



3rd Phytosanitary Conference

Virtual Edition

'Enhancing phytosanitary systems for healthy plants, safe and sustainable trade'

Chief Guest

Hon. Peter Munya, EGH

Cabinet Secretary

Ministry of Agriculture, Livestock, Fisheries and
Cooperatives (Kenya)

13th - 16th September 2021





General conference information

The 3rd Phytosanitary Conference will be held virtually. A link to enable all registered participants to attend will be shared prior to the start of the conference.

Certificate of attendance

All participants of the 3rd phytosanitary conference will be awarded certificates of participation. The certificates will be sent electronically to participants.

Break-out rooms

There will be three break-out rooms (room 1-3) during afternoon hours. Room 1 and 2 will be used for oral presentations while room 3 will be used for poster presentations.

Side events

These events will take place for three days during the conference. Link to participate in side events will be provided prior to the meeting.

Essay awards

The three best essays on International year of Plant Health, 2020 will be awarded at the end of the conference by the permanent secretary.

Oral presentations

Oral presentations will be done for a maximum of 10 minutes. This includes oral presentation and question time. Participants are required to email their final presentations for conference to phytosanitaryconference@kephis.org by 10th September, 2021.

Poster sessions

Oral poster sessions have been allocated a maximum of 5 minutes in room 3. Participants are required to email their presentations to phytosanitaryconference@kephis.org by 10th September, 2021.

Exhibition by sponsors

Conference participating sponsors are required to email their exhibitions to phytosanitaryconference@kephis.org by 10th September, 2021.

Translations

The language of communication will be English. However, there will be French translation services.

Online feed-back

Participants are required to complete an online feed-back survey at the end of the conference.





Conference agenda

Day 1, Monday 13 th September 2021		
Official opening session Moderators: Prof. Theophilus Mutui (MD, KEPHIS) Dr. Isaac Macharia (GM-PS, KEPHIS) Mr. Joseph Kigamwa Rapporteurs: Dr. Alex Muvea, Mr. Ivan Obare		
10.00- 10.20 am	Arrival of Chief Guest and registration – Registration foyer	
10.20-10.30 am	Opening remarks	Managing Director, KEPHIS Prof. Theophilus Mutui
10.35-10.40 am	Key note address 2	Director IAPSC, Dr. Jean Gérard Mezui M'ella
10.30-10.35 am	Key note address 1	Secretary General, IPPC
10.40-10.45 am	Welcoming remarks	Board Chairman, KEPHIS Mr. Robin Achoki
10.45-10.55am	Official opening	Cabinet Secretary Hon. Peter Munya, EGH
10.55 -11.00am	Break and photo session	
	Moderator: Dr. Washington Otieno, Co-moderator: Dr. Benard Mukoye Rapporteurs: Dr. Alex Muvea; Mr. Ivan Obare	
11.00-11.20 am	Key note address: International Year of Plant Health 2021 Mr. Ralf Lopian, NPPO Finland	
11.20-11.30 am	Msiska Kenneth , The international year of plant health: a report from Zambia	
11.30-11.40 am	Hellen Mwarey , The international year of plant health: a report from Kenya	
11.40-11.50 am	Raymunda , The international year of plant health: a report from Sierra Leone	
11.50-12.00 pm	Gillian Watson , Invasive scale insects (Hemiptera: Coccoomorpha) detection and identification in Africa	
12.00-12.15 pm	Andrew Polaszek , Natural enemies and potential classical biological control of invasive scale insects (Hemiptera: Coccoomorpha) in sub-Saharan Africa	
12.15-12.30 pm	Mutitu Eston , Mitigation measures for invasive insect pests on <i>Eucalyptus</i> spp. in East Africa: A review	
12.30-12.35 pm	Special Session: Overview of CABI Global programmes	
12.35-12.45 pm	Rono Mercy , Extensive surveillance of key potato growing areas in Kenya confirms absence of <i>Clavibacter sepedonicus</i>	
12.45-13.00 pm	Lucy Karanja , Occurrence of <i>Pectobacterium</i> species in soils of smallholder potato farmers in Kenya	





13.00-14.00pm			Lunch break (Promotion videos and exhibition)		
14:00-15.30pm		Room 1 Moderators: Prof. James Muthomi Co-Moderators: Dr. Edward Onkendi Rapporteur: Dr. Alex Muvea		Room 2 Moderators: Dr. Johnson Nyasani Co-Moderators: Mr. George Momanyi Rapporteur: Mr. Ivan Obare	
14.00-14.15 pm		Munguti F. Importance of accreditation of plant health laboratories in supporting phytosanitary systems		Ferguson M. E. Virus elimination in cassava clones and maintenance of clean stock	
14.15-14.30 pm		Avedi Edith. Plant post entry quarantine regulation in Kenya: Current status and future prospects		Kasina Muo. Infestation and management of fruitflies infesting African bird eye chili (<i>Capsicum frutescens</i> L.) in coastal Kenya	
14.30-14.45 pm		Kosiom Thomas. Biosecurity threat posed by increasing pest incursions in Kenyan		Mulwa J. Evaluation of periphos 77.5 gr in fumigation of roses for management of thrips (<i>Frankliniella occidentalis</i>), red spider mites (<i>Tetranychus urticae</i>) and false codling moth (<i>Thaumatotibia leucotreta</i>)	
14.45-15.00 pm		Koome F. Biosecurity risks posed by sea containers moving in the International trade. A Case study in Kenya		International year of plant health: a report from Rwanda	
15.00-15.15 pm		Charimbu M. Reimagining the e-market: The role of Kenya Plant Health Inspectorate Service (KEPHIS) in regulating trade of plant products on the online market in Kenya		Mukoye B. A distinct variant of Groundnut rosette virus associated satellite RNA (Sat-RNA) causing chlorotic rosette in western Kenya	
15.15-15.30 pm		Syanda Josiah : <i>E-Phyto</i> in phytosanitary systems		George Oluoch. Efficacy of Non-encapsulated Thymol and Eugenol with Chitosan Nano particles against Bacterial Wilt Bacterium <i>Ralstonia solanacearum</i>	
15.30-16.00 pm		Plenary discussion			
End of day's program					
Day 2, Tuesday 14 th September 2021 Moderator: Dr. Maina Mwangi; Co-Moderator Dr. Moses Oyier Rapporteurs: Dr. Benard Mukoye and Ms. Pamela Kipyab					
11.00-11.20 am		Key note address: Pest surveillance and diagnostics in phytosanitary systems - Dr. Sevgan Subramanian, ICIPE			
11.20-11.30 am		Kimaru S.L. Detection of <i>cucumber mosaic virus</i> and <i>tobacco mosaic virus</i> in reservoir plants			
11.30-11.45 pm		Cherotich S. Botryosphaeria Canker and dieback a threat to domestication of baobab (<i>Adansonia Digitata</i> l.) and marula (<i>Sclerocarya Birrea</i> A. rich.) in agroforestry systems in Kenya			
11.45-12.00		Mwangi L. Tree seed-borne diseases detection for phytosanitary measures in Kenya			
12.00-12.15 pm		Paul A. Nyamwamu. Rapid molecular identification of thrips species associated with Maize chlorotic mottle virus transmission in Murang'a County, Kenya			
12.15-12.30 pm		Muli John. Detection surveillance on Coconut lethal yellowing disease in Kwale County			
12.30-13.00pm		Panel Discussion: Invasive species and pest incursions			





	Moderator: Dr. Muo Kasina Panelists i. CABI –Dr. Rwomushana / Dr. Mulema ii. KEFRI – Dr. Eston Mutitu iii. UK – Ms. Gillian Watson	
13.00-14.00pm Lunch break (Promotion videos and exhibition)		
14:00-15:30 pm	Room 1 Moderator: Dr. Moses Nyongesa Co-Moderator: Dr. Mary Guantai Rapporteur: Dr. Benard Mukoye Disease surveillance in phytosanitary systems	Room 2 Moderators: Dr. Eston Mutitu Co-Moderator: Mr. Ivan Obare Rapporteur: Ms. Pamella Kipyab Pest surveillance and diversity
14.00-14.15 pm	Edith Avedi. Status of Tomato brown rugose fruit virus in tomato and capsicum crops in Kenya	Ombuya Alfayo. Surveillance of papaya mealybug (<i>Paracoccus marginatus</i>) (Hemiptera: Pseudococcidae) in the coastal counties of Kenya
14.15-14.30 pm	Shango P. Assessment and detection of maize chlorotic mottle virus stability in maize seeds in Kenya	Finyange P. Surveillance for the Asian citrus psyllid (<i>Diaphorina citri</i>) in Kwale and Kilifi counties to determine its existence and spread in citrus orchards
14.30-14.45 pm	Mabele Anthony. Epiphytology and genomic RNA analysis of <i>groundnut rosette assistor virus</i> causing groundnut rosette disease in western Kenya	Nyanga’u D. Diversity of nematodes of banana (<i>Musa</i> spp.) in Kenya with reference to altitude and banana types
14.45-15.00 pm	Obare Ivan. Incidence and distribution of Cassava Mosaic and Cassava Brown Streak Diseases in Western Kenya	Momanyi G. Prevalence of <i>Drosophila Suzukii</i> Matsumura (spotted wing drosophila) in Kenya
15.00-15.15 pm	Omondi D. Characterization of the genetic diversity of <i>Cercospora zeina</i> as the causal pathogen of gray leaf spot disease of maize in Kenya	George Otieno. Occurrence of tomato bacterial wilt and its management by resistant varieties in Siaya County
15.15-15.30 pm	Micheni C. On Field detection of the Genus <i>Pectobacterium</i> and <i>Dickeya</i> causing blackleg in Taita Taveta county, Kenya	Benard Kharinda. Bacterial wilt in potato: disease prevalence, incidence and severity in Kenya
15.30-16.00 pm	Plenary session	
End of day’s program		



Day 3, Wednesday 15th September 2021

**Moderator: Dr. Muo Kasina;
Co-Moderator: Dr. Alex Muvea
Rapporteurs: Dr. Mary Guantai
Dr. Moses Oyier**

11.00-11.20am	Key Note Address: Import controls and Export certification in phytosanitary systems. Dr. Kenneth Msiska - NPPO, Zambia	
11.20-11.30 am	Msiska K. Trade negotiations and communication in phytosanitary systems – the case of market access of fresh blueberry fruits produced in Zambia and exported to china	
11.30-11.45 pm	Adze Augustin. Integrated management of <i>Leucinodes orbonalis</i> on eggplant fruits exported to European Union	
11.45-12.00 pm	Abed Mathagu. Phytosanitary and risk assessment considerations during introduction and cross-border movement of transgenic crops	
12.00-12.15 pm	Kigamwa J. COPE Capacity building towards implementation of Sanitary and Phytosanitary Standards for market compliant agricultural produce	
12.15-12.30 pm	Wanja Kinuthia. Scales insects: Distribution and possible threat to food security in Kenya	
12.30-13.00 pm	Panel discussion: Impact of covid-19 on trade in plant products Moderator – Dr. Chagama Kedera Panelists i. KFC – Mr. Cemet Tulezi ii. AU-IAPSC – Ms. Luiza Munyua iii. NPPO Uganda - Joyce Brenda Kisingiri	
13.00-14.00pm	Lunch break (Promotion videos and exhibition)	
14:00-15.30pm	Room 1 Moderator: Dr. Dennis Omayio Co-moderator: Mr. Joseph Kigamwa Rapporteur: Dr. Edward Onkendi Import & export controls and certification systems	Room 2 Moderator: Dr. Marylucy Oronje Co-moderator: Ms. Florence Munguti Rapporteur: Dr. Benard Mukoye Market access and trade
14.00-14.15pm	Mukoye B. Pathways threatening alien pest entry through border points into Kenya	Kiganiri G. Partnering with the private sector to restore Mango exports to the EU and UK Markets
14.15-14.30 pm	Buah S. Assessment of <i>Xylella fastidiosa</i> presence in flower cuttings and potential host plants of Uganda	Githaiga P. Systems approach for the management of fruit fly <i>Bactrocera dorsalis</i> for Kenya mango export
14.30-14.45 pm	Kosiom T. Phytosanitary concern of fumigation gaps in international trade in grains	Guantai M. Effects of changes in market requirements: A case study of current status of compliance of Kenyan produce in the international market and mitigation measures



14.45-15.00 pm	Mutiga R. Perception and knowledge of the pesticidal effects on Pollinators of Pigeon Pea (<i>Cajanus cajan</i> (L.) Millsp.) in Machakos County, Kenya	Nankinga C. Public and private sector capacity building interventions to improve compliance to sanitary phytosanitary standards in fruits and vegetable growers in Uganda
15.00-15.15 pm	Keter Stella. Effects of bio fumigation of Spider Plant (<i>Cleome gynandra</i> L.) against root-knot nematodes (<i>Meloidogyne</i> spp.) on quality of tuberose (<i>Polianthes tuberosa</i> L.)	Miriam M.W. Farming practices and soil properties that influence spread and population density of potato cyst nematodes in smallholder farms in Nyandarua county.
15.30-16.00pm	Plenary session	
End of day program		
Day 4, Thursday 16th September 2021 Moderator: Hosea Machuki, FPEAK, Co- Moderator: Ms. Faith Ndunge Rapporteurs: Dr. Alex Muvea and Ms Pamela Kipyab		
11.00-11.20 am	Key note address: Industry role and Emerging innovation in phytosanitary systems: Ms. Sylvie Mamias, Union Fleurs	
11.20-11.30 am	Ndlela Shepard: Advances in non-chemical postharvest disinfestation of fruits and vegetables using hot water treatment Phytosanitary Measures: Status and future.	
11.30-11.45 pm	Muthama A. Integrated pest management decision support system (IPM-DSS) using technology to manage tree diseases and pests in Kenya.	
11.45-12.00 pm	Mukumbu P. Emerging innovations in phytosanitary systems for control of invasive papaya mealybug (<i>Paracoccus marginatus</i>) in coastal region, Kenya.	
12.00-12.15 pm	Samwel Sibuti. Effectiveness of Imazapyr coated hybrids and selected striga-tolerant varieties on <i>S. hermonthica</i> management and maize yield performance in western part of Kenya.	
12.15-12.30 pm	Kasina Muo. Deploying Low-cost pest exclusion agricultural nets to manage problematic horticultural pests for sustainable export market access.	
12.30-12.35 pm	Special Session CABI: CABI digital tools-Overview	
12.35-12.45 pm	MaryLucy Oronje. Horizon scanning and insight reporting for monitoring and managing phytosanitary risks	
12.45-13.00 pm	George Momanyi. Horizon scanning for prioritizing invasive alien species with potential to threaten Kenya’s agriculture, biodiversity and economy	
13.00-14.00pm	Lunch break (promotion and exhibition videos)	





14:00-15.30 pm	Room 1 Moderator: Dr wanja Kinuthia Co-moderator: Mr. Thomas Kosiom Rapporteur: Dr. Muvea Integrated Pest management	Room 2 Moderator: Dr. Lorna Migiro Co-moderator: Mr. Ivan Obare Rapporteur: Ms Kipyab Integrated Pest management
14.00-14.15 pm	Susan Njeri. Evidence of natural attack of fall armyworm, <i>Spodoptera frugiperda</i> (J.E. Smith) by parasitoids and entomopathogens in Southeastern and coastal Kenya	Imbayi B. Effectiveness of pheromone traps in management of Tephritid flies on mangoes in Murang'a and
14.15-14.30 pm	Mwirigi Boniface. Knowledge gap assessment and coping strategies by farmers against fall armyworm (<i>Spodoptera frugiperda</i>) (J.E. Smith) infesting maize in southeastern and coastal Kenya	Mwaura O. Potential of genotypic resistance in eco-friendly and sustainable management of potato cyst nematodes, <i>Globodera rostochiensis</i> , in Kenya
14.30-14.45 pm	Mweke A. Novel approach in management of fall armyworm (<i>Spodoptera frugiperda</i> JE Smith) using virus extract from larvae treated with Baculovirus	Jayo Tracyline. Host plant resistance to <i>Pyricularia grisea</i> in selected <i>Eleusine coracana</i> genotypes under greenhouse conditions
14.45-15.00 pm	Nduta A. Effect of Integrated pest management of fruit flies on yield of Pumpkin in Machakos county	Diana Gitonga. Adaptability of different potato varieties to different moisture and temperature conditions in the semi-arid areas in Kenya
15.00-15.15 pm	Gathogo Miriam. Red gum lerp psyllid (<i>Glycaspis brimblecombe</i>) spread, host damage and host preference in central Kenya highlands	Selpha O. Classical Biological Control of Papaya Mealybug in Kenya.
15.15-15.30 pm	Ochieng Berrick. Efficacy of organic amendments in the control of potato cyst nematodes under greenhouse conditions in Kenya	Barasa M. Prospects of indigenous fungal entomopathogens in the control of Western flower thrips <i>Frankliniella occidentalis</i> (Pergande) on tomato <i>Solanum lycopersicum</i> under field conditions
15.30-15.45pm	Momanyi E. The role of regulatory institutions in safeguarding consumers against aflatoxin exposure: a case of KEPHIS	Wachira E. Rice husk biochar for carbon sequestration, soil fertility and plant health improvement : a review
Closing session		
16.00-16.10	Essay competition awards and closing remarks	PS, MoALF
16.10-16.20	Vote of thanks	KEPHIS MD
16.20-16.30	Closing Prayer	
End of the conference		






Poster presentation titles		
Moderators: Dr. Muvea, Dr. Onkendi Day 2; 10.00 -11.00 am		
No.	Title	Presenter
1	Invasive species antagonistic power against ecosystems health can be estimated using logarithmic integration of parameters algorithm	Omayio D.
2	Farmer perception, knowledge and management of scale insect pest complex infesting crops and trees in coastal Kenya	Guantai M.
3	Best practices for sustainable scale insect pest management in Kenya	Kibwage P.
4	Screening of finger millet genotypes for resistance to <i>Pyricularia grisea</i> under varied agro-ecologies in Kenya.	Tracyline J.M
5	Prevalence and management of major tomato fungal diseases in Kiambu, Kirinyaga and Kajiado counties, Kenya.	Nuwamanya, A.M
6	Current status of Irish apical cuttings propagation facilities in Kenya	Mwangangi Maureen
7	Habitat preference and distribution of crickets (Orthoptera: Gryllidae) in Western Kenya.	Odhiambo M.A.
Moderators: Dr. Mukoye, Mr. Obare Day 3; 10.00 -11.00 am		
8	Indigenous edible mushrooms of Kaya chivara forest in Kilifi, Kenya	Momanyi E.
9	Microbial assessment of irrigation water used for vegetable production in Kenyan urban centers	Miguel G.
10	Candidatus Liberibacter asiaticus (CLas) distribution survey in Coastal Kenya	Momanyi G.
11	Light-emitting diodes (led) with uv-a light: a game changer in the phytosanitary systems?	Okello E.A.
12	Status of biological control as an alternative management option for <i>Tuta absoluta</i> of tomatoes in Garissa and Kajiado counties	Ochieng V.
13	Review on <i>Carpophilus hemipterus</i> (dried fruit beetle) following detection from imported fruits into Kenya.	Ombuya A.
14	Review on regulated pests of fruits and cereals intercepted at the port of Mombasa, Kenya.	Ombuya A.
Moderators: Dr. Onkendi Dr. Mukoye Day 4; 10.00 -11.00 am		
15	Determination of variance on international movement of seed.	Karwara A.
16	Implementation of ISPM 10 in export compliance of chilies (<i>capsicum spp</i>) to EU and UK markets	Kivi A.
17	Current diversity of pesticides and their application in potato production and storage in Bomet county	Oyoo Judith.
18	Farmers' Willingness to adopt biocontrol Using Parasitoid for Management of Macadamia Stinkbug (<i>Bathycoelia distincta</i> Distant) In Kenya.	Oduor A.N
19	Potential of <i>Metarhizium</i> based biopesticides for management of red spider mites in French beans.	Wanja S.


20	Impact assessment of Sweet potato decentralized vine multipliers in Kenya.	Mwangangi M.
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Side Events

14th September 2021		
Time	Description	Convener
11.00am to 12.30pm	Training stakeholders on utilization and relevance of <i>E-Phyto</i> during the COVID- 19 pandemic in order to facilitate trade.	Mr. Josiah Syanda
11.00am to 12.30pm	Training of youth on phytosanitary matters in effective trade	Ms. Catherine Muranguri
15th September 2021		
11.00am to 12.30pm	Training of Capsicum exporters on Pest Free Places of Production requirements; current and future prospects	Mr. Eric Were
11.00am to 12.30 pm	Training stakeholders on the requirements for accessing the Korea market	Ms. Asenath Koech
16th September 2021		
11.00am to 12.30 pm	Training of growers and exporters of rose cut flowers on system approach for False Codling Moth management, challenges and successes.	Dr. Mary Guantai

Keynote Speakers Profile

	<p>Mr. Ralf Lopian has held various positions with the Plant Pathology Department at the University of Helsinki, the National Plant Protection Service of Finland and the Secretariats of the European and Mediterranean Plant Protection Organization and the International Plant Protection Convention. He was the chair of the IPPC Commission as well as its vice-chair for several election periods and has been the international champion for the proclamation of the International Year of Plant Health. For six years, he has been chairing IPPC and FAO steering committees preparing the IYPH.</p>
	<p>Dr. Sevgan Subramanian is a Principal Scientist at <i>icipe</i>. Dr Subramanian holds a PhD in Agricultural Entomology from Tamil Nadu Agricultural University, India. He has over 14 years of research for development (R4D) experience in Africa. His significant research contributions are in development of Integrated Pest Management (IPM) strategies for horticultural and staple food crops, biopesticide research and development, thrips and tospovirus management, climate-change impacts and adaptation and Insects for food, feed and other uses. He has published widely, with >150 publications, including book chapters, online thrips identification tools and over 90 peer-reviewed articles in high impact journals. Dr Subramanian is extensively involved in strengthening partnerships and resource mobilization. He has a global network of partners, collaborators and stakeholders across ~40 organizations in 18 countries from 6 continents.</p>
	<p>Kajarayekha K. MSISKA (PhD) is the Director of the Plant Quarantine and Phytosanitary Service (PQPS), one of the Departments under the Ministry of Agriculture of Zambia. PQPS is the designated National Plant Protection Organization (NPPO) of Zambia. The mandate of PQPS include preventing the introduction of plant pests and their spread while facilitating safe international trade of plants, plant products and other regulated articles. Dr. K.K. Msiska has vast experience in matters of phytosanitary both at national and international level. In other words, he has a</p>

	<p>clear practical understanding of the entire phytosanitary certification process to ensure compliance of commodities earmarked for trade. Dr. Msiska has represented Africa at different committees under the International Plant Protection Convention (IPPC) such as the International Year of Plant Health (IYPH), The Standards Committee (SC) and the Implementation and Capacity Development Committee. Through the PQPS, Zambia has been championing the declaration of the International DAY of Plant Health (IDPH). He has also represented the developing countries at the Standards and Trade Development Facility (STDF) Expert Working Group. Dr. Msiska works closely with the Private Sector, Cooperating Partners such as the USAID, STDF, IPPC, and other Government Departments, including the NPPOs of other trading partners and the Regional Plant Protection Organizations (RPPO) of Africa, the Inter-Africa Phytosanitary Council (IAPSC). He is not new to KEPHIS as he has been part and parcel of the Centre of Phytosanitary Excellence (COPE) at KEPHIS. Dr. Msiska holds a PhD in Biosecurity from Lincoln University, New Zealand.</p>
 <p>Ms. Sylvie Mamias Union Fleurs, Belgium</p>	<p>Sylvie Mamias is the Secretary General of Union Fleurs; Union Fleurs was founded in 1959 in Brussels as an international umbrella organisation for national associations and companies active in the floricultural trade. Its main purpose is to represent and promote the interests of traders of cut flowers, cut foliage and pot plants. Union Fleurs has nowadays members in 20 countries worldwide, gathering over 3.000 companies involved in the import, export, wholesale and distribution of cut flowers and pot plants. Membership accounts for 80% of the total value of worldwide trade of cut flowers and pot plants. All the major players in the floricultural trade are represented in the organisation.</p>