



NARO

NaLIRRI News

JUNE - DECEMBER 2025

EDITION



**NATIONAL LIVESTOCK
RESOURCES RESEARCH INSTITUTE**

EDITOR'S NOTE

Winnie Nanteza
Development Communication Officer



Welcome to the June–December 2025 edition of the NaLIRRI Bi-Annual Newsletter. Over the past six months, the Institute has had an array of scientific breakthroughs, developments and activities; from vaccine development and laboratory validation to district-level engagements and regional partnerships.

A defining feature of this issue is the evolution of the Anti-Tick Vaccine platform now looking to become a fully-fledged center. This edition is also special as it coincides with the publication of the biography of Prof. Jolly Mary L. Kabirizi, compiled and developed by the NaLIRRI Communications Unit. She worked with NARO for over 30 years and her story reminds us that impact builds from decades of service, scientific commitment.

We hope this newsletter offers a snapshot of the Institute's work and the people advancing livestock in Uganda and beyond.

The NAROVAC® Anti-tick Vaccine: racing towards commercial production

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Advancing local production of Aflasafe at Nakyesasa

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DIRECTOR'S MESSAGE

Prof. Samuel Majalija
Director of Research, NaLIRRI



The June–December 2025 period has marked an important phase of consolidation and strategic advancement for NaLIRRI. We have taken significant steps toward operationalizing the NAROVAC production centre under Good Manufacturing Practice standards. The elevation of the Anti-Tick Vaccine platform into a fully-fledged Centre reflects years of scientific development, infrastructure investment, and human capacity strengthening. Equipment installation, system qualification, and regulatory engagement have progressed steadily, positioning NARO closer to sustainable local vaccine production.

At the same time, our broader research pipeline remains active and responsive. From dual LSD-FMD vaccine development and enhanced FMD surveillance systems to expansion of assisted reproductive technologies, climate-smart forage systems, and local Aflasafe production, the Institute continues to address livestock productivity, biosecurity, and food safety in a comprehensive and integrated manner.

Institutional reforms, including the merger of the Vaccinology and Biosciences programmes, are improving efficiency and accelerating innovation delivery. Strengthened laboratory systems including the adoption of SILAB LIMS; reinforce data integrity and compliance with international standards.

Our engagements with Parliament, the World Bank, regional delegations, universities, and international research institutions affirm growing confidence in NaLIRRI's mandate and capabilities. As we strengthen regulatory compliance and expand regional collaboration, we are positioning the Institute not only as a national research body, but as a regional contributor to livestock health systems.

The future of livestock transformation in Uganda depends on science that is practical, scalable, and accountable. NaLIRRI remains committed to delivering exactly that. I thank our staff, partners, and stakeholders for their dedication and continued support.



The NAROVAC® Anti-tick Vaccine: racing towards commercial production

Tick-borne diseases remain one of the most economically damaging constraints in livestock production. The June–December 2025 period reflects a shift from vaccine research toward vaccine deployment.

The June–December 2025 period marked a defining phase in NaLIRRI's vaccine development journey. What began years ago as a research-driven effort to combat tick-borne diseases entered a new stage of institutional strengthening and strategic positioning.

During the reporting period, the Anti-Tick Vaccine platform was formally elevated from a wing to a Programme under NaLIRRI. This transition signaled recognition of its growing technical scope, operational complexity, and strategic importance in the livestock sector.

At the same time, discussions began at the highest levels of NARO leadership regarding the long-term institutional

future of vaccine production within the Organization. Benchmarking visits to established vaccine manufacturing institutions in other countries were undertaken to study governance models, regulatory systems, and operational structures. Technical consultants were engaged to assess readiness, compliance pathways, and structural requirements necessary for transition into a fully-fledged Centre.

While the journey to become a center is unfolding, the groundwork laid between June and December 2025 represents the foundation upon which that decision was built. These cumulative actions demonstrate readiness not only at facility level, but at institutional level as well.

The reporting period therefore reflects measurable advancement toward commissioning under GMP conditions, even as institutional restructuring discussions progress in parallel.

Expanding Regional Market Positioning

The elevation of the Anti-Tick Vaccine platform into a Programme was accompanied by deliberate strengthening of human and technical capacity.

Vaccine manufacturing under Good Manufacturing Practice standards requires far more than laboratory expertise. It demands an integrated ecosystem of vaccinologists, molecular biologists, pharmaceutical production specialists, quality assurance officers, regulatory experts, engineers, utilities managers, environmental control specialists, veterinarians, and commercialization professionals.

During the reporting period, NaLIRRI consolidated and expanded this multidisciplinary team; not as isolated recruitments, but as part of

a structured effort to demonstrate institutional readiness. The Programme brought together expertise in viral immunology, recombinant protein production, fermentation systems, batch documentation, validation and qualification protocols, regulatory compliance, and international GMP systems.

Quality Assurance and Regulatory Affairs functions were strengthened to ensure deviation management, change control, audit preparedness, and documentation integrity. Engineering systems; including HVAC, water purification, environmental monitoring, and utilities management — were reinforced to support validated cleanroom operations.

Field veterinarians and tick colony specialists continued to support vaccine efficacy trials, animal welfare protocols, and traceability systems; ensuring that

laboratory production remains grounded in real-world performance evaluation.

Administrative, procurement, and inventory professionals ensured GMP-compliant materials management, supply chain continuity, and operational coordination.

This strengthening of human capacity was critical not only for operational scale-up, but also for engagements with regulators, consultants, and NARO top management during Centre planning discussions. In regulated vaccine production, credibility rests not only on infrastructure but on systems, documentation, and demonstrable competence.

The Programme's multidisciplinary structure therefore represents more than staffing expansion. It reflects institutional maturity.

Strengthening technical and regulatory capacity for sustainable production

As institutional restructuring discussions progressed, NaLIRRI simultaneously turned outward — recognizing that production capacity must be matched with deliberate market readiness.

During the reporting period, findings from a comprehensive Regional Market Intelligence (REMI) study covering Kenya, Tanzania, Rwanda, and South Sudan were formally presented. The study examined livestock populations, disease burden patterns, acaricide resistance trends, regulatory approval pathways, distribution systems, and stakeholder readiness across the four countries.

The findings confirmed strong and growing demand for sustainable tick control solutions across East Africa. Resistance to commonly used acaricides — particularly amitraz-based formulations — has reduced the effectiveness of chemical tick control in several regions. Farmers are increasingly confronted with higher treatment costs, declining efficacy, and environmental concerns. These dynamics create a compelling case for vaccination as a long-term, science-based intervention.





Tanzania emerged as the largest potential market due to its substantial cattle population and widespread tick burden. Kenya presents both strong demand and a well-developed veterinary pharmaceutical distribution network capable of structured rollout. Rwanda offers a stable and predictable regulatory environment with strong government commitment to livestock health. South Sudan, though more complex from a logistical standpoint, shows significant need — particularly through development-supported livestock programs.

Importantly, the study highlighted that no widely commercialized anti-tick vaccine currently exists in these markets. This positions NAROVAC® not as a competing product within a crowded field, but as a category-defining innovation.

The report also underscored the importance of regulatory alignment through East African Community harmonization mechanisms, which could streamline multi-country registration processes and reduce duplication.

The REMI findings therefore reinforced a strategic insight: vaccine production must be supported by market intelligence, regulatory planning, and partnership development. The Programme's strengthening during this period was deliberately aligned with regional positioning; ensuring that scientific advancement is matched by responsible expansion planning.





Significant progress was also made toward operationalizing the production facility under Good

Manufacturing Practice standards.

Equipment installation and qualification processes advanced, including environmental control systems designed to meet National Drug Authority requirements. International consultants supported compliance benchmarking, risk management frameworks, and systems validation processes.

Engagements with regulatory bodies and institutions such as AU-PANVAC strengthened oversight, documentation systems, and quality assurance structures.

Meet the Core Team

Photo	Name	Position	Area of Expertise
	Prof. Justus Rutaisire	Head of Vaccine Centre	Veterinary Medicine & Strategic Leadership
	Dr. Omony John Bosco	Head of Vaccine Production	Viral Vaccinology & Recombinant Vaccine Development
	Dr. Andrew Kiggundu	Production Manager	Biotechnology, Biosafety & Research Management
	Mulondo Samuel, MSc	Vaccine Production Technician	Molecular Virology & Viral Vaccine Development

	Nangonzi Rosette, MSc	Molecular Biologist	Antigen Production & Molecular Diagnostics
	Sandra Lunkuse, MSc	Molecular Biologist & QC Scientist	Genomics & Vaccine Quality Control
	Richard Ssekyanzi, MSc	Genomics Scientist & QC Consultant	Recombinant Vaccine R&D & Molecular Analysis
	Betty Perus Namazzi	Biomedical Laboratory Technologist	Molecular Diagnostics & Vaccine Laboratory Systems
	Lule Andrew	Vaccine Production Technician	Recombinant Protein Production & GMP Systems
	Ivan Kyakuwa	Vaccine Production Technician	Bioprocessing & Vaccine Formulation

	Nagayi Lamurah Namuli	Quality Control Officer (Chemist)	Analytical Testing & Pharmaceutical Quality Control
	Kagimu Thomas	Head of Quality Assurance	GMP Compliance & Quality Management Systems
	Isaac Mugisha	QA & Documentation Officer	GMP Documentation & Validation Systems
	Farida Khaukha	Regulatory & GMP Specialist	Pharmaceutical Regulation & International GMP Systems
	Nambi Hellen, MPS	Production Pharmacist	GMP Manufacturing & Production Operations
	Kiggundu Solomon Emergo	Experimental Animal Veterinarian	Animal Welfare & Vaccine Field Trials

	Kyomuhangi Rovence	Tick Colony Consultant	Tick Biology & Vaccine Efficacy Evaluation
	Ayebale Juliet	Tick Colony Technician	Experimental Trials & Animal Monitoring
	Liya Tadese Zewde	Monitoring & Traceability Consultant	Field Monitoring & Vaccine Traceability Systems
	Ashiraf Migadde	Business & Value Chain Officer	Commercialization & Market Development
	Douglas Guwondo	Inventory & Stores Officer	GMP Inventory & Supply Chain Management
	Oryem Rolex	Stores & Inventory Consultant	Warehousing & Materials Control

	<p>Atima Susan Katherine</p>	<p>Administrative & HR Officer</p>	<p>Administration & Staff Coordination</p>
	<p>Mutumba Benedict Ntanzi</p>	<p>BMS Engineer</p>	<p>HVAC, Cleanrooms & Facility Systems</p>
	<p>Brian Walugembe (Eng.)</p>	<p>HVAC Consultant</p>	<p>Air Quality & GMP Environmental Control</p>
	<p>Ayebare Ronard</p>	<p>HVAC Technician</p>	<p>HVAC Operations & Maintenance</p>
	<p>Muwanguzi Joel</p>	<p>HVAC Technician</p>	<p>Cleanroom Environmental Control</p>
	<p>Wampamba Peter Bugeza</p>	<p>Electrical Technician</p>	<p>Facility Electrical Systems & Maintenance</p>

	<p>Martin Mwesigwa</p>	<p>Water & Effluent Systems Technologist</p>	<p>Purified Water & Utilities Management</p>
	<p>Aaron Mwangi</p>	<p>Environmental & Safety Officer</p>	<p>Health, Safety & Environmental Compliance</p>



World Bank delegation reaffirms commitment to Uganda's agricultural transformation

NaLIRRI, alongside sister institutes under the National Agricultural Research Organisation (NARO), hosted a high-level delegation from the World Bank during a strategic visit aimed at deepening collaboration in Uganda's agricultural transformation agenda.

The delegation toured research facilities at both the National Crops Resources Research Institute (NaCRRRI) and the National Livestock Resources Research Institute (NaLIRRI), engaging directly with scientists and technical teams. At NaLIRRI, they observed progress in vaccine research and production systems, forage improvement platforms, reproductive technologies, and feed value addition initiatives. The visit provided an opportunity not only to showcase infrastructure and innovation, but also to reflect on the institutional

reforms and capacity strengthening that have taken place over recent years.

In his address, the Director General of NARO emphasized the remarkable expansion of scientific capacity within the organisation, noting the steady growth in PhD-level researchers and the increasing pace of technology releases. He underscored the need for sustained investment in irrigation systems, resilient seed supply chains, livestock vaccine production, and value addition if Uganda is to close productivity gaps and strengthen export competitiveness.

The World Bank delegation highlighted Uganda's significant potential to increase agricultural productivity, particularly by addressing yield gaps and strengthening value chain integration. Discussions focused

on linking research outputs more effectively with private sector actors, infrastructure development, energy access, and market systems. The delegation emphasized the importance of integrated rural development models that move beyond isolated interventions and instead connect research, inputs, extension services, and market access into cohesive systems.

The engagement concluded with renewed commitment to continued collaboration, particularly in research infrastructure strengthening, vaccine development, and integrated agricultural value chain transformation. The visit reaffirmed NaLIRRI's central role in positioning livestock research as a pillar of Uganda's broader economic development strategy.



Parliamentary Committee on the National Economy Engages NaLIRRI on research investments

On 11 September 2025, NaLIRRI received members of the Parliamentary Committee on the National Economy for a guided visit focused on reviewing investments in livestock research and infrastructure. The engagement provided an important platform for dialogue between policymakers and scientists at a time when Uganda is strengthening its domestic capacity in vaccine production, livestock breeding, and feed systems development.

During the tour, the Committee was briefed on progress in the extended field trials of the NAROVAC® Anti-Tick Vaccine, ongoing developments in Aflasafe biocontrol production, expanded goat breeding initiatives, and research into sustainable zero-waste livestock systems. Plans to establish

a dedicated feed laboratory were also discussed as part of broader efforts to enhance feed quality research and address one of the most persistent constraints in livestock productivity.

Committee members acknowledged the scale of scientific advancement underway but emphasized the importance of translating innovation into visible grassroots impact. Particular attention was drawn to regions such as Busoga and Northern Uganda, where livestock systems remain vulnerable and where technology uptake must be accelerated. Members encouraged the Institute to strengthen extension linkages and ensure that public investments yield measurable benefits at farm level.

The Committee pledged continued parliamentary support and urged effective utilization of the International Fund for Agricultural Development (IFAD) grant to expand NaLIRRI's footprint and enhance adoption pathways. The visit reinforced the central role of legislative oversight and policy backing in sustaining long-term agricultural research investments.



Advancing local production of Aflasafe at Nakyesasa

NaLIRRI made substantial progress toward local production of Aflasafe with the arrival of key manufacturing equipment at the Nakyesasa facility.

The new installations include cleaning, roasting, mixing, and packaging units designed to support in-country production of the biocontrol product used to combat aflatoxin contamination in food and feed. Once fully operational,

the facility will enhance accessibility of safe and affordable aflatoxin mitigation technologies to farmers and agro-processors.

Local production represents a significant milestone in strengthening Uganda's food and feed safety systems. By reducing reliance on imports and building domestic technical capacity, the initiative contributes to improved

public health outcomes and supports market competitiveness for agricultural produce.

Installation and calibration processes are underway, with production anticipated before the end of the year. The development reinforces NaLIRRI's role in linking livestock health, crop safety, and value chain integrity within an integrated agricultural framework.

Dual LSD–FMD vaccine project launched under STI-OP support

NaLIRRI initiated a new research project focused on piloting local production of an inactivated dual Lumpy Skin Disease–Foot and Mouth Disease vaccine in Uganda. The project, supported by the Government of Uganda under the STI-Operationalization Program, represents a strategic step toward strengthening national vaccine self-sufficiency.

During the inception meeting, project leadership emphasized strict adherence to scientific, regulatory, and ethical standards



throughout implementation. Application protocols were drafted to secure necessary approvals for vaccine development and testing, while Terms of Reference were formulated to define roles and responsibilities within the research team.

The initiative received guidance from the Science Committee and the Institutional Animal Care and Use Committee, ensuring alignment with compliance frameworks. By integrating dual vaccine development within local production systems, the project reflects an emerging shift toward multi-disease vaccine solutions that optimize manufacturing efficiency and broaden disease control coverage.

The launch signals NaLIRRI's continued progression from research and development toward scalable vaccine production capabilities.

Uganda's FMD vaccine supply strengthened through strategic collaboration

NaLIRRI advanced Uganda's Foot and Mouth Disease (FMD) control efforts through a significant milestone in antigen production during the reporting period. Scientists working under the FMD Research Team, in collaboration with Egyptian counterparts, successfully produced 90 litres of inactivated SAT-1 antigen; a critical component in the formulation of quadrivalent FMD vaccines.

The antigen was subsequently shipped to Egypt for final reconstitution under current Good Manufacturing Practice (cGMP) conditions, where it will be processed into finished vaccine doses destined for Uganda. This collaborative production model combines local scientific capacity in antigen development with established large-scale vaccine manufacturing

infrastructure, accelerating delivery timelines while strengthening domestic technical expertise.

The initiative contributes directly to the national target of delivering 15 million doses of FMD vaccine during the 2025/2026 financial year. By integrating local production stages into the broader vaccine supply chain, Uganda is gradually reducing reliance on fully imported formulations and building a pathway toward greater self-sufficiency in livestock vaccine production.

FMD remains one of the most economically disruptive livestock diseases in the region, affecting trade, productivity, and farmer livelihoods. Strengthening antigen production capacity is therefore not merely a technical achievement; it is a strategic intervention in safeguarding Uganda's livestock economy and enhancing disease preparedness.

Laboratory validation strengthens FMD surveillance and diagnostic confidence

NaLIRRI's DTRA Laboratory reached a critical quality assurance milestone with the successful validation of Standard Operating Procedures for sample analysis using the Non-Structural Protein 3ABC ELISA kit. The validation confirms that laboratory processes generate consistent, accurate, and reproducible diagnostic results, reinforcing confidence in the reliability of surveillance data.

Following the validation exercise, the laboratory team analyzed 225 livestock blood samples collected from various locations to assess exposure to the FMD virus. The results revealed that 106 samples showed antibodies

indicative of prior infection, pointing to an infection rate of approximately 23 percent among the animals tested. These findings provide valuable epidemiological insights that inform vaccine deployment strategies, outbreak containment planning, and targeted disease monitoring.

Reliable diagnostics form the backbone of effective disease control systems. By strengthening laboratory validation protocols and enhancing compliance with quality standards, NaLIRRI is reinforcing its capacity to generate credible data that supports national animal health decision-making. The milestone also contributes to broader efforts to align laboratory operations with international standards, ensuring traceability, data integrity, and technical accountability.



Together, enhanced diagnostic capacity and improved surveillance mechanisms position Uganda to respond more effectively to FMD outbreaks and reduce long-term economic losses associated with the disease.



Scaling assisted reproductive technologies for livestock improvement

NaLIRRI continued to expand its Assisted Reproductive Technologies (ARTs) program, advancing embryo transfer and hormonal synchronization interventions aimed at accelerating genetic improvement in livestock.

Recent monitoring visits confirmed successful pregnancies following embryo transfer procedures conducted on selected farms in Wakiso District. Additional surrogates are scheduled for transfer in the coming months as technical teams refine protocols to optimize conception rates under Ugandan production conditions.

Parallel efforts are ongoing within goat improvement programs, where synchronization and artificial insemination strategies are being tested to enhance productivity in indigenous breeds. These interventions are designed to shorten genetic improvement cycles and strengthen dairy and meat value chains through science-based breeding systems.

The expansion of ARTs signals a broader institutional commitment to modernizing livestock production systems and supporting farmers with high-performing, resilient breeds adapted to local environments.

Strengthening regional collaboration: Kenyan Senate Committee visit



NaLIRRI welcomed members of the Senate Standing Committee on Agriculture, Livestock, and Fisheries of Kenya during a study visit aimed at learning from Uganda's research and innovation systems.

The delegation received a comprehensive briefing on NARO's mandate and NaLIRRI's core research programs, including vaccine development pipelines, assisted reproductive technologies, feed innovation systems, and zero-waste livestock models. During facility tours, members observed the anti-tick vaccine production plant, embryo transfer laboratories, dairy processing units, and feed value addition platforms.

The visit stimulated in-depth discussions on regional collaboration in livestock health and vaccine production. The Kenyan delegation expressed particular interest in the NAROVAC® Anti-Tick Vaccine, noting its potential to address tick-borne disease burdens across East Africa. Conversations also explored avenues for technology exchange, joint research, and cross-border regulatory harmonization.

The engagement underscored the growing importance of regional scientific cooperation as African nations seek to strengthen livestock productivity and reduce reliance on imported animal health solutions. It also positioned NaLIRRI as an emerging regional reference point in livestock vaccine



Soroti University explores partnership with NaLIRRI

research and innovation.

A team from Soroti University, led by Principal Accountant Mr. Godfrey Oluka, visited NaLIRRI on a benchmarking visit as the university prepares to establish a dairy farming platform under its new Agricultural Research Center. During a meeting with NaLIRRI's Director, Prof. Samuel Majalija, the team revealed that land has already been secured and fundraising efforts are underway, with NaLIRRI identified as a potential strategic partner.

The visitors emphasized that their planned dairy platform is aimed at improving dairy breeds in Eastern Uganda to boost milk production and strengthen the region's dairy value chain. They were particularly impressed by NaLIRRI's zero-waste platform, which adds value to livestock by-products. Discussions highlighted opportunities for collaboration, including NaLIRRI scientists supporting curriculum development, supervising students, and providing internship placements. The team was advised to formally write to the NARO

Director General to initiate the required MoU process.

Eritrean delegation benchmarks NaLIRRI's zero-waste livestock model



NaLIRRI hosted a delegation from Eritrea seeking to learn from Uganda's experience in sustainable livestock systems and organic farming practices. The visit formed part of broader knowledge exchange efforts aimed at strengthening environmentally responsible agricultural production models within the region.

The delegation was introduced to NaLIRRI's zero-waste livestock platform, where innovations in manure management, value addition to cow dung, improved pasture establishment, and integrated feed systems were demonstrated. Discussions highlighted how waste streams from livestock units are converted into productive inputs, reducing environmental impact while enhancing farm-level profitability.

Particular interest was expressed in the Institute's approach to combining scientific research with practical demonstration systems that farmers can replicate. The delegation commended the organization and cleanliness of the facilities and described the zero-waste model as a viable template for organic livestock production in their home context.

The exchange underscored NaLIRRI's growing recognition as a regional knowledge hub for climate-smart and environmentally sustainable livestock innovation.



Uganda Prisons service officers undertake study tour at NaLIRRI

On 23 September 2025, officers from the Uganda Prisons Service attending the Intermediate and Staff Course at the Prison Academy and Training School visited NaLIRRI for a structured study tour on livestock production and management systems.

The visit was designed to strengthen practical understanding of small-scale livestock enterprises, pasture development, breeding management, animal health, and socio-economic

dimensions of livestock production. Participants toured the anti-tick vaccine production facility, observed zero-waste manure conversion systems, and engaged with researchers at the dairy and breeding units.

Discussions focused on how structured livestock enterprises can support institutional food security, vocational training, and income-generating activities within correctional facilities. By exposing officers to modern livestock

management approaches, the tour provided insights that can inform institutional agricultural programs while reinforcing the broader role of livestock production in rehabilitation and self-sufficiency initiatives.

The engagement highlighted NaLIRRI's role not only as a research institute but also as a national training and knowledge transfer center serving diverse sectors.

SILAB Laboratory information system strengthens data integrity and compliance

The training focused on installation of the system on institutional servers and strengthening staff capacity in sample reception, tracking, result entry, report generation, and data analysis. Participants from multiple laboratories, including Livestock Breeding, Mycotoxin Food and Feed, Livestock Nutrition, and Infectious

Animal Diseases, received hands-on sessions aimed at enhancing operational efficiency and traceability.

The adoption and strengthening of SILAB LIMS significantly improves compliance with ISO 17025 standards, enhances data security, and ensures reliability of laboratory outputs. In an era where

NaLIRRI advanced its laboratory data management systems through a refresher training on the SILAB for Africa Laboratory Information Management System (LIMS), conducted in collaboration with the Ministry of Agriculture, Animal Industry and Fisheries through the National Animal Disease Diagnostics and Epidemiology Centre.

diagnostics underpin disease control strategies and regulatory compliance, robust laboratory information systems are indispensable.

The initiative marks an important step in modernizing NaLIRRI's research infrastructure and strengthening confidence in laboratory-generated data.



Nutrition and dairy research platforms upgraded with new equipment

During the reporting period, NaLIRRI made notable progress in strengthening its nutrition and dairy research platforms through installation of new feed processing and dairy value addition equipment.

The newly installed facilities include drying units designed for aeroponic forage products and insect-based protein sources, supporting research into alternative and high-protein livestock

feeds. These developments align with emerging global interest in sustainable protein systems and efficient feed conversion technologies.

Earlier arrivals of dairy processing equipment have now positioned the platform to support production of pasteurized milk, yoghurt, cheese, milk powder, ice cream, whey protein, and casein. Beyond product development, the expanded capacity strengthens

research in dairy value chains, post-harvest handling, and quality assurance.

By integrating feed innovation with dairy processing research, NaLIRRI is reinforcing a systems-based approach to livestock productivity; addressing inputs, production efficiency, and value addition within a single coordinated framework.

People



Legacy profile: Prof. Jolly Kabirizi the mother of pasture research in Uganda

When Prof. Jolly Mary L. Kabirizi returned to NaLIRRI in September 2025, it was not merely a courtesy visit. It was home-coming.

For nearly five decades, from 1975 to 2025, Prof. Kabirizi's work helped shape Uganda's livestock feeding systems, strengthen forage research, and elevate the place of women in agricultural science. Her journey; from a rural upbringing in Wakiso District to becoming one of Uganda's most respected forage scientists; mirrors the growth of agricultural research itself in this country

Trained at Makerere University, where she earned her Bachelor's, Master's and PhD in Agriculture, Prof. Kabirizi devoted her career to solving what she often described as the "silent constraint" in livestock production: feed. At a time when genetics and disease control dominated livestock discourse, she chose to focus on forages; a field often underestimated, yet foundational to productivity. Her research on improved forage species, Napier grass disease management, feed conservation technologies, climate-smart innovations, and gender-responsive adoption strategies became central to strengthening Uganda's dairy and livestock value chains

But her contribution was never confined to research plots and academic publications. She believed deeply that science must "walk with farmers." Over the years, she translated complex research into farmer manuals, practical demonstrations, and training programmes that reached communities across Uganda and the wider East African region. Through collaborations with institutions such as ILRI, FAO, ASARECA, CIAT, The World Bank, DANIDA, the African Union and others, her work crossed borders and influenced forage systems across the region

Perhaps the most visible expression of her philosophy is Kyakuwa Farm in Wakiso District; a compact but powerful demonstration of zero-grazing systems, forage banks, silage technologies, and integrated livestock management. Established as a living classroom, the farm became a bridge between research and practice, hosting farmers, extension workers, policymakers, and students. It proved that innovation does not require vast land, but vision, discipline, and commitment.

Beyond technologies, Prof. Kabirizi invested in people. Many scientists currently serving in NARO and other institutions passed through her mentorship. She championed women and youth in livestock enterprises at a time when agricultural science spaces were largely male-dominated. Her leadership was quiet but loud, anchored in service, humility, and persistence.

Her contributions have been nationally and continentally recognized, including the Presidential Golden Jubilee Medal and the Golden Agricultural Sector Services Award. Within NaLIRRI, a road bearing her name stands as a lasting tribute; not only to a career, but to a generation of scientific leadership.

In 2025, the NaLIRRI Communications Unit had the privilege of compiling and developing her full biography, **Pastures and Me**, documenting her life story, scientific journey, and reflections on the future of forage development and livestock transformation. The publication captures both the scientific and human dimensions of her work, preserving institutional memory for future generations.

Her legacy is not simply recorded in awards or titles. It lives in the forage fields she helped establish, the farmers who adopted new feeding systems, the women and youth who found opportunity in livestock enterprises, and the scientists she mentored who now carry the work forward.

Post Graduate Achievers

Advancing Forage Science: Dr. Molly Allen Defends PhD in Plant Breeding



NaLIRRI proudly celebrates *Dr. Molly Allen*, a pasture scientist who has successfully defended her PhD in Plant Breeding at the University of Ghana's West African Centre for Crop Improvement (WACCI).

Her doctoral research focused on strengthening Uganda's forage systems by assessing the genetic variation of *Brachiaria*

species using advanced SNP markers, identifying traits linked to improved nutritional quality, and developing NIRS predictive models for rapid forage quality assessment. These scientific advances will accelerate breeding of more nutritious and drought-tolerant pasture varieties; contributing to reduce feed costs and improved milk and meat productivity.

Dr. Allen joined NARO in 2019 and currently serves as a Research Officer at NaLIRRI. She holds an MSc in Plant Breeding and Seed Systems and a BSc in Horticulture. Her work centers on developing highly nutritive and climate-resilient forage varieties to strengthen livestock production systems in Uganda.

Before joining NaLIRRI, she contributed to the development of β -carotene-rich cassava varieties resistant to Cassava Brown Streak Disease, supporting efforts to reduce vitamin A deficiency in cassava-dependent communities. Dr. Allen will officially graduate in February 2026. Her achievement reflects NaLIRRI's continued investment in scientific excellence and human capacity development for livestock transformation.

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