



Special Edition for
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2024

The Ukiriguru Agricultural Research Centre brings you a collection of information about technology transfer and partnership as written from activities held in July and August as follows:

- Nanenane agricultural show
- TARI's collaboration with public and private partners in various projects
- Visitors from various places of the world
- Photo gallery about various TARI's activities

How visitors were impressed with TARI's technologies at the Nanenane show

The nanenane agricultural show has been held from 1-8 August, 2024 in many places of the country. TARI Ukiriguru through its agritech hubs (Nyamhongolo in Mwanza and Nyakabindi in Simiyu) participated in to showcase various technologies. In both two hubs, TARI was awarded with trophy and certificate after becoming winners among all research institutions participated in the exhibition.



Left is a trophy and certificate that was awarded to TARI Ukiriguru at the Nyamhongolo grounds, and right is a certificate that TARI was awarded at the Nyakabindi grounds.

At the Nyamhongolo grounds

69 demo plots were established to show the performance of TARI's improved seeds. About 4,366 stakeholders visited TARI demo plots and booth. This includes government officials, primary and secondary school students, college and university students and farmers from Mwanza and beyond.



TARI Ukiriguru officer Mr. Yese Ojwang (with microphone) giving explanations about TARI's rice variety to students from different universities.

At the Nanenane agricultural show, some demo plots that impressed many visitors include cassava, banana, rice, pigeon peas, sweet potato, cotton, millet and push-pull technology.

Nyang'hwale district commissioner Ms Grace Kingalame was among visitors whom were impressed with TARI's research products particularly on how push-pull technology controls pests without application of chemicals.

On his part, Mussa Ntabo, a farmer from Ilemela, commended TARI for coming up with such technology that saves costs and increases productivity.

"Honestly, I am very impressed with this technology, I will make sure I get seeds of these leaves (desmodium and mullato) so that I can try at my plots." He said.

At the Nyakabindi grounds



TARI's researcher Mr. Lucas Masiko explaining to the visitors on millet production technology. Millet varieties which were planted at Nyakabindi agritech hub are also available to other TARI's research centres countrywide.

At the Nyakabindi agritech hub in Simiyu region, about 88 demo plots with various improved varieties were prepared. A total of 1267 stakeholders visited the plots and. Also in the centre's booth, many technologies were displayed including types of soil, various fertilizers, post-harvest handling and value addition technology and innovated sowing machine, also known as Rafiki planter).

In both agritech hubs (Nyamhongolo and Nyakabindi) farmers are allowed to visit demonstration plots throughout the year.

Get to know Push-pull technology and its impact to the farmers

Growth in agricultural productivity is vital to reduce hunger and poverty and ensure food security.

Agricultural growth can be achieved by reducing major constraints to productivity such as pests, weeds and degraded soils. To reach such achievements, researchers have been emphasizing farmers to maintain good agricultural practices including to control the pests and improve soil fertility.

Under this reason, UPSCALE project which is funded by the European Union has come up with Push-pull technology which apart from having ability to control pests, it increases fertility and yields.

It is an integrated cropping system that involves driving pests away from the main crop using a repellent intercrop (the push-desmodium) while attracting them out of the crop with trap plants (the pull-mullato). Also the system improves soil health and water retention, provides economic and high-value livestock fodder.



Appearance of maize in push-pull technology.

Ms. Florentina Maganga from Sazira village in Bunda district is among farmers benefiting from the project. Giving her testimony to the Multi-actors of the project when paid a visit to her plots, she said after adopting push-pull technology is now witnessing the increase of yields to compare with previously.

"I used to harvest about 40 kg of maize from small plot, but after trying this technology in the same plot, in 2021 I harvested about three bags (100kg each)" She said, adding that her plan is to expand farm with push-pull technology



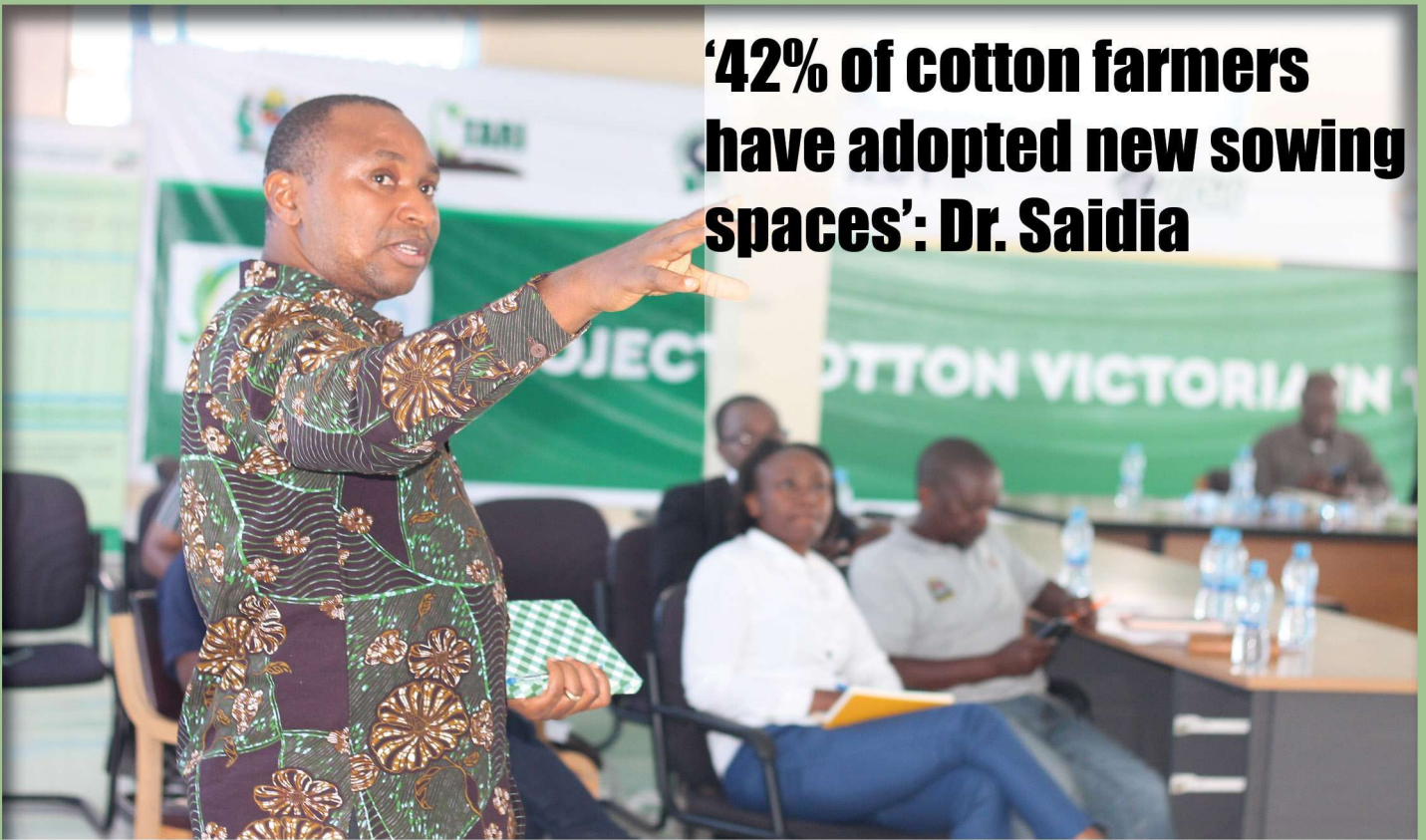
Stakeholders in the UPSCALE project looking at the desmodium field owned by Ms Florentina Maganga

Partners of the project involves TARI Ukiriguru centre, government agencies like TOSCI, local government authorities, development communities, and farmers just to mention a few.

In his presentation during the multactors meeting held from 29-31 of July, 2024 Managing Director of Mara Development Organization (MADEO), Mr. Wilbard Makoko mentioned that his organization, in collaboration with TARI, has been promoting adoption of push-pull technology to primary and secondary schools students in 4 villages of the Tarime district with the goal of reaching 1120 students in 28 schools (14 primary schools and 14 secondary schools).

So far, 8 Push-Pull clubs have been established with a total of 320 students. The aim is to promote adoption of this technology to young generation and ensure its sustainability.

'42% of cotton farmers have adopted new sowing spaces': Dr. Saidia



National coordinator for cotton Dr Paul Saidia delivering the presentation to the National Technical Committee (NTC) of the Cotton Victoria project

In the last farming season of 2023/2024 the number of cotton farmers who have adopted new sowing spaces (60cm x 30cm) has increased from 206,937 farmers to 217,061 equivalent to 42% of all 517,343 farmers from 11 cotton-growing regions. This includes Mwanza, Simiyu, Geita, Mara, Shinyanga, Tabora, Katavi, Kigoma, Singida, Dodoma and Morogoro region.

The national coordinator for cotton also TARI Ukiriguru centre director Dr. Paul Saidia identified this when making presentation during the National Technical Committee of cotton victoria stakeholders held in Shinyanga region.

The meeting aimed at evaluating the progress of the project for 2023/24 and way forward in the coming farming season.

The meeting brought together acting director of the Tanzania Cotton Board (TCB), TARI Ukiriguru, researchers, government officials and other cotton supervisors from 11 regions.

Cotton Victoria project was introduced in 2016 under the partnership of Brazilian government with the aim to solve the challenges facing cotton sub-sectors in the country.

By referring last year's achievements, in the next farming season 2024/2025 stakeholders pledged to put more muscles in many areas including increasing pre basic seed production to reach a target of 20 tones cotton, updating rates of application insecticide according to new spacing in different soil types, updating social economic information according to new spacing in different soil types and also to ensure more media coverage, farmer's field days, and demo plots to disseminate new technologies to new cotton growing areas.

The goal is to reach about 600,000 farmers in the coming seasons. The new cotton spacing of 60cm x 30cm increases number of plants and



Acting director of the Tanzania Cotton Board Mr. James Shimbe giving his thanks remarks to the project's stakeholders and call more joint efforts to promote cotton farming.



Members of the National Technical Committee attentively listening to various presentations

HOW 'KILIMO THABITI' IS CHANGING AGRICULTURE

Kilimo Thabiti project that was initiated in 2023 is implemented in Bunda na Butiama districts in the Mara region under the funding Fund for Innovation and Development (FID).

The project focuses on integrating weather information and good agricultural practices (GAPs) for cassava and maize crop production together with distribution of weather forecasts via short messages (SMS), enabling farmers to synchronize their activities with prevailing weather conditions.

Some farmers in Bunda district have praised the project for coming up with technology that assures them with accurate information about weather condition.

The appreciation was given in a recent visit by project partners from the Tanzania Agricultural Research Institute (TARI), the Tanzania Youth Espouse for Gender and Development (TYEGD), Esoko and Weather Impact, that was held in Nyangere and Sarawe villages.

"I am a garden farmer. There was a time I received a message that it would rain. Two days later it rained. It helped me to know what the weather would be, so I don't irrigate. I can say they help us a lot." Said Hassan Break from Nyangere village who grows onions.

"Those sms do not mislead, they help us a lot and prepare us psychologically for the coming weather conditions. If I had a plan to dry my crops on sun, and then I got a message that it will rain, I have to postpone drying the crops until it is sunny again. This helps us to avoid loss" said Veronica Muhende, a farmer from Sarawe village in Bunda District.



Some Sarawe villagers, researchers and other stakeholders in the Kilimo Thabiti project looking at the drip irrigation system that was installed to Veronica Muhende's field under the facilitation of Kilimo Thabiti project

At the beginning of the project, 30 citizen scientists were trained on how to take rainfall and soil moisture measurements and they now participate in collecting and disseminating agro-weather information. At present, 2632 farmers (46%F/54%M) have been registered to receive short messages, meanwhile over 900 farmers are eagerly waiting to get registered.

In the project implementation along with other tasks, TARI, through its Ukiriguru center, has been training farmers on good agricultural practices, conducting research, and collecting data on climate change.

TYEGD are responsible for working closely with farmers (commonly known as citizen scientists in the project) and monitoring, while

Esoko is in charge of generating online digital data collection tools and distributing agro-weather advisory SMS to farmers. Weather Impact, is responsible for project coordination and weather forecasting based on online data shared by farmers and from satellites.

Director of research and innovation Dr. Deusdedith Mbanzibwa, who was representing TARI's Director General during the visit, said this technology has more potential as it helps farmers to improve their livelihood, especially in this era of combating the impacts of climate change. "It is my hope implementation of this project will be extended to farmers in other areas", he said, and emphasizing the farmers to follow what experts and extensionists ask them to do in a particular agro-weather advisory.



TARI UKIRIGURU AT THE SABASABA TRADE FAIR

The 48th Dar es Salaam International Trade Fair (DITF) commonly known as Sabasaba fair that was held from 28 of June to 13 of July, brought together companies, institutions, entrepreneur and other exhibitors from Tanzania, East Africa region, Africa and outside African continent.

This is the yearly platform that plays vital role in improving various beneficial opportunities among investors.

The Tanzania Agricultural Research Institute (TARI) was among the participant of the trade fair that held at the Mwalimu Julius K. Nyerere grounds in Dar es Salaam with the theme "Tanzania; Your Best Destination for Business and Investment."

On top of that, the Ukiriguru research centre also participated in the fair to showcase and advertise technologies and value added products on cassava, sweet potato and cotton.

The centre was represented by Mr Kiyenze from technology transfer and partnership department.

When speaking to media outlets, TARI's Director General Dr. Thomas Bwana said the institution is committed to ensure the agricultural research findings come up with technologies that will respond to farmers' challenges.

Dr. Bwana added that, to manage post harvest loss, researchers go beyond variety development and come up with more value addition technologies for the farmers' benefits.



Part of TARI's products at the Sabasaba trade fair

Another area that TARI is putting more efforts is to ensure all technologies innovated by researchers are reaching targeted consumers especially farmers to help them in increasing productivity.

This aims is to match with the vision of the sixth phase government, that is to transform the landscape of agriculture for a 10% growth in the sector by 2030 (Agenda 10/30) and expand more agricultural opportunities.



TARI Director General Dr Thomas Bwana (left) listening to TARI Ukiruguru officer Mr. Kalwinze Kiyenze when explaining about cotton fiber technologies.

PHOTO GALLERY



Delegates from the office of Jiangsu Province's governor taking a look at the TARI's research products after visiting the Ukiriguru center and Agricultural training college (MATI Ukiriguru) as part of the preparations for the visit of the province's governor Hon. Xu Kunlin in October, 2024. The intent of the visit was to expand the relations between China and Tanzania through the Chinese provinces and Tanzanian regions including Mwanza and cooperation on research matters, to develop agriculture, fishing and livestock sectors.



A group photo of TARI Ukiriguru staff and the Director of Research and Innovation Dr. Deusdedith Mbanzibwa (in blue t-shirt) soon after the meeting held at the centre's conference room



A group photo between TARI Ukiriguru researchers and representatives of Weather Impact institution who are among stakeholders of Kilimo Thabiti project who visited the centre to explain the progress of the project. From left is Dr James Nkwabi Head of the socio-economy and marketing research unit, Dkt Hadija Musa researcher in root and tuber, Janina Fraas, Dr Paul Saidia Ukiriguru centre director, Lorenzo Occeili and Dr Abdullah Mkiga acting coordinator of Technology transfer and partnership.



Some students from various colleges in a group photo after visiting cotton ginning site. TARI has recently received tens of students from colleges and Universities to attend their practical training.



Ukiriguru researchers in a group photo at the Nyakabindi grounds immediately after being awarded with a certificate and a trophy after the TARI Ukiriguru become winner in the nanenane agricultural show.

PHOTO GALLERY



A group photo immediately after the conversation between the Director General of the Tanzania Atomic Energy Commission (TAEC) Prof Najat Kassim Mohammed (center) and Ukiriguru Center Director Dr Paul Saidia (third from the left). Among many issues that were discussed were building capacity to TARI researchers in cotton mutation breeding using atomic energy technology, the preparation of greenhouses, and cooperation in preparing publications on crops' value addition. Prof. Najat was welcomed by Dr. Saidia accompanied with Dr. Alfonse Mutiba (first left) who is the Head of the cotton pathology section.

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