowing Diversity = Harvesting Security (SD=HS) is a programme in a race to protect food now and in the future. The program works with Indigenous people and smallholder farmers in 8 countries in Africa, Asia and Latin America. These include Uganda, Zambia, Zimbabwe, Peru, China, Nepal, Lao PDR and Guatemala.

SD=HS is the joint effort of Oxfam Novib one of the 20 affiliates of the Oxfam Confederations. Oxfam Novib is also recognised globally as a leading civil organisation with a firm track record in the field of plant genetic resources. The programme aims to ensure there is increase in the level of crop diversity in the communities, so communities are food secure.

To achieve the goals, the SD=HS programme works in partnerships and invests in alliances with likeminded NGOs, government institutions, academic bodies and national breeding and research institutes.

Through these partnerships it brings forth expertise in quality seed development, policies and regulation, local enterprise development and public-private partnerships.

In Uganda the SD=HS programme is implemented in nine districts in northern Uganda and the West Nile region through the non-accessible Farmer Field Schools (FFS).

OXFAM Uganda works with partner organisations including the Eastern and Southern Africa Small Scale Farmers Forum (ESAFF) and Participatory Ecological Land Use Management (PELUM-Uganda) which has subcontracted Community Empowerment for Rural Development – Uganda (CEFORD – Uganda).

To date the program has led to great innovations such as Okra Coffee by women of Adjumani district, Uganda. Through methodology, community seed banks and alliances with relevant governmental and private institutions, the SD=HS programme empowers farmers to conserve, develop, exchange and sustainably use diverse plant genetic resources to improve their livelihoods and improve food and nutrition security.

SD=HS focuses on 4 pillars which include farmer's crop improvement and adaptation to working with resilient indigenous and farming communities and improved production and improved market access to high quality seeds diverse crops and varieties.

The third and fourth pillars aim at improving nutrition and local food-plants to strengthen coping strategies of communities and works on attaining an enabling policy and institution environment.