

## 18<sup>th</sup> RUFORUM ANNUAL GENERAL MEETING 2022

Theme: Strengthening Africa's Agri-food Systems in the Post COVID-19 Era – Opportunities and Challenges

### OFFICIAL OPENING OF THE SCIENTIFIC CONFERENCE

Date: 12<sup>th</sup> December 2022

Time: 08:30 – 11:00

Venue: Harare International Conference Centre

Registration Link: <https://bit.ly/3yHFyvn>

### Concept Note

Contact: Professor Majaliwa Jackson Gilbert Mwanjalolo

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### Background

The economy of several African countries has remained highly dependent on rain-fed Agriculture, and mainly conducted by small-holder farmers who are dominantly rural and poor. Increasing agricultural productivity and enhance quality of the Agri-food Systems value chains actors is one of the avenues to create wealth, and increase competition at both domestic and international markets. This call for investment in research and adoption of improved agricultural technologies and management practices stemming from an effective and efficient agricultural research system.

The design of such system on the African continent needs an overlay the farming systems and socio-cultural and policy environment, existing human and institutional capacity and level of investment in research, in addition to the layers of potential climate change projected impacts to the sector. The diversity of farming systems is at different levels of degradation that requires specific approaches and interventions for restoration. Past interventions have only yielded silos of success because of aforementioned factors and more so because of the policy environment. Despite progress observed in improving the policy environment across the continent, there is still need for incentive to attract more investment from the private sector, and to enable African countries take advantage of technologies developed elsewhere; at the same time, promote dialogue between decision makers and researchers. The overall agricultural R&D investment levels in most countries are well below the minimum target recommended by the African Union, and the national and sub-regional agricultural research organizations are weak and highly dependent on donor funding. On the other hand, national governments commitment and transparency on donor contributions have remained limited. New capacities and skill sets including for professionals,

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internal institutional management, and operating capacity levels at different spatial scale in the entire spectrum of the Agri-food Systems science, technology and innovation are required.

Collaboration at all levels is growing rapidly on the African continent and researchers from different institutions, countries and regions need to work together around specific research questions. Investment in operational Agri-food Systems networks and enhancing their synergies is one of the pre-requisite for building the required capacity to innovate the Agri-food Systems Science, Technology and Innovation processes. Such consortia are valuable as they offer interdisciplinary expertise and allow recruitment of researchers provides the necessary flexibility to adapt to a wide continuum of arising challenges. Building research networks is particularly important for the African continent is also paramount important because of its fragmented scientific community, small research groups, and scarce financing.

RUFORUM, in partnership with the African Crop Science Society and the Zimbabwean RUFORUM member universities, will convene a three-day scientific conference where scientists, academicians and students will present their work orally focusing on the application of biological, ecological and social knowledge for the development of resilient climate-smart Agri-food systems including sustainable livestock production and environmental and natural resources management for food and nutritional security and economic and social stability. Digital innovations, data management, intellectual property rights, economics, policy analysis, and education and research institutions-community engagement experiences will be highlighted.

### Objective of the Scientific Conference

The Scientific Conference aims to bring together leading academicians, scientists, researchers and research scholars especially from the continent to exchange and share their experiences and research results on all aspects of Agriculture and agricultural related sciences, and emerging development concerns with a focus on climate-smart innovations. It also provides an interdisciplinary and multi-stakeholder platform for policy makers, researchers, practitioners, educators and students to present and discuss the most recent scientific knowledge, technological innovations, emerging trends, and concerns as well as practical challenges encountered and solutions adopted to strengthening Agri-food systems. As in previous RUFORUM Conferences, special provision will be made for graduate students to share their research findings and profile their research. Themes for the scientific sessions will cover eight thematic areas.

### Expected outputs and outcomes

- Strengthened networking among members of the scientific community working in agriculture and related fields;
- Focus given to innovation in Agri-food and nutrition systems, climate-smart agriculture and climate change adaptation and mitigation;
- Improved presentation and communication skills for especially the graduate students;

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- Increased visibility of research and development outputs from Africa; and
- Improved methods for increasing the uptake of research results by other stakeholders

## Programme

**Moderator/Chair: Prof. Fanuel Tagwira**, Permanent Secretary, Ministry of Higher Education, Science and Technology Development, Zimbabwe

Time	Activity
<b>Session 1: Opening and Setting the Scene</b>	
09:00 – 09:15	Welcome Remarks: Prof. Theresia Nkuo-Akenji, RUFORUM Board Chair and Vice Chancellor University of Bamenda, Cameroon
09:15 – 09:30	Remarks: Prof Luisa Santos, the President of the African Crop Science Society
09:30 – 09:45	<b>Welcoming Address:</b> Hon Minister. Prof. Amon Murwira of Higher Education, Science and Technology Development, Zimbabwe
09:45 – 10:05	<b>Key Note Address:</b> Dr. Patrick Okori, RUFORUM incoming Executive Secretary: Making agriculture work for Africa to respond to current and future development challenges: Lessons learnt after a decade of implementation of the Comprehensive African Agriculture Development Programme (CAADP)
10:05 – 10:20	<b>Respondent:</b> Prof. Brice Sinsin, Former Rector, University of Abomey Calavi, Benin: Key Agricultural research issues in the continent and needed actions
10:20 – 11:00	<b>Discussion</b>
<b>Session 2: Panel Discussion on Transforming agri-food systems for improved productivity, human nutrition and environmental sustainability</b>	
<b>Session Moderator:</b> Prof Linus Umezuruike Opara, Distinguished Professor & DST/NRF South African Research Chair in Postharvest Technology, Stellenbosch University, South Africa	
11:00 – 11:50	<b>Panelist 1: Dr. Cliff Sibusiso Dlamini</b> , Executive Director and Head of Mission, the Centre for Coordinating Agricultural Research for Development in Southern Africa (CCARDESA): Agricultural Research for Development to Intervene Effectively in Complex Systems under climate change condition and the Implications for Research Organizations
	<b>Panelist 2: Dr Stephen Onakuse</b> , President of AGRINATURA, University College Cork, Ireland: Linking agricultural research with the agribusiness community from a pro-poor perspective: The importance of human capital development
	<b>Panelist 3: Prof Mac Mallewa</b> , Vice Chancellor, Kamuzu University of Health Sciences, Malawi: Innovations to address Human Nutrition and Malnutrition: Link between Agriculture, Nutrition and Health
	<b>Discussion</b>

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11:50 – 12:00	Closing Remarks by the Sessions Chair
12:00 – 12:30	Health Break and Photographs
12:30 – 13:00	Tour of the Exhibitions and Posters
13:00 – 14:00	Lunch Break
14:00 – 18:30	Parallel Scientific Sessions

## PARALLEL SCIENTIFIC SESSIONS

### DAY I

MONDAY 12 <sup>th</sup> December, 2022	
<b>PARALLEL SESSION I</b>	
<b>TIME: 14:00-17:00</b>	
<b>THEME: ENHANCING AGRICULTURAL PRODUCTIVITY AND EARNINGS FOR FARMING COMMUNITIES</b>	
<b>VENUE: LECTURE ROOM G1</b>	
<b>CHAIR:</b> Anthony Kibe, Egerton University, Kenya; <a href="mailto:kibeanto@gmail.com">kibeanto@gmail.com</a>	
<b>RAPPORTEUR:</b> Napolion Bahati Kajunju Heri, Makerere University, Uganda; <a href="mailto:napkajunju@gmail.com">napkajunju@gmail.com</a>	
<b>Time</b>	
14:00 – 14:05	<b>Welcome Remarks by Session Chair</b>
14:05 – 14:12	Factors that influence adoption of quality seed potato among smallholder farmers in Kenya. <b>Raphael Wambua</b> , Egerton University, Kenya; <a href="mailto:acds@egerton.ac.ke">acds@egerton.ac.ke</a> ; <a href="mailto:masakuraphael@gmail.com">masakuraphael@gmail.com</a>
14:12 - 14:19	Factors affecting potato production in rural Kenya. A case of small-scale potato farmers in Molo Sub – County. <b>Beatrice Chepkoech</b> , Egerton University, Kenya; <a href="mailto:beatricekero12@gmail.com">beatricekero12@gmail.com</a>
14:19 - 14:26	Measuring technical efficiency and its determinants among cassava farmers in Western Uganda: Data Envelopment Analysis approach. <b>Midamba Dick Chune</b> , Gulu University, Uganda; <a href="mailto:midambadick@gmail.com">midambadick@gmail.com</a>
14:26 - 14:33	Effects of Adaptation to Rainfall Variability on Livelihood Vulnerability of Farming Households in Semi-arid Southeastern Kenya. <b>Mwatu, M. M.</b> Alupe University, Kenya; <a href="mailto:mmmwatu76@gmail.com">mmmwatu76@gmail.com</a>
14:33 - 14:40	Interactive effects of contour-based rainwater harvesting and organic fertilizers on grain yield of sorghum ( <i>Sorghum bicolor</i> L.) in rainfed dryland farming systems, Zimbabwe. <b>Friday N. M Kubiku</b> , Bindura University of Science Education, Zimbabwe; <a href="mailto:fridaykubiku@gmail.com">fridaykubiku@gmail.com</a>
14:40 – 14:50	<b>Discussion</b>
14:50 – 14:57	Soil erosion characteristics under soil fertility improvement and cropping systems in smallholder farming systems (Review). <b>Janvier Bigabwa Bashagakule</b> , Université Catholique de Bukavu, DR Congo; <a href="mailto:bashbigabwa@gmail.com">bashbigabwa@gmail.com</a>
14:57 – 15:04	Influence of selected factors on adoption of organic African indigenous vegetable farming. A review. <b>Kemunto H. W.</b> Egerton University, Kenya; <a href="mailto:winnieyvonne95@gmail.com">winnieyvonne95@gmail.com</a>
15:04 – 15:11	A participatory appraisal of the onion-groundnut intercropping based system under organic fertilizer management in South-Kivu, Eastern of D.R. Congo. <b>Serge S. Ndjadi</b> , Université Catholique de Bukavu, DR Congo; <a href="mailto:ndjadishakanye@gmail.com">ndjadishakanye@gmail.com</a>
15:11 – 15:18	Inorganic fertilizer use, source and type of agricultural information used among farmers in Uganda. <b>Hellen Namaweje</b> , Makerere University, Uganda; <a href="mailto:hnamaweje@gmail.com">hnamaweje@gmail.com</a>
15:18 – 15:25	Role of farm inputs in Adoption of Good Agricultural Practices among Smallholder Potato Farmers, Kenya. <b>Masca Uwamariya</b> , Egerton University, Kenya; <a href="mailto:uwamariyamasca@gmail.com">uwamariyamasca@gmail.com</a>
15:25 – 15:35	<b>Discussion</b>
15:35 – 15:45	<b>Break</b>
	<b>CHAIR:</b> Xavier Poshiwa, Great Zimbabwe University, Zimbabwe; <a href="mailto:xposhiwa@gzu.ac.zw">xposhiwa@gzu.ac.zw</a>
	<b>RAPPORTEUR:</b> Shakirah Nansove, Makerere University, Uganda; <a href="mailto:snansove31@gmail.com">snansove31@gmail.com</a>
15:45 – 15:52	Influence of rendered abattoir effluent on fruit yield of chilli pepper and soil properties. <b>Adekola Olabisi Fatimo</b> , University of Ilorin, Ilorin, Nigeria; <a href="mailto:badekola@unilorin.edu.ng">badekola@unilorin.edu.ng</a>

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15:52 – 15:59	Influence of nitrogen and phosphorus on seed yield and oil content of safflower. <b>Kolanyane, M.</b> Botswana University of Agriculture and Natural Resource, Botswana; <a href="mailto:maduopelokolanyane@gmail.com">maduopelokolanyane@gmail.com</a>
15:59 – 16:06	Response of safflower insects to nitrogen and phosphorus fertilizer application in Botswana. <b>Monyame, P.</b> Botswana University of Agriculture and Natural Resource, Botswana;
16:06 – 16:15	Biochar-based organic fertilizer increases crop production and soil physico-chemical properties in the ten selected districts of Zimbabwe. <b>Mandumbu Ronald;</b> Bindura University of Science Education, Zimbabwe; <a href="mailto:rmandumbu@gmail.com">rmandumbu@gmail.com</a>
16:15 – 16:22	Phytochemical analysis and acaricidal activity of <i>Cissus quadrangularis</i> plant. <b>Kuvawoga E R;</b> Bindura University of Science Education, Zimbabwe; <a href="mailto:pdzomba@gmail.com">pdzomba@gmail.com</a>
16:22 – 16:32	<b>Discussion</b>
16:32 – 16:39	Yield and aflatoxin levels in three groundnuts ( <i>Arachis hypogea</i> ) varieties planted on ridges and against flat seed beds under dry land farming in Mt Darwin, Zimbabwe. <b>Newman Choto;</b> Bindura University of Science Education; <a href="mailto:chotonewman@gmail.com">chotonewman@gmail.com</a>
16:39 – 16:46	Effect of different water application rates and plant population on white bulb onion ( <i>Allium cepa</i> L.) water and nitrogen use efficiency under drip irrigation on a clay soil. <b>Misi Amos Manyanga,</b> Great Zimbabwe University; <a href="mailto:amosmisi@yahoo.co.uk">amosmisi@yahoo.co.uk</a>
16:46 – 16:53	Design of an automated irrigation and fertigation system for a farm with low yielding boreholes, case study of Maziwa farm, Murewa, Zimbabwe. <b>Chipfunde F,</b> Great Zimbabwe University, Zimbabwe; <a href="mailto:fchipfunde@gzu.ac.zw">fchipfunde@gzu.ac.zw</a> ; <a href="mailto:fchipfunde@gmail.com">fchipfunde@gmail.com</a>
16:53 -17:00	<b>General Discussion and Closing</b>

**DAY I**

<b>MONDAY 12<sup>th</sup> December, 2022</b>	
<b>PARALLEL SESSION 2</b>	
<b>TIME: 14:00-17:00</b>	
<b>THEME: STRENGTHENING/IMPROVING THE PERFORMANCE OF LIVESTOCK PRODUCTION SYSTEMS</b>	
<b>VENUE: LECTURE ROOM G2</b>	
<b>CHAIR:</b> Sadik Kassim, National Agricultural Research Organization (NARO), Uganda; <a href="mailto:sdkassim@gmail.com">sdkassim@gmail.com</a>	
<b>RAPPORTEUR:</b> Alarape Omolara Latifat, Egerton University, Kenya; <a href="mailto:alarapeomolaralatifat616@gmail.com">alarapeomolaralatifat616@gmail.com</a>	
<b>Time</b>	
14:00 – 14:05	<b>Welcome Remarks by Session Chair:</b>
14:05 – 14:12	Effect of environmental temperature on yield in different breeds and cross breeds of dairy cows. <b>Nyazika Ingrid,</b> University of Zimbabwe, Zimbabwe; <a href="mailto:nyazikaingrid@gmail.com">nyazikaingrid@gmail.com</a>
14:12 - 14:19	The socio-economic profile of the small-scale/communal wool farmers in the Mangaung district of the Free State Province, South Africa. <b>A.J. Strauss,</b> University of the Free State, South Africa; <a href="mailto:andriesstr1@gmail.com">andriesstr1@gmail.com</a>
14:19 - 14:26	Forecasting of small scale milk production at Nharira-Lancashire dairy scheme. <b>Washaya Soul,</b> <a href="mailto:jabulaniwashaya@yahoo.com">jabulaniwashaya@yahoo.com</a>
14:26 - 14:33	Are small-scale farmers in Nakuru willing to take up snail farming? <b>Gwiza Shepherd</b> <a href="mailto:Shepherdgwizatino@gmail.com">Shepherdgwizatino@gmail.com</a>
14:33 - 14:40	Effect of dietary manipulation on gene expression in farm animals. <b>Alarape, O.L.</b> <a href="mailto:alarapeomolaralatifat616@gmail.com">alarapeomolaralatifat616@gmail.com</a>
14:40 – 14:50	<b>Discussion</b>
14:50 – 14:57	Effects of group dynamics on the effectiveness of smallholder dairy producers in Bomet county, Kenya. <b>Chitsora S. R</b> <a href="mailto:ruewchitsora@gmail.com">ruewchitsora@gmail.com</a>
14:57 – 15:04	Need for coordinated actions of stakeholders to improve animal productivity through the valorization of local feed resources in South Kivu, Eastern Democratic Republic of Congo. <b>Azine C. Pascaline,</b> <a href="mailto:pascalineciz@gmail.com">pascalineciz@gmail.com</a>
15:04 – 15:11	Enhancing wool productivity and income for smallholder wool farmers through training. <b>Ntsiapane A,</b> <a href="mailto:ntsiapanealina@gmail.com">ntsiapanealina@gmail.com</a>

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15:11 – 15:18	Biological and Economic Efficiency of Partial Dietary Substitution of Soybean Meal (Glycine max) with Cowpea Meal (Vigna unguiculata) in Broiler Production. <b>Edmore Bumhira</b> , <a href="mailto:bumhiraedmore@gmail.com">bumhiraedmore@gmail.com</a>
15:18 – 15:25	Impact of yeast (Saccharomyces Cerevisiae) and bacteria (Lactobacillus strains) probiotics on sweet sorghum (Sorghum bicolor var. saccharatum) silage quality and performance of lactating dairy cows. <b>Chiambiro, G</b> , <a href="mailto:madzimurej@gmail.com">madzimurej@gmail.com</a> , <a href="mailto:jmadzimure@cut.ac.zw">jmadzimure@cut.ac.zw</a>
15:25 – 15:35	<b>Discussion</b>
15:35 – 15:45	<b>Break</b>
	<b>CHAIR:</b> Benson Cishala, University of Zambia, Zambia; <a href="mailto:bchishala@unza.zm">bchishala@unza.zm</a> <b>RAPPORTEUR:</b> Rodrigue Ayagirwe Basengere, Universite Evangelique en Afrique, DR Congo; <a href="mailto:rayagirwe@gmail.com">rayagirwe@gmail.com</a>
15:45 – 15:52	Feed and nutrition challenges facing dairy goat production globally and the remedies. <b>Oktoto, Caleb Wanyiri</b> <a href="mailto:calebwanyiri6@gmail.com">calebwanyiri6@gmail.com</a>
15:52 – 15:59	The Use of Black Soldier Fly Larvae (Maggots) as Poultry Feeds. <b>Grace Kyarimpa</b> , <a href="mailto:kyarimpagrace4@gmail.com">kyarimpagrace4@gmail.com</a>
15:59 – 16:06	Supplemental Feeding of Honey Bees for Strong Colony Build-Up during the Dry Period and Winter. <b>Haron Juma Masai</b> , <a href="mailto:masaijumah@gmail.com">masaijumah@gmail.com</a>
16:06 – 16:15	The effect of Aspergillus Niger and Saccharomyces cerevisiae on the base nutritional value of soybean meal used in poultry feed formulation. <b>Ncube, N</b> . <a href="mailto:cmawere@hit.ac.zw">cmawere@hit.ac.zw</a>
16:15 – 16:22	Effects of substituting maize (zea mays) with white sorghum (sorghum bicolor) in a cereal–concentrate mixture on a finishing broilers diet. <b>Zibusis Nxumalo</b> <a href="mailto:zibusisonx@gmail.com">zibusisonx@gmail.com</a>
16:22 – 16:32	<b>Discussion</b>
16:32 – 16:39	Seasonal variation in the nutritional value of fodder resources used in cattle feed in South Kivu. <b>Kunde Emmanuel</b> , <a href="mailto:amanikunde2018@gmail.com">amanikunde2018@gmail.com</a>
16:39 – 16:46	The effect additives on fermentation and chemical composition of Senegalia mellifera (Black thorn) bush silage. <b>Kamati M.I.</b> <a href="mailto:milongeni@gmail.com">milongeni@gmail.com</a>
16:46 – 16:53	Update on the National Cattle Breeding & Artificial Insemination Program (2016-2022) in Zimbabwe. <b>Eddington Gororo</b> , <a href="mailto:gororoeddington@gmail.com">gororoeddington@gmail.com</a>
16:53 -17:00	<b>General Discussion and Closing</b>

## DAY 1

**MONDAY 12<sup>th</sup> December, 2022**

### PARALLEL SESSION 3

**TIME: 14:00-17:00**

**THEME: ENVIRONMENTAL AND NATURAL RESOURCES MANAGEMENT**

**VENUE: LECTURE ROOM F3**

**CHAIR:** Abigael Otinga, University of Eldoret, Kenya; [amarishas@yahoo.com](mailto:amarishas@yahoo.com)

**RAPPORTEUR:** Bashangaluke Bigabwa Janvier, Universite Catholique De Bukavu, DR Congo; [bashbigabwa@gmail.com](mailto:bashbigabwa@gmail.com)

**Time**

14:00 – 14:05	<b>WELCOME REMARKS BY SESSION CHAIR:</b>
14:05 – 14:12	Agro-industrial wastes as substrates in production of single cell protein- a review. <b>Sitati Linda</b>
14:12 - 14:19	Broiler endogenous biosurfactants antibacterial potential in the face of antimicrobial resistance. <b>Chigede, N</b> . Chinhoyi University of Technology, <a href="mailto:nchigede@gzu.ac.zw">nchigede@gzu.ac.zw</a> ; <a href="mailto:ngavaitec@gmail.com">ngavaitec@gmail.com</a>
14:19 - 14:26	Intersection between livelihood, environment and agriculture: A case of artisanal small-scale mining in Muzvezve Community, Zimbabwe. Chinhoyi University of Technology, <b>Muzenda Reuben</b> <a href="mailto:pamela.madududu@staff.msuas.ac.zw">pamela.madududu@staff.msuas.ac.zw</a>
14:26 - 14:33	Women Involvement in Fisheries Co-management of Lake Turkana, the World's Largest Desert Lake, Kenya. <b>Maurice O. Ogoma</b> , <a href="mailto:luleogoma@gmail.com">luleogoma@gmail.com</a>

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14:33 - 14:40	Water quality effects on organophosphate acaricidal efficacy against the Rhipicephalus appendiculatus ticks. A case of Glenlussa and Sunnyside, Zvimba East District, Mashonaland West Province, Zimbabwe. <b>Madhovi O</b> , <a href="mailto:ngavaitec@gmail.com">ngavaitec@gmail.com</a>
14:40 – 14:50	<b>Discussion</b>
14:50 – 14:57	A review of probiotics as pharmabiotics. <b>Kiama Roseline M.</b> , <a href="mailto:roselinekiama94@gmail.com">roselinekiama94@gmail.com</a>
14:57 – 15:04	Potential for microbial bioremediation of heavy metal contaminated soils in sub-Saharan Africa: A systematic review. <b>Jean Bosco Ngarukiyimana</b> <a href="mailto:jeanboscongarukiyimana@gmail.com">jeanboscongarukiyimana@gmail.com</a>
15:04 – 15:11	Effect of daily minimum temperature on the daily new cases of COVID-19 in Zimbabwe: A snapshot view. <b>Nyoni k.</b> <a href="mailto:knyoni@gzu.ac.zw">knyoni@gzu.ac.zw</a>
15:11 – 15:18	Optimization of hemertia illucebs technology for biogenic waste treatment under sub Saharan climatic conditions. <b>Maipisi Antony</b> , <a href="mailto:maipsiantony@gmail.com">maipsiantony@gmail.com</a>
15:18 – 15:25	Understanding the causes of declining bee population and adopted management strategies in Africa. <b>Chepkor Mike K</b> <a href="mailto:mikechepkor@gmail.com">mikechepkor@gmail.com</a>
15:25 – 15:35	<b>Discussion</b>
15:35 – 15:45	<b>Break</b>
	<b>CHAIR:</b> Crispin Murungweni, Chinhoyi University of Technology, Zimbabwe; <a href="mailto:Chrispen.Murungweni@gmail.com">Chrispen.Murungweni@gmail.com</a> <b>RAPPOREUR:</b> Magdalena Kamati, University of Namibia, Namibia; <a href="mailto:milongeni@gmail.com">milongeni@gmail.com</a>
15:45 – 15:52	An assessment of willingness to pay for encroacher bush-based animal feed in Namibia. <b>Cecil Togarepi</b> , University of Namibia, Namibia; <a href="mailto:ctogarepi@unam.na">ctogarepi@unam.na</a>
15:52 – 15:59	Ecosystem service values as influenced by current and historical urban expansion: Evidence from three case studies in Tigray, Northern Ethiopia. <b>Muluberhan Biedemariam</b> , <a href="mailto:muluberhan84@gmail.com">muluberhan84@gmail.com</a>
15:59 – 16:06	Unlocking the potential of Uganda Integrated Early Warning Systems (UNIEWS) in reducing disasters among vulnerable communities. <b>Akwango-Aliau Damalie</b> <a href="mailto:dakwango@gmail.com">dakwango@gmail.com</a>
16:06 – 16:15	Fluxes of greenhouse gases (GHGs) from streams and rivers influenced by different livestock production systems. <b>Evans Sicharani</b> <a href="mailto:sicharanievans@gmail.com">sicharanievans@gmail.com</a>
16:15 – 16:22	Structural and Functional Composition of Macroinvertebrate Communities as Indicators of Livestock Disturbance of Streams and Rivers. <b>Christine A. A. Owade</b> , University Eldoret, Kenya; <a href="mailto:owade.christine@gmail.com">owade.christine@gmail.com</a>
16:22 – 16:32	<b>Discussion</b>
16:32 – 16:39	Effects of Urban Agriculture on the Socio-Economic Status of Farmers in Cities of Sub-Sahara Africa: A literature review. <b>Ninsheka Leonard</b> , Bishop Stuart University <a href="mailto:ninshheleo@gmail.com">ninshheleo@gmail.com</a>
16:39 – 16:46	Stakeholder perspectives of Integrated Catchment Management concept: A Case Study of Chiredzi sub catchment. <b>Nyoni K</b> Great Zimbabwe University. <a href="mailto:knyoni@gzu.ac.zw">knyoni@gzu.ac.zw</a>
16:46 – 16:53	Land use/land cover dynamics along an altitude gradient in Mbale district. <b>Ahumuza, E.</b> <a href="mailto:elizabeth.ahumuza@gmail.com">elizabeth.ahumuza@gmail.com</a>
16:53 -17:00	<b>Discussion &amp; Closing Remarks by Session Chair</b>

## PARALLEL SESSIONS

### DAY 2

Tuesday 13<sup>th</sup> December, 2022

#### PARALLEL SESSION 1.1

TIME: 08:30-13:00

THEME: ENTREPRENEURSHIP AND YOUTH EMPLOYABILITY

VENUE: LECTURE ROOM G1

**CHAIR:** Patience Mlongo Mshenga, Egerton University, Kenya; [pmshega@egerton.ac.ke](mailto:pmshega@egerton.ac.ke)

**RAPPOREUR:** Florence Chambabulele, Mulungushi University, Zambia; [florencechambabulele7@gmail.com](mailto:florencechambabulele7@gmail.com)

Time

08:30 - 08:35

**Welcome Remarks by Session Chair**

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Lusaka State University  
Advancing Learning



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MAZON SVAL UNIVERSITY  
UNIVERSITY OF ZIMBABWE

08:35 - 08:42	The Development of Microfinance in Uganda: A historical analysis. <b>Akiteng Miriam Hope</b> , Nkumba University, Uganda; <a href="mailto:akitengmiriamhope@hotmail.com">akitengmiriamhope@hotmail.com</a>
08:42 - 08:49	An evaluation of GCA membership influence on the SES of women farmers in Mt Darwin District Zimbabwe. <b>Fungisayi Susan Makuzwa</b> , Bindura University of Science Education, Zimbabwe;
08:49 - 08:56	Effect of Village Savings and Loan Associations (VSLAs) on Agricultural Production and Livelihoods in Eastern Uganda. <b>Kongai Hellen</b> , Busitema University, Uganda; <a href="mailto:hellenbiruma@gmail.com">hellenbiruma@gmail.com</a>
08:56 - 09:03	Effects of COVID-19 Pandemic on Performance of Fruits and Vegetable Vendors in Nairobi County. <b>Kundu N. Ruth</b> , <a href="mailto:danielaruthkay6290@gmail.com">danielaruthkay6290@gmail.com</a>
09:03 - 09:10	Factors influencing adoption of agro-processing technologies by butchery agribusinesses in Kenya. <b>Molapo, Mathapelo E</b> <a href="mailto:moltamolapo@gmail.com">moltamolapo@gmail.com</a>
09:10 – 09:17	Using applied human psychology to influence agribusinesses in Africa. <b>Nakiganda Racheal G.</b> Egerton University, Kenya; <a href="mailto:rachealgladysn@gmail.com">rachealgladysn@gmail.com</a>
09:17 – 09:27	<b>Discussion</b>
09:27 - 09:34	Factors influencing entrepreneurship uptake among rural youths in Njoro Sub-County, Kenya? <b>Nyakapene Navison</b> , <a href="mailto:navisonnyakapene@gmail.com">navisonnyakapene@gmail.com</a>
09:34 – 09:41	The Role of Financial Technologies in Transforming Agrienterprises in Kenya: A Review. <b>Onyango Lilian Achieng</b> , <a href="mailto:lilianonyango96@gmail.com">lilianonyango96@gmail.com</a>
09:41 – 09:48	Market structure and conduct of African indigenous vegetables in Kenya. <b>Nambafu Scolastina N</b> , <a href="mailto:scolastinambafu@gmail.com">scolastinambafu@gmail.com</a>
09:48 – 09:55	Impact of Change In Food Prices On Farmer's Livelihoods In Byangabo Sector of Musanze District, Rwanda. <b>Joseph Mbuta Munyentwari</b> , <a href="mailto:munyentwarimbutajoseph@gmail.com">munyentwarimbutajoseph@gmail.com</a>
09:55 – 10:05	Economic Barriers toward Uptake of Modern Apiculture: A Review. <b>Nyamira Enock N</b> <a href="mailto:enocknyamira2@gmail.com">enocknyamira2@gmail.com</a>
10:05 – 10:12	Relationship between market research and product price: A case of soy bean trade in northern Uganda. <b>Grace Madraa</b> , <a href="mailto:gracemadraa2@gmail.com">gracemadraa2@gmail.com</a>
10:12 – 10:30	<b>Discussion</b>
10:30 – 11:00	<b>TEA BREAK</b>
	<b>CHAIR:</b> Wales Singini, Mzuzu University, Malawi, <a href="mailto:wallessingini@gmail.com">wallessingini@gmail.com</a> <b>RAPPORTEUR:</b> Alarape Omolara Latifat, Egerton University, Kenya; <a href="mailto:alarapeomolaralatifat616@gmail.com">alarapeomolaralatifat616@gmail.com</a>
11:00 - 11:07	Enhancing Agribusiness rice clusters and market linkages for food security and incomes in northern Uganda. <b>Basil Mugonola</b> , <a href="mailto:b.mugonola@gu.ac.ug">b.mugonola@gu.ac.ug</a>
11:07 - 11:14	Remedying market failures among smallholder rice farmers in Uganda: Which institutions matter? <b>Akite Irine</b> , <a href="mailto:akiteirine5@gmail.com">akiteirine5@gmail.com</a>
11:14 - 11:21	The relationship between business size and access to innovation support activities. <b>Basil Ajer</b> <a href="mailto:ajerbasil@gmail.com">ajerbasil@gmail.com</a>
11:21 - 11:28	Employability Graduate Tracer Study Alumni supported by RUFORUM: A Case of Graduates Supported under TAGDev Programme. <b>Waswa Moses</b> <a href="mailto:m.waswa@ruforum.org">m.waswa@ruforum.org</a>
11:28 - 11:35	Identifying a Niche Market for Local, Hand-Made and Socially Responsible Wool Products in South Africa. <b>Marais Michelle</b> <a href="mailto:michelle@gvf.co.za">michelle@gvf.co.za</a>
11:35 - 11:42	Leadership Style and Job Satisfaction among Academic Staff at Kampala International University (KIU) Main Campus. <b>Anita Muhairwe</b> <a href="mailto:anitamuhairwe@gmail.com">anitamuhairwe@gmail.com</a>
11:42 - 11:52	<b>Discussion</b>
11:52 - 11:59	Innovations in Smallholder pig farming contexts: what are the sources of differences? <b>Daniel M. Okello</b> , Gulu University. <a href="mailto:okelloabua@gmail.com">okelloabua@gmail.com</a>
11:59 - 12:06	Credit and its Correlation with Information and Communication Technology Tools' Adoption in Agricultural Extension among Peasants in Rangwe Sub-County, Kenya. <b>Dimo John Caleb</b> , Egerton University, <a href="mailto:dimocaleb@gmail.com">dimocaleb@gmail.com</a>
12:06 - 12:13	Efficiency of goat marketing channels in the semi-arid regions of Zimbabwe. <b>Barbra Sibanda</b> , Bindura University of Science Education, <a href="mailto:ezivenge@gmail.com">ezivenge@gmail.com</a>
12:13 - 12:20	Value Chain Analysis for Onion Supply: A mini review to identify areas for improving competitiveness of smallholder producers in Uganda. <b>Harriet Mbabazi</b> <a href="mailto:harrietmbabazi28@gmail.com">harrietmbabazi28@gmail.com</a>
12:20 - 12:27	Profitability of Moringa leaf meal as broiler production cost reduction path among smallholder broiler farmers in Zimbabwe. <b>Emmanuel Zivenge</b> ; Bindura University of Science Education <a href="mailto:stimbura7@gmail.com">stimbura7@gmail.com</a>

**CO-ORGANISERS:**





12:27 - 12:34	Implementing sustainable wool value chain practices to maximise earnings for wool farmers and the community of the Free State: A case study in the Free State. <b>Matlhoko, K.S</b> , <a href="mailto:MatlhokoKS@UFS.ac.za">MatlhokoKS@UFS.ac.za</a>
12:34 - 12:41	Revitalization of pig value chain for improving livelihoods of smallholder farmers in northern Uganda. <b>Ndyomugenyi E. K.</b> , <a href="mailto:ellyndyomugenyi@gmail.com">ellyndyomugenyi@gmail.com</a>
12:41 - 13:00	<b>General Discussion and Closing</b>

## DAY II

TUESDAY 13 <sup>th</sup> December, 2022	
<b>PARALLEL SESSION 2.1</b>	
<b>TIME: 8:30-13:00</b>	
<b>THEME: ENHANCING POST-HARVEST MANAGEMENT, VALUE ADDITION AND NUTRITION</b>	
<b>VENUE: LECTURE ROOM G2</b>	
<b>CHAIR:</b> Johnny Mugisha, Makerere University, Uganda; <a href="mailto:johnnymugisha@gmail.com">johnnymugisha@gmail.com</a>	
<b>RAPPORTEUR:</b> Bintu Nabintu Ndusha, Universite Evangelique en Afrique, DR Congo; <a href="mailto:ndushabintu27@gmail.com">ndushabintu27@gmail.com</a>	
Time	
08:30 - 08:35	<b>WELCOME REMARKS BY SESSION CHAIR:</b>
08:35 - 08:42	Influence of petal harvest time and genotype on petal and seed yield, and dye content of safflower. Setshogela B. P, <a href="mailto:vemongor@buan.ac.bw">vemongor@buan.ac.bw</a>
08:42 - 08:49	Investigating the efficacy of phytochemicals present in Musa spp. (banana) peels and <i>Eucalyptus tereticornis</i> (gum tree) leaves as stored maize grain bio-protectants against <i>Sitophilus zeamais</i> (maize weevil). <b>Mazodze K.</b> Harare Institute of Technology, Zimbabwe; <a href="mailto:cmawere@hit.ac.zw">cmawere@hit.ac.zw</a>
08:49 - 08:56	An Ethnomycological Survey on Mushroom Identification, Distribution, Characterization, Consumption and Toxicity in Karoi, Makonde and Zvimba Districts in Mashonaland West, Zimbabwe. <b>Kavhumbura G.</b> <a href="mailto:gamukavhumbura@gmail.com">gamukavhumbura@gmail.com</a>
08:56 - 09:03	Single cell protein in human and animal feeds. <b>Dorothy Cherotich</b> , <a href="mailto:cherotichdoro97@gmail.com">cherotichdoro97@gmail.com</a>
09:03 - 09:10	Blending of maize with mushrooms improves nutritional quality of maize-based complementary food for infants 6-24 months. <b>Kilama Godfrey</b> , <a href="mailto:kilamagodfrey632@gmail.com">kilamagodfrey632@gmail.com</a>
09:10 - 09:17	Evaluation of Physical Properties of Taro ( <i>Colocasia esculenta</i> ) Starch and its Modifications. <b>Ababu Victor</b> <a href="mailto:ababuvictor2014@gmail.com">ababuvictor2014@gmail.com</a>
09:17 - 09:27	<b>Discussion</b>
09:27 - 09:34	Comparison of traditional and improved storage techniques on nutritional content of Orange Fleshed Sweet Potatoes and Green Banana. <b>Emmanuel Mugwaneza</b> , <a href="mailto:mugwanezaemmanuel5@gmail.com">mugwanezaemmanuel5@gmail.com</a>
09:34 - 09:41	Determinants of dietary diversity score of children (6–59 months) from farming rural households of Quthing and Thaba-Tseka districts, Lesotho. <b>Nkoko Nthabeleng</b> , <a href="mailto:nthabelengnkoko@gmail.com">nthabelengnkoko@gmail.com</a>
09:41 - 09:48	Food Fortification: driver for more nutritionally resilient households and communities. <b>Melas Adoko</b> , World Food Programme, Rome, Italy; <a href="mailto:melas.adoko@wfp.org">melas.adoko@wfp.org</a>
09:48 - 09:55	Fermented Foods Alleviate Hunger in Darfur. <b>Elhadi. A. I. Elkhalil</b> <a href="mailto:eaikhalil@yahoo.com">eaikhalil@yahoo.com</a> ; <a href="mailto:eaikhalil@uofk.edu">eaikhalil@uofk.edu</a>
09:55 - 10:05	Cytotoxic effects of pomegranate mesocarp extracts on HepG2 cell line. <b>Chandra Tatsha Bholah</b> , University of Mauritius, <a href="mailto:tatsha.cb@gmail.com">tatsha.cb@gmail.com</a>
10:05 - 10:12	Postharvest interventions and their impact on quality and shelf life of snap beans: A review. <b>Emaru Anthony</b> , <a href="mailto:emaru.09033@student.egerton.ac.ke">emaru.09033@student.egerton.ac.ke</a> ; <a href="mailto:emaruanthony@gmail.com">emaruanthony@gmail.com</a>
10:12 - 10:30	<b>Discussion</b>
10:30 - 11:00	<b>TEA BREAK</b>
	<b>CHAIR:</b> Assogbadjo Achille Ephrem, University of Abomey Calavi, Benin; <a href="mailto:assogbadjo@yahoo.fr">assogbadjo@yahoo.fr</a>
	<b>RAPPORTEUR:</b> Marius Affonfere, University of Abomey Calavi, Benin; <a href="mailto:mariusaffonfere@gmail.com">mariusaffonfere@gmail.com</a>
11:00 - 11:07	The Underutilized Potential of Banana Peel In Kenya. <b>Martha B. Ombonga</b> , <a href="mailto:marthaombonga10@gmail.com">marthaombonga10@gmail.com</a>

### CO-ORGANISERS:



11:07 - 11:14	Value Addition, A Strategy to Minimize Post-Harvest Losses Along Mango Value Chain in Kenya. <b>Ntabo Agnes N</b> <a href="mailto:ntaboagnes@gmail.com">ntaboagnes@gmail.com</a>
11:14 - 11:21	Evolution of rice milling industry in Kenya. <b>Ooko Winnie</b> <a href="mailto:winzooko@gmail.com">winzooko@gmail.com</a>
11:21 - 11:28	Evaluation of effective preservation methods for injera. <b>Timar Petros Menbere</b> , <a href="mailto:petertimar42@gmail.com">petertimar42@gmail.com</a>
11:28 - 11:35	Assessment of the quality of honey at different value chain nodes: a case of northern Uganda. <b>Sylvia Woor</b> , <a href="mailto:sylviawoor@gmail.com">sylviawoor@gmail.com</a>
11:35 - 11:42	Factors Contributing to Low Recovery Rate Among Children 6-59 Months with Acute Malnutrition: A review. <b>Susan Adongo</b> , Gulu University, <a href="mailto:suzitrust@gmail.com">suzitrust@gmail.com</a>
11:42 - 11:52	<b>Discussion</b>
11:52 - 11:59	Prevalence of consumption of industrially processed hydrogenated vegetable oils (Iphvo) amongst households in Gulu city. <b>Okia Lazarus</b> , Gulu University, <a href="mailto:okialazarus15@gmail.com">okialazarus15@gmail.com</a>
11:59 - 12:06	Antibiotic Resistance profile of Salmonella isolates detected in food and water consumed by children under five years old in Karamoja Sub-region Uganda. <b>Ronald Mpagi</b> , <a href="mailto:mpagironald91@gmail.com">mpagironald91@gmail.com</a>
12:06 - 12:13	Occurrence and Antibiotic Resistance of Listeria monocytogenes in Fresh Fruits and Vegetables from Gulu City. <b>Ketty Acomo</b> , <a href="mailto:kateacomo@gmail.com">kateacomo@gmail.com</a>
12:13 - 12:20	Factors Associated with Dietary Pattern Among Working-Class Adults; A Review. <b>Adisa Faith Musumba</b> , <a href="mailto:musumbafadisa@gmail.com">musumbafadisa@gmail.com</a>
12:20 - 12:27	Synergistic potential of selected spices on the microbial quality of nutrient-dense foods. <b>John Ngoka Ngala</b> <a href="mailto:ngalajohn86@yahoo.com">ngalajohn86@yahoo.com</a>
12:27 - 12:34	Prevalence of iron Deficiency Anemia among refugee populations: A mini review of sociodemographic determinants and approaches to minimize the deficiency among children and women of childbearing age. <b>Caroline Ikomolot</b> , <a href="mailto:caroikomo@gmail.com">caroikomo@gmail.com</a>
12:34 - 12:41	Plant-based Nutrient Source Substitution for Production of Health-sensitive Meat Products: A brief overview. <b>Agako Alod</b> , <a href="mailto:alodagako@gmail.com">alodagako@gmail.com</a>
12:41 - 13:00	<b>Discussion &amp; Closing Remarks by Session Chair</b>

## DAY II

<b>TUESDAY 13<sup>th</sup> December, 2022</b>	
<b>PARALLEL SESSION 2.2</b>	
<b>TIME: 14:00-17:00</b>	
<b>THEME: ENHANCING AGRICULTURAL PRODUCTIVITY AND EARNINGS FOR FARMING COMMUNITIES</b>	
<b>VENUE: LECTURE ROOM G1</b>	
<b>CHAIR:</b> Agnes Mwangwela, Lilongwe University of Agriculture and Natural Resources (LUANAR), Malawi; <a href="mailto:amwangwela@luanar.ac.mw">amwangwela@luanar.ac.mw</a>	
<b>RAPPORTEUR:</b> Jemimah Alla Haseou, Gulu University, Uganda; <a href="mailto:jemima9419@gmail.com">jemima9419@gmail.com</a>	
<b>Time</b>	
14:00 – 14:05	<b>WELCOME REMARKS BY SESSION CHAIR:</b>
14:05 – 14:12	Fall army worm attacks on Malawi's maize: a geospatial perspective. <b>Magreta Ruth</b> , <a href="mailto:rmagreta@luanar.ac.mw">rmagreta@luanar.ac.mw</a> ; <a href="mailto:ruth.magreta@yahoo.com">ruth.magreta@yahoo.com</a>
14:12 - 14:19	Effects of different sorghum varieties and use of maize bait in a sorghum crop for fall armyworm management in semi-arid Zimbabwe. <b>Mandumbu Ronald</b> , <a href="mailto:rmandumbu@gmail.com">rmandumbu@gmail.com</a>
14:19 - 14:26	Aphid population response to wood vinegar foliar spray on kales. <b>Mutua Elvis K</b> , <a href="mailto:mutua.0904420@student.egerton.ac.ke">mutua.0904420@student.egerton.ac.ke</a>
14:26 - 14:33	The efficacy of neem (Azadirachta indica) seed extract in the control of yellow sugarcane aphid ( <i>Sipha flava</i> ) in the South East Lowveld of Zimbabwe. <b>Sanangurai, S. J.</b> Africa University <a href="mailto:manyangarinwaw@africau.edu">manyangarinwaw@africau.edu</a>
14:33 - 14:40	Identification of multiple insect resistant inbred lines: prospects for breeding for dual resistance to Fall armyworm and weevil pests in tropical maize. <b>Aduto France</b> , <a href="mailto:francesaduto@gmail.com">francesaduto@gmail.com</a>
14:40 – 14:50	<b>Discussion</b>
14:50 – 14:57	Validation of markers associated with carotene content in cassava. <b>Njenga Peninah</b> , Makerere University; <a href="mailto:njengapeninah@gmail.com">njengapeninah@gmail.com</a>

### CO-ORGANISERS:



14:57 – 15:04	Genetic variability for tuber quality traits in a collection of yams ( <i>Dioscorea species</i> ) germplasm in Ugandan agro-ecologies; <b>Olive Apuko</b> , Makerere University; <a href="mailto:oapuko86@gmail.com">oapuko86@gmail.com</a>
15:04 – 15:11	Understanding genetic variability and adaptability of sorghum germplasm using quantitative traits. <b>Nokuqala Nyoni</b> , <a href="mailto:nokumthinsi@gmail.com">nokumthinsi@gmail.com</a>
15:11 – 15:18	Assessment of Recently Released Soybean Varieties through Farmer's Field Demonstrations Plots in Angónia and Tsangano Districts in Tete Province, Mozambique. <b>Fernando, A.I.</b> , <a href="mailto:arturfernando29@gmail.com">arturfernando29@gmail.com</a> ; and <a href="mailto:fernando.artur@yahoo.com">fernando.artur@yahoo.com</a>
15:18 – 15:25	Cowpea Improvement for disease resistance and enhanced nutrients in Uganda: Progress and Achievements in the last two decades. <b>Mbeyagala E.K.</b> <a href="mailto:kmbeyagala@gmail.com">kmbeyagala@gmail.com</a>
15:25 – 15:35	<b>Discussion</b>
15:35 – 15:45	<b>Break</b>
	<b>CHAIR:</b> Nadia Fanou Fogny, University of Abomey Calavi, Benin; <a href="mailto:nadia@fogny.bj">nadia@fogny.bj</a> <b>RAPPORTEUR:</b> John Mugonya, Gulu University, Uganda; <a href="mailto:mugonyajohn@gmail.com">mugonyajohn@gmail.com</a>
15:45 – 15:52	Development of new sorghum varieties with superior grain yield performance and desirable food, feed and beverages quality attributes in Zimbabwe. <b>Mhembere Mirriam</b> <a href="mailto:mkchibvongodze@gmail.com">mkchibvongodze@gmail.com</a>
15:52 – 15:59	Evaluation of spider plant ( <i>Cleome gynandra</i> L) accessions for agronomic traits under greenhouse conditions. <b>Nuugulu Leonard M.</b> , Botswana University of Agriculture & Natural Resources, Botswana; <a href="mailto:lmnuugulu@gmail.com">lmnuugulu@gmail.com</a>
15:59 – 16:06	Seed and oil yield of safflower genotypes in response to environmental variation. <b>Mosupiemang, M.</b> , Botswana University of Agriculture & Natural Resources, Botswana; <a href="mailto:marangmosupiemang@yahoo.com">marangmosupiemang@yahoo.com</a>
16:06 – 16:15	Temperature and duration of exposure on chilling injury of safflower. <b>Kereilwe, D.</b> , Botswana University of Agriculture & Natural Resources, Botswana; <a href="mailto:dineophudu@gmail.com">dineophudu@gmail.com</a>
16:15 – 16:22	Strategic agronomic options for managing intra-seasonal dry spells in rainfed smallholder cropping systems in eastern Zimbabwe. <b>Mbanyele Vengai</b> , <a href="mailto:vengaimbanyele@gmail.com">vengaimbanyele@gmail.com</a>
16:22 – 16:32	<b>Discussion</b>
16:32 – 16:39	Food Crops for Improved Nutrition: Proximate composition of cowpea and soybean in Zambia. <b>Natasha M. Mwila</b> <a href="mailto:mwilanatasha@yahoo.co.uk">mwilanatasha@yahoo.co.uk</a>
16:39 – 16:46	Improvement of Indigenous Coping Strategies of Famine-stricken in Darfur States, Sudan. <b>Elkhalil E. A</b> <a href="mailto:eaikhalil@yahoo.com">eaikhalil@yahoo.com</a> ; <a href="mailto:eaikhalil@uofk.edu">eaikhalil@uofk.edu</a>
16:46 – 16:53	Evaluating challenges and possible solutions taken towards eradicating hunger in Kenya. <b>Mukundi Edward</b> <a href="mailto:edwardmukundi29@gmail.com">edwardmukundi29@gmail.com</a>
16:53 - 17:00	<b>Discussion &amp; Closing Remarks by Session Chair</b>

## DAY II

<b>TUESDAY 13<sup>th</sup> December, 2022</b>	
<b>PARALLEL SESSION 3.2</b>	
<b>TIME: 14:00-17:00</b>	
<b>THEME: CLIMATE SMART INNOVATIONS</b>	
<b>VENUE: LECTURE ROOM G1</b>	
<b>CHAIR:</b> Franke A.C, University of the Free States, South Africa; <a href="mailto:FrankeAC@ufs.ac.za">FrankeAC@ufs.ac.za</a>	
<b>RAPPORTEUR:</b> Cecil Togarepi, University of Namibia, Namibia; <a href="mailto:ctogarepi@unam.na">ctogarepi@unam.na</a>	
<b>Time</b>	
14:00 – 14:05	<b>Welcome Remarks by Session Chair</b>
14:05 – 14:15	Monetize Your Research-A case of Fungi Application for Food Security, sustainable Industrial Products, Biodiversity Restoration and Climate Change Mitigation. <b>Richard K. Mibey</b> , <a href="mailto:rmibey51@gmail.com">rmibey51@gmail.com</a>
14:15 - 14:25	The contribution of biochar to the national climate change action plan to minimize greenhouse gas emissions in Kenya. <b>Kwizera Enock</b> <a href="mailto:kwizera.0904120@student.egerton.ac.ke">kwizera.0904120@student.egerton.ac.ke</a>
14:25 - 14:35	Feed Additives Controlling Methane Gas Emission in Cattle production without Altering the Feed. <b>Ouma Mary A.</b> , <a href="mailto:oumamary08@gmail.com">oumamary08@gmail.com</a>

### CO-ORGANISERS:



14:35 - 14:45	Understanding the impacts of climate change on soil micro-organisms. <b>Ocholla A. Jemimah</b> , <a href="mailto:jemmy.achieng@gmail.com">jemmy.achieng@gmail.com</a>
14:45 – 14:55	<b>Discussion</b>
14:55 – 15:05	Leveraging on project partners to build resilience of small-holder dairy farmers to cope with adverse impacts of climate change in western Kenya. <b>Wambui, C. C.</b> , <a href="mailto:wambuicc@gmail.com">wambuicc@gmail.com</a>
15:05– 15:15	Mitigating impacts of livestock production on climate change in Africa: a review. <b>Frank O. Masese</b> , <a href="mailto:fmasese@uoeld.ac.ke">fmasese@uoeld.ac.ke</a> ; <a href="mailto:ondemasese@yahoo.com">ondemasese@yahoo.com</a>
15:15 – 15:25	The Current Issues of Climate Change and Livestock Production. <b>Kipkorir J. Bett</b> <a href="mailto:kipkorir.bett.kb@gmail.com">kipkorir.bett.kb@gmail.com</a>
15:25 – 15:35	Developing equations for predicting feed intake by pastoral/agro-pastoral livestock: tackling uncertainty in Uganda’s national enteric methane emissions inventory. <b>Katongole, C.B.</b> Makerere University, <a href="mailto:constantine.katongole@mak.ac.ug">constantine.katongole@mak.ac.ug</a>
15:35 – 15:45	<b>Discussion</b>
15:45 – 16:00	<b>Break</b>
	<b>CHAIR:</b> Zelalem Bekeko Erena, Haramaya University, Ethiopia; <a href="mailto:zelalembekeko@yahoo.com">zelalembekeko@yahoo.com</a> <b>RAPPORTEUR:</b> Deborah Alio, Busitema University, Uganda; <a href="mailto:deborah.alio@yahoo.com">deborah.alio@yahoo.com</a>
16:00 – 16:10	Enteric methane emissions from Sudanian Zebu Peul cattle during the rainy season in West Africa. <b>Orou Adamou K</b> , <a href="mailto:habibou.assouma@cirad.fr">habibou.assouma@cirad.fr</a>
16:10 – 16:20	Greenhouse gas Fluxes from Riparian Zones of Afro-tropical Rivers Influenced by Different Livestock Production Systems. <b>Godfrey Owuor</b> , <a href="mailto:godfreyowuor03@gmail.com">godfreyowuor03@gmail.com</a>
16:20 – 16:30	Leveraging Cloud-Based Machine Learning Algorithms for Estimating Carbon in Biomass and Soil. <b>Kemigyisha, Fortunate</b> , <a href="mailto:kemfortie@gmail.com">kemfortie@gmail.com</a>
16:30 – 16:40	The impact of climate change on livestock production. <b>Maud Boakyewaa Acheampong</b> <a href="mailto:maudacheampong352@gmail.com">maudacheampong352@gmail.com</a>
16:40 – 16:50	Adoption of artificial intelligence to combat climate change in Africa. <b>Winnie Chebet</b> <a href="mailto:winniechebz@gmail.com">winniechebz@gmail.com</a>
16:50 -17:00	<b>General Discussion and Closing</b>

DAY III

<b>WEDNESDAY 14<sup>th</sup> December, 2022</b>	
<b>PARALLEL SESSION 1</b>	
<b>TIME: 8:30-13:00</b>	
<b>THEME: RESILIENCE OF AFRICAN RANGELANDS IN FACE OF NATURAL DISASTERS</b>	
<b>VENUE: LECTURE ROOM G1</b>	
<b>CHAIR:</b>	
<b>RAPPORTEUR:</b>	
<b>Time</b>	
08:30 - 08:35	<b>WELCOME REMARKS BY SESSION CHAIR:</b>
08:35 - 08:55	Keynote Address by Dr Igshaan Samuels, Range and Forage Sciences Specialist Researcher at Agricultural Research Council, South Africa; - Grassland Society of Southern Africa –President: 2021-2022; Keynote Address Title: <b>“Emerging issues for African rangelands resilience”</b>
08:55 - 09:00	<b>Discussion</b>
09:00 - 09:10	Comparison of acid insoluble ash and acid detergent lignin as makers for estimating digestibility by open grazing goats: tackling barriers to enteric methane inventorying using the Tier 2 methodology. <b>Kusiima N.</b> <a href="mailto:bagadanasuru3@gmail.com">bagadanasuru3@gmail.com</a>
09:10 – 09:20	A review of agro pastoral practices and crop-livestock systems productivity under variable rainfall patterns in the cattle corridor of East Africa. <b>Jane Akot</b> , <a href="mailto:janeokwerowaca@gmail.com">janeokwerowaca@gmail.com</a>
09:20 - 09:30	Impact of livestock grazing management systems on soil c in the savanna biome of South Africa. <b>Mathye MC</b> , <a href="mailto:2020549511@ufs4life.ac.za">2020549511@ufs4life.ac.za</a> ; <a href="mailto:KotzeE@ufs.ac.za">KotzeE@ufs.ac.za</a>
09:30 – 09:35	<b>Discussion</b>
09:35-09:40	<b>Comfort Break</b>

CO-ORGANISERS:





09:40-09:50	<b>PCP Researchers:</b> Resilience issues at the human- livestock- wildlife interphase
09:50-10: 00	<b>Godfrey Manyawu and Irenie Chakoma:</b> Integrated research and development perspectives for rangelands resilience: past and current ILRI strategies
10:00-10: 10	<b>Vladimir Grosbois and Prisca Mugabe:</b> Capacity building for rangeland resilience: Research Platform-Production and Conservation in partnership
10:10-10:15	<b>Discussion</b>
10:15-10:30	Session Synthesis and Closing ( <b>Anthony Egeru +TBA</b> )
10:30 – 11:00	<b>TEA BREAK</b>
	<b>CHAIR:</b> Franklin Masese, University of Eldoret, Kenya; <a href="mailto:fmasese@uoeld.ac.ke">fmasese@uoeld.ac.ke</a> <b>RAPORTEURS:</b> Joseph Ssekandi, Kabale University, Uganda; <a href="mailto:sekjoseph@gmail.com">sekjoseph@gmail.com</a>
11:00 - 11:05	<b>WELCOME REMARKS BY SESSION CHAIR</b>
11:05 - 11:15	A review of Brachiaria grass as fodder for dairy goats. <b>Onkeo Christine K,</b> <a href="mailto:onkeoc@yahoo.com">onkeoc@yahoo.com</a>
11:15 - 11:25	The effects of molasses and malted barley with or without lactic acid bacteria (LAB) inoculant on the pH, nutritional composition and in vitro digestibility of Senegalia mellifera silage. <b>Murorua Portia,</b> <a href="mailto:portiamurorua@gmail.com">portiamurorua@gmail.com</a>
11:25 - 11:35	The quantification of grazing gradients of conventional and high-density, grazing systems. <b>Madikizela Wanda,</b> <a href="mailto:2016136414@ufs4life.ac.za">2016136414@ufs4life.ac.za</a>
11:35 - 11:45	Productivity and semen quality of bulls at a semen station in Zimbabwe. <b>Eddington Gororo,</b> Chinhoyi University of Technology <a href="mailto:gororoeddington@gmail.com">gororoeddington@gmail.com</a>
11:45 - 12:55	Livestock and wildlife as vectors of nutrients affecting water quality of the Mara river, Kenya. <b>Elizabeth W. Wanderi</b> <a href="mailto:ewanderi428@gmail.com">ewanderi428@gmail.com</a>
12:55 - 12:05	<b>Discussion</b>
12:05 - 12:15	Determination of optimal encroacher bush value chains: application of analytical hierarchy process in Namibia. <b>Cecil Togarepi,</b> <a href="mailto:ctogarepi@unam.na">ctogarepi@unam.na</a>
12:15 - 12:25	Diversity of fodder species, and productivity of pasture in peri-urban areas in Southern Benin. <b>Luc Hippolyte Dossa,</b> <a href="mailto:hippolyte.dossa@fsa.uac.bj">hippolyte.dossa@fsa.uac.bj</a> ; <a href="mailto:dolhip@yahoo.com">dolhip@yahoo.com</a>
12:25 - 12:35	Current status of bovine semen and artificial insemination use in Zimbabwe. <b>Eddington Gororo,</b> <a href="mailto:gororoeddington@gmail.com">gororoeddington@gmail.com</a>
12:35 - 12:45	Sprouting and rooting potential of selected indigenous shrubs species. <b>Verene Nyiramvuyekure,</b> <a href="mailto:nyiramvuyekureverene@gmail.com">nyiramvuyekureverene@gmail.com</a>
12:45 - 12:55	The role of grazing management in improving soil carbon sequestration in grasslands of Southern Africa. <b>Franke A.C</b> <a href="mailto:FrankeAC@ufs.ac.za">FrankeAC@ufs.ac.za</a>
12:55 - 13:00	<b>Discussion &amp; Closing Remarks by Session Chair</b>

### DAY III

<b>WEDNESDAY 14<sup>th</sup> December, 2022</b>	
<b>PARALLEL SESSION 2</b>	
<b>TIME: 8:30-13:00</b>	
<b>THEME: UPSCALING IMPACT OF UNIVERSITY AND COMMUNITY CONNECTEDNESS</b>	
<b>VENUE: LECTURE ROOM G2</b>	
<b>CHAIR:</b> Prossy Nakato Isubikalulu, Makerere University, Uganda; <a href="mailto:isubikalulu@gmail.com">isubikalulu@gmail.com</a>	
<b>RAPORTEUR:</b> Micheline Inamahoro, Institut des Sciences Agronomiques du Burundi (ISABU), Burundi, <a href="mailto:inamicheline@gmail.com">inamicheline@gmail.com</a>	
<b>Time</b>	
08:30 - 08:35	<b>WELCOME REMARKS BY SESSION CHAIR:</b>
08:35 - 08:45	Enhancing safflower production and product development for food security and improving incomes of small-scale farmers in Botswana. <b>Emongor, V. E;</b> Botswana University of Agriculture and Natural Resource; <a href="mailto:vemongor@uan.ac.bw">vemongor@uan.ac.bw</a>
08:45 - 08:55	Adoption of vegetable farming in urban areas of Kenya-Nairobi during the COVID -19 crisis. <b>Waweru W. Leah</b> <a href="mailto:lesteve95@gmail.com">lesteve95@gmail.com</a>

#### CO-ORGANISERS:





08:55 - 09:05	Effect of home gardens on households' food security in the communes of Ouinhi, Ouèssè and Zè (Benin). <b>Fanou-Fogny N.</b> University of Abomey-Calavi; <a href="mailto:manchaachamou@gmail.com">manchaachamou@gmail.com</a>
09:05 - 09:15	Characterizing smallholder onion farming in Sironko district: Implications for practice and policy in Uganda. <b>Elias Munezero</b> , <a href="mailto:enias016@gmail.com">enias016@gmail.com</a>
09:15 - 09:25	Promotion of Mushroom cultivation: an alternative farming activity in the Okondjatu district of the Otjozondjupa region in Namibia. <b>Kristine N. Haukongo</b> , <a href="mailto:kristinehaukongo@gmail.com">kristinehaukongo@gmail.com</a>
09:25 – 09:35	<b>Discussion</b>
09:35 – 09:45	Organizational Culture and Employee Performance of Academic Staff among Higher Education Institutions in Uganda. <b>Amanya, B.L.</b> , <a href="mailto:bbamanya.lynn5@gmail.com">bbamanya.lynn5@gmail.com</a>
09:45 - 09:55	Role of agricultural extension agents in dissemination and utilization of market information among smallholder potato farmers in Nyandarua County, Kenya: A review. <b>Mburu, J M.</b> <a href="mailto:johnmethi94@gmail.com">johnmethi94@gmail.com</a>
09:55 – 10:05	Communication Pathways for Tissue Culture Banana planting materials in Mukono District, central Uganda. <b>Lucy Mulugo</b> , Makerere University, Uganda; <a href="mailto:lucy.mulugo@mak.ac.ug">lucy.mulugo@mak.ac.ug</a> ; <a href="mailto:lmulugo@yahoo.com">lmulugo@yahoo.com</a>
10:05 – 10:15	Gender dimensions in higher Education Institutions in East Africa. <b>Deborah Alio</b> , Busitema University, Uganda, <a href="mailto:deborah.alio@yahoo.com">deborah.alio@yahoo.com</a>
10:15 – 10:30	<b>Discussion</b>
10:30 – 11:00	<b>TEA BREAK</b>
	<b>CHAIR:</b> Flora JOSIANE CHADARE, National University of Agriculture, Benin; <a href="mailto:fchadare@gmail.com">fchadare@gmail.com</a> <b>RAPPORTEUR:</b> Lucy Were Mulugo, Makerere University, Uganda; <a href="mailto:lucy.mulugo@mak.ac.ug">lucy.mulugo@mak.ac.ug</a>
11:00 - 11:10	Piloting a Technology Transfer Model: A Case of the UNZA ATDC promoting village chicken production among small holder farmers in Luanshya District of Zambia. <b>Mwala M.S.</b> <a href="mailto:mmwala@unza.zm">mmwala@unza.zm</a>
11:10 - 11:20	Refresher training for agricultural innovation in Northern Uganda: what are the training preferences of agricultural extension workers? <b>Douglas Otoo</b> , <a href="mailto:douglasotoo46@gmail.com">douglasotoo46@gmail.com</a>
11:20 - 11:30	A gendered approach to the goat value chain analysis: a case study of Mbire district Zimbabwe. <b>Rusawo Bianca P.</b> University of Zimbabwe, <a href="mailto:rusawopaida@gmail.com">rusawopaida@gmail.com</a>
11:30 - 11:40	Community-University journey together from tied contour rain water harvesting to community innovation, value addition and product development: experiences from the CARP Project Zimbabwe. <b>Mandumbu Ronald</b> , <a href="mailto:mandumbu@gmail.com">mandumbu@gmail.com</a>
11:40 - 11:50	Drivers of partnerships in scaling out research innovations in cassava seed systems: Commercialization beyond technology transfer in Uganda. <b>Samuel Kalimunjaye</b> <a href="mailto:kali.samuel@gmail.com">kali.samuel@gmail.com</a>
11:50 - 12:00	<b>Discussion</b>
12:00 - 12:10	Organizational security system: A case study of the RUFORUM Secretariat. <b>Acan, E.</b> , <a href="mailto:evalineacan40@gmail.com">evalineacan40@gmail.com</a>
12:10 - 12:20	Industries without smokestacks - An Alternative pathway for Uganda. <b>Tasha Balunywa</b> , <a href="mailto:tasha.balunywa@gmail.com">tasha.balunywa@gmail.com</a>
12:20 - 12:30	Assessing Knowledge, Awareness and Use of Climate Smart Agriculture practices in Arid and semi-arid regions in Kenya. <b>Evaline Chepng'etich</b> , Jomo Kenyatta University of Agriculture and Technology, Kenya; <a href="mailto:sang.evaline@ku.ac.ke">sang.evaline@ku.ac.ke</a>
12:30 - 12:40	Is Drought a Humanitarian Emergency in Kenya? : A review. <b>Ikonya Judith Engurat</b> , <a href="mailto:ikonyajudith1@gmail.com">ikonyajudith1@gmail.com</a>
12:40 - 50	The Impact of Menstrual Hygiene Management and Gender on Psychosocial Outcomes for Adolescent Girls in Kenya. <b>Itenu Irene Adongo</b> , <a href="mailto:itenuirene@gmail.com">itenuirene@gmail.com</a>
12:50 - 13:00	<b>Discussion &amp; Closing Remarks by Session Chair</b>

**CO-ORGANISERS:**



DAY III

WEDNESDAY 14<sup>th</sup> December, 2022

PARALLEL SESSION 3

TIME: 8:30-11:00

THEME: DIGITAL INNOVATIONS IN AGRICULTURE AND EDUCATION

VENUE: LECTURE ROOM F3

**CHAIR:** Jude Lubega Thadeus, Nkumba University, Uganda; [ar@nkumbauniversity.ac.ug](mailto:ar@nkumbauniversity.ac.ug)

**RAPORTEURS:** Daniel Michael Okello, Gulu University, Uganda; [okelloabua@gmail.com](mailto:okelloabua@gmail.com)

Time	
08:30 - 08:35	<b>WELCOME REMARKS BY SESSION CHAIR:</b>
08:35 - 08:50	Assessment of Mycotoxin disease in maize in Rwanda and Development of IoT-enabled AI Control and Monitoring system. <b>Emmanuel Masabo</b> , <a href="mailto:masabem@gmail.com">masabem@gmail.com</a>
08:50 - 09:05	Designing an ICT enabled model for enhanced active teaching and learning in teacher training institutions in Uganda. <b>Annet .K. Mugisha</b> , <a href="mailto:kajuraannet2@gmail.com">kajuraannet2@gmail.com</a>
09:05 - 09:20	A Machine Learning Detection Model to Manage Aflatoxins in Groundnuts After Harvest in Uganda. <b>Tamale Lilian</b> , <a href="mailto:ann.lillian14@gmail.com">ann.lillian14@gmail.com</a>
09:20 - 09:30	<b>Discussion</b>
09:30- 09:45	The use of Geographical Information System (GIS) and Remote Sensing (RS) technologies in generation of information used to mitigate risks from landslide disasters; a literature review. <b>Ameria Nabukonde</b> , <a href="mailto:amerianabu@gmail.com">amerianabu@gmail.com</a>
09:45 - 10:00	Exploration of existing early warning systems and their architecture. <b>Sylvia Namwano</b> , <a href="mailto:snamwano@nkumbauniversity.ac.ug">snamwano@nkumbauniversity.ac.ug</a>
10:00 - 10:15	Student Perspectives of Online Learning: The Case of RUFORUM-Supported Students in Member Universities in Africa. <b>Waswa Moses</b> , Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) <a href="mailto:m.waswa@ruforum.org">m.waswa@ruforum.org</a>
10:15 – 10:30	<b>Discussion &amp; Closing Remarks by Session Chair</b>
10:30 – 11:00	<b>TEA BREAK</b>

CO-ORGANISERS:

