

KEPHIS Moves Towards Authorization of Private Regulatory Officers

KEPHIS Headquarters, Nairobi - The Seeds and plant Varieties Act (2012), section 3B provides for the appointment of service inspectors and authorization of private seed inspectors, analysts and examiners as stated below:

3B. Appointment of inspectors, analysts and examiners

- (1) For the purposes of enforcing the provisions of this Act, the service;
 - (a) Shall appoint seed inspectors, seed analysts and plant examiners and
 - (b) May authorize competent private or public persons to perform specified functions under this Act on its behalf.

Provided that an authorization may be withdrawn in case of misconduct



KEPHIS inspectors instructing trainee private inspectors in a bean seed field in Nakuru

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This is in line with the national Seed Policy enacted in 2010 which aspired to have legal and policy reforms to provide for effective participation of both public and private sectors in the production of quality planting materials including self-regulation. This was a culmination of many years of petitions by the seed industry players to privatize seed certification services.

In the years after the gazetement of the amended Seeds and Plant Varieties Act, KEPHIS Quality Assurance department with collaboration of the Seed Traders Association of Kenya (STAK) and the Ministry of Agriculture made guidelines for the authorization of private inspectors, analysts and plant examiners. The authorization guidelines document was finally agreed upon in 2015, setting the stage for the authorization of private seed inspectors, analysts and examiners.

The authorization guidelines provide the scope of services that can be authorized, eligible entities for authorization as private seed inspectors, analysts and examiners, authorization conditions to be met, the process towards authorization and the monitoring and audit procedures to ensure that the authorized private seed inspectors, analysts and examiners are certifying seed according to the set standards. It also provided for the withdrawal of authorization for various non-compliances and misconduct.

In May 2016, KEPHIS invited applications for training private seed inspectors and analysts from qualified interested individuals and companies that deal with seed and companies that do not deal in seed. Over 40 applications were received and 30 were shortlisted and accepted for the training. Of these, 19 individuals from five seed companies that deal with seed and one other company attended the two weeks training.

Senior and experienced inspectors and analysts from various KEPHIS stations were involved in the preparation and implementation of the training of the private seed inspector and analysts.

Training of the private inspectors covered basic principles in seed production, ethics in inspection, inspection procedures for specified crops, seed processing, sampling, labeling and sealing. The analysts training covered seed biology, seed quality, sampling and various seed testing methods. One week of theory training at KEPHIS headquarters was followed by a week of practical training at KEPHIS Nakuru Seed Testing Laboratory. The field inspectors were taken to the field in Perkerra irrigation scheme and Salgaa for demonstration of field inspection procedures. Examinations were done for both the theory and practical lessons and all participants passed.

The training was considered a pilot project and requires that the trained private inspectors and analysts be attached to skilled and certified inspectors and analysts to gain experience and confidence in seed regulation activities. It was also observed that clear commitment is required from companies that deal with seed that the private inspectors and analysts will be allowed adequate independence to make inspection and analysis decisions without undue influence. Indeed, the private inspectors and analysts will augment and support KEPHIS inspectors to ensure adequate capacity to undertake all seed quality certification processes that are required by law. The inspectors will also be trained in audit and monitoring of the private inspectors and be exposed to countries which are already implementing this system of seed certification for ease of implementation.

Measures Taken to Mitigate Against the Potato Cyst Nematode

The Potato Cyst Nematode (*Globodera rostochiensis*) was recently reported as a major pest of potato in Kenya. The tuber is the second most important food crop in Kenya. The origin of the introduction of Potato Cyst Nematode (PCN) in the country is yet to be established and in Africa, this pest has been reported from South Africa to Egypt, Tunisia, Morocco, Algeria, Libya and Sierra Leone. The pest, which is transmitted through movement of infested or



Potato Cyst Nematodes present in potato roots

contaminated soils, water, potato plant materials and tubers, farm machineries and tools has in the recent years dwindled potato production in major production centres in the country.

Once the pest has been introduced, the cysts containing viable eggs can survive in such soils for up to 20 years even when susceptible host plants are absent. This negatively affects potato production even with the use of rotation as a pest management procedure.

This situation spurred some initiatives, and consultative meetings led by the Ministry of Agriculture through KEPHIS led to the creation of a Multi-Institutional Working Group to develop a management strategy for this pest in 2015. This year, renewed initiatives seeking modalities for conducting a national multi-institutional baseline survey on PCN in Kenya were made.



headquarters and other potential financial partners seeking funding. So far, FAO – Kenya has secured some funds to implement the ideas contained in the proposal. This has formed the basis of the current initiative under a Technical Cooperative Project (TCP) where a comprehensive survey has been conducted in 20 counties with a total of 1,200 soil samples being collected. These are currently undergoing analyses at the Plant Quarantine and Biosecurity Station (PQBS), Muguga to determine the distribution and occurrence of the pest.

The outcome of the analysis will guide the development of a PCN contingency control plan that will be disseminated to extension staff and other stakeholders in the potato industry. The project aims to inform policy changes necessary to curb the spread of



(Left) A KEPHIS officer collects soil samples for PCN analysis; (right) KEPHIS inspectors inspect infested potato

A consortium of scientists from the State Department of Agriculture, KEPHIS, Kenya Agriculture and Livestock Research Organization (KALRO), International Centre for Insect Physiology and Entomology (ICIPE), International Institute for Tropical Agriculture (IITA), International Potato Center (CIP), International Fertilizer Development Center (IFDC), Food and Agriculture Organization of the United Nations (FAO) and the National Potato Council of Kenya has been constituted to guide and execute a national baseline survey for PCN in all potato producing counties of the nation.

To facilitate this process, a project proposal was developed by all stakeholders and submitted to FAO

the pest and manage existing infestations. Ultimately the initiative will enable farmers manage the pest and improve their potato productivity.

(Left) a KEPHIS officer collects soil samples for PCN analysis; (right) KEPHIS inspectors inspect infested potato

“Ultimately the initiative will enable farmers manage the pest and improve their potato productivity

KEPHIS Trains Kilifi Women's Group on Good Agricultural Practices for Enhanced Food Production

Kilifi County - Kilifi, in the coastal region, has seen increased agricultural activity in recent years, hence the need for farmers to embrace new farming techniques and technologies. This includes knowledge on recommended crop varieties suitable for the region, use of mobile phones to find out approved and recommended crop varieties and use of laboratories for quality assurance of agricultural inputs such as soil, water, manure, fertilizers and irrigation water. The county is also exploring the possibilities of exporting produce to international markets.

KEPHIS and the County Government of Kilifi organized a training for one farmers group on Good Agricultural Practices (GAP) and the importance of laboratory analyses of their agricultural inputs and how to manage pests and diseases for increased food production leading to improved livelihoods in the county.

The group identified was Kasidi Women Group located in Chonyi, Kilifi South that was formed in 2006 and grows cereals and horticultural crops for local markets. The group depends on rain and drip irrigation to water their produce. KEPHIS Mombasa regional officers trained the group as part of collaboration with the county to support farmers.

The training was practical, hands on farm training and involved 27 members of the group on their four acre parcel of land. KEPHIS provided agricultural input, advisory services and training in the course of the growing season. They also demonstrated soil and water sampling for fertility and irrigation suitability, respectively. This was done along with advising the farmers on the need to know soil and water status and their subsequent recommendations

to improve on farm input management.

Watering a seed bed

The benefits of planting on nursery for small size vegetable seeds were emphasized which included better control of pathogenic infection, management of pests and diseases, watering, weeding and mulching. The benefits of using mulch were explained and demonstrated to the group by using grass mulch on the beds to retain soil moisture, to suppress weeds and protect the bed from direct sunlight and rain. Some tomato seeds were planted on trays using peat moss as the media for demonstration.

After planting, pruning, trellising and trailing were demonstrated to the farmers to keep the vines off the ground to reduce exposure to soil borne pathogens.



Trailing allows better airflow around the plants which keeps the canopy drier and less vulnerable to fungal diseases. It also makes it easier for chemical application and picking of the fruits.

A fertilizer regiment was followed to avail more nutrients for the growing plants. Weeding was also done to avoid competition for water and nutrients for plants and weeds and to reduce host plants for pests.

At the end of the training period, the farmers were able to harvest 6 tonnes of tomatoes, yields they would not achieve if following conventional agricultural practices. Some of the yields achieved by the farmers during their practical sessions on Good Agricultural Practices facilitated by KEPHIS Mombasa office.



Left and right: KEPHIS staff and farmers trellis tomatoes to improve yields and prevent pest and disease infestation



Some of the yields achieved by the farmers during their practical sessions on Good Agricultural Practices facilitated by KEPHIS Mombasa office.

Sweet Potato Pre-Basic Seed Production for Healthier Lifestyles

KEPHIS is collaborating with the International Potato Centre (CIP) to implement a Sweet Potato Action for Security and Health in Africa (SASHA II) Project that aims to promote the production and consumption of the Orange Fleshed Sweet Potato (OFSP) variety. The project is designed to offer clean (disease and pest free) pre-basic sweet potato seed for bulking by seed multipliers for later distribution to vine multipliers in various counties and eventually to farmers.

The role of KEPHIS is to clean and multiply OFSP sweet potato vines through tissue culture and sell them to the basic seed multipliers who subsequently sell what they have bulked to Decentralized Vine Multipliers (DVMs) in various



Sweet potato pre-basic seed production glass houses at the Plant Quarantine and Biosecurity Station, Muguga

counties and the East African region. The DVMs will finally be sold to farmers (both small and large scale) for root tuber production.

Sweet potato production and processing is on the rise in sub-Saharan Africa. This growth is primarily driven by increasing awareness about the benefits of sweet potato, in particular the vitamin A rich orange fleshed varieties.

However, increased production requires timely access to increased quantities of tubers that can only be obtained through use of disease-free seed.

Quality seed is the starting point for any successful agricultural venture and a functioning sweet-potato seed system contributes to food security and income generation. The transition between breeder and pre-basic (i.e. first generation or foundation) seed production is a major bottleneck in the functioning of an efficient seed system for sweet-potato.

This is because of limited incentives to maintain seed breeders, unreliable funding streams and poor investment in human capacity and facilities for pre-basic seed production and inadequate coordination between seed demand and supply.

To bridge this gap in the sweet potato seed system, KEPHIS partnered with CIP to provide quality and certified seed through its Plant Quarantine



and Bio-Security Station(PQBS) that hosts an ISO/IEC 17025:2005 accredited virology laboratory with the technical capacity to ensure that virus-indexed (pathogen tested) starter tissue culture plantlets are available and micro-propagated under laboratory conditions.

These are then acclimatized or hardened and further multiplied under screen house conditions to produce pre-basic seed. The cuttings from the screen house are bought by certified basic seed multipliers who grow them in net tunnels to maintain the integrity of the



(Left) Virus indexing of sweet potato tissues to assure clean seed,(right) controlled growing (micro propagation) of tissue cultured sweet potato at PQBS laboratory



Hardening and multiplication of pre-basic sweet potato in the screen houses

clean seed. The basic multipliers later sell what they have bulked to decentralized vine multipliers who grow the vines in open fields for eventual sales to root tuber producers (farmers).

Currently, KEPHIS produces clean pre-basic seed material of two sweet-potato varieties -Vitaa and Kabode. These are highly preferred by farmers due to their high dry matter content, beta-carotene content and good performance in terms of yield.

Climbing Beans a Show Stopper at the Nairobi International Trade Fair

Jamhuri Park Showgrounds, Nairobi - The Nairobi International Trade Fair was recently held at the Jamhuri Park show grounds. The event brought together exhibitors from all over the world and from various fields like agriculture, trade, finance, security, among others.

KEPHIS participated in the weeklong event as the government regulatory body that assures the quality of agricultural inputs and produce to promote food availability and national growth. The Corporation showcased its services like soil, water and fertilizer analyses, export and import certification and phytosanitary and quality assurance services for produce and seed.



Visitors admiring climbing beans at the KEPHIS stand during the Nairobi International Trade Fair

A crowd puller to the stand was the tall climbing beans that got the attention of many visitors at the fair. This is because the beans occupied a small area of land yet produced huge yields of the legume. KEPHIS presented this legume to show that despite diminishing land sizes, farmers and those interested in farming can plant crops that utilize small land sizes to produce food. The variety of climbing beans was developed by plant breeders at the University of Nairobi.

Students were also captivated by the phytosanitary department's display of multiplied sweet potato plantlets in test tubes and screen and glass house demonstrations. They were taken through the process of cleaning diseased plants and the multiplication of clean seed by a plant quarantine and biosecurity station (PQBS) officer where the activity was on going. Cleaning and multiplication of sweet potato seed is an ongoing project at PQBS done in collaboration with



Curious students observing cleaned sweet potato seed; (right) Students admiring the vegetable plot

the International Potato Centre.

The importance of laboratory analysis of water, soil and fertilizer was explained to the visitors. This together with the use of certified seed is essential for improved crop yields. Visitors also got to see the array of export

produce that KEPHIS certifies and were inspired to go into farming of export produce such as mangoes, avocados, baby corn, baby spinach, baby carrot and various flowers. They were urged to have their farm inputs and agricultural produce certified by KEPHIS to enable them access international markets.



Mr. Francis Kiplagat (left) sharing tips on mango farming with the youth at the stand

The use of new pest management techniques that reduce the use of chemical pesticides was showcased to the visitors with a certified mango farmer from Elgeyo Marakwet, Mr. Francis Kiplagat explaining to visitors how the fruit fly trap works and how it has improved his yields and opened up local and international markets for his mangoes. He also shared with the youth how to be successful in agriculture. The KEPHIS procurement office engaged youth who visited the stand on the 30% KEPHIS tenders allocated to the youth, women and people living with disabilities in accordance with government directives.

KEPHIS Wins at the Kabarnet Show

Kabarnet, Baringo County – KEPHIS took part in the annual Kabarnet Agricultural Show where she scooped top awards at the event. These were:

- Position 1** - Best Regulatory Authority Stand
- Position 2** - Best Agricultural based Statutory Board Stand
- Position 2** - The Best Medium Government Stand
- Position 2** - The Best Stand in Strategies of International Trade and Exports
- Position 3** - The Best Innovation and Invention Stand

The winning trophy was given to the Nakuru team by H. E. The Deputy President William Ruto.



The Agricultural Society of Kenya, the organizers of the show, judged the stands for various categories based on the display, the attractiveness of the stand, the knowledge and ability of staff manning the stands and the ability of the displays to pass the message to visitors, among other criteria.



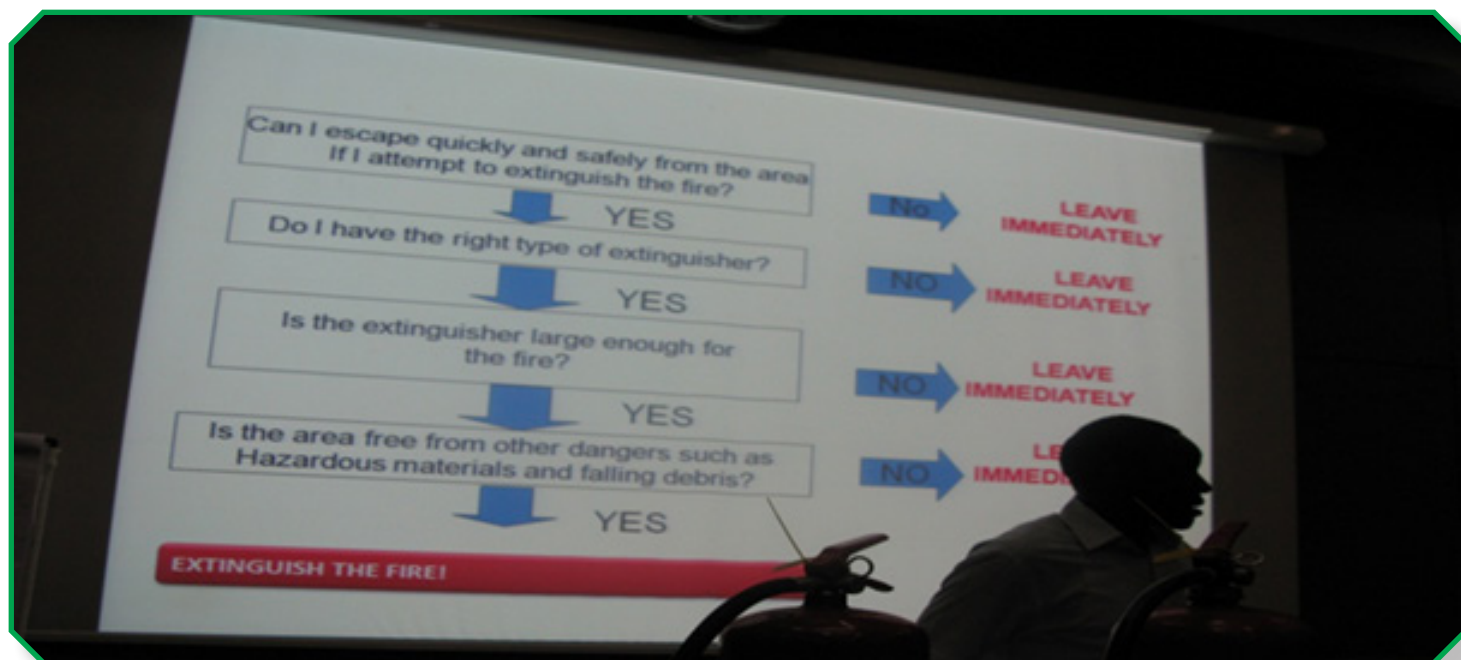
Deputy President H.E. William Ruto awards the KEPHIS Team for 1st position in the Best Regulatory Authority Stand at the Kabarnet Show.

Over 700 show participants visited the KEPHIS stand including farmers from Baringo, Uasin Gishu and Elgeyo Marakwet counties. Primary and secondary students from various schools also passed by the stand. Farmers were especially interested in the fruit fly traps that control the mango fruit fly and how to access them. They were also pleased with the application of small seed verification stickers on all seeds packets and asked KEPHIS to enforce their application on vegetable seed packets.



The KEPHIS Nakuru team poses with the awards at the stand

KEPHIS Fire Marshalls Trained On Fire Safety Preparedness



Steps in evaluating risks of fighting a fire.

KEPHIS Headquarters, Nairobi - According to the United Nations Sustainable Development Goal number 8 of decent work and economic growth, job opportunities and decent working conditions are required for the whole working age population.

In line with this, KEPHIS organized a training workshop for its fire marshals at headquarters in Karen, to sensitize them on tools and procedures to undertake in the event of a fire emergency. This was aimed at ensuring that KEPHIS is a safe place to work in and assure the safety of employees in the event of fire eventualities.

Staff were taken through various stages of fire emergencies including the identification of fire hazards at the workplace, evacuation procedures for both abled and disabled staff, communication of fire emergencies and drills with relevant security and safety agencies like the police and fire rescue institutions, and on fire-fighting techniques in case of small and manageable fires.

The trainer, Mr. Gitau, urged the marshals to conduct sensitization to other staff members including fire safety drills at their various stations at least once in a year in consultation with the authorities and fire safety specialists so as to prepare staff for any eventuality. Mr. Gitau trained the marshals on different sources of fire and the relevant firefighting equipment for each. At the workplace, electrical fires were the most likely to happen due to overloading sockets, faulty cables and machinery.

In the case of electrical fires, the marshals were asked to use powder and carbon dioxide fire extinguishers to fight the fires after alerting everyone



The fire marshals after their training

about the incidence. In the case of gas and chemical fires, powder, foam and carbon dioxide extinguishers are suitable for putting out the fires. The attendants also went through a practical firefighting drill. Held at the parking lot, the drill saw participants use various extinguishers in fighting the fire. They noted that to

fight the fire effectively, an array of extinguishers were needed, these were: powder to stop chemical reactions needed for a fire to start and grow, foam to limit the oxygen in the fire and water to reduce the heat.

KEPHIS Staff Trained on First Aid for Emergency Preparedness

KEPHIS Headquarters, Nairobi - Ensuring healthy lives and promoting the well-being of staff is essential to productivity at work and sustainable development. When this is compromised by accidents and sudden illness, then first aid comes in. First Aid is described as the immediate help in case of health emergencies using available resources before the arrival of professional help; it is the first step in ensuring the quick recovery of patients so that they may return to their duty posts as soon as possible and improve the productivity of their organization.

KEPHIS organized training on first aid for staff that was attended by representatives from all stations. The attendants were taken through various scenarios that might occur at work, at home and on the road. They were therefore trained on relevant first aid for each of those incidences.

First Aid is meant to preserve the life of casualties, prevent further injuries and promote quick recovery. Michael Gitau, the trainer, also showed staff how to assess the scene of incidence, make the area safe for casualties, bystanders and themselves as first aiders, offer emergency help, call for professional help and management of the scene and those involved after

the incidence.

The attendants went through casualty management procedures including the separation of danger and the casualty and first aider, assessing the awareness of the casualty and basic lifesaving procedures like assessing the respiratory and circulatory systems of the casualty and searching for any deformities and injuries.

They were also trained on basic lifesaving procedures like Cardio Pulmonary Resuscitation (CPR), the Heimlich

maneuver, among others that may help in preventing loss of life in the event of an accident.

At the workplace, there can be various causes of unconsciousness and attendants were trained

how to identify such cases as Epilepsy, insulin deficiency and other health conditions that may overwhelm their colleagues and lead to the condition. The participants learnt how to manage the situations as professional help was sought or as the casualty is taken to hospital. This included helping to return blood circulation to the head by laying the casualty down and raising their legs, enabling respiration by opening up the airway and laying them in a recovery position for their comfort.



Trainer Michael Gitau (left) instructing participants on first aid procedures

In the event a situation is beyond the capability of the first aider to handle, or is a major incidence, they were advised to call emergency service providers such as ambulances and relevant security and safety officers. The participants were urged to have numbers of government and private security firms and those of emergency response units at hand always in case of an emergency and to come up with a hierarchy of officers to call the service providers in case of emergencies to limit confusion and for accountability purposes when the need arises. Participants also went through

practical sessions on dealing with various emergencies like fractures, fainting and burns. This equipped them to be ready and responsive in case of any incidences at the workplace or in the field during their field visits.

In the end, the trainer emphasized that safety begins with the individual and that with proper sensitization of other staff, emergencies at the workplace can be well managed to preserve life and for quick recovery of casualties so that they may return to being productive members of the organization and the nation.

Ol Choro Field Day Shows Barley Farmers How to Manage the Brome Grass Weed



Ol Choro, Narok County - As a regulator in the agriculture sector, KEPHIS organizes and takes part in farmer field days countrywide to sensitize farmers on the importance of using certified agricultural inputs such as seed, water, fertilizer and soil and to show farmers the importance of managing pests and diseases on their farms for good yields. To achieve

her mandate, KEPHIS works with various stakeholders such as seed companies, agro-chemical companies, other private sector players and research institutions. In Narok County, Barley farmers face the challenge of Brome grass weed which has continued to be a menace to their farming. Thus, KEPHIS together with some seed companies and the county government



Farmers at the KEPHIS stand

of Narok organized for a farmer's field day to show farmers how to eradicate the weed from their farms. The event was held at Ol Choro in Mr. David Kilesi's. The strategies demonstrated were use of certified seeds, use of effective herbicides and crop rotation.

Other crops planted were Irish potatoes Wheat, peas, canola, Carrots, and Sunflower.

The field day was attended by over 300 farmers, County representatives, stakeholders (Kenya Seed Company, University of Eldoret, Syngenta, Bayer, Coopers Limited, East Africa Malting



The KEPHIS General Manager for Quality Assurance Mr. Simeon Kibet (3rd right) who was the guest of honour and represented the Managing Director addressed farmers and other dignitaries during the event.

Limited, Kenya Agricultural and Livestock and Research Organization KALRO- Njoro), Agiventure) and the Ministry of Agriculture in Narok County.

Farmers were strongly urged to plant certified seeds so as to get high yields; emphasis was also put on how to identify certified seeds in licensed seed shops. The KEPHIS also showed them how to identify genuine seed by looking at quality marks that include the new seed labels.



Chelangat Tonui from the KEPHIS Nakuru Regional office explaining services to the farmers

IMPORTANT NOTICE ON CHANGE OF KEPHIS CONTACT DETAILS

In order to enhance communication with our stakeholders, customers and the public, we are happy to inform you of our new phone numbers which will make it easier for you to reach and engage with us.

The new numbers are as follows:

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Naivasha | Eldoret Airport | Malaba Border Office | Busia Border
Office | Isebania Border Office | Namanga Border Office | Loitokitok
Border Office | Taveta Border Office | Lungalunga Border Office |
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