

Farmer Field Schools Final Report – February 2024

This report shares the latest developments under Temwa’s Farmer Field Schools project in Nkhata Bay North, Malawi, which started in November 2022 and came to an end in December 2023. We are pleased to report that significant progress has been made training farmers to become more food and income secure. Below we describe the positive developments in the communities in the final six months.

Project context and aims

In the Nkhata Bay North where Temwa works, 90% of families are subsistence farmers and 58% of people live below the national poverty line. The families here depend on being able to grow food, but are facing hardships due to the effects of climate change. Erratic rainfall, drought, flooding, strong winds and crop pests are affecting food production and exacerbating high vulnerability and poverty. These challenges have been worsened further by local deforestation, which erodes the soil, dries up water sources, and lowers agricultural productivity.

This project aims to improve food security for vulnerable households by establishing Farmer Field Schools, through which local farmers will train their peers in agricultural knowledge and skills. This is a group-based learning process where farmers engage in experiential learning, experimenting and problem-solving in their own fields. The project involves a series of participatory learning sessions, led by trained facilitators that cover a range of topics related to crop production, pest management, soil conservation, and other aspects of sustainable agriculture. Over time, this will help embed climate-smart agriculture and food production practices and improve capacity and skills across the community - increasing agricultural productivity and climate resilience, while enhancing capacity to manage natural resources.

Project achievements

We are proud to report that, in the last six months, your support has helped build the knowledge and skills of farming communities through the following project activities and achievements.

Outcome : Improved agricultural productivity through sustainable agricultural practices

Farmers in Nkhata Bay have often relied on unsustainable farming practices which are not resilient to increasingly unpredictable weather practices. Use of chemical fertilisers, similarly, have proved unsustainable following their huge increase in price last year. This project aimed to equip farmers with sustainable agricultural methods through Farmer Field Schools.

Community meetings were held at the start of the project, which engaged community members as well as local governance, in order to establish the main challenges facing farmers in each area and the focal points of the training. In total, **73** farmers registered across 3 schools:

Njiri, Kakhulukulu, and Chiwowo Farmer Field Schools. This has far exceeded the project’s goal of 30 farmers, demonstrating the demand in the community for training on sustainable farming.



[Curriculum Development](#)



Each Farmer Field School has their own curriculum tailored to tackling the challenges facing the farmers in their respective area. This includes topics such as crop management, soil conservation, water management, pest control, and marketing.

The Njiri Farmer Field School's curriculum was developed at the start of the year, while the Bula, Chilembe Farmer Field School finalised theirs in April (due to delays caused by extreme weather).

As well as organic farming methods, their curriculum includes expanding livestock production, particularly poultry. Grafting, budding and propagation of fruit trees and plantain has also been included.

[Identifying and designing demonstration sites](#)

After the curriculums were developed, the schools identified sites for demonstrating practices, sharing skills, and discussing new methods. In Njiri and Chilembe, two sites each were identified. These were then designed in line with the respective curricula. Farmers have been able to see how best to arrange the plots in order to best adopt each climate adaptive farming method while managing pests. Collectively designing the plots has also created a sense of shared ownership of the demo sites.

Due to the distances some farmers were having to travel, we split the Chilembe school into two: Kakhulukulu and Chiwowo Farmer Field Schools.

[Material support](#)

In May, Temwa supported the three farmer field schools with materials to successfully implement the project. These materials were in addition to those already gathered by community members which are being used to support the day-to-day operation of the schools. The materials included vegetable seeds,



cereal seeds, legumes seeds and watering cans, as well as materials for making organic manure and natural pesticides.

The project has also included establishing tree nurseries in all three of the Farmer Field Schools. The **6,000** seedlings provided are expected to cover **64** hectares of land, with each farmer helping to plant the seedlings. The trees are expected to help soil fertility and provide shade for the crops.

[Farmer Training](#)

The Farmer Field Schools have been continually offering theoretical and practical training sessions on different agricultural methods, based on local needs and interests. These have focused particularly on manure fertilisers and organic pesticides. Farmers at all three schools have been trained on producing **3** different types of manure namely: Bokashi, Mbeya and Bio char and 3 different natural pesticides.

Demonstrations have also showcased various bed designs, such as raised beds and sunken beds, highlighting their advantages in terms of water management, soil erosion prevention and improved plant growth. This was followed by training on manure application and crop management, which allowed farmers to use the demo plots to practise the knowledge gained. Farmers were also trained on using monitoring tools to collect data on the growth, maturity and yield of the crops grown in the demo sites.

In August and September, training focused on constructing water and soil conservation measures, including swale and marker ridges to prevent run-off and erosion. This activity is vital in an area with such steep topography as Nkhata Bay North, where loss of soil fertility is a recurring issue. **73** farmers are now equipped with skills on construction of marker ridges and have begun constructing them at the demo sites.



[Graduation and Peer learning](#)

Throughout the year, the farmers began facilitating peer learning on single aspects of the curriculum. In August, for example, **30** farmers started providing individual training to fellow farmers from their respective villages on specific individual modules. Farmers trained through peer learning also visited the demo plots to appreciate the effectiveness of these measures and some of these new farmers are using manure in their fields already. This meant that, by November, **105** farmers had been trained through peer learning on organic fertiliser and pesticide making.

Because farmers faced a very challenging growing season in 2022-2023, there has been increased demand for peer learning on sustainable practices. This is because the benefits of these techniques have become more obvious and their affordability has become more important as prices have massively increased.

Now that the Farmer Field School attendees have graduated successfully, they will now begin training other farmers on the full curriculum, with continued support and monitoring from Temwa. Approximately **60** of the **73** farmers have committed to training at least **3** of their peers on the curriculum in 2024.

Overall, a total of **358** farmers will have been trained through the school (**73**) and peer learning initiative (**285**) from our first year of Farmer Field Schools. In turn, this will benefit an estimated **2,148** family members of the farmers, who will have an increased, more consistent source of nutritious food thanks to the sustainable farming techniques learned under the project. Proper nutrition is vital for a community's development, ensuring people are healthy, children can concentrate in school, and families can earn a living.

[Challenges](#)

The project has faced increasing challenges as a result of unpredictable weather patterns, which impacts the implementation of the project activities, particularly as travel became difficult.

In August, pests and disease attacks increased across all three demo plots. To address this, we applied a natural pesticide more frequently and have planned increased water irrigation during the hotter months.

In Nijiri, we also found that the Village Development Committee members were not actively engaging in the project. It is vital for the sustainability of the project that all local governance are engaged and supportive of the project work. In contrast, in Chilembe Bula, we have been joined by the Village Agricultural Committees, Village Development Committees, Chiefs and Agriculture Extension Development Officer at meetings and training. In the next project year, we intend to create more consistent involvement across all the schools.



Successes

The **73** farmers have continued to show great enthusiasm and commitment towards improving their agricultural practices. Through their training, they are promoting ecological balance while minimising potential harm to the environment and human health.

They are now experts on manure production, storage, and application. We expect they will teach others to adopt these methods now they have successfully graduated from their Farmer Field School.

This project has closely followed Temwa's Community-Driven Approach, as farmers have been organising to create their own curriculums and mobilising materials in order to create self-sufficiency. The schools have provided farmers with an opportunity to experiment with new techniques and see the benefits for themselves.

Looking forward

At the end of the year, we conducted a monitoring of each Farmer Field School site by looking at crop growth development, maturity and quality of the produce. We also monitored the farmers' preparedness for the 2023-2024 growing season.

Farmers have been diligently monitoring the quality and quantity of their crops using three types of manure fertiliser, comparing the efficacy of each type. Using this data, they have been able to make plans for the next growing season. **80%** of farmers have begun using Mbeya manure

fertiliser which had a positive impact on the winter cropping harvest. Monitoring has also assessed the adoption of water and soil conservation methods, as well as the survival of trees planted this year which showed an **89%** survival rate.

Our monitoring showed that **54** farmers have improved their winter cropping harvests by at least **30%** through adoption of sustainable agriculture practices, particularly manure fertilisers. Most farmers have ventured into winter cropping as one way of generating income.

By implementing sustainable practices, the farmers not only improved their yield but also contributed to environmental conservation. Hillary Lusayo Ndawambe, the project's leading officer, noted that the farmers have optimised their farming practices using careful monitoring, becoming a model for sustainable agriculture and showcasing the positive outcomes of combining traditional farming knowledge with modern data collection techniques.

"This positive shift not only enhances crop productivity but also fosters environmental stewardship and resilience in the face of changing conditions. The commitment of participating farmers to embrace sustainable methods underscores the project's success in promoting long term viability and addressing key challenges in modern agriculture. As we anticipate the next growing season, the collective efforts towards sustainable practices position the community for continued growth, emphasising the importance of ongoing support and knowledge exchange in sustaining this positive momentum."

As the project begins its second year, we are estimating at least **80** new farmers will attend Farmer Field Schools and learn the comprehensive curriculum. Then, once they have graduated at the end of the year, they too will train a further **3** peers on the full curriculum, passing on the knowledge they have gained. In addition, we will also be expanding our individual training sessions on specific topics, such as natural pesticides and manure fertilisers, to approximately **300** other farmers. In total, we will reach around **620** farmers, supporting them to increase their production through sustainable farming practices.



Community Stories

Eveless is scaling-up with organic farming methods

Eveless Banda lives in Denthema with her husband, Francis, and their six children. She farms maize and vegetables, but had previously only been doing so on a very small scale due to the cost of chemical pesticides and fertilisers.

The little money she earned was barely enough to feed her family, and did not stretch to paying for her children's school fees.

Eveless joined her local Farmer Field School in the hope of improving her farming skills and increasing her scale. She has now been trained on using organic fertilisers and pesticides which is already improving her crop production and saving her money.

"I believe that I will be a woman who is able to support her family with these skills gained from the Farmer Field School. I will be able to produce more using resources that do not require a lot of money".



Using organic manure to combat the cost of living



Joseph Kanyika lives in Denthema with his wife and two children. He has always been a small-scale farmer, supplementing his income with piece-work.

For a long time, Joseph has been hoping to expand his farming and increase his harvests. He had been relying on expensive chemical fertilisers and pesticides, the cost of which is increasing exponentially. Through a community meeting organised by Temwa, he got involved with his local Farmer Field School. He has since been using Mbeya and Bio-char fertilisers on his crops.

"Through Temwa training from the farmer field school on manure production and natural pesticides, I have been able to adopt the practices which have resulted in high crop production. I have plenty to eat and sell."

In the future, Joseph hopes to continue increasing his crop production in order to make a profit.
