



# National Agricultural Research Laboratories- NARL

## E-bulletin March 2024

A Bi-Monthly E-bulletin highlighting News from NARL and stakeholders: Collaborators, NARO Institutes, Agriculture sector, Donors and the Public and Policy Stakeholders Contacts: P.O.Box 7065, Kampala Tel +256414661977, Email: [director.narl@naro.go.ug](mailto:director.narl@naro.go.ug) website [www.narl.go.ug](http://www.narl.go.ug) tweeter @NarlKawanda, Facebook NarlKawanda

### Message from Director NARL



*Dr. Robooni Tumuhimbise,*

*Director of Research National  
Agricultural Research Laboratories  
(NARL)-Kawanda*

Dear our esteemed stakeholders and readers, I welcome you to the NARL E-bulletin, the first issue of 2024. This is a quarterly news E-bulletin where NARL shares with stakeholders news of Research and Development and related events taking place with in NARL, NARO.

In the current issue, we share with you highlights of the visit of the Katikiro of Buganda to NARL, the launch of a new project under the Soil, Agro-meteorology and Environment program-Space to place project, NARO-NARL show casing to farmers at the eastern Uganda Agricultural show in Soroti and bidding farewell to the outgoing Director of KOPIA and welcoming the new Director of KOPIA in Uganda. The issue also highlights capacity building of staff at the Plant Genetic Resource Center (PGRC) and the event of tree planting at Entebbe Botanical gardens by well-wishers and consumer palatability tests in Nakaseke district for the new banana varieties soon to be released. We share links to related activities so you can read or view more about the highlights. We share links to related activities so you can read or view more about the highlights.

Permit me to remind you that NARL carries out strategic research on five areas: bananas; food biosciences and agribusiness; bio systems and agricultural engineering; soils, environment and agro meteorology; biodiversity and biotechnology. To effectively deliver on its Research mandate, NARL has the state of the art facilities for soil testing Analysis, Tissue Culture Laboratory, and Workshop for Agricultural Machinery, Food Processing Centre, Business Incubation Program, Conference Facilities, Agricultural Research Information Service (ARIS), Uganda National Gene Bank (UNGB) and an Insect Museum

I wish you nice reading!



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### Katikiro of Buganda Applauds Scientists on his Visit to NARL



*Katikiro interacts with NARO fraternity during his visit to National Agricultural Research Laboratories –Kawanda*

On 30<sup>th</sup> January 2024 saw the Katikiro of Buganda Charles Peter Mayiga visiting the National Agricultural Research Laboratories (NARL), Kawanda. Speaking to the staff of NARL, Katikiro observed that “Ugandans need science to improve farm methods for better yields so that the farmer gets money in their pockets, so they educate children, get medical attention and have enough food to eat.”

A Memorandum of Understanding was signed on 3<sup>rd</sup> October 2023 between Mengo and NARO focusing on collaboration between Buganda and NARO, to benefit Buganda region through the expertise and technologies developed by NARO as a vehicle to transform agriculture in the Kingdom. Along with the Minister of State for Agriculture, Trade, and Cooperatives in the Buganda Kingdom, Hajji Amis Kakomo who hailed the partnership with NARO as a monumental step and expressed confidence in NARO’s ability to propel Buganda towards significant socio-economic development. Katikiro directed BUCADEF to initiate a program that disseminates NARO technologies to communities, aiming to spark rapid socio-economic transformation. “The main point is for Buganda to get the knowledge and use it to transform its people by improving their livelihoods through innovative farming”. He further noted that for Buganda to become prosperous, it requires the people in Buganda to have sufficient food and be able to sell surplus and have decent housing. “It is not good to lead people who are hungry” he added “Hungry people can be a security threat”.

“We need to get knowledge from the experts to be able to find viable technologies to utilize small plots of land”, he said, adding that “When I get tired for a good cause I sleep a happy man. “The real business on our hands is to help the local men and women change their lives. That is our job as a primary responsibility. We can do this if we encourage them to participate in economic activities which they are capable of doing which is Agriculture”.



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Katikiro visited the Biotechnology laboratory where he observed the generation of banana plants through tissue culture, he also visited the Soils Laboratory and was taken through the soil mapping for the greater Masaka sheet. He then visited the Food Biosciences and Agribusiness laboratory and planted a *Garcinia buchananii* indigenous fruit tree species, locally known as *Nsaali* (Luganda) or *Amashalalazi* (Lukiga) conserved for medicinal use. Katikiro then toured an exhibition of agro-machinery, Banana food production value chain and value addition as well as utilization of banana fibre for high value quality hair extensions.

Read more by clicking this link [Katikiro Enthralled at NARO results - National Agricultural Research Organisation \(NARO\)](#)

### Ugandans Urged to Enhance Soil Fertility



Left: Stakeholders at the workshop. Right: An earthen basin holding water run off around a citrus fruit tree in Kumi district

Dr. Fred Kabango from the Ministry of Agriculture Animal Industries and Fisheries - MAAIF expressed concern that the use of fertilizer in Uganda is low.” It is a concern to all of us. There is a significant knowledge gap that exists between farmers and what they ought to know and do to utilize the soil best. As a country thriving for agro-industrialization, there is no way we can achieve high yields for commercialization if we do not look at the critical element of soil fertility improvement and management”, he said. Speaking at the launch of the Space to Let project at Hotel Africana in Kampala on the 6<sup>th</sup> February where he represented the Minister of Agriculture Animal Industry and Fisheries Hon. Frank Tumwebaze. Improving fertilizer knowledge of stakeholders is required because farmers and their advisors are not aware of the 4Rs’ Nutrient Stewardship including applying the Right Source of nutrients, at the Right Rate, at the Right Time, and with the Right Method. Proper use of fertilizers along the 4Rs nutrient stewardship is key to improve Fertilizer Use Efficiency, soil fertility and increased yield resulting in ‘increased production and productivity.

The Deputy Director General of NARO in-charge of Agricultural Technology Promotion Dr. Saddik Kassim observed that stakeholder Involvement, participation and Inclusion is



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paramount for any project to succeed. DDG was optimistic that the project is timely with a good design that has linkages upwards and down wards with inclusive participation of stakeholders." Upwards with the funders - USAID and down wards with the Local Government Production and extension staff and farmers respectively. The design is good and should guarantee success," he said. Dr. Robooni Tumuhimbise the Director of Research NARL appreciated the Project team leader of the Soils Program "I thank Dr. Cranmer Kayizi for leading the team from NARL. Thank you for the good job done. Thank you for the hard work and motivation of staff to do good work. I also extend gratitude to the funders who are International Fertilizer Development Company (IFDC), United States Agency for International Development USAID Mission, and other development partners."

Dr. Upendra Sigh the Vice President of IFDC was glad to work with NARO on this project at a time IFDC celebrates its 50<sup>th</sup> anniversary this year. He observed that the same objective at its establishment is still relevant today." IFDC is independent and 24 countries in Africa and South Asia. Working with the public and private sector in enhancing fertilizer use for cropping systems." Space to Place (S2P) project is an initiative to increase fertilizer use efficiency in sub-Saharan Africa. The project aims to generate and promote technologies for improved soil productivity, sustainable land, agricultural water and ecosystem management and resilience to climate change is implemented by the National Agricultural Research Laboratories (NARL) Kawanda, under the soils, Environment and Agro Metreology Program. More [SOILS-Space to Place - IFDC](#)

### New KOPIA Director Welcomed at NARL



*Director of Research at NARL receives gifts from the incoming and outgoing Directors of KOPIA*

South Korean Agency for International Agricultural Development (KOPIA) have a new Director Dr. Cho Ilho. He was welcomed at the National Agricultural Research Laboratories -Kawanda (NARL) by the Institute's Director of Research Dr. Robooni Tumuhimbise. Dr. Cho Ilho paid a courtesy call to Dr. Roboni in the presence of the outgoing KOPIA Director



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Dr. Park Taeson, whose tour of duty is over in Uganda after serving for five years respectively. Prior to visiting NARL, the new Director of KOPIA held a meeting with Dr. Yona Baguma, the Director General of the National Agricultural Research Organisation (NARO), at the NARO headquarters in Entebbe. Dr. Baguma commended KOPIA for its infrastructure development projects at NARO Zonal Agricultural Research Institutes in Mukono, Kawanda, Namulonge, and Luweero. He commended KOPIA's collaborative planning approach, ensuring that implemented programs are tailored to meet the needs of farmers. Over the years, KOPIA has provided significant support to NARO, particularly in enhancing various agricultural programs aimed at improving the livelihoods of smallholder farmers. Specifically working with NARL, farmers in Teso sub-region districts of Kumi, Ngora, Soroti and Kalaki, whose farmers have received support in citrus production management and market development through model villages. More [Kopia gets new director, focuses on vegetables and citrus | Monitor](#)

### PGRC Staff Trained in Quality Management System



*Stakeholders plant trees at the Entebbe Botanical gardens at the Running Out of Trees (ROOTS) Campaign in 202*

Representatives from the Global Diversity Crop Trust (GDCT) – Janny Van Beem and Nassir Meriem visited the Uganda National Gene bank from 19<sup>th</sup> – 22<sup>nd</sup> February 2024 to validate and train staff in Quality Management aspects. Janny informed the staff that Quality management attracts partnership and funding. In attendance was Dr. Alex Barekye and Eng. Charles Kibirige from NARO Secretariat. Dr. Barekye gave welcome remarks on behalf the NARL Director, Dr. Robooni Tumuhimbise and thanked GDCT for their technical and financial support. Eng. Kibirige advised that there is need to construct a new gene bank instead of remodeling the existing one. Another meeting was held at NARO Secretariat with the NARO Deputy Director General in charge of Research Coordination Dr. Swidiq Mugerwa and the Director General NARO Dr. Yona Baguma. The DDGR noted that the National Gene bank should be the central unit and custodian of germplasm acquisition. Breeders should acquire germplasm through the gene bank and then access it



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from the gene bank for effective data management. The DG stated that the 10 year's support and network with Crop Trust will harness the resource and improve the gene bank facility. Earlier on a group of 101 athletes from the Matooke Marathon Runners visited the Gene bank, planted over 190 fruit tree species including Guava, Java plum, Canarium and mangoes donated by the Katonda Afaayo Foundation in Entebbe Botanic Gardens. The theme of the event was *"Let us plant tree and save the earth for the future"*. More .....  
[UGANDA: 2021 Roots aims to plant 40 million trees | Afrik 21](#)

### NARO Takes Knowledge to Farmers in Eastern Uganda



*Left: DG NARO and Chairman NARO Governing Council at the opening ceremony of the Eastern Uganda Agricultural Show at Awoja Riverside Farm. Middle: Fmanuel Ongua explaining to students soil fertility enhancement at the show. Right: Dr. John Adriko training farmers in citrus orchid management*

Dr. John Adriko the Program Leader for Biotechnology and Biodiversity urged citrus fruit farmers in Teso to market their citrus fruits in groups so as to get higher prices compared to selling as individuals. Speaking at the Awoja Riverside Farm Agricultural show in Soroti, he encouraged farmers to maintain quality fruits by avoiding diseases. "You can save a lot on pests and diseases if you start by cleaning the orchid to avoid spreading diseases from diseased fruits that drop off the trees", he told farmers during the training sessions on citrus production.

National Agricultural Research Laboratories -Kawanda (NARL), participated in the show along other NARO Institutes in the 4 day show that attracted people from east and northern Uganda. From NARL, The soils, Agro-meteorology and Environment program showcased the new Eastern Uganda Soils map that explained the various soil types and fertility levels of soils in the region. A practical training on enhancing soil and water in citrus orchards was done with farmers groups. The Food Bioscience and Agribusiness program showcased sorting and grading of citrus fruits, value addition of citrus to make fresh juice, juice concentrate and marmalade. The NARL team was hosted to a one hour and a half radio talk



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show on Kyoga Veritas Radio in Soroti. At the official opening ceremony, The Chairman NARO governing Council Dr. Olaho Mukhani and Director General of NARO Dr. Yona Baguma inspected various exhibition stalls, and plots at Awoja Riverside Farm." Agricultural Shows are very important avenues for reaching farmers. These are events where many ideas re exchanged between researchers and farmers and farmers to farmers, farmers with extension and other stakeholders, noted the chairman. He thanked Mr. Joseph Asutai the proprietor of the farm for the vision of establishing Awoja Riverside Farm and congratulated him on the third event of 2024 that is run annually. He thanked the District Agricultural officer for Soroti, Mr. Okello Moses for working with the farmers and using Awoja Riverside Farm as a demonstration area. While reflecting on the shows he organized years ago in Kenya that brought many stakeholders to learn at the shows, he said" These shows expose new technologies to farmers". He noted that NARO should partner with such shows in the different parts of the country including towns at border point respectively.

Click on these links to view more

[Top NARO bosses impressed with Awoja riverside farm, see what they said. \(youtube.com\)](#)

[WATCH! The untold facts about Awoja Riverside farm \(youtube.com\)](#)

### Nakaseke farmers approve the new banana varieties introduced by NARO



Left: The Nakaseke farmers who participated at the food tasting activity. Middle: Farmers tasting the sample matooke during the sensory activity in Nakaseke. Right: Mrs. Teopista Nansubuga (the host farmer second Right) with a team from NARO at her plantation.

**B**anana farmers and consumers in Nakaseke district have tasted and approved the new improved banana varieties developed by NARO-NARL. NARO in collaboration with the International Institute of Tropical Agriculture (IITA) developed *matooke*- cooking banana hybrids which include NARITA 4, NARITA17, NARITA22, NARITA 18 and NARITA 24.

These varieties are resistant to pests and diseases. The hybrids were planted in 2021 in five representative farms in Nakaseke, where farmers interact with the improved hybrids and decide on the best for them to adopt. On 1<sup>st</sup> March, more than 40 participants converged at Mrs. Teopista



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Nansubuga's home in Bulwadda village in Nakaseke district to taste the first harvest of these *matooke* hybrids and contributed to determining the best hybrid after cooking. They scored the *matooke* varieties based on colour, softness, taste, and flavour among other attributes. Speaking at the event, Dr. Alex Barekye, the Programme Leader of the NARO Banana Research emphasised the importance of the farmer's participation in this activity because they are the end users of the *matooke* being developed. "We do this to get your perception as the consumers. Therefore, give us your honest score so that we can breed for you the best bananas." He further said the *matooke* testing activity is part of the process of developing the hybrids.

This activity was also supervised by inspectors from the Ministry of Agriculture Animal Industry and Fisheries who also scored and the findings were reported to the Variety Release Committee which is in-charge of releasing the best hybrid to the public. These hybrids code-named NARITAs have resistance to pests like nematodes and weevils and diseases such as black sigatoka, and are tolerant to harsh climatic conditions such as prolonged drought. They are- NARITA 4, NARITA17, NARITA22, NARITA 18 and NARITA 24. This was the first harvest of these varieties in the 3 regions of Central-Nakaseke, Eastern-Bugiri and Sheema and Mbarara respectively.