



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

QUARTER 1 (JUL - SEP) 2024



KEPHIS Hosts The 1st
International Seed
Quality Conference

KEPHIS Holds it's 2nd
Culture Change
Management Training

KEPHIS Shines at
Kisumu, Kitui,
Mombasa and Nairobi
Agricultural Shows

The Legacy and Impact
Of KEPHIS Seed Testing
Laboratory in Nakuru

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Message from the Managing Director



Dear Stakeholders,


It gives me great pleasure to introduce this edition of **Quarter One 2024/ 2025** KEPHIS Newsletter. Over the past quarter, KEPHIS has achieved several notable milestones, including the successful hosting of the 1st International Seed Quality Conference, where over 300 delegates from across the world came together to discuss the critical role of seed quality in adapting to climate change and ensuring food security. Themed *“Seed Quality Assurance and Technological Advances for Climate Change Adaptation Towards Sustainable Food and Nutrition Security,”* this conference marked a significant step forward in strengthening international collaborations, fostering innovation, and enhancing seed quality standards.

To strengthen our regulatory role, our Board has been actively involved in regional visits to our offices in: Moyale One Stop

Border, Timau, Nyeri, Mombasa, Namanga OneStopBorderPost, Loitoktok, Taveta, and the Jomo Kenyatta International Airport. These visits have highlighted KEPHIS’s commitment to ensuring compliance with plant health regulations, particularly at our borders, and fostering collaborations with local authorities to boost agricultural productivity. The Board’s interactions with stakeholders have also reinforced our shared responsibility in safeguarding plant health and food security in Kenya.

In response to the National goal to plant 15 billion trees by 2032, KEPHIS participated in a tree-planting initiative at Kaptagat Forest, where we donated and planted 2,000 Hass avocado seedlings as part of our commitment to environmental conservation and climate change mitigation. This activity reflects our dedication to restoring degraded landscapes and contributing to Kenya’s broader climate goals.





Additionally, we are pleased to have welcomed new Directors, Deputy Directors, and other key staff members to the KEPHIS family. These new team members bring valuable expertise and fresh perspectives that will enhance our ability to fulfill our mandate and drive further growth in the Corporation.

Moreover, KEPHIS's achievements at the Nairobi, Mombasa, Kisumu, and Kitui Agricultural Society of Kenya (ASK) Shows this year further underline our leadership in the sector. These recognitions, particularly in areas of innovation, agricultural safety, and plant health regulation, affirm our position as a regulator in Agriculture. We continue to align our efforts with Government's Bottom-Up Economic Transformation Agenda (BETA), ensuring that farmers through the value chain have access to quality seeds, agricultural input, and adhere to plant health measures and technologies that will increase productivity, enhance food security and assure safe trade.

The success of KEPHIS is built on the dedication of our employees, the trust of our stakeholders, the collaboration of our partners, and the guidance and oversight of our Board of Directors. The Board's strategic leadership has been key in steering KEPHIS towards achieving its mandate and ensuring we maintain the highest standards in all our operations. I extend my heartfelt gratitude to all who contribute to this success.

As we move forward, let us remain focused on our mission of ensuring the quality of agricultural inputs and safeguarding food security for future generations. As a Corporation, we will continue to build a resilient and sustainable Agricultural sector for Kenya and beyond.

Prof. Theophilus Mutui
Managing Director, KEPHIS.

The Editor's Note



Dear Readers,

Welcome to the first edition of KEPHIS Newsletter for Quarter One 2024/ 2025 Financial Year. This issue presents an exciting array of developments that highlight KEPHIS's tireless efforts in enhancing agricultural standards and ensuring the safety and quality of plant materials in Kenya.

In this edition, we have published informative articles on our laboratory services and the crucial role they play in safeguarding Plant Health. We have also featured articles on Phytosanitary services, Seed Certification, and a special section with frequently asked questions on the Seed and Plant Varieties Act, providing valuable insights into how these services ensure the quality of agricultural inputs and produce.

During the Quarter, the Corporation hosted a regional training on potato pest detection and management at the

Muguga Laboratory. This training, which attracted participants from over 12 African nations, emphasized KEPHIS's leadership in combating agricultural threats across the region, with a focus on emerging pests affecting key crops such as potatoes.

I invite you to explore these and other stories in this edition, which reflect KEPHIS's collective strength in ensuring food security and promoting safe agricultural trade.

To stay updated on our activities and engage with us directly, I encourage you to follow us on our social media platforms—X (formerly Twitter), Facebook, and LinkedIn. Where we regularly share informative content, updates, and developments within the Corporation.

I hope you find this edition both informative and engaging. We look forward to your feedback and continued engagement as we shape future editions.

Kellen Karuti
Deputy Director Corporate
Communications., KEPHIS.

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KEPHIS HOSTS THE 1ST INTERNATIONAL SEED QUALITY CONFERENCE



Dr. Andrew Mwiha Karanja - Cabinet Secretary Ministry of Agriculture and Livestock Development, Dr. Paul Kipronoh Ronoh - Principal Secretary State Department for Crop Development, Hon. Joseph M'eruaki - KEPHIS Board Chairman and Prof. Theophilus Mutui - KEPHIS Managing Director pose for a photo during the 1st Quality Seed Conference

The first ever International Seed Quality Conference themed 'Seed quality assurance and technological advances for climate change adaptation towards sustainable food and nutrition security' was held at the KEPHIS Headquarters, Karen from the 19th- 22nd August 2024. The event was officially inaugurated by the Cabinet Secretary Ministry of Agriculture and Livestock Development Dr. Andrew Mwiha Karanja together with the Principal Secretary State Department of Crop Development Dr. Paul Kipronoh Ronoh, Chairman of the KEPHIS Board Hon. Joseph M'eruaki and KEPHIS Managing Director Prof. Theophilus Mutui.

In his speech the Cabinet Secretary highlighted the significance of the conference in enhancing international trade in certified seed. He emphasized the need to update regulatory frameworks

to promote competitive seed markets, minimize trade barriers and ensure responsible trade in high – quality agricultural products. He affirmed that no effort will be spared in eliminating illegal seeds, ensuring the highest seed quality and safeguarding bountiful harvest for farmers. This aligns with the Bottom-Up Economic Transformation Agenda (BETA), which seeks to empower small-scale farmers by providing them with access to quality seeds, thus enhancing agricultural productivity and contributing to food security.

“No effort will be spared in eradicating illegal seeds to ensure the highest seed quality and protect abundant harvests for farmers”

Dr. Mwiha Andrew
Cabinet Secretary



*KEPHIS Managing Director,
Prof. Theophilus Mutui.*



*Principal Secretary State
Department of Crop Development
Dr. Paul Kipronoh Ronoh
addressing delegates during the
seed conference at KEPHIS.*



*Chairman of the KEPHIS
Board Hon. Joseph Meruaki
giving his remarks during the
seed conference.*

The conference was attended by over 300 participants from across the globe. At the conference the following thematic areas were addressed;

- 1) Technological advancements and innovations in seed production and quality assurance for climate adaptation and resilience
- 2) Regional/ International harmonization of standards and cross border trade in seeds
- 3) Plant health and biosecurity in seed quality assurance
- 4) Plant variety protection, evaluation and release for climate resilience and sustainable agricultural production
- 5) Sustainable Seed systems for delivery of quality seed
- 6) Seed quality surveillance: case studies/ practical approaches
- 7) Cross-Cutting issues in seed systems (Capacity building and knowledge transfer, trade negotiations and communication in seed systems, GMOs, Biosafety, gender youth issues in seed systems, collaboration and partnerships)
- 8) Policy and regulatory environment in seed industry
- 9) Approaches to seed quality assurance for vegetative propagating seeds

During the conference, there were ongoing exhibitions and side events. The exhibitors included;

- | | | |
|-----------------------------|--------------------------|----------------------|
| 1. KEPHIS | 8. Advanta Seeds | 14. SNV |
| 2. CGIAR | 9. Western Seeds | 15. BAYER |
| 3. MEDA | 10. Simlaw Seeds | 16. Seeds 2 B Africa |
| 4. Agriseedco | 11. Egerton University | |
| 5. Avocado Society of Kenya | (Seed centre) | |
| 6. KALRO | 12. Green Africa | |
| 7. Agripark Seeds | 13. Trees for the Future | |



The side events were very educative and insightful. They included; Phytosanitary Requirement for import and export of seeds, Seed Certification and Identification of fake seeds, Euphresco iii seed health, Technologies in seed production and management.



The CS Ministry of Agriculture and Livestock Development Dr. Andrew Mwiha Karanja plants a tree during the 1st International Seed Quality Conference



Delegates pose for a photo during the conference

Seed has always been a key factor in agricultural production acting as the basic and most vital input for sustainable growth in agriculture. The discussions at the conference were an eye opener and will significantly impact the future of the seed sector. High-quality seeds and innovative practices, aligns with the BETA agenda's goal of building a more resilient and inclusive agricultural economy, ensuring the Kenyan farmer has access to sufficient, safe, and nutritious food.

BOARD REGIONAL TOURS

EASTERN REGION

On the 29th July 2024 the KEPHIS Board Members led by the Chairman Hon. Joseph M'eruaki together with the Senior Management led by the Managing Director Prof. Theophilus Mutui embarked on a tour to the Eastern Region. On the first day they visited the KEPHIS Moyale office. The office that is the official border of Kenya and Ethiopia plays a crucial role in ensuring that all plant and plant material entering or exiting Kenya



Board, Senior Management and Members of Staff pose for a photo at the KEPHIS Moyale Office

are fully compliant with the phytosanitary standards. The standards are in place to prevent the introduction of foreign invasive/injurious pests, diseases and noxious weeds. It also enhances trades and promotes food and nutrition security.



KEPHIS Board and Senior Management pay a courtesy call to the Deputy County Commissioner of Moyale and engaged with a multi-agency team during their tour in Moyale

The team paid a courtesy call to the Deputy County Commissioner of Moyale to discuss the areas of collaboration which will support the efforts at the border. The delegation also had the opportunity to engage with several stakeholders including a multi-agency team that had representatives from institutions that

partner with KEPHIS, they include; Kenya Revenue Authority (KRA), Kenya Bureau of Standards (KEBS), the Agriculture Food Authority (AFA), Immigration, public health, Kenya Veterinary Services, COMESA trade facilitation department, Criminal investigation department and security agencies.



The Board and Senior Management visit the HM. Clause, Equinox Horticulture Limited and the KEPHIS Timau Office

On the 31st of July the team proceeded to the Timau, Laikipia County. They visited the HM. Clause Limited, Equinox Horticulture Limited and finally the KEPHIS Timau office where they planted trees. Currently, the Timau region has 25 companies producing cut flowers mainly for export. Export and import regulation is key for Kenya's Agricultural sector, boosting economic growth and food security.



Board Members and MD Plant trees during their visit to the KEPHIS Timau Office



Nyeri Deputy Governor H.E Kinaniri Waroe receives the KEPHIS delegation at his office in Nyeri County

The team then proceeded to Nyeri which hosts one of the KEPHIS offices, established in 2015. At Nyeri, the KEPHIS Board and Senior Management, led by Chairman Hon. Joseph M'eruaki, paid a courtesy call to Governor H.E. Mwalimu Mutahi Kahiga, EGH, who was represented by his Deputy Governor Nyeri Deputy Governor H.E Kinaniri Waroe. This visit highlighted KEPHIS's commitment to partnering with the County Government to enhance Agriculture by assuring the quality of Agricultural inputs and mitigating negative impacts on the

economy, environment, and human health. During the visit, KEPHIS expressed gratitude for the 15 acres of land given by the County Government of Nyeri at Wambugu Farm ATC for the establishment of KEPHIS Nyeri offices and demonstration farm, which will help provide seamless services to Nyeri farmers and farmers in the entire Central and Eastern Region Economic Block. Together, KEPHIS and the County Government of Nyeri aim to improve Agricultural productivity through plant health services, seed certification, and plant variety protection.



KEPHIS Chairman and MD plant trees at the Nyeri Wambugu Farm

The week-long tour came to a conclusion with a visit to the Embu Regional Office. This visit highlights its critical role in serving clients across 12 counties, including Embu, Kirinyaga, Nyeri, Meru, Laikipia, Tharaka Nithi, Isiolo, Marsabit, Garissa, Wajir, Mandera, Kitui (Mwingi), and Machakos (Masinga). The Embu office

is a key hub for Phytosanitary Services, including the issuance of Phytosanitary Certificates and Plant Import Permits, which are crucial for enhancing safe trade. The office also conducts farm audits and nursery inspections to ensure that farms meet high-quality standards and adhere to the set phytosanitary regulations.



KEPHIS Board and Senior Management pose for a photo during the Embu Regional office visit

SOUTHERN REGION



Board and Senior Management pose for a photo at the KEPHIS JKIA office

The KEPHIS Board and Senior Management, led by Chairman Hon. Joseph M'eruaki, and the Managing Director Prof. Theophilus Mutui, visited various KEPHIS offices from 2nd September 2024 to 5th September in the Southern region. They visited the following KEPHIS offices: JKIA, Namanga, Oloitoktok, Taita Taveta and Mombasa regional office.

On 2nd September 2024, the delegation toured the KEPHIS JKIA office. The board was taken through the inspection and documentation processes

involved in exporting Kenya's horticultural produce, which includes flowers, avocados, mangoes, Asian vegetables, passion fruits, herbs, snow peas, and French beans, among others. This thorough inspection process ensures that Kenya's produce meets the stringent requirements of importing to countries such as Europe, Australia, the US, Israel, the Middle East, Russia, and the UAE, thereby enhancing trade. The region is committed to serve the clients, through effective stakeholder mapping to ensure that their needs and expectations are met.

The delegation proceeded to Namanga border, where the board was guided through the multi-agency inspection and certification procedures for commodities crossing the Kenya-Tanzania border. At this facility, KEPHIS plays a crucial role in ensuring compliance with phytosanitary regulations, preventing the spread of pests and diseases, and safeguarding agricultural health. KEPHIS



A demonstration during the tour on how cut flowers inspection is done

conducts inspections, issues phytosanitary certificates, and performs pest risk analyses. Through the enforcement of these standards and collaboration with multi-agency teams, the One-Stop Border Post facilitates safe and efficient cross-border trade, enhances regional economic integration, and ensures the safety and quality of Kenyan exports.



NAMANGA One Stop Border Post (OSBP).

In the future, this region aims to have a fully operational laboratory, as well as ownership of land within Namanga, which can be used for staff quarters and training facilities.



KEPHIS board and Senior Management at the Namaga office during the Southern region tour



KEPHIS Board and Senior Management pose for a photo at the Taveta- Holili One Stop Border Post

On 4th September 2024, the delegation visited the Taveta-Holili One Stop Border as part of the ongoing oversight of key entry points. This post focuses on ensuring that all plant material imports and exports comply with phytosanitary standards and managing seed certification services to safeguard plant health and

support Kenya's agricultural sector.

These efforts align with the Bottom-Up Economic Transformation Agenda (BETA), which aims to strengthen Agricultural productivity and enhance safe trade to drive economic growth and development in Kenya.



KEPHIS Board Chairman plants a tree at the Taveta- Holili One - Stop Border Post during the Southern region tour.

During the visit to the KEPHIS Loitokitok office, the Board of Directors, led by Chairman Hon. Joseph Eruaki and Managing Director Prof. Theophilus Mutui,

reviewed the operations of the one-stop border post. This facility plays a crucial role in ensuring that all plant materials entering Kenya from neighboring countries are safe and compliant with phytosanitary regulations. The Board also met with Kenya Revenue Authority (KRA) officials at the post to discuss ways to enhance the inspection and certification processes, aligning with international trade agreements and the standards set by the International Plant Protection Convention (IPPC). These efforts are crucial to preventing the entry of harmful pests and diseases, ensuring the safety and quality of plant materials, and supporting sustainable agricultural trade in line with global phytosanitary standards.



KEPHIS Board, Senior Management and Staff pose for a photo at the KEPHIS Loitokitok office

KEPHIS HOLDS IT'S 2nd CULTURE CHANGE MANAGEMENT TRAINING



Board Members and Senior Management in Serena Hotel, Mombasa for the Culture Change Management Training.

KEPHIS held a Culture Change Management Training for its Board members and Senior Management on September 12-13th, 2024, at Serena Beach Resort, Mombasa. The training, facilitated by the Institute of Certified Secretaries, aimed to strengthen institutional capacity, a key focus in the KEPHIS Strategic Plan 2023-2027.

As the second of its kind, the training focused on enhancing corporate governance by fostering teamwork,

leadership, and adaptability. The management had an opportunity to have an overview of the first change management session, receive feedback from new leadership, as well as explore key topics such as fostering teamwork and collaboration, sustaining change and action planning.

The training was attended by the Board Chairman, Board Members and the Management.

STRENGTHENING AGRICULTURAL QUALITY THROUGH NEW TALENT AT KEPHIS

The Kenya Plant Health Inspectorate Service (KEPHIS), a State Corporation established by the KEPHIS Act No. 54 of 2012, is under the Ministry of Agriculture and Livestock development. Its primary role is to ensure the quality of agricultural inputs and produce, a mission critical to Kenya's agricultural sector.

To bolster its human capital talent pool, and technical capacity, the Board recruited and filled critical management, technical and operational positions within the year.

The 2024 cohort underwent a comprehensive two-week induction program, designed to familiarize them with KEPHIS's operations and mandate. This induction was crucial for integrating the new staff into the organization and aligning them with its objectives.

The induction program's highlight was the warm welcome from KEPHIS's leadership led by the Board Chairman Hon. Joseph M'Eruaki and Managing Director Prof. Theophilus Mutui who emphasized on the Service's core values of

customer focus, professionalism, integrity, teamwork, and innovation - values that are central to KEPHIS's operational ethos.

It is boards desire that this new talent will greatly enhance KEPHIS's ability to maintain high standards in agricultural quality and support the sector's growth.

The successful recruitment of the new team presents a significant step towards strengthening the organization's capacity to execute its core mandate and better service delivery to the public and stakeholders. The board and management hopes that commitment of the new staff to embody professionalism and innovation will be instrumental in achieving the Service's goals in line with the Strategic Plan 2023-2027.

“ It is the Board's desire that this new talent will greatly enhance KEPHIS's ability to maintain high standards and support growth in the agricultural sector.”

Hon. Joseph M'Eruaki
Board Chairman

KEPHIS HOSTS REGIONAL TRAINING ON POTATO PEST DETECTION AND MANAGEMENT



From 16th to 27th September 2024, KEPHIS Muguga, which serves as the COMESA reference laboratory for Plant Health, hosted a specialized training session titled “Hands-on Training on Detection and Identification of *Pectobacterium* and *Dickeya* spp.” The training drew participants from 12 African nations, including Kenya, Ethiopia, Rwanda, Burundi, Tanzania, Zambia, South Sudan, Lesotho, Uganda, Malawi, Mozambique, and Zimbabwe. The primary objective of the training was to introduce participants to the bacterial pathogens *Pectobacterium* and *Dickeya* spp, both of which pose emerging threats to potato productivity in the region. Attendees were

equipped with up-to-date information about these pests and hands-on skills to identify and detect them effectively.

The training program was facilitated by experts from the Centre for Agriculture and Bioscience International (CABI), the International Institute of Tropical Agriculture (IITA), and the International Potato Center (CIP). The event was officially opened by KEPHIS Managing Director Prof. Theophilus Mutui.

In addition, to learning about *Pectobacterium* and *Dickeya* spp, participants were also trained on the detection and management of Potato Cyst Nematode (PCN), a quarantine pest

affecting potato crops. This additional training was conducted in collaboration with FAO Kenya, IITA, CABI, ICIPE, the International Potato Center (CIP), and CGIAR, aiming to enhance the skills of National Plant Protection Organizations (NPPOs) from the region in addressing PCN and other potato pests. The two training programs aimed to bolster the capacity of NPPOs across the region to address emerging threats to potato farming, ensuring agricultural sustainability and productivity.

After productive two weeks of knowledge exchange and skill-building, participants received certificates in recognition of their competencies. The closing ceremony was presided over by the KEPHIS Managing Director Prof. Theophilus Mutui, who emphasized the importance of regional collaboration in combating agricultural threats. This initiative reaffirms KEPHIS's commitment to fulfilling its mandate in ensuring the quality of agricultural inputs, regulating plant health, and facilitating safe trade.



MD, Prof. Theophilus Mutui addressing participants.

“ This initiative underscores KEPHIS’s unwavering commitment to its mandate of ensuring quality agricultural inputs, safeguarding plant health, and enhancing safe trade.”

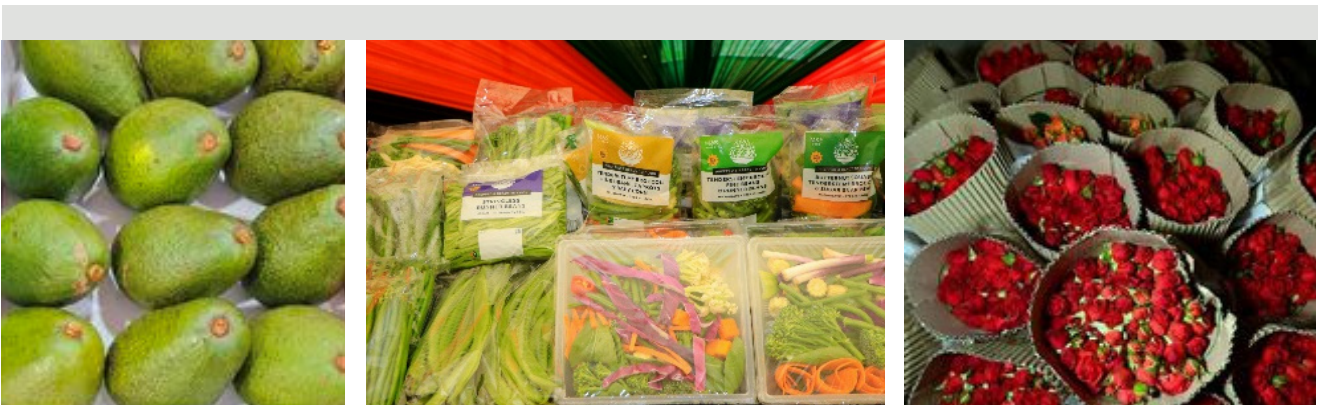
Prof. Theophilus Mutui
Managing Director - KEPHIS

INFORMATION ARTICLE ON PHYTOSANITARY



Phyto stands for plants while **Sanitary** stands for Health hence phytosanitary is the measures for the control of plant health especially in agricultural products. Agriculture is core to Kenya's national economic growth and development as it contributes to food and nutrition security for the rapidly

growing population as per the Bottom-Up Economic Transformation Agenda of the government under creative economy to ensure food sustainability in the country. It is also a direct and indirect source of income for over 80% of the Kenya's population. Therefore, ensuring plant health is crucial to Kenya's agriculture.



Major fresh produce that are exported from Kenya

In Kenya, plant health and phytosanitary regulation started in 1923 where inspection of imported plant or plant materials were done at the Port of Mombasa while quarantine services were conducted under the Kenya Agricultural Research Institute (KARI) the now KALRO. Fast forward to 1996, a state corporation (Kenya Plant Health Inspectorate Service, KEPHIS) was established to be vigilant for the Government, business sector, scientists and

farmersonallmattersrelatedtoplanthealth and quality control of agricultural inputs and produce. To support phytosanitary and trade, Kenya has signed and ratified a number of conventions, treaties and agreement with the International Plant Protection Convention (IPPC), World Trade Organization (WTO), African Union, Bilateral Trade Agreements and Regional Plant Protection Organization (RPPOs).

Kenya has a very stringent plant introduction and certification procedures since the 1930s when the plant quarantine

services were started in East Africa. KEPHIS Plant inspectors from the Muguga quarantine station visit farms during the crop growing period to certify that phytosanitary conditions specified by the importer are adhered to. If the fields are certified to be free from the specified diseases or pests, then a phytosanitary certificate is issued to indicate the health status of the plant material at the time of the inspection. When a new commodity is imported to Kenya, a pest risk analysis is undertaken to prevent the introduction of pest.



Kenya trades internationally in the import and export of plants, plant products and various regulated articles. This comes with a high risk of introduction of foreign injurious pests and diseases. To curb this, every country has a National Plant Protection organization that is mandated to ensure that all exporters and importers meet the phytosanitary requirement. In Kenya the Kenya Plant Health Inspectorate Service is mandated to assure the Quality of Agricultural Inputs

and Produce towards a food secure nation and safe trade. Plants and Plants produce undergo thorough inspection to ensure that they do not exit in Kenya or enter the country with any pest. The exporters have to adhere to the strict hygiene practices and principles on food safety right from land preparation to first customer, have proper documentation of all actions, from land preparation (including names of contract farmers/growers) to client, have documentation of all pesticides used (the

pesticides must be approved by the Pest Control Products Board (PCPB) Their rates and application levels, safety provision in application to post harvesting and final.

Invasive peststthreatentheproduction of crops thus can lead to adverse effects

in the economy and the nation's food security. Kenya Plant Health Inspectorate Service ensures that these pests don't enter Kenya. Pests and diseases create a trade barrier and reduction of agricultural competitiveness.



A false Coddling moth on a rose flower



Infected maize plant

The Kenya Plant Health Inspectorate Service undertakes the following phytosanitary services;

- 1) Import and export certification,
- 2) Pest surveillance,
- 3) Pest Risk Analysis,
- 4) Trade and Standards,
- 5) Pest Forecasting and laboratory diagnostic. Post –entry quarantine,
- 6) Export certification,
- 7) Facilitation of exchange of clean germplasm
- 8) Import/ export controls, grading and inspection, surveillance
- 9) Farm export certification and post entry quarantine





KEPHIS Plant Inspectors from different regional offices undertake pest risk analysis, surveillance and Pest Forecasting and Laboratory Diagnostic. Post -entry quarantine, at a farm in Muranga County.

The international exchange of germplasm and trade/movement of plants and plant products is crucial in the quest for adequate food production and supply. There being a need to ensure that foreign injurious pests, diseases and noxious weeds which do not exist in Kenya are not introduced in the country.

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SEED CERTIFICATION




The journey to a bountiful harvest begins with a single seed. Seed certification remains KEPHIS's mandate, ensuring agricultural excellence through rigorous plant health and quality assurance standards. Through a comprehensive seed certification process, KEPHIS guarantees that farmers receive seeds of the highest quality, boasting high purity, high germination capacity, and freedom from specific pests and diseases.

KEPHIS plays a crucial role in the national fight against counterfeit seeds, which threatens agricultural productivity. This process involves conducting field inspections, seed processing, sampling, testing, stringent registration, licensing of seed merchants and stockists. These activities ensure that certified seeds meet the minimum quality standards

stipulated in the Seeds and Plant Varieties Act, preventing crop failures and ensuring optimal yields for farmers. This contributes to the overall stability and growth of the agricultural industry.

Field inspections are conducted during the active growth stage, while seed processing and sampling are carried out on harvested seeds from approved fields to eliminate extraneous material and improve seed quality. Internationally accepted procedures ensure that seed standards regarding germination capacity, purity, and moisture content are met during processing.

During the mid-final stages of certification, sampled seeds are tested in the KEPHIS seed testing laboratories in Nakuru and Kitale. Seeds that meet quality



standards are labeled and allowed into the market under their respective seed companies. Conversely, those that fail to meet the standards are issued a stop-sale order awaiting disposal.

KEPHIS also conducts post-control tests, which are quality control checks designed to verify the effectiveness of previous control measures. Additionally, as part of the seed post-certification survey, seeds from stockists are sampled and tested to ensure consistent quality for farmers.

Anyone wishing to produce, process, or market certified seed is required by law to apply for KEPHIS registration as a seed merchant. Demonstrating its commitment to plant health and quality assurance, KEPHIS organized the first-ever international seed quality conference from August 19th to 22nd, 2024. The outcome from the Conference will go along way in shaping decisions and policy formulation around seed in Kenya.



KEPHIS SHINES AT KISUMU, KITUI, MOMBASA AND NAIROBI AGRICULTURAL SHOWS



KEPHIS Staff at the Ithookwe Showgrounds - Kitui Agricultural Show.

KEPHIS recently made a significant impact at the Nairobi, Mombasa, Kisumu and Kitui Agricultural Shows, aligning with its communication and visibility strategies. The organization showcased its seed certification services, laboratory, and phytosanitary services, reaching a wide audience.

At the Kitui Agricultural Trade Fair, held from July 25th to 27th, 2024, at the Ithookwe showgrounds, over 100,000 attendees explored modern crop and livestock production technologies. The event, themed “Promoting Climate Smart Agriculture for Food and Nutrition Security and Trade Initiatives for Sustainable Economic Growth,” was hailed as a resounding success. KEPHIS provided valuable knowledge and skills on new technologies and sustainable farming methods, promising a lasting impact on the county’s agricultural sector.

Similarly, KEPHIS participated in the Kisumu Agricultural Show from July

24th to 28th, 2024, at the Mamboleo Showground. The event, under the theme “Promoting Climate Smart Agriculture and Trade Initiatives for Sustainable Economic Growth,” featured over 150 participants, showcasing agricultural excellence by the lakeside. KEPHIS offered critical insights on farming techniques through exhibits and onsite training sessions.

From September 4th to 8th, 2024, KEPHIS showcased its commitment to sustainable agriculture at the Mombasa Show, held at the Nyali – Mkomani Showground. Themed “Promoting Climate Smart Agriculture and Trade Initiatives for Sustainable Economic Growth,” the event emphasized integrating climate-smart practices into agriculture and trade. KEPHIS, among over 300 exhibitors, highlighted its multifaceted role in seed certification, phytosanitary services, and laboratory testing, as well as its crucial functions at the port. The organization engaged with Stakeholders, emphasizing on the importance of these services in

promoting best practices and fostering sustainable agricultural growth. Besides that, KEPHIS bagged 5 awards.

KEPHIS also emerged as a winner at 2024 Nairobi International ASK show

where we excelled in two categories:

- Best stand interpreting the current show theme
- Third best Agricultural -Based Statutory stand.



KEPHIS Staff at the Kitui Agricultural Show.



Staff at the Ithookwe Showgrounds-Kitui Showcasing Multiple Awards



Deputy Director - Mombasa Regional Office Mr. Koome Fredrick receiving the ASK trophy.



Mombasa regional office staff during the ASK International show.

At the Kisumu show, KEPHIS received several awards, including:

- The stand that best interprets the current theme
- Best agricultural-based organization disseminating safety information in agricultural products
- Best regulatory authority corporation stand
- Best stand embracing Information Technology and Communications Systems
- Best agricultural-based statutory body commission stand

Similarly, at the Kitui show, KEPHIS was recognised as:

- Best National government ministries/departments stand
- Best Agricultural-based statutory board
- Best stand in agricultural training services
- Best stand exhibiting agronomic practices to boost food security

At the Mombasa show, KEPHIS was recognized as:

- The best Agricultural based organization that disseminates safety information in agricultural products.
- The best innovation and invention stand.
- The best Regulatory authority and corporations stand.
- The best Agricultural based statutory board stand.
- The best local stand in strategies of international trade and exports.

KEPHIS remains committed to equipping farmers and other agricultural stakeholders with essential knowledge for good agricultural practices, aiming for high yields with minimal pest risk interruptions.

KEPHIS SEED TESTING LABORATORY-NAKURU

Seeds of Excellence

“The Legacy and Impact of KEPHIS Seed Testing Laboratory in Nakuru”

The history of KEPHIS seed testing laboratory in Lanet, Nakuru dates back to 1964 when the first International Seed Testing Association (ISTA) training in Kenya was organized by Dr. Schoorel, the secretary of ISTA then. Through the support of the Netherlands Government, the Kenyan Government established the seed testing laboratory at the National Agricultural Research Laboratories (NARL) in 1965. The laboratory was relocated from NARL to the current site (Lanet) in 1979. Together with the seed inspectorate section and variety section, the station was officially known as the National Seed Quality Control Service (NSQCS). KEPHIS took over the NSQCS station in 1996.

The purpose of the Seed Testing Laboratory is to provide a seed testing system that meets clients' needs through timely provision of accurate test results to ensure farmers access disease free seeds with high purity and germination standards while facilitating national and international seed trade. The main clientele of the laboratory includes seed companies, research institutions, farmers, learning institutions and private companies.

ISTA membership and accreditation

KEPHIS seed testing laboratory became an ISTA member in 1964 and was first accredited in the year 2002.

Since then, the laboratory has been going through ISTA audits after every 3 years and successfully retained accreditation in 2006, 2009, 2012, 2015, 2018, 2021 and 2024 audits. The scope of accreditation includes seed sampling, purity and other seed determination, germination and moisture tests. The laboratory also performs Seed vigor, tetrazolium, thousand seed weight determination and seed health tests. ISTA orange certificates are issued on the accredited tests to facilitate seed export outside the country. The laboratory also issues seed test reports to compliant seed lots thereby facilitating seed companies to trade their seed locally within the country.

Competence and Capacity

The laboratory is run by a team of qualified, competent and dedicated staff who have experience in conducting seed testing. The Laboratory is well furnished with the necessary equipment to perform seed testing and plant/ seed health diagnostics including weighing balances, seed blowers, moisture ovens, ambient controlled germination chambers, conductivity meters, pH meters, PCR machines, laminar flow hoods, ELISA readers, microscopes among others. The staff also have necessary methods, procedures and reference materials for their use when performing the delicate tests.

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Main activities

The laboratory carries out the following activities as part of the seed certification process.

- (i) Purity analysis
- (ii) Moisture testing
- (iii) Germination testing
- (iv) Thousand seed weight determination
- (v) Seed vigour test
- (vi) Tetrazolium/ Viability test
- (vii) Plant virology, bacteriology, mycology and nematology.

Purity analysis

This test is carried out to determine the composition by weight of the pure seed in the sample and by inference the composition of the seed lot. The analysis further identifies the various seeds of other plant species and other material in the sample. The minimum seed lot purity standards are stipulated in the Seeds and Plant Varieties Act (Cap. 326).

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Purity test at the KEPHIS Nakuru laboratory.

Moisture tests

The moisture content is an important factor in seed longevity and quality. In seed trade, high seed moisture content may exaggerate the weight of the seed lot and encourage disease infection during storage. The recommended seed moisture content levels are stated in the Seeds and Plant Varieties Act (Cap. 326).

Germination

Germination of a seed in a laboratory test is the emergence and development of the seedling to a stage where the aspect of its essential structure indicates whether or not it is able to develop further into a satisfactory plant under favorable conditions in soil. The objective of the germination test is to determine

the maximum germination potential of a seed lot, which can then in turn be used to compare the quality of different lots and also estimate the field planting value. Testing under field conditions is normally unsatisfactory, as the results cannot be repeated with reliability. Laboratory methods have, therefore been evolved in

which conditions are controlled to give the most regular, rapid and complete germination for the majority of samples of a particular species. The conditions have been standardized to enable the test results to be reproduced within the limits as near as possible to those determined by random sample variation.



Germination test by the officers from KEPHIS Nakuru.

Tetrazolium test

Is a biochemical test that may be used to make a rapid assessment of seed viability? The colour phase of the test is obtained by use of a colourless testing solution that consists of water, and 2, 3, 5-triphenyl Tetrazolium chloride (TTC).

When it enters the living cells, the salt is reduced to a reddish, water insoluble compound. The staining patterns within tissues permit recognition and location of functional and non-functional tissues within embryo structures.

Weight determination

The aim of the test is to determine weight per 1000 pure seeds of the sample. The number of seeds in a weighed quantity of pure seed is counted and the weight per 1000 calculated. It is used to calculate seeding rates and calibrate seed drills.

Seed vigour test

Seed vigour is the sum of those properties that determine the performance of seed lots of acceptable germination in a wide range of environments. The test is done to provide information about the planting value of seeds in a wide range of environments and/ or the storage potential of seed lots. A vigorous seed lot is one that can perform well even under environmental conditions which are not optimal for the species.

Pathology

Seed pathology tests are done to detect and identify seed-borne pathogens. Different methods are used depending on the pathogen being investigated (fungi, bacteria or virus). Seed pathology is also crucial in the routine seed field inspections and surveillance. The methods used in testing include: -

- **Mycology:** Dry seed inspection, washing test and incubation.
- **Virology:** ELISA tests, growing on test and PCR testing.
- **Bacteriology:** Gram staining, growing on test, indicator plants, serological tests and molecular tests.
- Nematology tests.

Training and student attachments

The seed testing laboratory has been serving both local and international students/officials who are on short term attachments and exposing them to the current procedures of seed testing in accordance to ISTA standards. Some of the participants trained in the laboratory include a group sponsored by CYMMIT comprising of participants from DRC, Malawi, Zambia and Tanzania who visited the laboratory on 28th August 2024. The laboratory has also received visitors from Burundi (2023), Africa (2023), DRC (2021), Eritrea (2023), University of Nairobi (SEMIS), Rwanda (2022), Somalia (2019), Malawi (2016).



Madagascans' Ministry of Agriculture officials on a short term training programme

International workshops

The seed testing laboratory hosts international Seed Testing Association (ISTA) workshops on different areas: Purity testing, Germination, Vigour & Moisture testing and Seed Germination, Tetrazolium, Sampling and Statistics.

PICTORIAL



1. KEPHIS Laboratory Complex at the headquarters in Karen-Nairobi



2. Pesticide residue analysis laboratory (under analytical chemistry laboratory)



3. Heavy metals analysis laboratory (under analytical chemistry laboratory)



4. Entomology Laboratory (molecular laboratory)



5. Sample preparations /extraction room (plant health laboratory)

PICTORIAL



TREE PLANTING ACTIVITY



Prof. Albert Kimutai - Board Member with KEPHIS Staff Members.



KEPHIS Regional Staff | ELDORET

| KITALE

The tree planting activity at Kaptagat took place on 13th July 2024 was one of the extensions plans which was launched by His Excellency the president Dr. William Ruto on 22nd December 2022. The initiative's main aim is to plant 15 billion trees by 2032. It's a move aimed at reducing greenhouse emissions, stopping and reversing deforestation and restoring 5.1 million hectares of deforested and degraded landscapes through the African Landscape Restoration Initiative.

His excellency the president DR. William Samoei Ruto presided over the Kaptagat tree planting event where Kenya Plant Health Inspectorate Service KEPHIS donated 2000 Hass avocado seedlings and was represented by; KEPHIS board member Prof. Albert Kimutai, Ag. Deputy Director Kitale Mr. Thomas Kosiom, together with members of staff from Nairobi, Eldoret and Kitale offices

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FREQUENTLY ASKED QUESTIONS ON SEED AND PLANT VARIETY ACT



WHAT IS THE SEEDS AND PLANT VARIETY ACT CAP 326?

- > An Act of Parliament to:
 - > Ensure that seeds produced or imported into Kenya meet certification requirements to ensure farmers get maximum benefits upon planting the seeds.
 - > Prevent sale of fake seed and provide for punishment of fake seed dealers.
 - > Ensure that seed sold in Kenya is of suitable varieties that have been tested and found to perform satisfactorily under Kenyan Agro-ecologies.
 - > Provide for breeders to recover their investment in breeding by protecting them from unfair protection of their varieties.
 - > Provide for the conservation and sustainable utilization of plant genetic resources for food and agriculture, including indigenous seeds and plant varieties in Kenya.
 - > Establish a Tribunal to hear appeals and complaints on seed related issues.

WHAT IS SEED CERTIFICATION ?

Seed certification is the process designed to maintain and make available to farmers continuous supply of high-quality seeds of suitable varieties of crops, so grown and distributed to ensure the physical identity and genetic purity.

WHAT IS THE DIFFERENCE BETWEEN CERTIFIED SEEDS & INDIGENOUS?

Certified seeds are seeds that have undergone laboratory tests and have been determined to be of high quality. In most cases, indigenous seeds are produced informally and maintained by farmers and local communities through several generations. Indigenous seeds can also be certified if they undergo the necessary tests such as germination, purity free from diseases and having defined variety characteristics.

WHAT ARE THE BENEFITS OF CERTIFIED SEEDS?

- > High germination capacity.
- > Free from pests and diseases
- > Varietal purity



WHEN WAS THE SEED AND PLANT VARIETY ACT CAP 326 ESTABLISHED ?

The Act was established in the year 1972; reviewed in 1991, 2012 and amended in 2016.

WHO IS TARGETED BY THE ACT?

The Act focusses on regulation of commercial production and sale of seeds.

WHO IS MANDATED TO OVERSEE THE IMPLEMENTATION OF THE ACT?

The Kenya Plant Health Inspectorate Service KEPHIS

WHAT KIND OF SEED SYSTEMS DO WE HAVE IN KENYA?

Formal seed system – seed is produced under a certification scheme prescribed in the Seeds and Plant Varieties Act. Production is done by registered seed companies. All seed is inspected and certified by KEPHIS. Product is Government certified seed.

b) Informal seed system – involves recycling and informal sharing and exchange of seeds by farmers. There are no regulations to govern the system.

WHO CAN PRODUCE CERTIFIED SEEDS IN KENYA?

A seed company registered by KEPHIS.

WHO IS REQUIRED TO REGISTER TO SELL CERTIFIED SEEDS IN KENYA?

The Seed Merchants and Seed Sellers (agrovets)

WHO IS A SMALLHOLDER FARMER?

A smallholder farmer is a farmer who owns below 3 or fewer acres of land.

DO SMALLHOLDER FARMERS USE CERTIFIED SEEDS?

Yes, a farmer considers their need and selects the variety and types of seed that gives them maximum returns. Many stallholder farmers are involved in commercial production of vegetables (and flowers) for local consumption and export.

IS SAVING & SHARING OF CERTIFIED SEEDS PROHIBITED BY THIS ACT?

No, the Act does not prohibit the saving and sharing of the indigenous seeds between farmers for non-commercial purposes.

The New Management Team



Ms. Nancy Ndumia
Director Corporate Services

Nancy Ndumia holds a Master's Degree in Business Administration from the University of Sunderland (UK) and a Bachelor's Degree in Commerce (Finance Option) from the University of Nairobi. She is also a Certified Public Accountant and is a member of the Institute of Certified Public Accountants, Kenya (ICPAK).



David Njoroge
Director Internal Audit and Risk management.

David Njoroge holds a Master's Degree in Business Administration (Finance) from the University of Nairobi, Bachelors of Commerce (Accounting) University of Nairobi. He has over 15 years of experience both in Public and Private sector. A member of ICPAK and Institute of Internal Auditors.



Faith Kaluai
Director Legal Services & Corporation Secretary

Faith is an advocate of the High Court of Kenya with 13 years of experience. She holds LL.B from Moi University, a Master's Degree in Law and a Higher Diploma in Human Resource Management. She has vast experience in Labour law, Corporate Governance and Risk Management. A certified Public Secretary CPS(K), a Certified Professional Mediator (CPM) and Accredited Governance Auditor.



Bernard M. Kiilu
Deputy Director -Human Capital

Mr. Bernard M. Kiilu is a consummate Human Resource Practitioner with over eighteen years post qualification experience He holds an MBA in Human Resources Management and Strategic Management from Daystar University. Mr. Kiilu is an Executive Council member and Vice Chairperson of the African Public Sector Human Resource Practitioner's Network - Kenya Chapter. He is a licensed HR practitioner and member of the IHRM.



Ann Ileri

Deputy Director ICT & Innovation.

Ann holds a Master’s Degree of Science in Information Technology Management from the University of Nairobi, a Bachelor’s of Science in Computer Science from Masinde Muliro University. She has of over 13 years of experience in robust Technology Infrastructure and Systems Deployment and Management in the public sector. She is a member of CSK.



Kellen Karuti

Deputy Director Corporate Communications

Kellen holds a Master’s in Communications from Daystar University, a Bachelor’s Degree of Arts in English & Literature from Kenyatta University, a Post Graduate Diploma in Public Relations Management from the Kenya Institute of Management. She has over 13 years of experience in Corporate Communications and Public Relations in both Public and Private sector. A member of PRSK and KIM.



Ireen Nyaga

Manager Supply Chain Management.

Ms. Nyaga Ireen holds a Master’s Degree in Procurement & Contracting, a Bachelor’s Degree in BBM (Purchasing & Supplies management). She is a member of Certified Procurement & Supply Professional (CPSP-K), She has 14 years of experience in Procurement in both Public and private sector.



Nicholus Tunya

Ag. Director, Planning and Strategy.

Bachelor’s of Science in Agricultural Economic from Egerton University. He has over 20 years of experience both in Public and Private Sector. He has worked at KEPHIS since 2008 and served under various capacities in the Planning and Strategic directorate. He is a full member of the National Quality Institute (NQI)





Hilda Miranyi

Deputy Director Research and Compliance.

Hilda holds a Master’s Degree in Horticulture from the University of Nairobi, BSc. Horticulture from Egerton University. She has over 20 Years experience in Public Sector, in IPPC-EWG.



Ephraim Wachira

Deputy Director Seed Certification

Master’s in Agriculture and Rural Development from Kenya Methodist University; BSc. in Agriculture from Egerton University. He has over 20 years of experience in the Public Sector - Seed Certification, ISTA, OECD.



George Ngundo

Acting Deputy Director
Plant Quarantine and Biosecurity Station.

George holds a Bachelor’s Degree of Science in Biological Sciences from JKUAT, a Master’s of Science in Plant Pathology and a Master’s in Biosafety in Plant Biotechnology. He has got over 27 years of experience in germplasm management, seed certification, plant variety registration, Phytosanitary regulation, plant disease diagnosis and management.



Peter Kamuti

Deputy Director Laboratory Analytical
Chemistry Laboratory and Food Safety.

Peter holds a Bachelor’s Degree in Biochemistry from Kenyatta University, a Master’s of Science in Food Safety from the University of Western Australia. He has over 20 years of experience in both Public and Private Sector.



Florence Munguti
Ag. Director Laboratory Services.

Florence holds a Master’s Degree of Science in Molecular Biology & Bioinformatics from JKUAT, a Bachelor’s of Science in Biochemistry from Egerton University. Currently undertaking PhD studies in Plant Pathology at the University of Nairobi. She has over 13 years of experience in plant health issues.

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George Keere Momanyi
Deputy Director, Import, Export
and Border Control.

George holds a Bachelor’s Degree of Science in Horticulture from Egerton University, a Master’s of Science in Horticulture from JKUAT and a Master’s in Bio-safety (Plant Biotechnology) from Marche Polytechnic University, Ancona-Italy. George has got over 25 years of experience in Public and Private Plant Health Sector.

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Victor Kibet
Deputy Director Security.

Victor holds a Master’s Degree in Arts (IDS), a Bachelor’s of Arts from University of Nairobi. He has over 20 years of experience in Private Sector and the Military. He is a member of PROSAK/ICSMP-K.

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KENYA PLANT HEALTH INSPECTORATE SERVICE (KEPHIS)
QUARTER ONE (JULY - SEPTEMBER) 2024 NEWSLETTER.

Editorial Team

- | | | | |
|-----------------------|------------------|-------------------|-----------------|
| 1. Kellen Karuti | 3. Stella Nkatha | 5. Gerald Katheru | 7. Brian Ndunda |
| 2. Catherine Muraguri | 4. Fulki Ogle | 6. Ruth Thuku | |

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| KEPHIS Headquarters

- P.O Box 49592 - 00100, Nairobi
- 0 709 891 000 | 0 206 618 000
- director@kephis.org / kephisinfo@kephis.org
- www.kephis.go.ke