



Africa RISING farmers' Field Days on Soil and Water Management Technologies in Singida and Dodoma

Report

16 - 17 February

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The [Africa Research In Sustainable Intensification for the Next Generation](#) (Africa RISING) program comprises three research-in-development projects supported by the United States Agency for International Development (USAID) as part of the U.S. Government's Feed the Future initiative.

Through action research and development partnerships, Africa RISING is creating opportunities for smallholder farm households to move out of hunger and poverty through sustainably intensified farming systems that improve food, nutrition, and income security, particularly for women and children, and conserve or enhance the natural resource base.

The three regional projects are led by the International Institute of Tropical Agriculture (in West Africa and East and Southern Africa) and the International Livestock Research Institute (in the Ethiopian Highlands). The International Food Policy Research Institute leads the program's monitoring, evaluation and impact assessment.




Africa RISING appreciates the support from the American people delivered through the USAID Feed the Future initiative. We also thank farmers and local partners at all sites for their contributions to the program.

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Introduction

As Africa RISING prepares to wind-up its activities in Tanzania, it was a pleasure to work with the national and development partners to scale out the validated technologies that had been researched for over 10 years.

Farmers Field Day (FFD) events were successfully held on two consecutive days from 16th – 17th February at Manyoni District in Singida region and Chemba District in Dodoma region to expose the farmers on soil erosion technologies. In Manyoni district, Singida Region the event took place on the 16th at Gurungu village while in Chemba District; Dodoma Region the event took place at Mirambo village on the 17th February 2023.

Specifically, the FFDs demonstrated the best technologies introduced and popularized in the development partner LEAD Foundation project-participating villages (Gurungu and Mirambo). The soil erosion control practices using Fanya Juu/Chini terraces, *in-situ* rainwater harvesting techniques using tied ridges and good agronomic practices which encompass the use of improved seeds, use of fertilizer (i.e. organic and inorganic fertilizers), and recommended spacing among others. Similarly, other technologies demonstrated include farmer-managed natural regeneration technologies (FMNR) famous as ***Kisiki hai*** as well as planting of leguminous trees (*Gliricidia Sepium*) on the banks of terraces to reinforce the banks, source of animal feed and soil fertility management.

About 186 participants including the farmers, champions/lead farmers, extension officers, policy makers (district senior officers, councilors) were exposed to Fanya juu/chini terraces and tied ridges technologies during the FFDs in the two villages. The FFD events were jointly organized by IITA in collaboration with TARI Makutupora, LEAD Foundation and local government across two villages.

This report is prepared from information collated from the two days of the events, with actual figures for all days shared by team members.

Day One: Gurungu village, Singida

At the demonstration site

- The farmers gathered at Mohammed Juma's demonstration site bring together about 80 (55M, 25F) farmers were representing three sub-villages (Kibaoni, Mrumiana, and Mitunduruni) (see Table 1).
- The project coordinator, Mr Elirehema Swai gave an overview of the technologies demonstrated at the site including the Fanya juu/chini terraces and tied ridges.
- The farmers had a hand-on practice on how to lay-out the terraces under the guidance of Swai
- Farmers then had opportunity to ask questions on the technologies that were demonstrated and they got the expertise responses. The questions include:
 - Can inorganic fertilizer destroy the soil?
 - Is it necessary to apply them every season?



Photo 1: Swai giving a hand-on training to farmers on how to install terraces in the farm. Photo by G.Ndibalema/IITA



Photo 2: Maize planted using GAP and tied ridges. Photo by G.Ndibalema/IITA

General meeting

After the field tour the participants gathered under trees to enjoy the beautiful shades while having the general meeting concerning the tour they had in the field.



Photo 3: Participant gathering for a meeting after field tour in Gurungu village. Photo by G.Ndibalema/IITA

Opening remarks

- The meeting was officiated by Mr Yoram Emmanuel, the village chairperson of Gurungu village who welcomed and thanked the participants for attending the FFD
- Then Mr Nicodemus Nkuwi, the Ward Councilor insisted the farmers to apply the GAP they saw in the demo site in their farms because they showed a big difference in yields between the ones using the GAP and the traditional practices.

Elirehema Swai

- Thanked participants to the FFD despite their busy schedule with many activities to do.
- The purpose of this meeting is to show you the benefit of using the soil and water management technologies in preventing the soil erosion
- Work hard and apply what you have learned from this FFD
- I thank Prof Mateete Bekunda, the Africa RISING Chief Scientist for continuous commitment and support for the past 11 years in making the project succeed in improving the farmers livelihood and increasing productivity through the validated technologies.
- The project has done several studies in Dodoma and Manyara that aimed at increasing productivity and improving the livelihood of the Tanzanians.
- Other achievements were capacity building for researchers and other supporting staff as well as the publication of research works and books

Prof Bekunda

- IITA is a non-profit organization that aims to transform agriculture through improving productivity and improving farmers' livelihoods.
- Scientists work to write proposals to seek funds from donors and once the proposal wins, the fund is directed to research studies aiming at increasing agricultural productivity while having less effect on the environment.
- The funds also enable IITA to build the capacity of young researchers and other supporting staff in Tanzania
- The development partners such as LEAD Foundation should continue scaling the demonstrated technologies to other areas not yet covered by the project.
- Researchers to publish research findings since failure to do that means nothing has been done.

Launching of a training manual on installation of the terraces

After Bekunda's remark, he handed over to Mr. Fadhili Chimsala, the Head of the Division of Agriculture, livestock and fisheries officer (DALFO) of Manyoni District a Swahili training manual "*Hatua rahisi za uwekaji wa makingamaji shambani*", a step-by-step guide on installation of the terrace developed under auspices of Africa RISING project for official launching.



Photo 4: Prof Bekunda handing over the training manual to the Head of the Division of Agriculture, livestock and fisheries officer (DALFO) of Manyoni District Mr Fadili. Photo by G.Ndibalema/IITA

Fadhili Chimsala

- Thanked the farmers, leadership of Gurungu, TARI, and donors for making the event a success. Emphasized on the benefits of conserving the soil and food safety. He clearly pointed out the effects of soil erosion and emphasized farmers to take immediate action to increase productivity.
- The objective of the FFD event was to practically learn on how to harvest rainwater in the field and control soil erosion using terraces.
- Emphasized on the benefits of using early maturing seeds, farmyard manure, and chemical fertilizer to increase productivity.
- Thanked IITA, TARI, and LEAD Foundation for providing education to farmers and USAID for financing the project.

Closing remark

The FFD ceremony was officially closed by Mr Nicodemus Nkuwi, the Ward Councilor; he urged that farmers to continue installing terraces in areas already affected and those which are prone to soil erosion. He requested IITA and other implementing partners to continue introducing agricultural projects to Gurungu village.

Day Two: Mirambo village, Dodoma

At the demonstration site

- The FFD was attended by 85 (70M, 15F) farmers from Mirambo village representing four sub-villages (Songea, Masange, Kongo, and Kodimo) (*see table 1*).
- Mr. Swai gave an overview of the technologies being demonstrated such as Fanya Juu/Chini terraces and tied ridges. Whereas, participants were able to move around the field to observe the demonstrated technologies and asked questions regarding the topic discussed.



Photo 5: Mr Swai explaining to participants on the technologies demonstrated in the field. Photo by G.Ndibalema/IITA



Photo 6: A lead farmer from Africa RISING project in Kiteto explaining to participants on how he was trained on installing the terraces. Photo by G.Ndibalema/IITA

General meeting

After the field tour, the FFD event was officially opened by Ms Regina Bahaye, the Ward Extension Officer from Mirambo village. She welcomed all the participants and thanked them for attending the FFD event. Thereafter, the leaders gave opening remarks.



Photo 7: An on-going FFD meeting. Photo by G.Ndibalema/IITA

Opening remark

- Mr Bernard Abraham, the Regional Agricultural Officer gave a short introductory remark (Plate 5). He said technology is the only way to fight hunger and poverty.
- Therefore, if the demonstrated technologies (Fanya Juu/Chini terraces, tied ridges and others etc) are adopted by farmer's crop productivity will be increased.
- Emphasized that the community will fight hunger and poverty by using good agricultural practices and this is the only time that farmers need to use these technologies to make changes.

Elirehema Swai

- Demonstrated how terraces are being laid out in the field. He noted that soil is a great resource, so if it is conserved, productivity will be achieved.
- TARI through Africa RISING project has prepared a manual for the installation of terraces in the field which will be launched during the event by the guest of honor.
- Welcome Prof. Bekunda to give an overview of the Africa RISING project.

Prof Bekunda

- Thanked participants for making the FFD event possible.
- Mentioned the roles played by IITA and how funds are being used to improve smallholders' livelihoods.
- The areas covered by Africa RISING project in Tanzania such as Kongwa, Kiteto and Babati.
- Many studies were conducted in those areas and their research findings contributed to the development of a bigger book prepared by the project.
- The manual for the installation of terraces that will be launched in this event is part of the bigger book developed by the project.
- Acknowledged the great work done by TARI and LEAD Foundation in scaling the demonstrated technologies and concluded by asking Mirambo farmers to be an example in installing the Fanya Juu/Chini terraces in their fields since the adverse effects of soil erosion are widely seen in many fields in that community.

Hon. Sambala Said, the Chemba district council chairperson

- Thanked the farmers, invited guests and the Hon. District Commissioner for attending the FFD event.
- Admitted that Mirambo village is adversely affected by soil erosion therefore Chemba District Municipal Council will set by-laws that will oblige farmers to install terraces in eroded and erosion-prone areas.
- Called upon IITA and other interested organizations to write project proposal seeking funds to alleviate the soil erosion problem in Mirambo village.
- Welcomed the guest of honor Hon. District Commissioner for Chemba who represented the regional commissioner for Dodoma Region.

Hon Gerald Mongela, Chemba District Commissioner (On behalf of the regional commissioner read the speech)



Photo 8: Hon Mongela reading the speech at the FFD meeting. Photo by G.Ndibalema/IITA

- Thanked the organizers for the invitation and welcomed the participants to the FFD event.
- The farmers in Mirambo village have witnessed the adverse effects of soil erosion in their fields therefore I believe through this event, necessary measures will be taken to alleviate this problem.
- The main objective of the FFD event was to practically learn how to harvest rainwater in the field using tied ridges and control soil erosion using Fanya Juu/Chini terraces.
- The knowledge disseminated in the FFD event is a continuation of the efforts made by the Africa RISING project from 2011 to 2022.
- Acknowledged the great contribution of Africa RISING project in increasing crop productivity and building resilience to farmers against the effects of climate change. He finally thanked IITA, LEAD Foundation, and TARI for educating farmers and USAID for financing the project. Requested everyone to be a good ambassador of these technologies and called upon his subordinates to work on the questions raised during the FFD event so that the project goal would be reached.
- Insisted on creating by-laws to enforce people to conserve the soil.

Launching of a training manual on installation of the terraces

Hon Gerald launched a Swahili training manual "*Hatua rahisi za uwekaji wa makingamaji shambani*", a step-by-step guide on installation of the terrace developed under of Africa RISING project. Also, he directed TARI to bring more 50 copies to Chemba district. The DC believed that the guideline will be used effectively by lead farmers and extension officers to control soil erosion and increase crop productivity.



Photo 9: Lanching of the installation of the terraces training manual. Photo by G.Ndibalema/IITA)

Closing remarks

The FFD event was officially closed by Mr. Juma Dossa, Mirambo village chairperson. He thanked the villagers, invited guest and Hon. District Commissioner for attending the event. Mr Dossa insisted that by using the demonstrated technologies Mirambo farmers will be able to control a serious soil erosion problem that is affecting their fields. Therefore, a call was made to Mirambo farmers to apply these technologies in their fields to alleviate the problem.

Annexes

Attendance

Table 1. Farmers participation during the farmer's field days in Manyoni and Chemba District

District	Village	Sub - village	Gender		Total
			Male	Female	
Manyoni	Gurungu	Kibaoni	23	18	41
		Mrumiana	24	0	24
		Mitunduruni	8	7	15
Chemba	Mirambo	Songea	22	1	23
		Masange	10	4	14
		kongo	12	3	15
		Kodimo	26	7	33
Total			125	40	165

Media publication on the FFD events

- ITV Habari: Wakulima hatarini kukosa mavuno ya kutosha kutokana na mmomonyoko wa udongo (Farmers at risk of not having enough harvest due to soil erosion), published on 20 February, 2023
<https://www.youtube.com/watch?v=4ppaNrfeNQU> (5 mins)
- TBC ARIDHIO: Mmomonyoko wa udongo waondoa rutuba shambani (Soil erosion removes nutrients from the field), published on 19 February, 2023.
<https://www.youtube.com/watch?v=bltE8KKvZh8> (18:38 mins)

Select Photos (Credits to Gloriana Ndibalema/IITA)



A clear difference shown on the use of terraces between the two field.



Farmers learning how to use the measurement in installation of the terraces.



Mr Mohammed Juma, a farmer in Gurungu village standing in his farm that used to be affected by the soil erosion.



LEAD field coordinator keenly following the discussion during the FFD meeting in Gurungu village.



A farmer (center) was nicknamed 'Prof' after asking a critical question concerning the collective action on installation of terraces in Mirambo village.



Hon Mongela emphasizing on the effective use of the training manual launched.



Farmers following the demonstration of the technologies in the field.



A well performing field after application of the soil and water management in the field in Mirambo village.