

The 15th RUFORUM ANNUAL GENERAL MEETING 2019

SCIENTIFIC SESSIONS

| WEDNESDAY 4 th December, 2019 | |
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| PLENNARY SESSION 1 | |
| VENUE: Code Conference Room | |
| CHAIR: Dr. Sokona Dagnoko Sisokko sokona.dagnoko@gmail.com | |
| RAPPORTEUR: Dr. Williams Esuma esumawilliams@yahoo.co.uk Ms Nada Musa nadasiddig12@gmail.com | |
| Time | |
| 8:30-8:40 | WELCOME REMARKS Director of Research, UCC: Prof. Frederick Ato Armah farmah@ucc.edu.gh |
| 8:40-9:00 | REMARKS Deputy Rector, Eduardo Mondlane University: Prof. Armindo Daniel Tiago tiagao116r@gmail.com |
| 9:00-9:10 | OFFICIAL OPENING ADDRESS Minister of Education and Training (eSwatini): Hon. Lady Howard Mabuza |
| 9:10-9:30 | Key Note Paper 1: Characterisation of Livestock Systems in Africa Prof. Denis Mpairwe; Makerere University, Uganda dmpairwe@gmail.com |
| 9:30-9:50 | Key Note Paper 2: Recent Development in Robotics Prof. Herbert Roth, University of Siegen, Germany hubert.roth@uni-siegen.de |
| 9:50-10:00 | General Discussion |
| 10:00-10:30 | Health Break and Breaking into Parallel sessions |
| WEDNESDAY 4 th December, 2019 | |
| PARALLEL SESSION 1: LIVESTOCK AND LIVESTOCK PRODUCTION SYSTEMS | |
| Venue: Code Seminar Room 1A | |
| CHAIR: Prof. Mena Dos Anjos, Eduardo Mondlane University anjomena@gmail.com | |
| RAPPORTEUR: Dr. Milton Edimu miltonedimu@yahoo.com Dr Emmanuel Afutu emmanuel.afutu@ucc.edu.gh | |
| 10:30 – 10:35 | Introduction of the Session by Chair |
| 10:35 – 11:05 | Key note speaker: Prof. Donald. R. Kugonza donkugonza@gmail.com <i>Local chicken production in Uganda: Breeding practices and flock productivity</i> |
| 11:05 – 11:35 | Discussion |
| 11:35 – 11:45 | Costa, R rosac@kyeemafoundation.org <i>Village chickens: options to improve nutrition and health of HIV and AIDS affected individuals in Maracuene district, Mozambique</i> |
| 11:45– 12: 00 | Matilde Francisco Matola matola.matilde@gmail.com <i>Phenotypic aspects commonly observed in the plumage coloration of indigenous chickens from southern Mozambique</i> |
| 12:00 – 12:15 | Ndyomugenyi E K ellyndyomugenyi@gmail.com <i>Enhancing pig production and marketing for smallholder farmers in Northern Uganda (EPMSNU)</i> |
| 12:15-12:30 | Ahadi Birindwa ahadibirindwa@uea.ac.cd <i>Reproduction, milk production and phenotypic characterization of indigenous goat breeds in South Kivu, Democratic Republic of Congo</i> |
| 12:30-12:45 | Ilyass Yussif illyass@caes.mak.ac.ug |

CO-ORGANISERS:



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| | <i>Lemongrass (Cymbopogon citratus) as herbal feed additive source on rabbit (Oryctolagus cuniculus) performance</i> |
| 12:45-13:00 | General Discussion |
| 13:00 – 14:00 | LUNCH Break |
| WEDNESDAY 4th December, 2019 | |
| PARALLEL SESSION 2: LIVESTOCK AND LIVESTOCK PRODUCTION SYSTEMS | |
| Venue: Code Seminar Room 1A | |
| CHAIR: Dr Simon Angombe, University of Namibia sangombe@unam.na | |
| RAPPOORTEUR: Dr Ssekandi Joseph sekjoseph@gmail.com | |
| 14:00 – 14:15 | Halidu Agolisi Mamudu m.haliduagolisi@gmail.com <i>Effect of replacing soybean meal with dried rumen digesta on digestibility and growth performance of Djallonké sheep</i> |
| 14:15 – 14:30 | A.J. Strauss andriess@fs@agric.za <i>The status of wool production in the Free State Province, South Africa</i> |
| 14:30 – 14:45 | W. Singini walesingini@gmail.com <i>Fisheries management options for (Engraulicypris sardella) and Ncheni (Rhamphochromis spp.) in Nkhatabay district of Malawi</i> |
| 14:45 – 15:00 | Coffie, I. smailcoffie@gmail.com <i>Factors influencing tick load on dairy cattle herds in hot-humid and coastal environment of Ghana</i> |
| 15:00 – 15:15 | Theopoline Omagano Amushendje tamushendje@unam.na <i>Understanding the genetic resources and adaptive traits of locally adapted cattle breeds: the case of Afrikaner and Bonsmara cattle in Namibia</i> |
| 15:15-15:30 | General Discussion |
| 15:30 – 16:00 | HEALTH Break |
| WEDNESDAY 4th December, 2019 | |
| PARALLEL SESSION 3: LIVESTOCK AND LIVESTOCK PRODUCTION SYSTEMS | |
| Venue: Code Seminar Room 1A | |
| CHAIR: Prof. Vallantino Emongor Botswana University of Agriculture and Natural Resources vemongor@gmail.com | |
| RAPPOORTEUR: Dr. Nakiyemba Were alicenakiyemba@gmail.com | |
| 16:00-16:15 | Peter Ochieng onexpeters@gmail.com <i>An ontology based ChatBot for diagnosing chicken diseases solar power forecasting using long short-term Memory</i> |
| 16:15-16:30 | Asare-Agyapong E. addweseh@yahoo.com <i>Nutritional quality of early- or late- maturing varieties of groundnuts: effects on digestibility and growth performance of sheep fed groundnut haulms</i> |
| 16:30-16:45 | Eric Socrates Atikpo adzitey@yahoo.co.uk <i>A preliminary study of the antibacterial properties of ‘Dawadawa’ (Parkia biglobosa) and ‘Prekese’ (Tetrapleura tetraptera) on microbial load of beef</i> |
| 16:45-17:00 | Bombasom Kweku Tuocho kweku.bombason@stu.ucc.edu.gh <i>Broiler Value Chain: A potential for sustainable youth employment in Ghana</i> |
| 17:00-17:30 | Discussion and Wrap-Up |
| WEDNESDAY 4th December, 2019 | |
| PARALLEL SESSION 4: AGRIFOOD SYSTEMS | |
| VENUE: Code Seminar Room 1B | |
| CHAIR: Prof. Mick Mwala, University of Zambia mmwala@yahoo.com | |
| RAPPOORTEUR: Dr. Safina Biira bsaphina@yahoo.co.uk | |
| Time | Presentation Title |



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| 10:30 – 10:35 | Introduction of the Session by Chair |
| 10:35 – 11:05 | Key note speaker: Dr Kawuki, R. kawukisezirobert@gmail.com Advances in Breeding for Highland Cassava in Uganda |
| 11:05 – 11:35 | Discussion |
| 11:35 – 11:45 | Symphorien Agbahoungba agbahoungbasymphorien@gmail.com <i>Sources of resistance to flower bud thrips (Megalurothrips sjostedti Trybom) among Benin cowpea germplasm</i> |
| 11:45– 12: 00 | Rono Evalyne Chepkoech evalyneronoh@gmail.com <i>Genetic progress of sorghum cultivars through breeding in Uganda</i> |
| 12:00 – 12:15 | Joshua Agbattey joshuaagbattey5@gmail.com <i>Assessment of the effect of Shea Nut cake biochar on tomato (Solanum lycopersicon L.) growth</i> |
| 12:15-12:30 | Joyful Rugare rugare@yahoo.com <i>Existence of drought tolerant legume and small grain cereal crops with resilience to witch weeds</i> |
| 12:30-12:45 | Mbroh Isaac mbro.ike@gmail.com <i>Preferences of consumers and their willingness to pay for cowpea variety traits: Implications for breeding in Techiman Municipality, Ghana</i> |
| 12:45-13:00 | General Discussion |
| 13:00 – 14:00 | LUNCH Break |
| WEDNESDAY 4th December, 2019 | |
| PARALLEL SESSION 5: AGRIFOOD SYSTEMS | |
| VENUE: Code Seminar Room 1B | |
| CHAIR: Dr Basil Mugonola, Gulu University basil.mugonola@gmail.com | |
| RAPPORTEUR: Ms Maria Luisa de la Puerta Fernandez mdelapuerta@unam.na | |
| 14:00 – 14:15 | Blessing Nwokocha adanta4real@yahoo.com <i>Selection of cowpea lines for culinary quality improvement using cooking characteristics</i> |
| 14:15 – 14:30 | Selma N. Nghituwamhata snghituwamhata@gmail.com <i>Alterations of biochemical composition of cowpea (Vigna unguiculata (L) Walp.) leaves by Aphis craccivora feeding</i> |
| 14:30 – 14:45 | Sally Chikuta sallychikuta@yahoo.com <i>Inheritance of fodder quality traits and mode of action in selected sorghum genotypes</i> |
| 14:45 – 15:00 | Kwaku Boakye boakyecollins247@gmail.com <i>Data Envelopment Analysis (DEA) to estimate technical and scale efficiency Fka of smallholder pineapple farmers in the Central Region of Ghana</i> |
| 15:00 – 15:15 | Ebenezer Azinaho azinahoebenezer5050@gmail.com <i>Cowpea seed systems in the central region of Ghana and the effects on agronomic performance and yield</i> |
| 15:15 – 15:30 | General Discussion |
| 15:30 – 16:00 | HEALTH Break |
| WEDNESDAY 4th December, 2019 | |
| PARALLEL SESSION 6: AGRIFOOD SYSTEMS | |
| VENUE: Code Seminar Room 1B | |
| CHAIR: Dr Mcebisi Maphosa, Lupane State University mcebisi@gmail.com | |
| RAPPORTEUR: Dr. Getachew Shambel_getchs2006@gmail.com | |
| 16:00 – 16:15 | John Mulwa Ndisya jndisyas@gmail.com <i>Investigation of the drying behaviour of Cocoyam (Colocasia esculenta (L.) Schott)</i> |
| 16:15 – 16:30 | Dejene Kebede Astatke dejene100@gmail.com <i>Screening of diverse sorghum genotypes for resistance to ergot (Claviceps africana) in Uganda</i> |
| 16:30 – 16:45 | Felister Nzuve felistermusembi@gmail.com |



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| | <i>Multifaceted approach in management of fall armyworm in Kenya</i> |
| 16:45 – 17:00 | Ernest Teye teyernest@gmail.com <i>The impact of maturity stage, time of harvest and storage temperature of pineapples on quality of MD 2 pineapple juice</i> |
| 17:00 – 17:30 | Discussion and Wrap-Up |
| WEDNESDAY 4th December, 2019 | |
| PARALLEL SESSION 7: Digital Innovations, Economics and Policy Analysis | |
| Venue: Code Conference Room | |
| CHAIR: Dr Venny Nakazibwe, Makerere University vnakazibwe@gmail.com | |
| RAPPORTEUR: Dr Lazurus Lugoi lugoi338@gmail.com | |
| 10:30 – 10:35 | Introduction of the Session by Chair |
| 10:35 – 11:05 | Key note speaker: Prof. Jude Lubega lubegajac2016@gmail.com <i>Information and communications technology in agriculture</i> |
| 11:05 – 11:15 | Discussion |
| 11:15 – 11:30 | David Martin Amitu d.amitu@ruforum.org <i>Agri-Tech and Artificial Intelligence (ATAI) Opportunities for Agricultural Transformation in Africa</i> |
| 11:30 – 11:45 | Richard Sebuliba-Mutumba rsemur@gmail.com <i>The mediating role of psychological empowerment behaviour in the relationship between leadership empowerment behaviour and innovativeness of farmer organizations in central Uganda</i> |
| 11:45 – 12:00 | Deborah Alio deborah.alio@yahoo.com <i>Gender dimensions in Higher Education Institutions in East Africa</i> |
| 12:00 – 12:15 | Hellen Biruma hellenbiruma@yahoo.com <i>Integrated surface water floods management for improved accessibility and agricultural production in Uganda</i> |
| 12:15 – 12:30 | Sarudzai N.A Muzhange smuzhange@gmail.com <i>Made, not born; experiences from the entrepreneurial mentorship program at Gulu university</i> |
| 12:30 – 12:45 | Gabriel Karubanga amootigabs@gmail.com <i>Exploring farmer practices and their implications on postharvest losses among smallholder farmers in Uganda</i> |
| 12:45 – 13:00 | General Discussion |
| 13:00 – 14:00 | LUNCH Break |
| WEDNESDAY 4th December, 2019 | |
| PARALLEL SESSION 8: BIOSAFETY, BIOSECURITY AND BIORISK MANAGEMENT | |
| VENUE: Code Conference Room | |
| CHAIR: Prof. Richard Mulwa, Egerton University risamuk@gmail.com | |
| RAPPORTEUR: Dr Walter Odongo odongo78@gmail.com | |
| 14:00 – 14:05 | Introduction of the Session by Chair |
| 14:05 – 14:25 | Key note speaker: Kugonza Donald donkugonza@gmail.com <i>Africa under attack: A continent-wide mapping of the status of pathogens, parasites and predators of the hived honey bee <i>Apis mellifera</i> L. (Hymenoptera: Apidae)</i> |
| 14:25 – 14:35 | Discussion |
| 14:35 – 14:55 | Joseph Nzeh jnzeh@studentsforliberty.org <i>Antibiotics residue and resistance profile of bacterial isolates in imported and locally produced honey from locations within the Northern Region of Ghana</i> |
| 14:55 – 15:10 | Fassinou, F.T.K. ffinagnon93@gmail.com <i>Mutchayan, a derived product from baobab fruit pulp used as complementary food in Benin</i> |
| 15:10 – 15:25 | Weisheit, A. Anke aweisheit@must.ac.ug |



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| | <i>Internationalisation of PHARMBIOTRAC: An Eastern and Southern Africa Higher Education Centre of Excellence in "Pharm-BioTechnology and Traditional Medicine" at Mbarara University of Science and Technology</i> |
| 15:25 – 15:30 | General Discussion |
| 15:30 – 16:00 | HEALTH Break |
| WEDNESDAY 4th December, 2019 | |
| PARALLEL SESSION 8: BIOSAFETY, BIOSECURITY AND BIORISK MANAGEMENT | |
| VENUE: Code Conference Room | |
| CHAIR: Prof. Patience Mwadena Mlongo Mshenga Egerton University pmsshenga@egerton.ac.ke | |
| RAPPOREUR: Ms Diana Acero aserodianah@yahoo.com | |
| 16:00 – 16:15 | Elvis Kichana ekichana@gmail.com <i>The genetic variability and antimicrobial susceptibility of Escherichia coli isolates from household water sources in Northern Ghana</i> |
| 16:15 – 16:30 | Ahotondji Mechak Gbaguidi gmechak89@gmail.com <i>Effects of processing technologies on the quality of pasteurized baobab nectars produced in southern Benin</i> |
| 16:30 – 16:45 | Rebecca Mutebi Kalibwani rmkalibwani@as.bsu.ac.ug <i>Development of yoghurt supplemented with selected herbs and analysis of its physico-chemical properties</i> |
| 16:45 – 17:00 | General discussion |
| 17:00 – 17:30 | Discussion and Wrap-Up |
| Thursday 5th December, 2019 | |
| PLENNARY SESSION 2 | |
| VENUE: Code Conference Room | |
| CHAIR: Prof. Nancy Mungai; Egerton University, Kenya nmungai@egerton.ac.ke | |
| RAPPOREUR: Dr. Basil Mugonola basil.mugonola@gmail.com Dr. Elhadi Ali Ibrahim Elkhalil eaikhalil@yahoo.com | |
| Time | Presentation Title |
| 8:30 – 8: 50 | Lead Paper 1: Progress with the establishment of the Makerere University Regional Centre of Excellence for Crop Improvement Dr Richard Edema Dr. redema12@yahoo.com |
| 8:50 – 9:10 | Lead Paper 2: Experiences in the Baobab value chain Prof. Achille Assogbadjo assogbadjo@yahoo.fr |
| 9:10 – 9:30 | Lead Paper 3: Virtual Sign: the sign language gateway to higher education and digital literacy Dr Nuno Escudeiro nfe@isep.ipp.pt |
| 9:30 – 10:00 | General Discussion |
| 10:00-10:30 | Health Break and Breaking into Parallel sessions |
| Thursday 5th December, 2019 | |
| PARALLEL SESSION 9: Natural Hazards, Disasters and Environmental Crisis | |
| VENUE: Code Seminar Room 1A | |
| CHAIR: Abdallah Mohamed Abdallah Yahia, Kordofan University khalil2004@hotmail.com | |
| RAPPOREUR: Dr Jeremiah S. Shelembe jshellembe@uniswa.sz | |
| Time | Presentation Title |
| 10:30 – 10:35 | Introduction of the Session by Chair |
| 10:35 – 1:25 | Key note speaker: Prof. Jackson Mwanjalolo Majaliwa majaliwam@gmail.com Responding to the present and future environmental hazards, disasters and environmental crisis in Africa |
| 11:25 – 11:35 | Discussion |
| 11:35 – 11:50 | Hatim Mohamed Ahmed Elamin h.elamin@ruforum.org |



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| | Impacts of land use/land cover changes on desertification in gum Arabic belt, Ennhud locality, West Kordofan State, Sudan |
| 11:50 – 12:05 | Denga, R. V rdenga@gmail.com <i>Investigation of the drivers and impacts of agricultural expansions on the Kafue River Basin in Zambia's Copperbelt Province and their implications on environmental and social sustainability</i> |
| 12:05 – 12:20 | Nelson Papi Kolliesuah kolliesuah44@gmail.com <i>Rainwater harvesting technology: an adaptation approach to climate change among farmers in Africa, a systematic review</i> |
| 12:20 – 12:35 | Munyaka J munyakajustin@hotmail.com <i>Temperature variation and its impacts on maize and cassava production in Mayukwayukwa Refugee Settlement</i> |
| 12:35 – 12:50 | Basiru, A.O Okanlawon.basiru@students.jkuat.ac.ke <i>Vulnerability to climate change and variability: a gender analysis of forest based-communities in south-west of Nigeria</i> |
| 12:50 – 13:05 | Zenebe Shuite zeneshu112@gmail.com <i>Ecological and gender impacts of land use cover change in Southern Ethiopia</i> |
| 13:05 – 14:00 | LUNCH Break |
| Thursday 5th December, 2019 | |
| PARALLEL SESSION 10: SOIL FERTILITY AND SOIL HEALTH SYSTEMS IN AFRICA | |
| VENUE: Code Seminar Room 1B | |
| CHAIR: Prof. JS Anthony Kibe, Egerton University kibeanto@gmail.com | |
| RAPORTEUR: Mr Samuel Kalimunjaye kali.samuel@gmail.com | |
| Time | Presentation Title |
| 10:30 – 10:35 | Introduction of the Session by Chair |
| 10:35 – 11:25 | Key note speaker: Prof. George Nyamadzawo gnyama@yahoo.com The potential benefits and trade-offs of using sub-surface water retention technology |
| 11:25 – 11:35 | Discussion |
| 11:35 – 11:50 | Obiageli Umeugochukwu obyume@gmail.com <i>Effect of cation rich biochar and micronutrient blended inorganic fertilizer on rice yield in an acidic soil</i> |
| 11:50 – 12:05 | Kwame Agyei Frimpong kfrimpong@ucc.edu.gh <i>Biochar and Inorganic NPK fertilizer or compost application improves soil quality and cabbage yield</i> |
| 12:05 – 12:20 | Wivine Matabaro Adidja w.adidja@ruforum.org <i>Land degradation an issue in ecosystems</i> |
| 12:20 – 12:35 | Akello Sarah sarahakellok@yahoo.com Quality and dissemination of information on restoration of Awoja watershed in Eastern Uganda |
| 12:35 – 12:50 | Ekepu David d.ekepu@ruforum.org Assessing interdisciplinary research capacity for individual researchers: A case of researchers at Copperbelt University, Zambia |
| 12:50 – 13:05 | Phiona Nabirye nabiryeptiona11@gmail.com Uganda Christian University Arabica coffee enterprise development |
| 13:05 – 14:00 | LUNCH Break |
| THE END | |

