



KENYA PLANT HEALTH INSPECTORATE SERVICE (KEPHIS) **NEWSLETTER**

AUGUST - 2026



Celebrating 70 Years
of Growing Kenya's
Seed Sector

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KEPHIS Strengthens
Plant Pest Surveillance
Through Advanced
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How Climate-Smart
Agriculture Can
Transform Livelihoods
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Driving the Future
of Agriculture
Through Research
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Message from the Managing Director



Dear Stakeholders,

It is my pleasure to welcome you to the August 2026 edition of the KEPHIS Newsletter.

August was a productive month for the Service, marked by strategic reflection, technical capacity building, innovation, stakeholder engagement and strengthened partnerships. These activities demonstrate our continued commitment to delivering on our mandate of assuring the quality of agricultural inputs and produce, safeguarding plant health and facilitating safe trade.

During the month, the Board of Directors reviewed implementation of the

KEPHIS Strategic Plan 2023–2027 as part of the Midterm Review process. The exercise provided an important opportunity to assess progress, consider emerging challenges and opportunities, and provide strategic direction for the remaining implementation period. It also reaffirmed the importance of institutional performance, accountability and responsiveness to the evolving needs of Kenya's agricultural sector.

Strengthening our technical capacity also remained a key priority. Our inspectors undertook training in advanced technologies for plant pest surveillance, enhancing their ability to detect, monitor and respond to emerging pest threats. Investment in modern surveillance approaches, timely data



and skilled personnel is critical to protecting crops and livelihoods while maintaining confidence in Kenya's agricultural produce and supporting access to international markets.

The month also demonstrated the value of innovation within the seed sector. Our engagement with HZPC Holland B.V. on True Potato Seed technology explored opportunities presented by hybrid potato breeding while ensuring that appropriate variety testing, certification and regulatory systems remain at the centre of introducing new technologies.

Partnerships and knowledge exchange continued to strengthen our work. KEPHIS Nakuru hosted representatives from the Madagascar Seed Regulatory Agency for practical learning on seed regulation, variety release, certification and plant health management. Such engagements provide opportunities to share technical expertise, learn from one another and contribute to stronger regulatory systems within the region.

Closer to our farmers and other stakeholders, our teams continued

participating in field days, exhibitions and stakeholder forums. These platforms enable us to share information on plant health, quality seed and our regulatory services while providing opportunities to listen to and engage directly with the people we serve.

As we move forward, we remain focused on embracing science and innovation, strengthening our regulatory systems, developing our people and deepening collaboration with our stakeholders and partners.

I appreciate the Board, Management, staff, partners and stakeholders for their continued commitment and contribution to the KEPHIS mandate. Together, we will continue strengthening our systems and services to safeguard Kenya's agriculture, support food security and facilitate safe trade.

Prof. Theophilus Mutui, PhD.

Managing Director,
Kenya Plant Health Inspectorate Service
(KEPHIS)

The Editor's Note



Dear Readers,

Welcome to the August 2026 edition of the KEPHIS Newsletter.

This edition demonstrates the power of partnerships and knowledge sharing in advancing our mandate. Through engagements with local, regional and international stakeholders, we continue to exchange expertise, strengthen relationships and tell the story of how collaboration contributes to plant health, quality seed and safe agricultural trade.

Our Departmental Spotlight takes you to the Plant Quarantine and Biosecurity Station at KEPHIS Muguga, offering a closer look at the people, science and specialised work behind plant quarantine, diagnostics, clean germplasm exchange and other services that protect Kenya's agriculture.

This newsletter is more than a record of activities; it is a window into the stories that drive our work, the people we serve, the partnerships we build and the impact that brings the KEPHIS mandate to life.

We thank all our contributors and invite you to enjoy the stories in this edition.

To keep up with our daily activities and updates, follow us on our social media platforms:

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Enjoy the read!

Kellen Karuti

Deputy Director, Corporate Communications - KEPHIS

KEPHIS BOARD UNDERTAKES MID-TERM REVIEW OF THE 2023 – 2027 STRATEGIC PLAN



Kenya Plant Health Inspectorate Service (KEPHIS) Board of Directors held a workshop to review the implementation of the Service's 2023–2027 Strategic Plan and provide strategic guidance on the way forward from 12 to 14 August 2026. The workshop followed a consultative Midterm Review exercise facilitated by University of Nairobi UNES consultants in May 2026. The consultations brought together management and stakeholders to assess progress made in implementing the Strategic Plan, identify emerging challenges and opportunities and propose areas requiring strategic attention.

The consultants subsequently incorporated the views and recommendations gathered during the consultations and prepared a draft Midterm Review Report, which formed the basis of

discussions during the Board workshop. It provided an opportunity for the Board to consider the findings and recommendations of the Midterm Review, assess progress against the Strategic Plan's objectives and targets, and deliberate on the proposed strategic interventions.

A key focus of the workshop was to validate the proposed strategic interventions and performance targets, ensuring that they remain relevant to KEPHIS's mandate and responsive to the evolving needs of Kenya's agricultural sector. The Board also provided strategic guidance on the proposed revised direction, with discussions aimed at strengthening implementation, institutional performance and accountability during the remaining period of the Strategic Plan.

The engagement further provided a



platform for the Board and Management to reflect on achievements made so far, challenges encountered during implementation and areas requiring greater focus to ensure the Service delivers on its mandate effectively.

The workshop concluded with discussions on the way forward for finalization of the Midterm Review Report and its subsequent implementation. The Midterm Review is an important milestone in ensuring that the 2023–2027 Strategic

Plan remains responsive and aligned with KEPHIS's mandate of safeguarding Kenya's agriculture through effective plant health regulation, seed quality assurance, plant variety protection and phytosanitary services. Through the review, KEPHIS continues to strengthen its commitment to strategic accountability, performance improvement and effective service delivery, positioning the Service to better respond to emerging challenges and opportunities within Kenya's agricultural and plant health sector.

CELEBRATING 70 YEARS OF GROWING KENYA'S SEED SECTOR



Principal secretary, Dr. Paul Kiprono Ronoh, Kenya Seed Company Managing Director Mr. Sammy Chepsiror and Kitale Regional Office Deputy Director, Dr. Thomas Kosiom at the Kephis stand.

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Kenya Plant Health Inspectorate Service (KEPHIS), through its Kitale Regional Office, joined farmers, seed sector players and agricultural stakeholders in celebrating the 70th Annual Field Day of the Kenya Seed Company, held at Elgon Downs, Endebess, Trans Nzoia County.

The event brought together key players in Kenya's agricultural sector to celebrate seven decades of contribution to the development of the country's seed industry and reflect on the important role of quality seed in enhancing agricultural productivity, food security and farmers' livelihoods. The field day was graced by the **Principal Secretary, Ministry of Agriculture and Livestock Development, Dr. Paul Kiprono Ronoh**, who joined stakeholders in recognizing the milestones achieved in

the seed sector and the need to continue strengthening systems that support farmers.

KEPHIS Kitale Regional Office was led by the Deputy Director, Dr. Thomas Kosiom, who highlighted the Service's role in ensuring farmers have access to quality and certified seed. For KEPHIS, participation in the field day went beyond exhibiting its services. It provided an opportunity to engage directly with farmers, understand their experiences and respond to questions on seed quality and how to identify certified seed when purchasing at the Agrovet.

Through its seed certification mandate, KEPHIS regulates and oversees various aspects of seed production, processing, testing and certification. The objective is to ensure that seed available to farmers meets



the required standards for quality, purity, health and performance. Certified seed gives farmers greater confidence when making decisions on what to plant and contributes to better crop establishment, improved productivity and enhanced returns from farming.

The interaction with farmers also provided an avenue for KEPHIS to sensitize them on the importance of obtaining seed from authorised sources and checking for the required certification and labelling. This is particularly important in protecting farmers from poor-quality and counterfeit seed that can negatively affect yields and livelihoods.

The event further emphasized the importance of collaboration among regulators, seed companies, researchers, farmers, agro-dealers and other stakeholders

in building a reliable and sustainable seed system. As Kenya seeks to increase agricultural productivity and strengthen food security, access to quality seed remains fundamental. KEPHIS continues to work with industry stakeholders and farmers to uphold seed quality standards while promoting awareness and compliance across the seed value chain.

The 70th Annual Field Day was not only a celebration of the Kenya Seed Company's seven-decade journey but also a reminder of the collective responsibility to safeguard the integrity of Kenya's seed sector. From the seed planted today to the harvest of tomorrow, quality matters. KEPHIS remains committed to supporting a strong, reliable and sustainable seed system that empowers farmers and contributes to a food-secure Nation.

KEPHIS NAKURU HOSTS MADAGASCAR SEED REGULATORY AGENCY DELEGATION FOR TECHNICAL LEARNING VISIT



The visiting representatives from the Madagascar Seed Regulatory Agency pose for a group photo with KEPHIS inspectors.

KEPHIS is mandated to regulate the quality of agricultural inputs and produce, protect plant health, and facilitate compliance with national and international phytosanitary and seed standards. Through its regulatory, inspection, certification, laboratory, and phytosanitary services, the Service contributes to improved agricultural productivity, quality assurance, and the safe movement and trade of agricultural produce and planting materials.

On 5th August 2026, the Kenya Plant Health Inspectorate Service (KEPHIS) Nakuru Regional Office hosted representatives from the Madagascar Seed Regulatory Agency as part of a technical learning programme on seed regulation, variety release, certification, and plant health management.

The visit formed part of a wider training programme running from 3rd to 7th August 2026, designed to provide the participants with practical exposure to Kenya's seed regulatory systems and the technical processes supporting quality seed production, plant health protection, and safe agricultural trade.

As part of the programme, on 6th August 2026, the delegates undertook technical visits to selected seed production and processing facilities, gaining practical exposure to different stages of seed production, inspection, grading, and processing.

The team visited the Technology Farm, where they were taken through hybrid



maize seed production; Agrico PSA, where they observed potato seed production, inspection, and grading; and Bayer East Africa Limited, where they were introduced to maize seed processing operations.

During the Nakuru visit, the participants were taken through several key technical sections of the Regional Office, providing an opportunity to interact with KEPHIS officers and gain practical insight into the Service's operations.

The visit commenced with an engagement at the Seed Laboratory, where the Deputy Director, Mr. Charles Onyango, took the team through seed testing processes and the role of laboratory analysis in assuring the quality of seed intended for agricultural production. The practical session demonstrated how seed quality is assessed as part of the broader certification system.



The team subsequently visited the Plant Health Laboratory, where they were introduced to the laboratory's role in the detection and diagnosis of plant pests and diseases. The session provided an opportunity for the participants to appreciate how laboratory diagnostics support plant health surveillance and regulatory decision-making.



The programme later proceeded to the station farm, where post-control activities were demonstrated, with maize, wheat, and barley post-control plots featuring prominently. Participants were taken through the practical assessment of the post-control fields and the importance of post-control in verifying the identity, purity, and overall quality of certified seed



The visiting team is taken through laboratory processes at the KEPHIS Seed and Plant Health Laboratories.

The exercise was led by Seed Inspector Mr. Jonah Kahwai, who guided the team through the different crop sections and explained the post-control procedures in detail. Also at the farm, Variety Testing Section Head, Inspector Ms. Milkah Mbithe, took the participants through the ongoing activities, further elaborating on National Performance Trials and Distinctness, Uniformity and Stability (DUS) evaluation and the role of variety testing in supporting seed certification through the release of superior varieties and generation of crop variety descriptors.

Throughout the visit, the participants demonstrated keen interest in the various technical sessions, actively engaging KEPHIS officers through questions, taking notes, and participating in practical demonstrations. Their interactions reflected genuine appreciation for the systems and technical work undertaken by KEPHIS, with the team expressing particular interest in the practical application of regulatory processes across laboratory and field operations.



Participants at the KEPHIS station farm are taken through post-control activities and Distinctness, Uniformity and Stability (DUS) evaluation during the field practical session.

The engagement also provided an opportunity for the visiting representatives to identify practices and institutional reforms that could be adapted within the Madagascar Seed Regulatory Agency to strengthen its own regulatory systems and advance its mandate. This reinforced the value of the visit as a two-way knowledge-sharing platform, allowing both institutions to exchange experiences and perspectives on seed regulation and plant health management.

The visit underscored the importance of regional and international cooperation in strengthening seed quality assurance, plant health systems, and phytosanitary regulation. Such knowledge-sharing engagements contribute to the continuous improvement of regulatory systems and support the broader goal of ensuring the availability of quality seed, protecting plant health, and facilitating safe agricultural trade.



KEPHIS STRENGTHENS PLANT PEST SURVEILLANCE THROUGH ADVANCED TECHNOLOGIES



Early detection is the first line of defence against pests that can threaten crops, livelihoods, food security and agricultural trade. With plant health threats continually evolving, having the right technology and skills to identify and respond to these threats in time is critical to protecting Kenya's agriculture.

KEPHIS underwent a five-day training on Advanced Technologies for Plant Pest Surveillance, supported by TradeMark Africa (TMA), at Pride Inn Azure, Westlands. The training, held from 17th–21st August 2026, is part of ongoing efforts to strengthen the capacity of KEPHIS inspectors to apply modern technologies in plant pest surveillance.

The training officially opened by Dr. Isaac Macharia, Director, Phytosanitary and Biosecurity brought together KEPHIS inspectors for theoretical and practical sessions focused on the application of advanced technologies in pest detection, monitoring and surveillance.

As pests continue to pose a threat to agricultural production and trade, modern surveillance tools can make it easier to identify potential threats early, collect more accurate and timely field information and support informed decision-making. For KEPHIS inspectors, this means greater efficiency, accuracy and coverage when monitoring plant health threats across different regions.



Strengthening these capabilities is particularly important in preventing the introduction, establishment and spread of invasive and emerging pests. Early identification allows for timely action before a threat becomes more difficult and costly to manage, helping to protect crops, agricultural resources and the livelihoods that depend on them.



The use of advanced technologies will also strengthen the quality and timeliness of surveillance data, enabling KEPHIS to

better understand pest trends and respond to emerging threats. This supports faster and more informed decisions while strengthening coordination with farmers and other stakeholders involved in protecting plant health.

Beyond the farm, effective pest surveillance is important to Kenya's competitiveness in agricultural trade. Strong plant health systems help safeguard the quality of agricultural produce, protect Kenya's reputation in local and international markets and support continued access to markets that require high phytosanitary standards. By staying ahead of pest threats, Kenya can better protect its agricultural value chains while strengthening confidence in its produce.

The training therefore goes beyond building technical skills. It is an investment in the people, technology and systems that enable Kenya to anticipate plant health threats, act early and protect agriculture in an increasingly changing environment.

Through continuous capacity building and the adoption of innovative technologies, KEPHIS is strengthening its ability to detect threats earlier, respond more effectively and deliver stronger plant health services to farmers, traders and other stakeholders.

KEPHIS appreciates TradeMark Africa (TMA) for supporting this important capacity-building initiative and looks forward to applying the knowledge and skills gained to further strengthen plant pest surveillance and contribute to a resilient, secure and competitive agricultural sector.

KEPHIS HOSTS INTERNATIONAL DELEGATES FOR TECHNICAL EXCURSION ON PESTICIDE RESIDUE DATA GENERATION



The Kenya Plant Health Inspectorate Service (KEPHIS) recently hosted delegates from across Africa and international partner organizations during a technical excursion held as part of the Technical Symposium on Crop Grouping and the Codex Committee on Pesticide Residues (CCPR).

The excursion provided participants with an opportunity to move beyond theory and gain first-hand experience of how scientific data used in food safety and international trade is generated. Delegates were taken through Good Laboratory Practice (GLP) residue trials and laboratory analytical processes that support the establishment of Maximum Residue Limits (MRLs) for pesticides in agricultural commodities.

During the technical sessions, participants observed various stages of the

residue data generation process, including field trial design, pesticide application and spray calibration, sample collection and storage, laboratory analysis, and quality assurance. The practical engagement demonstrated the rigorous procedures required to generate reliable scientific data that can inform regulatory decisions and international food safety standards.

The generation of credible pesticide residue data is particularly important for agricultural trade. Maximum Residue Limits provide science-based benchmarks for pesticide residues in food and agricultural commodities, helping to protect consumers while supporting the safe movement of agricultural produce in local and international markets.

For Africa, strengthening the capacity to generate and use reliable residue data is



also important in enhancing the continent's participation in international standard-setting processes. Platforms such as the Codex Committee on Pesticide Residues provide an avenue for countries to contribute scientific and regulatory perspectives that influence standards affecting food safety and agricultural trade globally.



Through the excursion, KEPHIS demonstrated its role in supporting science-based regulation, food safety and agricultural trade, while providing an opportunity for participants to share experiences, learn from one another and strengthen technical networks across the region.

The engagement also highlighted the value of partnerships in strengthening agricultural regulatory systems. KEPHIS appreciated the collaboration and participation of AU-IBAR, USDA, CABI, the Minor Use Foundation (MUF), the

Pest Control Products Board (PCPB), and participating countries in making the technical engagement a success.

As agricultural trade continues to expand and food safety requirements become increasingly important, KEPHIS remains committed to strengthening scientific capacity, promoting sound regulatory practices and contributing to international efforts that support safer food systems, fair agricultural trade and stronger participation of African countries in global standard-setting processes.

HOW CLIMATE-SMART AGRICULTURE CAN TRANSFORM LIVELIHOODS IN NORTH EASTERN KENYA



For generations, communities in Kenya's North Eastern region have learned to make a living from the land and livestock under some of the country's harshest conditions. However, as rainfall becomes increasingly unpredictable, temperatures rise and prolonged dry spells become more frequent, relying heavily on livestock rearing alone is becoming a greater challenge. Yet within this challenge lies an opportunity: changing what is planted, how it is planted and how agricultural produce is turned into income. With the adoption of drought-tolerant crops and climate-smart agricultural practices, farming can become a pathway to food security, diversified household incomes and greater resilience to climate change.

Drought-resilient and early-maturing crops such as sorghum, millet, cowpeas, green grams, cassava and sweet potatoes, alongside climate-smart pasture and fodder varieties, can give farmers options that are better suited to dry conditions. Diversification means more than simply growing another crop; it spreads risk and creates multiple sources of food and income.

A household can grow drought-tolerant grains for consumption and sale, maintain livestock using improved fodder, cultivate high-value crops where conditions permit, and explore value addition by processing produce into products with longer shelf lives and better market value. Farmers, youth and PWD's can also organise themselves into groups, aggregate their produce, explore collective marketing and connect with buyers and also participate in seed production, agro-input businesses, processing, aggregation, transportation and digital agricultural services. In this way, agriculture can gradually move from subsistence to enterprise, creating opportunities across the wider agricultural value chain.

For this transformation to succeed, farmers need more than access to seed; they need confidence that the planting material they invest in is quality, genuine and suitable for their environment. This is where Kenya Plant Health Inspectorate Service (KEPHIS) plays an important role. KEPHIS regulates the seed and plant variety system, helping



ensure farmers have access to quality seed of suitable varieties. Through seed certification, inspection and testing, KEPHIS verifies that certified seed meets required standards for identity, purity, germination and freedom from pests and diseases. The Service also contributes to climate-smart agriculture through the release of resilient crop varieties, and capacity building of farming communities on climate-smart technologies. Through variety testing, registration and release, KEPHIS helps ensure that varieties introduced to farmers have been evaluated for their performance and suitability to particular agro-ecological conditions, with the National Variety List providing information on registered varieties, including traits such as drought resistance and early maturity.

KEPHIS' contribution extends beyond seed certification. Through farmer sensitisation, field days, demonstrations and stakeholder engagement, the Service supports farmers in understanding the importance of using certified seed, selecting appropriate varieties and adopting good agricultural practices. Plant health is equally important because even a drought-resilient crop can only deliver its potential

if protected from pests and diseases. KEPHIS' phytosanitary and plant health functions therefore complement climate-smart agriculture by supporting **plant pest surveillance, disease management, phytosanitary measures and the safe movement of healthy planting material.**

The future of agriculture in North Eastern Kenya does not have to be defined by drought. It can be defined by **adaptation, innovation and diversification.** Imagine a farmer who once depended primarily on livestock now cultivating drought-tolerant crops alongside livestock; a youth group producing quality seed; another processing sorghum or millet; and women turning locally produced crops into value-added products that generate income beyond the harvesting season. These are not simply agricultural activities they are opportunities to build resilient households, create livelihoods and strengthen local economies. Climate-smart agriculture offers communities a way to work with their environment rather than against it, moving from farming for survival to **farming for resilience, nutrition and income.**

Article By Vincent Bundi & Fulki Abdullahi

KEPHIS NAKURU CHAMPIONS SEED QUALITY AWARENESS AT KALRO MARINDAS SEED POTATO PRODUCTION UNIT LAUNCH



PS Dr. Paul Rono tours the KEPHIS exhibition stand during the commissioning.

On 25th August 2026, the Kenya Plant Health Inspectorate Service (KEPHIS) Nakuru Regional Office participated in the official opening of the Kenya Agricultural and Livestock Research Organization (KALRO) Seed Potato Production Unit at Marindas, Molo, Nakuru County.

The event brought together farmers, government officials, research institutions, agricultural stakeholders and members of the surrounding community, marking an important milestone in efforts to improve access to clean, certified potato seed in Molo and the wider Nakuru region.

KEPHIS mounted an exhibition stand alongside other agricultural stakeholders, using the occasion to create awareness of its mandate in regulating the quality of agricultural inputs and produce, protecting plant health and supporting compliance with national and international standards.



KEPHIS exhibition stand during the official opening of the KALRO Marindas Seed Potato Production Unit in Molo, Nakuru County, on 25th August 2026.

The event was graced by the Principal Secretary for Agriculture Development, Dr. Paul Kiprono Ronoh, who toured the KEPHIS stand and interacted with the team on the services being showcased.

In his address, Dr. Ronoh announced plans to incorporate a national farmers' training Centre into the facility's master plan, and drill water to support production activities. He also handed over 200 sacks of certified potato seed to women farmers attending the event and encouraged farmers to diversify into value-addition crops such as avocado, tea and coffee.

At the KEPHIS stand, farmers and other visitors were taken through practical aspects of seed quality assurance, including how to identify certified and uncertified seed potato, the importance of quality planting material, soil sampling and testing, plant variety protection and release, and seed verification systems.

The team also demonstrated how KEPHIS services work together, from soil testing and plant health protection to seed inspection and certification, helping visitors understand the measures used to assure the quality of agricultural inputs before they reach farmers.

The stand attracted strong engagement from farmers, agricultural stakeholders, members of the public and young people. Visitors actively sought information, asked questions and shared concerns on seed quality and access to KEPHIS services. Among the issues raised were the selling of uncertified seed by some agro-vets, and cases where farmers were misled about seed varieties suitable for their areas.

The engagement highlighted the continued need for farmer sensitization on seed certification, verification and the



importance of obtaining quality agricultural inputs through regulated channels.

The opening of the KALRO Marindas Seed Potato Production Unit therefore provided an important platform for bringing together seed production, research, regulation and farmer engagement. With increased production of quality seed, supported by regulatory oversight and continued farmer education, the facility is expected to contribute to improved access to quality potato planting material and strengthen the region's potato value chain.

Article by: Hellen Nadi Mazegu

LEARNING VISIT ON TETRAZOLIUM (TZ) TESTING FOR TUPANDE ONE ACRE FUND STAFF HELD AT KEPHIS NAKURU REGION ON 24th -28th AUGUST 2026



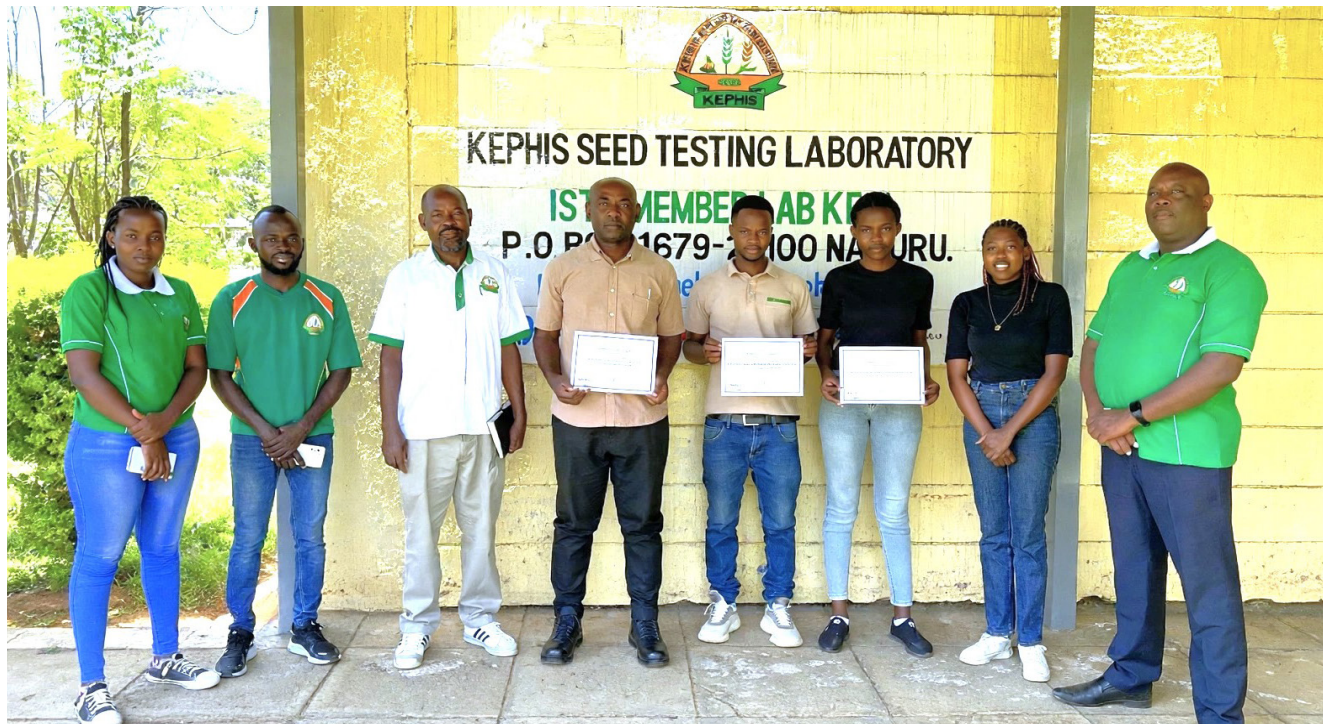
On 24th to 28th August 2026, the Centre of Phytosanitary Excellence (COPE) hosted a five-day learning visit for three officers from Tupande One Acre Kakamega region at the Kenya Plant Health Inspectorate Service (KEPHIS) Nakuru Regional Office. The program covered Tetrazolium testing training. The test is used to determine the viability of seeds. The training began by tetrazolium presentations followed by technical presentations and a guided tour of the seed testing laboratory at Kephis Nakuru.

The training combined theory with practical demonstrations, giving the participants hands-on experience that will

equip participants with the knowledge and practical skills required to correctly conduct, interpret and report tetrazolium tests for different seed species. This will strengthen the accuracy and efficiency of seed viability assessment and support reliable seed quality certification and decision-making. Practical sessions and facility briefs helped participants understand Kenya's phytosanitary systems and regulatory frameworks. The visit concluded with a peer-exchange session, experience sharing, and award of certificates, marking the successful completion of the program.



Theory put into practice. A KEPHIS officer demonstrates TZ testing procedures during a practical session at the KEPHIS Nakuru Seed Testing Laboratory.



Participants from Tupande One Acre Fund, Kakamega Region, pose with KEPHIS staff after successfully completing TZ testing training at KEPHIS Nakuru Seed Testing Laboratory.

DRIVING THE FUTURE OF AGRICULTURE THROUGH RESEARCH AND INNOVATION

5th REGIONAL RESEARCH CONFERENCE
ON LAND AND NATURAL RESOURCES

Kephis is
exhibiting!

Did you know research and innovation have the potential to transforming farming by helping farmers:

-  access quality planting material
-  improve productivity
-  manage emerging pests and diseases
-  adopt climate-smart practices
-  reach local and international markets.

Thank you for visiting Kephis stand.
KEPHIS : PLANT HEALTH, OUR BUSINESS



Agriculture is changing rapidly. From emerging pests and diseases to climate change, changing consumer demands and the need to access competitive markets, farmers today face challenges that require practical and innovative solutions. Research and innovation are therefore critical in building a resilient, productive and sustainable agricultural sector.

It is against this backdrop that the 5th Regional Research Conference on Land and Natural Resources, held on 19th and 20th August 2026, brought together farmers, researchers, policymakers, development partners and other stakeholders to share knowledge, explore new ideas and

strengthen partnerships for the future of agriculture. Recognizing the importance of research and innovation in addressing challenges facing the agricultural sector, the Kenya Plant Health Inspectorate Service (KEPHIS) took part in the conference to showcase its services and engage stakeholders on practical solutions for a stronger and more sustainable agricultural sector.

For farmers, the quality of seed and other agricultural inputs can determine the success of a crop even before it is planted. KEPHIS plays a key role in assuring the quality of seeds and other agricultural inputs, helping farmers access materials



that meet the required standards. Plant health is equally important, as pests and diseases can significantly reduce crop yields and affect the quality of agricultural produce. Through plant health inspection, surveillance and regulatory services, KEPHIS contributes to protecting Kenya's crops and preventing the introduction and spread of harmful pests and diseases.

As Kenyan agriculture increasingly targets regional and international markets, maintaining the quality and safety of agricultural produce is essential. KEPHIS supports the safe movement of agricultural produce by ensuring that plant health requirements are met, helping build confidence in Kenya's agricultural products locally and internationally.

The conference provided an opportunity for KEPHIS to interact with farmers, researchers, policymakers and other stakeholders, share knowledge and learn from emerging ideas and innovations. Such platforms are important in strengthening collaboration and ensuring that research is translated into practical solutions that respond to the realities farmers face.

The future of agriculture will require stronger partnerships, continuous learning and a willingness to embrace new ideas. Through its participation in the conference, KEPHIS reaffirmed its commitment to supporting a healthy, productive and globally competitive agricultural sector.

STRENGTHENING KENYA'S FIGHT AGAINST FALSE CODLING MOTH THROUGH SCIENCE, INNOVATION AND PARTNERSHIP



KEPHIS has reaffirmed its commitment to strengthening the management of False Codling Moth (FCM), *Thaumetotibia leucotreta*, a major threat to Kenya's horticultural production, exports and access to international markets.

This was highlighted during the THERMAFRICA Project meeting at KEPHIS Headquarters on 24th August 2026, bringing together KEPHIS, Ghent University and ICIPE experts. The European Commission-funded project seeks to understand the thermal ecology and reproductive characteristics of FCM in East Africa, particularly Kenya's

export production systems, to improve risk and climate suitability assessments.

The engagement also included visits to Penta Flowers, Redlands Flowers and Isinya Roses, where experts interacted with growers and gained first-hand insights into FCM management challenges.

Through research, innovation, capacity building and strong partnerships, KEPHIS aims to strengthen phytosanitary measures, support farmers and exporters, safeguard plant health and sustain Kenya's access to international horticultural markets.





KEPHIS PARTICIPATES IN AGRICULTURAL EXPO 2026 AT KAIMOSI AGRICULTURAL TRAINING CENTRE



Kenya Plant Health Inspectorate Service (KEPHIS) participated in the two-day Agricultural Expo 2026, held at the Kaimosi Agricultural Training Centre in Nandi County bringing together farmers, agricultural stakeholders, researchers, innovators, government institutions, private-sector players and development partners under the theme: “Adopting Innovative Technologies for Sustainable Agriculture through Value Addition.”

The Expo provided an important platform for stakeholders in the agricultural sector to showcase innovations, share knowledge and explore practical solutions aimed at transforming agriculture into a more productive, sustainable and commercially viable sector. It also highlighted the critical role of technology, value addition and partnerships in enhancing food security, improving farmers’ incomes and creating employment opportunities across the agricultural value chain.



The event was graced by the Chief Guest, Prime Cabinet Secretary and Cabinet Secretary for Foreign and Diaspora Affairs, His Excellency Dr. Musalia Mudavadi, accompanied by the Chief of Staff and Head of Public Service, Hon. Felix Koskei. Also, in attendance were His Excellency Stephen Sang, Governor of Nandi County; Hon. Cynthia Muge, Woman Representative, Nandi County; Hon. Julius Melly, MP Tinderet; Members of County Assemblies (MCAs); Chairpersons and CEOs of various State Corporations; and other leaders.



KEPHIS showcased its mandate and the role it plays in safeguarding Kenya's agricultural sector through the regulation and management of plant health, seed quality and variety protection. The Service continues to work closely with farmers, seed companies, exporters, researchers, agro-dealers, county governments and other stakeholders to ensure that agricultural production is supported by quality inputs and a healthy plant environment.

The Expo also provided KEPHIS with an opportunity to interact directly with farmers and agricultural stakeholders, create awareness on plant health and seed quality requirements and demonstrate the importance of using certified seed and complying with phytosanitary measures.

As agriculture continues to evolve, innovation and technology remain key drivers of sustainable agricultural transformation. KEPHIS remains committed to embracing modern technologies, strengthening surveillance and inspection systems, enhancing diagnostic capabilities, promoting digital solutions and working with partners to ensure that Kenya's agricultural sector remains resilient, productive and competitive.

KEPHIS AND HZPC EXPLORE TRUE POTATO SEED TECHNOLOGY



Kenya Plant Health Inspectorate Service (KEPHIS) on 26 August 2026, hosted representatives from HZPC Holland B.V. at its Headquarters in Karen for discussions on the development and adoption of True Potato Seed (TPS) technology, hybrid potato breeding, seed production and certification in Kenya.

The engagement brought together technical experts to explore opportunities for introducing innovative potato seed technologies while ensuring that regulatory and certification systems are aligned to support the production of quality planting material.

Key discussions focused on National Performance Trials (NPT) and Distinctness, Uniformity and Stability (DUS) trials for TPS varieties. These trials are critical in evaluating

the performance and characteristics of new varieties before they can be released for commercial production. The discussions also examined how certification and regulatory processes can support the introduction of TPS while safeguarding seed quality, varietal identity and integrity.

True Potato Seed presents an emerging opportunity to transform potato production by harnessing advances in hybrid breeding. Through hybrid breeding, TPS has the potential to deliver varieties with desirable traits such as improved productivity, disease resistance and resilience to changing climatic conditions. Unlike conventional seed tubers, which are bulky and require considerable space and resources for transportation and storage, TPS is produced as botanical seed and can be packaged in small, lightweight sachets.



This has the potential to significantly reduce transportation, storage and logistical costs while making seed more accessible and easier to distribute, particularly to farmers in remote areas.

HZPC is already engaging local seed producers in Kenya as part of efforts to establish a foundation for local TPS production. Subject to successful completion of trials, variety release and the necessary regulatory approvals, the first local production is expected in early 2028. The collaboration between KEPHIS and HZPC demonstrates the importance of partnerships in advancing agricultural innovation while ensuring that new technologies are introduced in a safe, structured and regulated manner.

For Kenya, the adoption of TPS could contribute to strengthening local seed production, reducing reliance on bulky planting material, creating new opportunities across the potato value chain and improving access to quality seed. As the country seeks to enhance food security and build climate-resilient agricultural systems, innovations such as TPS offer promising opportunities. KEPHIS remains committed to working with industry players, researchers and farmers to facilitate responsible innovation while upholding standards that protect farmers and strengthen Kenya's seed sector.

Through collaboration, innovation and sound regulation, Kenya is laying the groundwork for a more efficient, resilient and sustainable potato value chain.



KEPHIS BRINGS PLANT HEALTH AND SEED QUALITY SERVICES CLOSER TO MANYATTA STAKEHOLDERS



On 20th August 2026, the KEPHIS Embu team, led by Deputy Director John Muli, participated in the Manyatta Stakeholders Forum held at Kairuri Playground. The engagement provided an opportunity for KEPHIS to bring its services closer to farmers and other stakeholders while creating a platform for direct interaction and information sharing.

The forum served as an important avenue for engagement, awareness creation

and sharing of information on plant health, seed quality and other KEPHIS services that support farmers and contribute to safe agricultural trade. Through such forums, stakeholders have an opportunity to interact directly with KEPHIS, learn more about its services and gain a better understanding of the importance of plant health and quality agricultural inputs.

ONE TEAM, STRONGER RESULTS: BRINGING STAFF TOGETHER FOR BETTER SEED SERVICES



When people come together with a shared purpose, better results follow. The Seed Certification and Plant Variety Protection (SC&PVP) Directorate brought together its Deputy Directors, team leaders, technical teams and Farm Managers from across the regions for a two-day planning and coordination meeting held at KEPHIS Headquarters from 24–25 August 2026. The engagement created a valuable space for staff to share experiences, address challenges and align their efforts towards more effective, consistent and coordinated service delivery.

The meeting provided an opportunity for the Directorate to take stock of its activities, review progress and strengthen coordination across KEPHIS regional offices.

Key discussions focused on the internal audit report, implementation of the Annual Work Plan and Performance Contract, the annual calendar of activities, as well as emerging issues affecting the Directorate.

Beyond reviewing plans and performance, the meeting provided a platform for managers and technical teams to share experiences, identify implementation challenges and discuss practical ways of addressing them. The engagement highlighted the importance of regular consultation and collaboration among inspectors, team leaders, laboratory teams and managers in ensuring that activities are implemented effectively and consistently across all regions.



With seed certification, variety testing and plant variety protection playing an important role in assuring the quality of seed and protecting the rights of plant breeders, effective coordination remains essential. Harmonized approaches across regions help promote consistency in service

delivery, strengthen regulatory processes and ensure that stakeholders receive reliable and quality services. The meeting therefore served not only as a planning forum, but also as an opportunity to reinforce teamwork, accountability and a shared commitment to achieving the Directorate's objectives.

KEPHIS OFFICERS STRENGTHEN CRIMINAL INVESTIGATION SKILLS



Kenya Plant Health Inspectorate Service (KEPHIS) has strengthened the capacity of its officers to handle suspected regulatory offences following completion of a two-week Basic Crime Investigations Course at the National Criminal Investigations Academy (NCIA). The training, held from 10th to 21st August 2026, was designed to equip KEPHIS officers with foundational knowledge and practical skills in criminal investigation, particularly in areas relevant to the Service's regulatory mandate covering plant health, seed certification and plant variety protection and phytosanitary services.

As KEPHIS officers carry out regulatory and enforcement responsibilities, they may encounter suspected offences requiring proper investigation, evidence gathering

and preservation, preparation of case files and collaboration with law-enforcement and prosecution agencies. The training therefore provided an important platform for strengthening their ability to undertake these responsibilities lawfully, professionally and effectively.

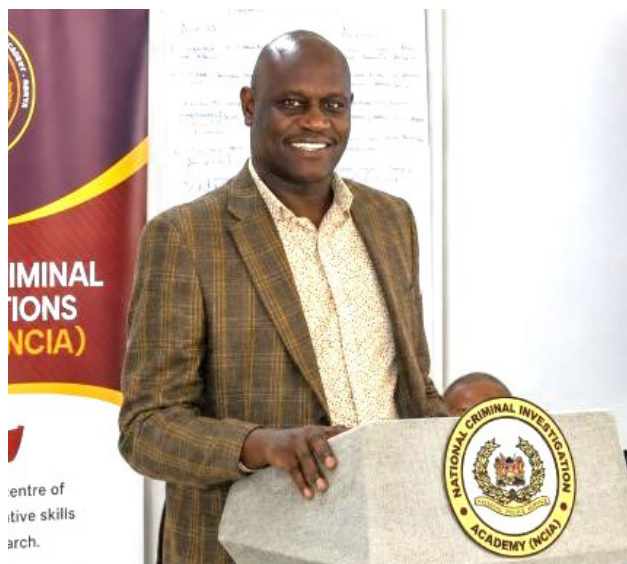
The course covered the investigation process from identification of suspected offences to court processes and giving evidence. Officers also gained skills in crime-scene management, exhibit and evidence management, charge drafting, case-file compilation and investigation reporting. The programme further exposed participants to oral, electronic and documentary evidence, surveillance and intelligence management, fraud investigations, professional ethics and court procedures. Practical learning was an

important component of the programme. Through mock investigation and mock court exercises, officers had an opportunity to apply the knowledge acquired in simulated real-life situations, strengthening their confidence in handling investigations and presenting evidence.

The training is expected to enhance KEPHIS' capacity to gather, preserve, document and present evidence in a systematic manner. It will also contribute to improved preparation of investigation reports and case files, greater preparedness for court attendance and giving evidence, and stronger collaboration with law-enforcement, prosecution and other regulatory agencies. Importantly, the programme reinforced the need for professional ethics, respect for the rights

of arrested and accused persons, and adherence to lawful procedures throughout the investigation process.

The Basic Crime Investigations Course provides a strong foundation for KEPHIS officers to undertake regulatory investigations in an evidence-based, professional and coordinated manner. Going forward, the knowledge and skills acquired will support improved investigation planning, evidence management, documentation, case preparation and inter-agency collaboration. By investing in the investigative capacity of its officers, KEPHIS continues to strengthen enforcement of plant health and agricultural regulatory requirements, contributing to a more effective and credible regulatory system.



Director, Crime Research and Intelligence Bureau (CRIB), Mr. Dennis Okadapau giving remarks on behalf of the Director, DCI, Mr. Mohamed I. Amin.



Mr. Nicholas Tunya, Ag. Director Planning and Strategy giving his remarks, on behalf of the KEPHIS management during the closing ceremony.



Deputy Director, Security, Mr. Victor Kibet, on behalf of KEPHIS management, giving his opening remarks for the training.

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NCIA Commandant, Mr. Ibrahim Jilo giving his remarks during opening of the course.

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DEPARTMENTAL SPOTLIGHT: PLANT QUARANTINE AND BIOSECURITY STATION (PQBS), KEPHIS MUGUGA



Mr. George Ngundo

Ag. Deputy Director- Plant Quarantine and Biosecurity Station (KEPHIS Muguga)

1. Briefly introduce the KEPHIS PQBS office and its role within the overall mandate.

The KEPHIS Plant Quarantine and Biosecurity Station (PQBS) Muguga is one of over 30 stations in KEPHIS. Its main mandate is plant protection through facilitation of safe transfer of plant genetic materials by preventing the introduction of plant pests, diseases and noxious weeds. The station's role started way back in 1931 with official Quarantine services in East Africa operating from Amani in Tanzania. In 1951, the quarantine facility was transferred from Amani to the present site at Muguga where it served the three East Africa territories (Kenya, Uganda and Tanzania) until July 1977 under the ministry of Agriculture and later the then Kenya Agricultural Research Institute (KARI). It was later handed over to KEPHIS upon its formation in 1996.

KEPHIS's Plant Quarantine and Biosecurity Station (PQBS) at Muguga is Kenya's specialist facility for plant quarantine, plant-health diagnostics and clean germplasm exchange. It is a key operational arm of KEPHIS—the national plant protection organization—whose broader mandate covers plant health, seed quality, plant-variety protection, agro-input quality and safe agricultural trade.

PQBS is the KEPHIS station that manages the high-risk plant-health part of plant movement: identifying pests, holding imported materials under quarantine, testing them, and releasing only materials that meet phytosanitary requirements. Its central purpose is to prevent the introduction, establishment and spread of harmful plant pests, pathogens and noxious weeds while enabling legitimate research, breeding, seed production and trade.

Within KEPHIS, PQBS complements border inspection and import/export controls at airports, seaports and land borders. Materials judged to carry higher pest risk are sent or directed to quarantine and diagnostic processes at Muguga rather than being released immediately.

2. What are the key services and activities undertaken at the PQBS in Muguga?

The Station provides capacity building and training to stakeholders in the agriculture industry, including farmers, traders, and government officials. The station also works with other institutions to build capacity in plant quarantine and biosecurity to enhance compliance with international standards and promote trade.



The station hosts tissue culture and virus cleaning laboratories and greenhouses to facilitate research, germplasm cleaning, multiplication and exchange. This facility is used to produce virus free planting material for crops such as cassava, sweet potato, passion fruit, yams and pyrethrum, banana, Irish potato and sisal. Activities in this laboratory are carried out in collaboration with various stakeholders such as: Pyrethrum Processing Company of Kenya for pyrethrum, International Institute of Tropical Agriculture (IITA) for cassava, International Potato Centre (CIP) for sweet potato and Irish potato. Services offered by the lab include.

- Surveillance and identification of farmer-preferred varieties for species to be cleaned.
- Virus cleaning of elite material obtained both locally and internationally.
- Distribution of germplasm within Kenya across East and Central Africa
- Conservation of germplasm for collected plant varieties.
- Farmer training and capacity building
- Inspection and certification of private and public tissue culture laboratories

The stations services are all offered at a fee, based on Legal Notice No. 48, the “Plant Protection (Fees and Charges) Rules, 2009 of the Plant Protection Act (Cap. 324)” that came into effect on 3rd April 2009 and have been in use since then.

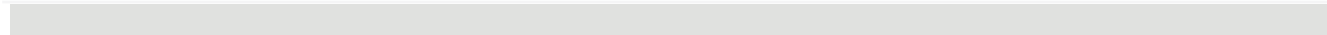
The Plant Quarantine and Biosecurity Station is a critical component of KEPHIS, and its activities are vital for protecting Kenya’s agricultural industry. Through its various activities, the station ensures that

Kenya’s plant resources remain free from pests and diseases and meet the required international standards for trade.

The station’s principal activities include:

- Laboratory diagnosis of pests and diseases intercepted at points of entry or submitted by farmers, inspectors, researchers and seed companies.
- Post-entry quarantine of high-risk imported plants and propagative materials.
- Phytosanitary support, including inspection and export certification activities.
- Identification of pest organisms and advisory recommendations on their management.
- Virus indexing, cleaning and in-vitro multiplication of high-value germplasm.
- Facilitation of clean germplasm exchange for research institutions, breeders, seed systems and regional partners.
- Training of national and international stakeholders in pest diagnostics and plant-health management.
- Maintenance of reference capacity for the Common Market for Eastern and Southern Africa (COMESA)
- Pest Surveillance & monitoring using latest tools (Traps, PIMS) for early warning of pest incursions into the country.

3. How does PQBS help protect Kenya’s agriculture from the introduction and spread of harmful pests and diseases, and what happens when plant materials enter the country for purposes such as research, breeding or commercial production?



PQBS protects Kenyan agriculture through a layered biosecurity system:

- i. Surveillance and identification of farmer-preferred varieties for species to be cleaned.
- ii. Virus cleaning of elite material obtained both locally and internationally.
- iii. Distribution of germplasm within Kenya across East and Central Africa
- iv. Conservation of germplasm for collected plant varieties.
- v. Farmer training and capacity building
- vi. Inspection and certification of private and public tissue culture laboratories

For research, breeding or commercial production, this system is particularly important because plants can look healthy while carrying latent viruses, bacteria, fungi or nematodes. Imported material such as seed, cuttings, tubers, tissue-culture plantlets or other propagules can therefore be held and grown under controlled observation before release. This allows symptoms to develop, enables repeated sampling and reduces the chance that hidden pathogens enter farms or the environment.

4. What plant health laboratories and diagnostic services are available at PQBS, what types of pests and diseases are diagnosed, and what technologies or techniques are used in the diagnostic process?

Muguga has six plant-health laboratories for effective diagnostics of plant pathogens, invasive species, as well as associated glasshouses and soil-sterilisation facilities. KEPHIS reports

that the laboratories process more than 12,000 diagnostic samples annually, while the glasshouses conserve numerous elite varieties and crop germplasm.

Services offered include diagnosis of plant pests ranging from viruses, viroids, bacterial, fungal pathogens, identification of Nematodes and insect pests, virus clean-up of plant germplasm as well as capacity building on matters related to pest diagnostics and management. The laboratories offer world class pest diagnostic services using the latest technologies including LAMP (Loop Mediated Isothermal Amplification) and Recombinase Polymerase Assays (RPA) for detection of plant pathogens. This is in addition to the use of more traditional real-time and conventional-PCR methods for the detection of over 100 individual plant pests. The station has also enhanced its diagnostic capacity through advanced molecular detection method such as use of DNA barcoding techniques and sequencing for detection of insect pests, virus vectors, fungi, bacteria and invasive species.

Table 1. Summary of diagnostic services offered at the PQBS Muguga

Laboratory area	Typical targets	Main techniques
Molecular biology	Plant pathogens and seed genetic-purity applications	Conventional PCR, real-time PCR, RPA, LAMP, DNA sequencing and barcoding
Virology	Numerous crop viruses; virus indexing of valuable planting material	ELISA formats, immuno-strips, mechanical inoculation, grafting, grow-out testing and molecular assays
Bacteriology	Bacterial pathogens of agricultural and horticultural crops, imports, exports and seed	Selective media, serology, biochemical testing and molecular methods
Mycology	Fungal pathogens of cereals, horticultural, ornamental and agricultural crops	Isolation, culturing, near-UV sporulation, microscopy, molecular identification and DNA barcoding
Nematology	Plant-parasitic nematodes in soil, water, seed and roots	Extraction and morphological identification of vermiform and cyst-forming nematodes
Entomology	Insect and other arthropod pests	Morphological identification, high-powered microscopy, incubation, X-ray insect identification and DNA barcoding
Tissue culture	Virus-infected germplasm and vegetatively propagated crops	Thermotherapy, chemotherapy where appropriate, meristem-tip culture, in-vitro multiplication and virus re-indexing

These facilities use accredited diagnostic approaches; with several KEPHIS laboratories operating under ISO/IEC 17025:2017 accreditation.

5. How does the work carried out at PQBS directly benefit farmers and the agricultural sector, particularly through early detection of pests and diseases and access to healthy and quality planting materials? Can you share an example of a significant plant health challenge that PQBS has helped address?

PQBS benefits farmers mainly by keeping damaging pests out, helping identify outbreaks early, and increasing access to healthy planting material. Early and accurate pest diagnosis lets KEPHIS, county officers, researchers and growers distinguish one problem from another and select the appropriate response rather



than applying randomly selected and often ineffective treatments.

For vegetatively propagated crops, the benefit is especially direct: a virus-infected parent plant can spread infection through every cutting, tuber, vine or sucker. PQBS tests material, cleans infected high-value germplasm where feasible, and recommends virus-free material for further multiplication and distribution. The tissue-culture laboratory has in the past produced clean cassava, potato, sweetpotato, yam and sisal planting materials, and is planning to introduce cleanup and production systems for other crops such as coconut, oil palm and arrow roots.

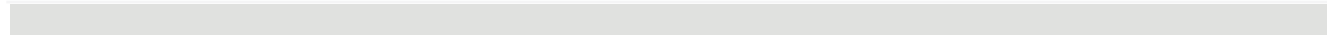
A significant example is the management of the **Maize lethal necrosis disease (MLND)**, which was first reported in the country in 2012 and severely threatened maize production. The disease results from co-infection involving maize chlorotic mottle virus and a potyvirus such as sugarcane mosaic virus, and can cause severe losses. KEPHIS tests all imported maize seed for MLND-associated viruses before it enters the seed-certification system, and also uses field inspection, sampling and testing for phytosanitary controls during seed production and research activities. Muguga has additionally trained other countries (eg Zambian, Rwandan and Ugandan) National Plant Protection Organizations in MLND diagnostics, helping support prevention and management beyond Kenya. Other important pest-response work supported by the station include capacity to identify and manage fall armyworm, false codling moth, desert locusts, papaya mealybug and fruit flies.

Post-entry quarantine is the controlled holding, growing, monitoring and testing of imported plant material **after it has entered Kenya but before unrestricted release**. It is required for materials whose pest risk cannot be adequately resolved through documents, visual inspection or a single laboratory test at the border (upon entry into the country). At PQBS or an approved quarantine facility, the material is kept isolated—typically in controlled glasshouses, screenhouses or designated fields—under restrictions on access, movement, sanitation and record keeping. KEPHIS monitors the plants periodically for pests and symptoms, conducts laboratory tests, and decides whether material can be released. If regulated pests are found, KEPHIS can require treatment, destruction of the material and decontamination of the facility.

This is essential because pathogens can be latent, expression can be delayed, and some pests require living plants to become detectable. It protects farms, biodiversity and trade markets from organisms that might otherwise establish permanently.

6. PQBS facilitates the exchange of clean germplasm. What does clean germplasm exchange involve, and how does this service support agricultural research, plant breeding and access to improved and healthy planting materials?

International exchange of germplasm and trade/movement of plants and plant products is crucial in the quest for adequate food production and supply. To ensure that foreign injurious pests, diseases and noxious weeds are not introduced in the



country, Kenya has a very stringent plant introduction and certification procedures. These procedures include the requirement that the safest way to exchange planting material, especially for vegetatively propagated crops including Cassava, Sisal, Irish Potato and Sweet Potato is by the use of tissue culture. Clean germplasm exchange is the safe movement of genetically valuable plant material—such as breeding lines, farmer varieties, elite clones, tissue-culture plantlets, seed or meristems—after it has been tested and, when necessary, freed from pathogens.

At PQBS Muguga, the process can involve:

- Receiving and documenting germplasm under import and phytosanitary conditions.
- Testing or “***indexing***” of plant material for priority pathogens.
- Applying virus-cleaning techniques, particularly thermotherapy followed by meristem-tip excision and in-vitro culture.
- Re-testing regenerated plants to verify freedom from targeted pathogens.
- Multiplying verified clean material in tissue culture.
- Releasing and distributing the material through compliant germplasm-exchange channels.

This makes it possible for breeders to access useful genetic diversity without transferring hidden disease, enabling research institutions to evaluate imported or regional materials, and gives seed systems a cleaner starting point for multiplying planting materials. Crops that have been

cleaned so far include potato, sweet potato, cassava and sisal.

7. What is the regional role of the PQBS station, and how does it support plant health management, diagnostics, research, germplasm exchange and capacity building beyond Kenya?

PQBS is designated as the designated Common Market for Eastern and Southern Africa (COMESA) regional reference laboratory for Plant Health since 2019 and is also a centre of excellence for germplasm exchange in Eastern and Central Africa. Its regional role includes diagnostic support, virus cleanup, clean-germplasm exchange, technical training and collaboration with regional and international institutions. The laboratory also coordinates plant health issues which include validation and standardization of diagnostic procedures, assist carrying out risk analysis, offer training to national and satellite laboratories and serve as centres of excellence for SPS technical matters.

KEPHIS through the PQBS has extensive collaborative activities with both national and international institutions towards fulfilment of common goals related to phytosanitary and biosecurity issues. Examples include the joint collaboration with the Pyrethrum Processing Company of Kenya in the production of disease-free pyrethrum planting materials carried out at PQBS and are later multiplied in bulking nurseries before selling to their contracted farmers. Since 2023, a total of 275,100 pyrethrum plantlets have been distributed in 18 counties with the leading counties being Nakuru, Nyandarua, West Pokot and Bomet.



The station also works with international organisations including the International Potato Center (CIP), International Institute of Tropical Agriculture (IITA), CABI, CIMMYT and icipe. For example, the KEPHIS–CIP collaboration has supported virus cleanup and multiplication of disease-free potato germplasm for distribution in Eastern Africa since 1979, while the IITA collaboration includes facility upgrading, germplasm acquisition, cleanup of infected material and regional exchange. Over the last three years more than 65,000 cuttings, 15,000 tubers and 5,500 tissue-culture plantlets were distributed locally and internationally to support breeding and seed systems in over 15 countries. Currently CIP is in the process of developing an estimated 150 new test varieties/hybrids of potato between parent lines from CIP and HZPCV in the Netherlands.

8. With emerging pests, diseases and climate-related threats becoming a growing concern, what are some of the emerging plant health challenges that PQBS is currently monitoring, researching or preparing to address?

KEPHIS identifies emerging pests and diseases, entry of quarantine pests, changing phytosanitary requirements, increasing demand for disease-free planting material, loss of germplasm diversity, climate change and the need for new diagnostic methods as strategic plant-health issues.

For PQBS, the practical implications include:

- Receiving and documenting germplasm under import and phytosanitary conditions.
- Testing or “***indexing***” of plant material

for priority pathogens.

- Applying virus-cleaning techniques, particularly thermotherapy followed by meristem-tip excision and in-vitro culture.
- Re-testing regenerated plants to verify freedom from targeted pathogens.
- Multiplying verified clean material in tissue culture.
- Releasing and distributing the material through compliant germplasm-exchange channels.

9. KEPHIS PQBS is set to host the new Root, Tubers & Bananas – East Africa Germplasm Exchange Laboratory (RTB-EAGEL). What is this new facility, why was it established, and what role will it play in pathogen diagnostics, virus elimination, in-vitro work and germplasm exchange?

The **Roots, Tubers and Bananas – East Africa Germplasm Exchange Laboratory (RTB-EAGEL)** is a new regional facility being established at PQBS Muguga. Construction started in April 2024 and was completed in January 2026. It is a collaborative project of KEPHIS, IITA and CIP, funded by the German Agency for International Cooperation (GIZ) through CGIAR’s Crops to End Hunger programme.

It was established because roots, tubers and bananas are vital to East African food security and livelihoods, yet their planting materials often carry pathogens and require specialised cleaning, testing and multiplication before they can move safely among countries or enter seed systems. The facility is designed to provide pathogen diagnostics, virus elimination, in-vitro culture, germplasm exchange, RTB research and regional knowledge sharing.



It will strengthen the entire pathway from breeder to farmer: test plant material, eliminate pathogens where possible, multiply verified pest-free material, support distribution and release of new varieties, and supply nucleus-quality planting material into the seed system.

The RTB-EAGEL shall be able to strengthen Kenya and East Africa in several ways:

- **Farmers:** faster access to disease-free, high-quality planting materials of potato, sweetpotato, cassava, yam and banana, with lower risk of carrying disease into fields.
- **Breeders and researchers:** safer and faster access to regional and international genetic materials for evaluation, crossing, conservation and variety development.
- **Seed systems:** production of verified “nucleus” material that can be multiplied by seed companies, public programmes and other certified multipliers.
- **Pest and disease management:** stronger pathogen diagnostics and virus elimination reduce the risk that valuable varieties are lost or exchanged with infections.
- **Regional exchange:** shared laboratory protocols, skilled technicians and improved throughput can make cross-border germplasm movement more reliable and faster.
- **Capacity building:** the improved facility is intended to operate as a regional training centre and support researchers’ projects across sub-Saharan Africa.

The upgrade also addresses practical constraints in the earlier tissue-culture setup,

including limited workspace, outdated equipment, sterilisation bottlenecks and contamination risk. Planned improvements include modern equipment, autoclaves, better water systems and solar support for stable growth conditions.

10. Looking ahead, what is the vision for PQBS over the next five years, and what would you like farmers, researchers, policymakers and the general public to know about the work being done at PQBS and its contribution to the future of agriculture?

PQBS will advance KEPHIS’s 2023–2027 strategic direction: **excellence in plant health and quality assurance**, with priorities around phytosanitary compliance, access to quality seed of superior varieties, trade facilitation, institutional capability and resilience to climate-change effects.

For PQBS, this will mean a stronger, more efficient and modern regional hub that can:

- Detect and diagnose priority pests faster and more accurately.
- Apply effective quarantine safeguards without unnecessarily slowing safe research and trade.
- Expand clean-germplasm, tissue-culture and virus-elimination capacity.
- Support farmers with healthier planting materials and more reliable disease advice.
- Help breeders move improved, climate-resilient varieties safely through national and regional systems.
- Train inspectors, diagnosticians, researchers and seed-sector actors in East Africa.

The core principle is that plant health is not only about stopping imports at the border. It is also about protecting farmer livelihoods, maintaining productive seed and planting-material systems, conserving useful crop diversity, enabling safe innovation, and safeguarding Kenya's access to agricultural markets.

PQBS and its activity Photos



The Plant Quarantine & Biosecurity Station (PQBS), KEPHIS Muguga.



Plant Quarantine & Biosecurity station has quarantine greenhouse and screen house facilities for carrying out biological assays, grow out tests as well as for maintenance of reference material e.g. viruses on live plants



Greenhouse and screenhouse facilities for quarantine containment



RTB-EAGEL will be used for;

- Receiving germplasm from breeding programs
- Internationally accredited diagnostics
- Pathogen Elimination
- In vitro facilities
- Tracking systems
- Genotyping for QC
- Regional distribution
- Network nodes with capacity to receive germplasm
- Self-sustaining
- Network coordination



Construction of 75 KW solar power - Status as of 9th Dec 2025



Germplasm cleanup by thermotherapy and meristem tip culture





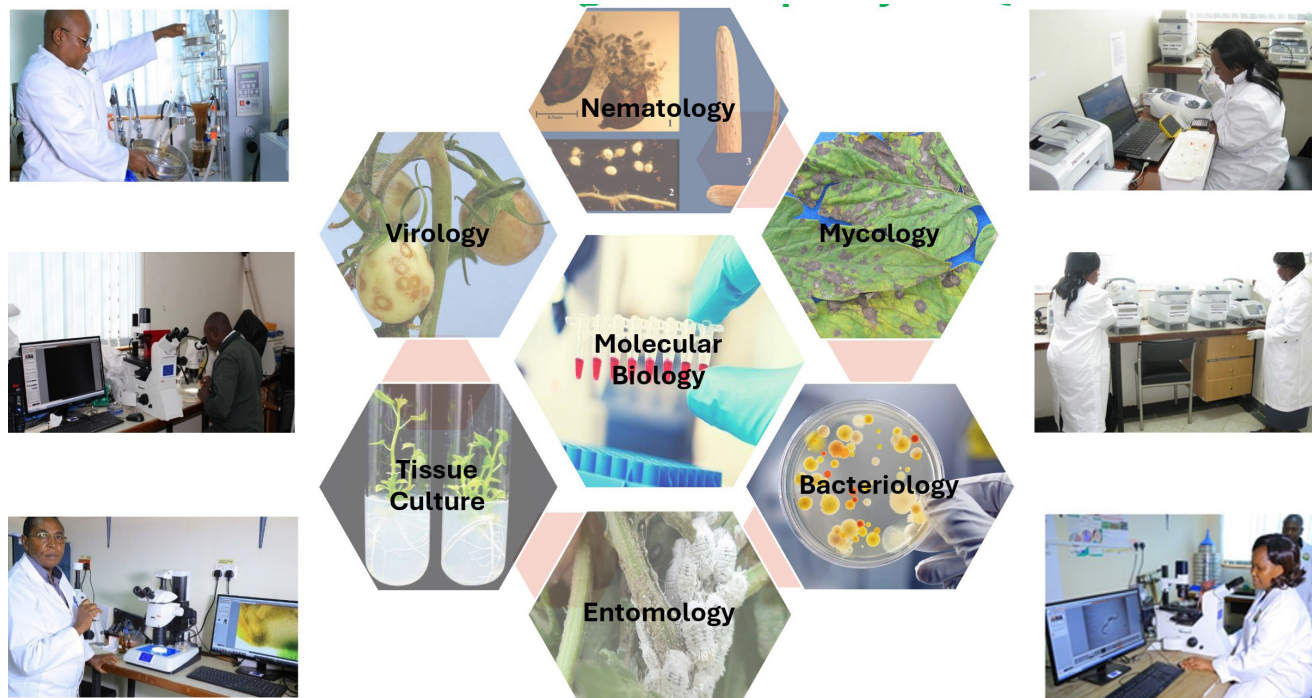
Last year, the International Potato Centre (CIP), housed at the station, has distributed more than 65,000 sweetpotato cuttings, 15,000 potato tubers and 5,500 tissue-culture plantlets locally and internationally to support breeding and seed systems.



Tissue culture multiplication of disease-free, true-to-type pyrethrum germplasm (both mother clones and varieties)

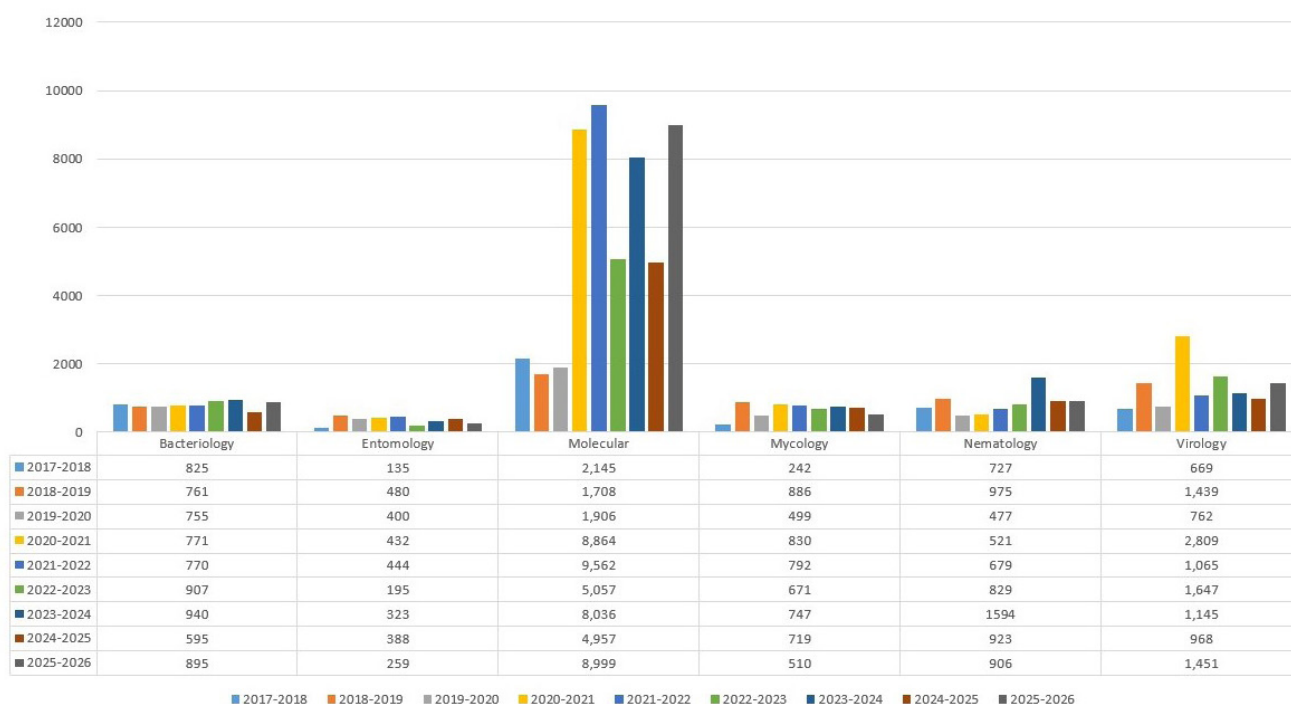
- *Conservation in-Vitro and in greenhouse*
- *Distribution for breeding work and for bulking sites in 18 counties*
- *Distributed about 275,100 plantlets since 2023.*

Current Pest Diagnostic Capacity at PQBS

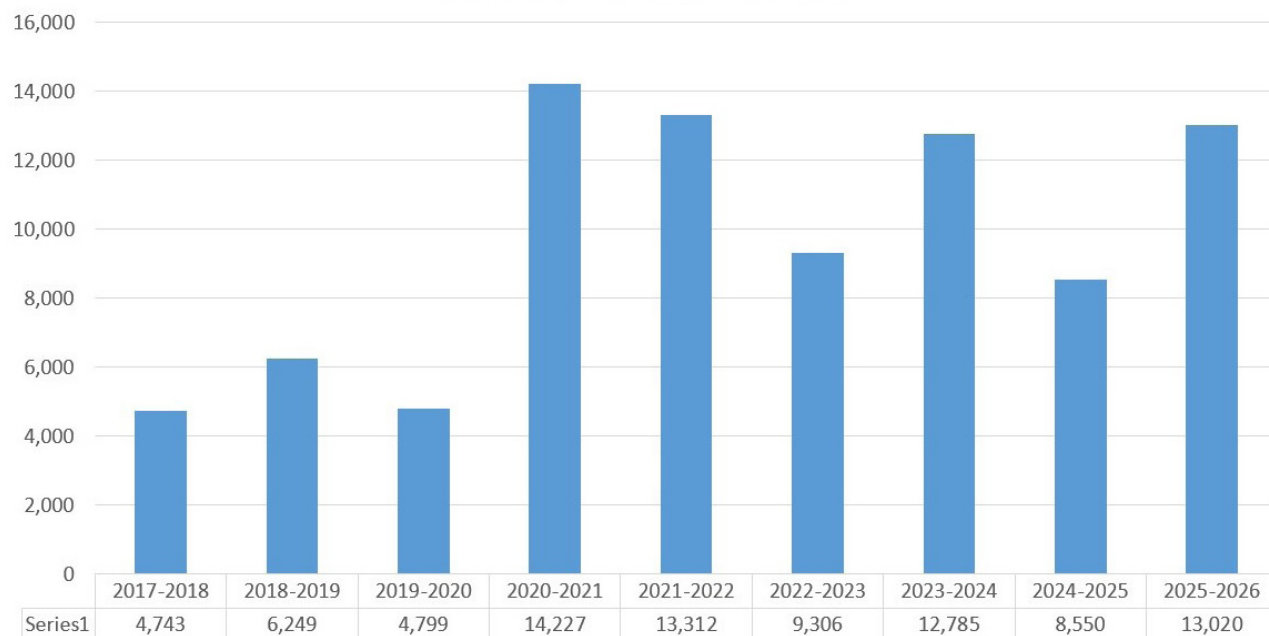


Current diagnostic capacity at PQBS

Samples tested at each laboratory at the PQBS between 2017-2026



Total samples tested at the PQBS between 2017-2026



PICTORIAL

Highlights from the 70 Years of Growing Kenya's Seed Sector



Highlights from the Kaimosi Expo 2026



Highlights from Training on Advanced Technologies for Plant Pest Surveillance







KENYA PLANT HEALTH INSPECTORATE SERVICE (KEPHIS)
NEWSLETTER AUGUST 2026

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