



# MUZARDI

# NEWSLETTER

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Mukono Zonal Agricultural Research and Development Institute (MUZARDI)

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# Editorial Note



Dear readers

As we close the year, we reflect with pride on a season of growth, collaboration, and community engagements. This year has been marked by strong partnerships, and continued support from institutions that drive our agenda. We would like to say thank you. Each milestone achieved is a testament to the dedication of MUZARDI staff, partners and supporters of our research work.

I would like to also appreciate those who have contributed to this issue. As we step into the new year, we remain committed to serve our stakeholders better and request for your valuable feedback.

**Mary Kayabula Nampeera**  
**Senior Communication Officer**

## Contributors

- Dr. Sseruwu Godfrey
- Christine Nakkazi
- Winfred Nakyagaba
- Ian Benywanira
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**Cover picture:** Dr. Mulindwa Aaron demonstrating to one of the teenager participants the use of a manual maize sheller during the Farm clinic

# MESSAGE FROM DIRECTOR



**A**s we conclude 2025, I reflect with great pride and gratitude on MUZARDI's progress that has been made through shared purpose, strong partnerships, and dedicated teamwork.

I sincerely thank the NARO Top Management and the Institute Advisory Committee for their guidance, as well as our valued partners. I also

appreciate our sister NARO institutes, academic partners, and the MUZARDI team, whose diligence has made us crown the year with success. To our clients, especially the farmers and private sector, your trust and engagement remain central to our work.

As you read this issue, I invite you to share in the progress we celebrate as

partners in research, innovation, and outreach advancing a resilient and productive Lake Victoria Crescent Agro-ecological Zone (LVCAZ). I thank you all for being part of our journey and look forward to an even more impactful year ahead.

Enjoy the reading!

**Dr. Henry Aaron Mulindwa**  
**Director of Research - MUZARDI**

# Forage production promoted for climate-resilient dairy farming



The forage demonstration planted at Kamenyamiggo

Climate change is rapidly reshaping livestock production systems in low- and middle-income countries, placing the livelihoods of millions of farmers at risk. Rising temperatures, erratic rainfall, and more frequent extreme weather events are disrupting feed availability, lowering animal productivity, and deepening vulnerability among pastoral communities. In Uganda's greater Masaka pastoral region, where dairy production largely depends on rain-fed pastures and traditional feeding systems, these challenges are increasingly pronounced.

Yet, as demand for animal products continues to rise toward 2050, the pressure on the dairy produc-

tion systems is set to intensify. Feed costs remain the single largest expense in dairy farming, accounting for an estimated 60–70 percent of total production costs.

As prices of conventional feedstuffs continue to escalate, many farmers are struggling to sustain profitable operations. The solution lies in changing focus and, in the adoption of climate-adapted, nutrient-dense forages that can be produced locally at lower cost.

Mukono Zonal Agricultural Development Institute (MUZARDI), through its Kamenyamiggo satellite station in Lwengo District, is therefore promoting climate-smart forages tailored to the needs of

dairy farmers. These forages are not only resilient to climatic stress but are also rich in energy and protein, hence enabling farmers to maintain milk production while reducing dependence on expensive commercial feeds.

Among the improved forages being promoted are high-yielding Napier varieties such as Juncao, Pakchong, and Sugar Napier, alongside *Brachiaria* hybrids, Sunhemp, Lablab, and Lucerne.

Field experience has shown that these forages significantly lower feed costs, improve animal nutrition, and provide a reliable buffer during periods of drought or feed scarcity. Importantly, they also en-



**A field of Russian comfrey forage at Kamenyamiggo**

hance soil health and farm resilience, offering long-term benefits beyond immediate productivity gains.

With many of them being perennial in nature the forages exhibit properties like high bio mass yield, fast regeneration after cutting and resilience to drought, which makes them appropriate for farmers to adopt. With the recent unexpected dry spell experienced in the month of November 2025, majority of the dairy farmers suffered pasture shortages, increased feed costs, and reduced animal productivity, caused by reliance on natural grazing and seasonal rains.

Scientists at Kamenyamiggo have adopted strategies of on-farm forage production and conservation in order to support farmers in greater Masaka region.

Farmers can now access planting materials and technical guidance on forage establishment,

**Feed costs remain the single largest expense in dairy farming.....**

management and conservation from the institute technical team.

Through investment in perennial forage systems and farmer capacity building, Mukono ZARDI is supporting farmers in dairy production, household incomes and climate resilience.

**Tropical forages can deliver multiple benefits in sub-Saharan Africa**

- 1 Improved forage varieties had **2.5** biomass than their local controls times higher
- 2 Improved leguminous forages increased milk by **39%**
- 3 Improved leguminous forages increased manure by **42%**
- 4 When forages were integrated/intercropped with food crops, soil loss was almost halved
- 5 soil organic carbon increased by around **10%** and grain yields increased by **60%**

Logos: Alliance, CIAT, CGIAR, RESEARCH PROGRAM ON LIVESTOCK

# MUZARDI ICT Staff attend the 2nd National ICT Summit



Mr. Mutyaba Robert during the summit

The Ministry of ICT and National Guidance, in partnership with the ICT Association of Uganda (ICTAU), convened the 2nd National ICT Summit from July 17–18, 2025 at the National ICT Innovation Hub in Nakawa. Under the theme “**Harnessing Digital Innovation for Sustainable Economic Growth**,” the summit brought together innovators, policymakers, researchers, and private-sector actors committed to accelerating Uganda’s digital transformation. Mr. Robert Mutyaba, Information Technology Officer, from NARO-Mukono ZARDI was part of the participants.

transition: AgriTech, HealthTech, EduTech, and the Digital Economy (including BPO). Presenters showcased the rapid rise of AI, machine learning, and big data as catalytic tools across agriculture,

education, health, and business.

During the summit, IT companies demonstrated practical digital solutions for farmers. Innovations included: **Automated weather**

As a participant from NARO, “I have noted the need to adopt digital enriching tools in research, innovation and outreach,” said Robert.



The summit focused on four priority sectors driving Uganda’s digital

**stations** delivering hyper-local forecasts directly to farmers' phones, helping them plan planting seasons and reduce climate-related losses.

**Solar-powered digital soil testing kits** from Simplify Network Uganda, these enable farmers to instantly assess soil pH and moisture levels for proper fertilizer decisions.

universities since it enables virtual laboratories, shared training materials, and collaborative seminars across institutions. Many presenters emphasized the need for improved institutional capacity in AI and machine learning, wider access to digital devices, and increased government investment in digital infrastructure to fully

economic strategy or value chains, which limits involvement of core economic ministries, leads to heavy consumption of imported technologies with little local production and national metrics. It's therefore wrong to focus on connectivity, not economic transformation.

Dr. Musenero called for a shift



**Some of the members of the ICT Association during the summit**

**Jaguz** livestock management software, which allows farmers to track animal health, feeding routines, and farm records. Axiom Zorn's big-data platform, designed to assess smallholder farmers' creditworthiness and link them to loans, insurance, and advisory services. These tools portrayed the fast-growing potential for homegrown AgriTech to improve productivity, resilience, and market inclusion. In the education sector, the "EDROOM" platform stood out as a promising digital resource for

unlock the platform's benefits. In her keynote address, Dr. Monica Musenero Masanza, Minister of Science, Technology and Innovation, challenged the nation to rethink its digital priorities.

She noted that although Uganda is expanding in the digital space, it has not yet translated this momentum into economic gains thus a need for strategic re-orientation. She pointed to key barriers like too much emphasis on digital inclusion rather than digital value creation, innovation activity without strong

towards a production-oriented, value-retaining digital economy that strengthens local ownership and competitiveness.

Uganda has the talent, ideas, and momentum to lead in digital innovation, but success will require stronger infrastructures, deeper technical capacity, and sustainable financing. As a participant from NARO, "I have noted the need to adopt digital enriching tools in research, innovation and outreach," said Robert.

# Mukono ZARDI hosts the 31st Seeds of Gold Farm Clinic



Dr. Mulindwa (DOR) guiding DDGATP, Dr. Kassim around stalls

**O**n 23rd and 24th August 2025 Mukono Zonal Agricultural Research and Development Institute (MUZARDI) successfully hosted the 31st Seeds of Gold Farm Clinic in Central Uganda at Ntawo, Mukono District. The Seeds of Gold Farm Clinics bring together researchers, farmers, and the private sector and therefore help bridge the gap between science and practice.

The two-day event attracted over 1,200 participants among them farmers, processors, researchers, academia, input dealers, and private sector players. Organized un-

der the theme “**Climate-Smart Farming,**” the clinic focused on key enterprises like coffee, banana, maize, fish, local chicken, and piggery. The event was organized by Nation Media Group, in partnership with the National Agricultural Research Organization (NARO), Bank of Uganda, Pride Bank, and LIONPRO. Scientists from NARO and partner institutions shared both practical and theoretical knowledge on climate-smart agronomic practices.

Farmers and participants had the opportunity to interact directly with subject-matter experts, gain-

ing hands-on experiences alongside classroom-style sessions. Input dealers and exhibitors showcased a wide range of innovations, including: improved seed varieties and fertilizers, animal feed concentrates and agro-chemicals, post-harvest handling technologies such as maize shellers and modern machinery including tractors.

Mr. Ssebunya John, the L.C 1 chairman Ntawo village, appreciated NARO and Nation media for organizing the Farm clinic that is freely providing skills to the community, thus development.

Dr. Aaron Henry Mulindwa, Director of Research – MUZARDI encouraged farmers to fully utilize the Farm Clinic to learn, network, and adopt new technologies for higher yields. He expressed gratitude to Nation Media, JEKA, and Holland Greentech for supporting MUZARDI in organizing a successful event and urged participants to continue visiting the institute for more agricultural support.

Dr. Sadik Kassim, Deputy Director General – Agricultural Technology Promotion (DDGATP), NARO applauded the massive turn-up of farmers. He emphasized that access to agricultural knowledge is key to improving productivity. He shared ten key tips for profitable farming, including: effective soil and water management, good crop and animal husbandry, ensuring timeliness in carrying out farming practices and diversifica-

tion of enterprises among others.

He also encouraged farmers to access government funding opportunities such as the youth empowerment and Emyooga funds, highlighting the need for responsible investment in agriculture.

David Jonathan Sentongo, Senior Activation & Promotion Officer – Nation Media Group commended the farmers for attending the farm clinic and praised NARO for sharing cutting-edge knowledge. He emphasized Nation Media’s commitment to strengthening partnerships that bring agricultural technologies closer to grassroots farmers across Uganda.

Dr. Barbara Zawedde, Principal Technology Promotion Officer – NARO highlighted that Farm Clinics are an essential avenue for disseminating research innovations

**Dr. Mulindwa,  
Director of  
Research  
MUZARDI  
encouraged  
farmers to  
fully utilize  
the Farm  
Clinic to  
learn, net-  
work...**



**Dr. Robert Isabirye trains poultry farmers**



**Participants learn about fish farming**

# KOICA enhances capacity of NARO Scientists in Seed Value Chains



**Participants use DUS technology of testing onions**

**T**he Korea International Cooperation Agency (KOICA), continues to advance its global mission of sustainable development and mutual cooperation. It therefore works to ensure that no one is left behind in the pursuit of the 2030 Sustainable Development Goals (SDGs).

In line with this mission, KOICA organized an intensive training under the Uganda seed value chain capacity building initiative for key vegetables on 16–27th September 2025. The training took place at leading agricultural institutions in Korea, including the Korea Seed and Variety Service, Kyungnong

Co., Nongwoo Bio, the National Institute of Horticulture and Herbal Science (NIHHS–RDA), and the Gyeonggi Provincial RDA.

The training aimed at equipping key scientists from the National Agricultural Research Organization (NARO) with knowledge and skills to lead vegetable variety development and enhancing the distribution of high-quality vegetable seeds in Uganda. Participants were expected to develop action plans to strengthen and expand the seed value chain in Uganda.

The program involved theoretical and hands-on training in vari-

ety testing technologies and seed inspection, creation of sustainable, developing practical action plans and field-based learning and cultural exchange where participants had to understand the Korean society while fostering strong cooperative ties with Uganda. These were taken through practical sessions on seed sampling and quality testing: moisture content analysis, purity testing, germination testing, and seed pathology.

Other areas included; National variety listing and seed certification where they learnt the seed operational structures, seed listing and certification systems.



**Dr. Mulindwa (Centre) receives his training certificate. Participants visit the Blue Farm Seed Research center**

One of the participants Dr. Mulindwa, the Director of research at MUZARDI, noted that the DUS Testing technology used in Korea could be adopted to benefit farmers in Uganda. DUS protocol involves testing vegetable seed using basic principles like distinctiveness, uniformity and stability.

Field Visits were also made to greenhouse and open-field demonstration sites, Seed-borne pathogen identification and detection laboratories, Seed quality management Center, KyungNong Co. for seeds and agrochemicals, Asia Seed Company that does seed production operations, the Seed Testing Center (genetic analy-

**The Training aimed at equipping key scientists from NARO with knowledge and skills to lead vegetable variety development...**

sis, pest and disease diagnostics), Sorghum commercialization site at Blue Farm Seed Research Institute and Private breeding research complexes, including the Seed Industry Promotion Center.

**A Climate Smart Agriculture (CSA)** session prepared participants to contextualize their knowledge for Uganda’s agricultural realities. Finally, the scientists were exposed to a hands-on training in breeding and seed management for key vegetables like pepper, pumpkin, and tomato. Through working groups of breeders and certification specialists from MAAIF teams developed action plans tailored for Uganda’s seed sector.



# NARO Scientists engage stakeholders at PEWOSA Show



Ms. Nakyagaba N. Winfred, a research officer trains coffee farmers at the Expo

**N**ARO–MUZARDI actively participated in the 2025 PEWOSA Agribusiness Show, held at Masaka Ssaza Grounds on 10–15th September 2025. The event is part of NARO’s visibility agenda to strengthen public–private sector collaboration, with the Buganda Kingdom. PEWOSA provides a key platform for agribusiness outreach, through its wide stakeholder engagements across Uganda.

Organized by CBS PEWOSA Nsindika Njake Business and Financial Initiative Ltd, the show ran under the theme “**Strengthening cottage business for agricultural growth and food security.**”

The event attracted exhibitors and visitors from all sectors of the agricultural value chain, including seed companies, agro-input suppliers, irrigation and machinery dealers, livestock service providers, NIRA, energy-saving innovators, students, extension workers, and religious and community leaders.

Mukono ZARDI, through its Kamenyamiggo (KMG) Satellite Station showcased NARO planting materials like quality KR coffee seedlings, vegetables like *sukuma wiki*, spinach, *Ntula*, and eggplant), and fruit tree seedlings. KR coffee varieties were the centerpiece of the exhibition, with scientists focusing on raising awareness about the

importance of sourcing certified, high-quality planting materials.

According to Ms. Nakyagaba N. Winfred, a Research Officer at KMG and Kirabo George, the demand for coffee seedlings continues to rise in the greater Masaka region. Several farmers visited the NARO Stall seeking for technical guidance on the coffee value chain, production and management practices.

These purchased coffee seedlings, while many more made bookings for pickup from the Kamenyamiggo station. On 12th September 2025, the NARO team trained at the Coffee Symposium organized in the PEWOSA show.

The session attracted many stakeholders, including farmers, cooperatives, and agribusiness actors. These provided training on good agricultural practices, site selection, seedling management, disease control, harvesting, and post-harvest handling.

The Chief Guest, Ow'ekitiibwa Kawaase Kakomo, Buganda Minister for Cooperatives, delivered a powerful message emphasizing that cooperation, teamwork, household food security, and adoption of modern technologies are the solutions to the agriculture sector. He reinforced the show's objective of empowering smallholder farmers and strengthening rural agribusi-

## The event attracted exhibitors and visitors from all sectors of the agricultural value chain, including seed companies...

ness enterprises as a noble cause.

Ms. Winfred noted that, MUZARDI remains committed to bridging the gap between research and community practice by sharing technologies, providing tailored advisory services, and engaging directly with farmers. Kamenyamiggo satellite station has so far provided coffee seedlings to farmers to support improved productivity, farmer resilience, and sustainable growth across the greater Masaka region.



Participants at the NARO exhibition stall

# Strengthening local seed systems through farmer trainings in Mukono and Luwero



The nine-year VegeSeed KOICA–Uganda partnership continues to make significant progress in strengthening Uganda’s vegetable seed value chain. The project aims at developing, producing, and disseminating certified high-quality vegetable seed for improved productivity and farmer incomes.

Mukono Zonal Agricultural Research and Development Institute (MUZARDI) is spearheading the shallot onion breeding works directly with both Luwero and Mukono district local governments.



The project also focuses on strengthening farmer capacity to produce improved seed of Nakati, hot pepper, shallot onion, pumpkin, and tomato. By enhancing both seed quality and local seed supply systems, the project will increase yields, improve nutrition, and open market opportunities for Ugandan and regional consumers.

As part of the project’s capacity-building strategy, farmer trainings were conducted on 29–30th October in Nama sub-county, Mukono District, and from 3–4th November 2025 in Bowa sub-county, Luwero District. Scientists from MUZARDI and

Scientists training project farmers on good agronomic practices

With the skills received in this training I hope to support other community-seed groups in Nama, Mukono district” noted Mr. Lwanga Sowedi a farmer.....



NaCRRI trained farmers on seed production, field selection, processing, storage, and marketing of high-quality certified seed.

The training further focused on demonstrating field-based seed

production techniques site selection, nursery establishment, harvesting, and post-harvest handling, decentralized vegetable seed systems to enhance local seed availability, incomes, and food security. Other areas covered included mindset change, rouging and off-type removal, determining appropriate harvest stages, and applying proper seed extraction techniques.

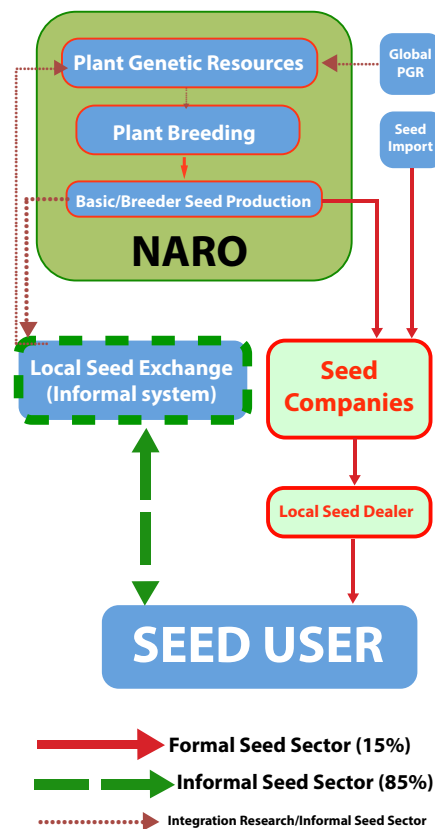
The trainings attracted over 82 farmers—45 from Nama and 37 from Bowa—including lead farmers, village model farmers, and members of organized farmer groups.

A delegation from South Korea also joined the sessions and later visited MUZARDI’s Ntawo station, where they toured the seed multiplication unit and inspected processing machinery. Farmers expressed interest in applying the acquired skills, particularly in seed selection, harvesting, extraction, cleaning, and drying as key practices for producing certified seed that commands higher market value. “With the skills received in this training I hope to support other community-seed groups in Nama, Mukono district” noted Mr. Lwanga Sowedi a farmer.

Dr. Sseruwu noted that “With the knowledge acquired, farmers are expected to improve seed quality and increase their household incomes.”



SEED FLOW IN THE FORMAL AND INFORMAL SEED SYSTEM



Source//: National Seed Strategy October 2018 Ministry Of Agriculture, Animal Industry And Fisheries 2018/19 - 2022/2023



# Stakeholders trained in improved coffee seed production at Kamenyamiggo

A four-day intensive training on improved coffee seed production was held from 20–23rd October 2025 at MUZARDI-Kamenyamiggo. The training brought together researchers, extension staff, local government officers, and farmers from Greater Masaka. The training was organized by the National Coffee Research Institute (NaCORI)

Kamenyamiggo stations participated actively alongside district agricultural officers and lead farmers. In his opening remarks, Dr. Sseruwu Godfrey, Center Manager for MUZARDI Kamenyamiggo, welcomed participants and expressed appreciation to NaCORI for investing in capacity building. He noted that improved seedling production

mand for KR8, KR9, and KR10 varieties, which stresses the need for well-managed nursery.

On behalf of NaCORI, Dr. Musesooli called on the farmers and nursery operators to adopt the newly released KR lines (except KR2). He noted that Uganda's National target of 20 million bags



**Dr. Mulindwa addressing the stakeholders at Kamenyamiggo**

under the National Coffee Seed Project (NCSP), a government initiative designed to increase the availability of high-quality coffee seedlings and strengthen Uganda's coffee seed system.

The program sought to expand technical capacity in the establishment and management of coffee mother gardens and nurseries. Critical steps were therefore taken to ensure that farmers access clean, certified planting materials. MUZARDI staff from both Ntawo and

is essential for strengthening compliance with coffee seed regulations. Dr. Henry Mulindwa, as Director of research MUZARDI, emphasized the importance of the training, particularly for Masaka sub-region, which remains one of Uganda's strongest coffee-producing hubs.

He emphasized the urgency of adhering to established regulations, continuous training of trainers, and MUZARDI's role in technology dissemination. He highlighted the rising de-

of coffee by 2030 requires a substantial increase in the production of certified seedlings. The project hopes to continue empowering other ZARDI staff in mother garden and screen house management as a key step in strengthening the country's coffee seed pipeline.

Representing local government, Lwengo District Agricultural Officer Mr. Peter Bamwesigye expressed gratitude to NaCORI and MUZARDI for hosting the training. He emphasized the need for district



**Participants gain field exposure of coffee fields**

teams to enforce nursery standards without hesitation, pointing out that the proliferation of uncertified nurseries necessitates stronger oversight and timely action.

The training further focused on proper establishment and management of coffee mother gardens, correct identification of KR lines, and practical demonstration of a well-managed nursery.

Other areas included establishment of a clonal coffee nursery, challenges in the national seed system, nursery shed management, pest and disease control, agroforestry practices in mother gardens, record keeping, and the requirements for operating a certified nursery. Strong emphasis was placed

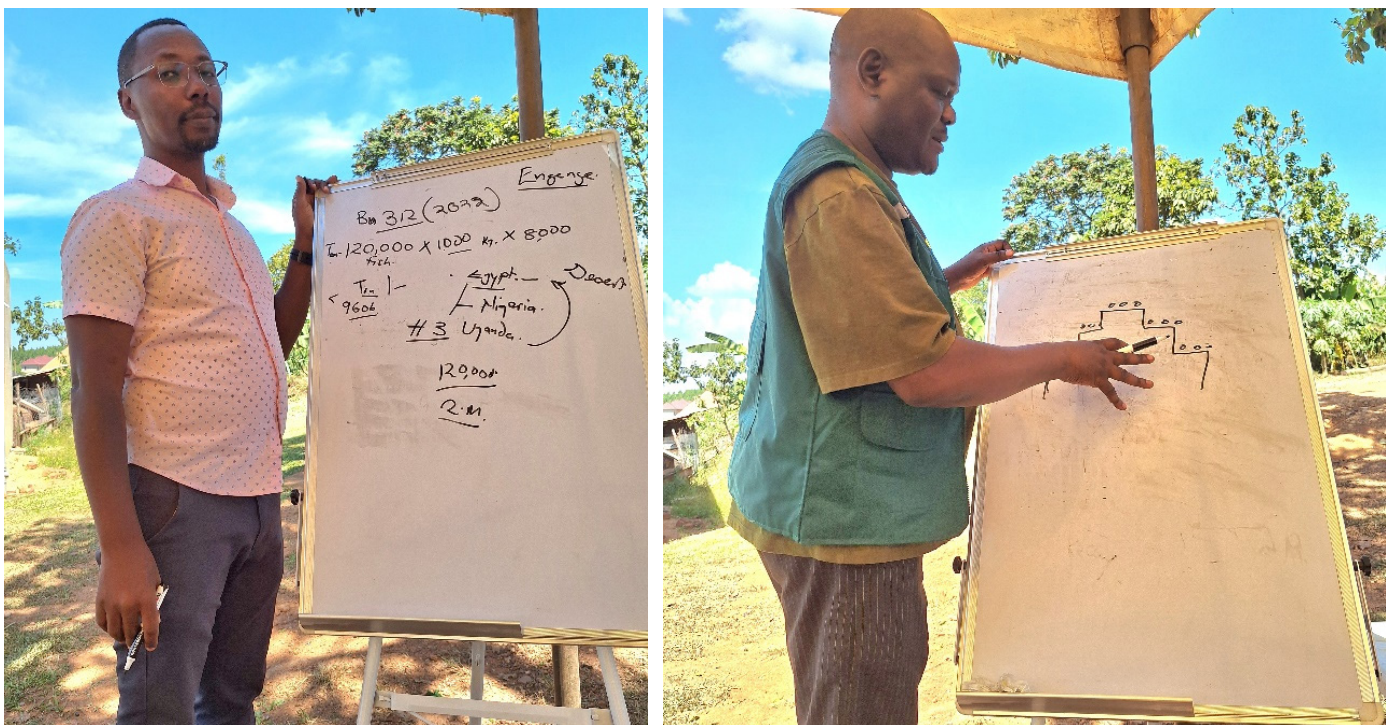
on nursery business planning and producing quality seedlings.

Dr. Sseruwu thanked participants for their active engagement and noted that the training marks a big milestone in supporting quality coffee planting material production, and enhancing sustainable productivity in the region.

Mr. Sam Kalibbala, the LC 1 chairman, Kamenyamiggo “encouraged participants to apply the knowledge gained and share it with other farmers and communities within the district.” He reminded attendees to continually reflect on the lessons learned, uphold standards, and work collectively to access better markets.

**Mr. Sam Kalibbala, the LC 1 Chairman, Kamenyamiggo “encouraged participants to apply the knowledge gained and share it with other farmers and communities within the district.”**

# MUZARDI Trains Farmers in Integrated Aquaculture and Vegetable Production



Scientists train farmers in Nyenje, Mukono district

**M**UZARDI conducted a one-day practical training on the integration of aquaculture into crop farming at JOVIC Continental Farm in Nyenje Village, Goma sub-county, Mukono District. The training was part of MUZARDI's efforts to equip farmers with climate-smart production options that enhance resilience, productivity, and household incomes amid increasing climate variability.

The training aimed at sensitizing farmers on optimal resource utilization and promotion of crop-aquaculture integration. It further exposed participants to innovative vegetable production techniques suitable for urban

**The training aimed at sensitizing farmers on optimal resource utilization, promote crop aquaculture integration especially....**

and peri-urban farmers. Participants shared diverse expectations, including learning about fish species, feeding and breeding, vegetable seed processing, poultry and piggery feeding, chemical use in vegetable production, and zero-grazing systems.

Aquaculture specialist Mr. Izaara Andrew highlighted the growing demand for fish, noting that Uganda ranks third in Africa for fish production despite having abundant freshwater resources. He emphasized fish farming as a highly profitable and nutritious enterprise, particularly when integrated with crop production, since pond water is rich in nutri-



Farmers listen to trainers during the engagement

ents that enhance vegetable yields. Practical guidance was provided on pond construction, feed management, sourcing quality fingerlings, and avoiding chemical contamination in integrated systems.

Additional sessions covered poultry farming, where farm-

ers received guidance on breed selection, brooding, feeding, and market linkages, and vegetable production and seed processing. Dr. Godfrey Sseruwu underscored the importance of quality seed, proper spacing, manure application, and correct harvesting and processing techniques to ensure

high yields and seed viability.

Ms. Namukose a farmer from Nyenje village, appreciated the scientists for reaching out to the community to promote farming practices that transform farmer incomes and livelihoods.

## Strengthening innovations through the NARO Intellectual Property Office

The National Agricultural Research Organization (NARO) is turning research ideas into real-world solutions through its Intellectual Property (IP) and Commercialization Office. The Intellectual property office has been able to ensure that innovations developed across NARO institutes are properly identified, protected, valued, and commercialized for the benefit of farmers, industry, and the national economy.

According to the Ms. Eliza Nahayo, a Senior Intellectual Prop-

erty Officer, the IP unit is a key asset of NARO that manages the organization's IP portfolio, keeps records of innovators, administers fair royalty and supports benefit-sharing arrangements with private sector. Beyond protection, it has also actively linked research to the market by facilitating technology transfer, commercialization of research products and services, and coordinated technology incubation and entrepreneurship initiatives.

The session at MUZARDI was part of the unit's routine sensi-

The unit hopes to ensure that research innovations deliver lasting socio-economic impact....



**Ms. Eliza Nahayo engaging MUZARDI staff on IP**

tization exercise around Public Agricultural Research Institutes (PARI) to create awareness about the IP policy to staff. The office also safeguards NARO’s interests by conducting IP due diligence before partnerships are formed, drafting and managing commercialization agreements, and monitoring the market performance of NARO technologies.

Ms. Theona Achola, a volunteer noted that, through IP scouting, training, patenting, trademark

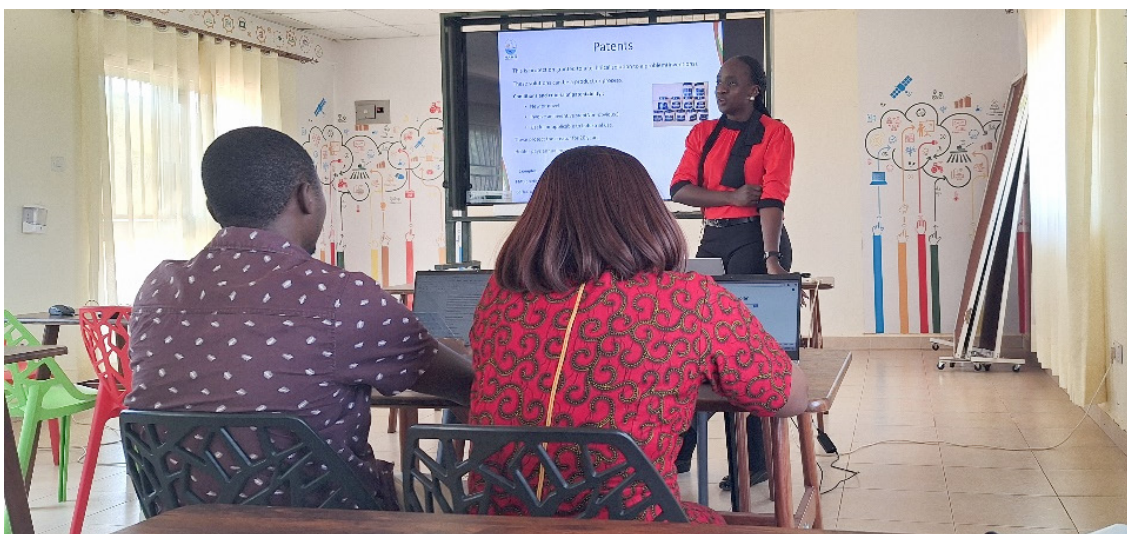
development, and licensing, the unit has been able to ensure that innovations move efficiently from the laboratory to the market.

At institute level, PARI Science Committees coordinate IP activities and provide regular updates to the IP Office which strengthens system-wide coordination.

Through these efforts, the NARO IP and Commercialization team also introduced an online E-learning IP Basic course that is accessed

freely on the NARO website. Ms. Eliza called on staff to attend at least 1-3 lessons annually for better appreciation of IP. The unit hopes to ensure that research innovations deliver lasting socio-economic impact for communities in Uganda.

Mr. Owen Singura, a project staff, noted after the training “I am glad that NARO is taking IP seriously and is currently permitting project and NARO staff to freely protect their innovations”



**Ms. Theona speaks to staff about IP management**

# MUZARDI Supports Government affirmative action in Greater Luwero



Hon. (Rtd) Col. Bright Rwamirama on a guided tour of stalls

The Government of Uganda reaffirmed its commitment to inclusive development and economic justice through the Greater Luwero Socio-economic empowerment programme an affirmative action initiative designed to transform livelihoods in communities that supported the National Resistance struggle.

The programme was launched in October 2024, and placed agro-industrialization at the center of household income growth and regional development.

In-line with the drive, a community engagement was held on 11th September 2025 at Luwero business grounds, where government officials, local leaders, researchers, extension staff, and farmers convened to review progress on the agro-industrialization agenda. The event featured a farmers' exhibition aimed at promoting modern agricultural practices and seed across Luwero, Nakaseke, and Nakasongola districts.

At the exhibition, MUZARDI showcased high-quality indigenous

vegetable seeds. This enhanced farmers' access to reliable planting materials, and supported productivity, nutrition, and market competitiveness. In addition, the team provided hands-on technical guidance to farmers and stakeholders on agronomy of key vegetables, including nakati, red amaranths, spider plant, and African eggplants.

Farmers also received technical knowledge on good agricultural practices for other priority enterprises particularly coffee and bananas where demand for tech-



**Mr. Ian.B. a Research officer at MUZARDI explains to the guests**

nical information remains high.

Beyond the exhibition, the team distributed information leaflets and flyers detailing a range of technologies developed and promoted by the institute.

While delivering the keynote address, the Chief Guest, Hon. (Rtd) Col. Bright Rwamirama, State Minister for Animal Industry, emphasized the government's renewed focus on ensuring that agricultural inputs reach farmers directly and on time.

He urged them to embrace modern technologies and best practices to maximize returns, while also calling for responsible use of government-provided resources to achieve sustainable outcomes.

**Overall, the farmers' exhibition significantly enhanced awareness of improved production practices, deepened farmer knowledge....**

In her remarks, the NRM Deputy Secretary General, Ms. Rose Namayanja, encouraged residents of Greater Luwero to support leaders who prioritize development and service delivery, noting that effective leadership is essential to translating programmes into tangible community benefits.

Farmers' exhibition significantly enhance awareness of improved production practices, deepen farmer knowledge, and strengthen linkages among researchers, extension personnel, and farming communities.

The Chief guest appreciated NARO for the commitment to translate research into real-world impact by empowering farmers with improved seeds, practical knowledge, and appropriate technologies.

# NARO and Muteesa I Royal University partner to launch BSc Agriculture Programme

**O**n 11th December 2023, the National Agricultural Research Organization (NARO) signed a Memorandum of Understanding (MoU) with Muteesa I Royal University (MRU). Under the MoU, NARO and MRU were to jointly implement selected activities in research and training. Prof. Vincent Kakembo the Vice Chancellor requested MU-

ya. These stakeholders provided guidance that led to a revised curriculum direction, with emphasis on incorporating competence-based aspects. Further reviews were undertaken by additional stakeholders, after which Dr. Sseruwu identified potential lecturers to support the initiation of the programme. In line with the MoU was the provision for shared facilities, where

Dr. Godfrey Sseruwu, Dr. Alex Isabirye, Ms. Winfred Nakyagaba, and Mr. Hossam Ssebanja. The team confirmed that the available facilities were adequate to support practical training for the BSc Agriculture programme and indicated that formal feedback would be communicated in early 2026. At the exit meeting, the NCHE team confirmed that NARO-Kamenya-



**Dr. Mulindwa A.H (DOR) leads the MUZARDI team to meet Muteesa Royal University Vice Chancellor. (R ) Dr. Sseruwu G. guides the university team in the fertilizer lab at Kamenyamiggo**

ZARDI to spearhead the development of the Bachelor of Science in Agriculture (BSc Agric) programme curriculum at Muteesa.

The curriculum development process was led by Dr. Godfrey Sseruwu, a Senior Research Officer at MUZARDI, a draft was therefore developed in line with National Council for Higher Education (NCHE) guidelines and was later refined through a stakeholders' review meeting held on 9 May 2024 at MRU's Kakeeka Campus, chaired by Dr. Zawedde Barbara Mugwan-

NARO-Kamenyamiggo facilities would be used for hands-on training. MRU students will subsequently have access to fields, farm equipment, and laboratories for hands-on training.

On 16th December 2025, an NCHE team conducted a curriculum and infrastructure verification exercise at MRU and NARO-Kamenyamiggo led by the Vice Chancellor. These were received by Dr. Henry Aaron Mulindwa, the Director of Research, MUZARDI, in the presence of other staff like

miggo has adequate facilities to support practical training for BSc Agriculture students and indicated that formal feedback on the outcome of the verification exercise would be communicated in early 2026. The Vice Chancellor, Prof Kakembo, noted that the collaboration with NARO marks a significant contribution of research to higher education and the entire agricultural sector in Uganda. This partnership will foster a release of skilled graduates ready to contribute meaningfully to farming communities and the business world.

# MUZARDI hosts students of University of Wisconsin Madison for a Study Tour



**A group picture of both MUZARDI and Wisconsin University staff & students**

The University of Wisconsin–Madison (USA), one of the leading universities in the United States, has maintained a long-standing collaboration with MUZARDI of organizing student study tours since 2017.

The most recent visit prior to the COVID-19 pandemic took place on 14th January 2020, after which the programme was temporarily suspended. On 18th August 2025, the collaboration resumed when MUZARDI hosted a delegation comprising of one staff member and twelve students, led by Professor James Ntambi, Steenbock Professor of Nutritional Sciences.

The delegation consisted of one staff member and twelve science undergraduate students led by

Professor James Ntambi. The study tour aimed at providing students with practical exposure between agriculture, health, and food security in a developing country context.

The Director of Research, Dr. Mulindwa, welcomed the team and briefed them about the different activities done by the National Agricultural Research Organization (NARO). This was followed by a presentation by Dr. Godfrey Sseruwu, which highlighted NARO's strategic interventions in addressing malnutrition within farming communities.

Dr. Sseruwu noted that NARO addresses malnutrition by promoting nutrient-dense crops such as orange-fleshed sweet potato, orange maize, which is rich in beta-carotene

a pro-vitamin A compound that the body converts into vitamin A. Six iron- and zinc-fortified beans have been released by NARO to enhance vitamin and mineral intake, among children and pregnant women.

The students also learned about MUZARDI's efforts to promote the production and consumption of fresh vegetables as a pathway to improved nutrition. They were introduced to small gardening technologies that enable even urban households to grow vegetables in limited spaces.

Through farmer training programmes, MUZARDI supports the production of healthy vegetables that contribute directly to household food and nutrition security. Beyond crops, the tour

The students also learned about MUZARDI's efforts to promote the production and consumption of fresh vegetables as a pathway to improved nutrition...



highlighted MUZARDI's work in promoting medicinal and high-value trees such as African cherry (*Prunus africana*), soursop, and pomegranate, and produces quality seedlings for uptake by farmers. These trees contribute not only to household health and incomes but also to biodiversity conservation.

The delegation further visited MUZARDI's indigenous chicken

breeding unit, which produces local chicks and eggs for communities. These toured the tilapia fish fry seed unit, which supplies fingerlings to farmers across the country.

Students learned about the nutritional value of tilapia, which is rich in essential vitamins and minerals including vitamin B12, phosphorus, potassium, and magnesium, as well as omega-3 and 6 fatty acids that are

important for heart and brain health.

“This visit has provided students with a practical understanding of how agricultural research translates into nutrition, livelihoods, and food security, said Prof. James Ntambi.



Ms. Janet a research assistant trains the students in vegetable growing

# Youth Engaged in Climate-Smart Poultry Value Chains

In the last half of 2025, the Greening the Chicken Value Chain Project delivered a series of hands-on training sessions in both Uganda and Burundi, reaching over 500 young value chain players. The trainings focused on practical, low-cost solutions for climate-resilient chicken production.

In Uganda, the engagements were held in Masaka City, Jinja City, at the Nile Vocational Institute, Kyambogo University, Bukalasa Agricultural College whereas in Burundi they were in Bujumbura city and Gitega province.

Across all sites, emphasis was put on hand-on learning, where short technical sessions were combined with live demonstrations and open discussions on the challenges facing poultry producers. Participants were introduced to climate-smart practices in poultry housing, feeding, brooding, and health management. A strong focus was placed on alternative feed resources, such as azolla, duckweed, moringa, Russian comfrey, Black Soldier Fly larvae, and abattoir by-products, as a response to rising feed costs and climate pressure on conventional feed systems.

Energy-efficient brooding technologies and briquette making were also demonstrated in efforts to promote reduction of the carbon footprint during brooding. Sessions on pest and disease management, including vaccination demonstrations, were particularly popular, reflecting the high demand for practical animal health knowledge among youth producers and students.

Across all locations, participants showed strong interest in practical demonstrations, particularly on alternative feeds, brooding, and disease prevention. Institu-



**Mr. Lumu Richard (in NARO jacket) trains chicken producers at the University of Burundi Gitega Campus.**



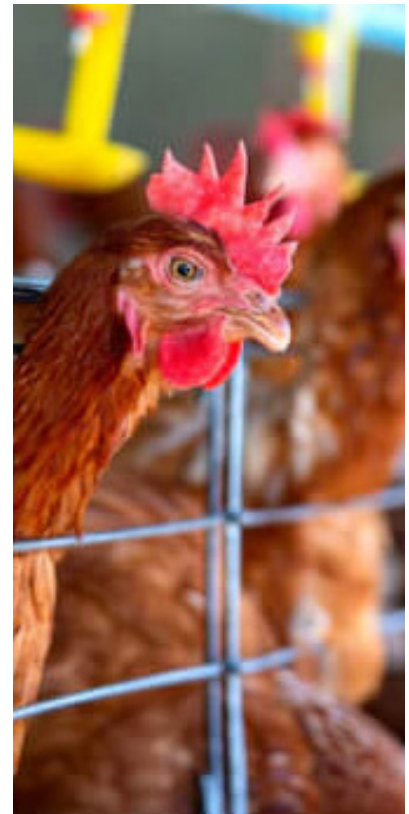
**A livestock technician demonstrates proper chicken mixing to students of Bukalasa Agricultural college**

## Training young people to earn a living from agriculture will strengthen existing value chains and fight poverty and food insecurity.....

tions expressed readiness to host demonstration units, and previously trained youth played a key role in mobilization and peer learning.

According to Mr. Galiwango Stephen, the academic registrar, Bukalasa agricultural college, 'training young people to earn a living

from agriculture will strengthen existing value chains and fight poverty and food insecurity.' Uganda and Burundi both have very young populations, and agriculture remains the backbone of employment in both countries, largely through smallholder and subsistence farming systems.



# NARO Top Management makes supervisory visit to MUZARDI



**Ms. Nazziwa Catherine feeds fry at the Aquaculture Multiplication Unit during a top management visit.**

**O**n 28th October 2025, a team comprising of the Director General Dr. Yona Baguma, the Deputy DGAT Dr. Kassim Sadik and the NARO legal officer Ms. Nabaweesi Violet made a supervisory visit to Mukono ZARDI. The team was welcomed by the Dr. Aaron Henry Mulindwa, the Director of research and together with the staff took the guests on a guided tour of the different units. At the coffee nursery, the scientists noted tangible contribution to the coffee sector through the increasing production of KR coffee seedlings at both Ntawo and Kamenyamiggo. However, the unit faces a challenge of limited access to KR 8 – 10 that would enable them make more impact.

The fish unit reported production of 1800 fry with a survival rate of

95% annually among farmers who access. Top management was impressed with this contribution to the fisheries sector and advised the scientists to document the impact made among farmers in the zone and beyond. While at the Vegeseed facility where breeding of shallot onions is done, Dr. Yona advised the breeders to think through the breeding process in order to accelerate selection of the best lines.

While at the poultry unit, the team was advised to enhance hatchability by constructing laying boxes on the side and mix grounded diatomaceous powder in chicken feeds. Dr. Mulindwa appreciated top management for the timely visit as well as the guidance given in research at respective units. He noted that the institute is striving

on tangible teamwork by the staff.

The Deputy Director General Technology Promotion, Dr. Kassim noted, that technical expertise and good attitude had been observed at the various units. He called on the scientists to document impact data from village, parish, sub-county to district level.

While addressing the staff, Dr. Yona appreciated the Director and his team for maintaining the momentum and performance of the Institute as NARO yearns to serve farmer communities and contribute to the country. He further requested scientists to focus on developing the piggery and local chicken value chains as flagship commodities for more livelihood impact.



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