EDITORIAL

OVERVIEW: THE 15TH JKUAT SCIENTIFIC, TECHNOLOGICAL AND INDUSTRIALIZATION CONFERENCE

J. Kinyuru, P. Home, W. Owino, P. Oyier, P. Kahenya, S. Kimani, M. Njire*, M. Kaibui, G. Njiri, R. Ndeda, V. Ngugi, M. Kimwele, O. Oluoch, P. Mbindyo, R. Mangira, J. Nyori, V. Opondo, S. Wakhu, R. Maina, J. Obel, C. Oywer, E. Olweny, W. Kahangi, D. Ngosi, C. Mugodo, S. Muya and M. Abukutsa-Onyango.*
Conference Organising committee, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya
Corresponding email: jkinyuru@agr.jkuat.ac.ke

1.0 INTRODUCTION

The Jomo Kenyatta University of Agriculture and Technology (JKUAT) Scientific, Technological and Industrialization Conference was first held in the year 2005, and is the main annual scientific forum hosted by the institution. The goal of the conference is to fulfil the institution's crucial role in the advancement of science and technology, while supporting the government's efforts towards achieving sustainable economic growth. The conference is organized by the Directorate of Research and Innovations in the Research, Production and Extension (RPE) Division of JKUAT.

The 15th JKUAT Scientific, Technological and Industrialization Conference was held virtually on 25th – 26th March 2021. The conference theme was Refocusing Research, Innovation and Entrepreneurship for Excellence in Higher Education in the Era of Covid-19 which was sub-divided to 7 sub-themes. The planning was spearheaded by a committee of 22 members drawn from various colleges of JKUAT. Ninety-five (95) abstracts were received out of which 76 were accepted for oral presentation. The conference was attended by 288 participants from 15 countries 7 of who were Keynote speakers, 76 research paper presentations and 10 exhibitions. The presentations focused on areas of agriculture, basic and applied sciences, engineering and technology, ICT and information Technology, Building sciences and health sciences. The conference was mainly sponsored by JKUAT but National Research Fund, Kenya gave financial support. Selected peer-reviewed full papers presented in the conference are published in this special issue of the Journal of Agriculture Science and Technology. The participants were satisfied with the organization, content and management of the conference.

The conference provided a forum through which the university showcases ongoing contributions it is making to the society; created a forum for constantly improving the University's approach to development-oriented scientific research, as it strives to remain a leader in this area; provided a forum for research peers from local and international institutions to discuss, share and publish vital information; provided an opportunity for the industrial/business sectors and policy makers to interact with researchers, so as to get new ideas and products for infusion into the production system and research and provoked policy makers to appreciate the need for substantial and long-term investments in scientific research, innovation and industrialization.

2.0 CONFERENCE PRESENTATIONS

2.1 Conference attendance

The total attendance was 288 participants from 15 countries namely Kenya, Uganda, Tanzania, Zimbabwe, Zambia, Zanzibar, Cameroon, Belgium, Germany, Japan, Finland, Ethiopia, UK, Mauritania and USA with a total of 83 presentations and 10 exhibitions made. Majority of the participants were male (61%) while 39% were female. JKUAT had the highest attendance (78%), industry and non-Kenyan universities had 9% each while other Kenyan universities had 4% attendance.

2.2 Key messages from presentations

Key messages from presentations in each sub-theme were summarised as follows:

i. *Water, Energy, Environment, and climate change Management for Sustainable growth*.
The need to mitigate climate change impacts was highlighted and the need for more collaborations internally and externally to meet the green economy should not be viewed as a substitute to sustainable development. It is not an end in itself, but it can be a means to an end.

ii. *Engineering Technologies, built environment and infrastructure for industrialization*.
From this subtheme, the need to realign our efforts to the new and emerging technologies to improve our infrastructure was highlighted

iii. *Policy, Governance entrepreneurship cultural and socio-economic aspects for competitive advantage*.
With the new normal there is a need for a change in our policies and the social set up so we would clearly and objectively move forward. This requires collaborative efforts to amend some of our policies and improve coordination among various institutions, and this was strongly emphasized.

iv. *Agriculture Science and Technologies for sustainable and nutrition Securities*.
Africa has large arable land but still food insecure due to diverse reasons. There is a need to improve our production system, reduce the use of manual labor and enhance the use of new technologies (e.g., Shujaa tractor) to improve our food production.

v. *Information and communication technology for development*.
Information and Communications Technologies for Development is an initiative aimed at bridging the digital divide and aiding economic development by ensuring equitable access to up-to-date communications technologies. Information and communication technologies (ICTs) include any communication device e.g. radio, television, cellular phones, computer and network hardware and software, satellite systems etc., as well as the various services and applications associated with them, such as videoconferencing and distance learning. Proper and effective communication of information and use of ICT is key amid the current COVID-19 pandemic.

vi. *Advances in medical and veterinary science for quality life*.
With the emergences of new disease, research effort should be up scaled to counter the diseases and their effects. New approaches in medicine, and new candidates in drugs development such as chitin from insects have great potential.

vii. *Basic and applied sciences for advancement of research and industrialization*.
Basic scientific research is the quest for new knowledge and the exploration of the unknown. Basic research is driven purely by curiosity and a desire to expand our knowledge. Applied research is used to answer specific questions that have direct applications to the society. The integration of basic and applied research is crucial to problem-solving, innovation and development of products and processes. There is need to realign future basic and applied sciences research to government objectives to ensure every student undertaking research actually contributes to the government development and research agenda.

3.0 CONCLUSION

The 15th JKUAT Scientific Conference was the first virtual conference of its kind and it was a success. It remains an important event in the university's annual academic calendar. What remains to be done is to ensure the event gains enhanced visibility and prominence within the

country and across the borders. This will be achieved with good lead time to allow ample and quality planning.