

CONFERENCE BRIEF

The Second High Panel Conference on Agricultural Research in Kenya

Theme: Contribution of research and innovation in mitigating the impact of emergencies and natural disasters in Kenya's agriculture and food system

1.0 Introduction

The agriculture sector is fundamental to the economic development of Kenya, contributing 34% of the gross domestic product (GDP) and 40% of the export earnings in 2019. It supplies raw materials for industries, creates employment, generates income and market for industrial products, and creates and promotes various off-farm activities in transport and value addition. Agriculture is the primary enterprise sector that supports national food and nutrition security, which nourishes human capital for all other economic sectors. In addition, it contributes positively to the national balance of payments by increasing food production, and thus cutting back on food imports.

The government has developed various policy instruments to support agricultural development. These include the Big Four Agenda wherein one of the pillars is attainment of 100 % Food and Nutrition Security, the Agricultural Sector Transformation and Growth Strategy (ASTGS), and the National Agricultural Research Systems (NARS) Policy, among others. Further, the Kenya National Commission for Science, Technology and Innovation (NACOSTI) has identified agricultural research as one of the five research priorities for the period 2018 to 2022.

To ensure that agriculture continues to play its critical role in socio-economic development, there is need for research to provide insights and innovative technologies for overcoming challenges inherent along the value chains in order to increase productivity in the context of a changing climate. Science is best-positioned to elucidate the rural-urban linkage in the context of agriculture and environmental disasters (eg loss of jobs by urban populations, urban rural migrations, and the resultant spread of infections, which will weaken agricultural labor and productivity). Similarly, agricultural research is necessary for re-engineering agricultural systems to ensure resilience during emergencies such as COVID-19.

1.2 The High Panel Conference on Agriculture Research in Kenya (HiPCARK)

The high panel conference on agriculture research in Kenya (HiPCARK) was mooted in 2018 with the annual Berlin “*Falling Walls Conference*” as a key motivation. HiPCARK seeks to bring together leading personalities drawn from key sectors that influence agricultural research, and is modeled to inspire discussions on demand-driven agriculture research. It has the following aims:

- To identify trends, opportunities and solutions for challenges in research for agricultural development in changing climatic regimes;
- To provide a platform for interdisciplinary exchange of ideas and closing gaps among the various stakeholders in agricultural research including business people, political actors, policy makers and academia;
- To recognize and promote scientists whose findings and innovations have major impacts on society;
- To inspire people to close gaps in agricultural research in order to increase agricultural productivity, reduce food losses and increase value of agricultural produce;
- To engage in discussion on selected issues in the agriculture sector and identify interventions for addressing the issues for consideration by policy makers and other stakeholders.

The inaugural HiPCARK was held on 13th – 14th September 2018, at the World Agroforestry Centre in Nairobi. The conference facilitated strengthening of the fraternal bond among the agricultural scientists and other sector players in Kenya and validated the national agricultural research agenda which has been adopted by NACOSTI. In relation to this research agenda, a review of the national agriculture research policy is at advanced stages to make it more responsive to prevailing context in the national agriculture research system.

1.3 The 2020 HiPCARK Hybrid Conference

As a follow-up to the 2018 inaugural conference the 2nd Agriculture Research Conference has been organized to be held on October 21st and 22nd, 2020. The conference will be hosted by the Kenya Agricultural Research and Livestock Research Organization (KALRO), in collaboration with partner organizations working in agriculture research (NARS and IARCs), relevant

government agencies and other stakeholders. The circumstances prevailing in the country as imposed and characterized by the COVID19 pandemic, climate change, desert and locust invasion have defined the theme of the conference as well as the mode of participation which shall be a hybrid of virtual and physical.

2.0 Objectives

The overall objective of the conference is to elucidate the potential inherent in agricultural research to address the challenges imposed by emergencies such as pandemics, disasters associated with climate change, desert locust invasion and other societal issues that we currently face as a nation. Specifically, the conference aims to:

- Emphasize the centrality of agricultural research in the country's development agenda, including the positioning of research as a core element of the Agricultural Sector Transformation and Growth Strategy (ASTGS)
- Elucidate the interlinkages between COVID-19, other zoonotic attacks, locust invasions, etc., and environmental changes (climate change and erosion of natural capital), and how research is critical in mitigating such emergencies
- Highlight the importance of strengthening local innovation capacity for solutions such as the production or synthesis of reagents, ventilators, use of biofoundries etc., in view of the difficulties faced by the international supply chain failure during emergencies such as COVID-19.

3.0 Outcomes

- A set of recommendations on policies, programmes and actions by the government and other stakeholders in the agriculture sector
- Reinforced commitments by the agriculture sector and related stakeholders to increased investments in research and a robust and coordinated innovation ecosystem.
- More visibility and articulation of agriculture research and innovation in the national transformation agenda (ASTGS Flagship 8)

4.0 Conference Plan

The HiPCARK conference is designed to nurture an open dialogue between different stakeholders aimed at arriving at recommendations that will lead to concerted actions. Broadly, the 2nd HiPCARK conference will be conducted in a span of one and half days, with interactive plenary and break-out sessions (see indicative Conference agenda below).

The conference will focus on the following four (4) topics:

1. Desert locust invasions, predictions and early warning systems
2. Climate change, observatory and early warning,
3. COVID19 pandemic and zoonotic emergencies
4. Market systems, international supply chains, food safety, nutrition and human health

5. ICT integration that is cross-cutting,

5.0 Indicative session outline:

1. The opening plenary of the conference will be for 60 min (09:00 to 11:00) hours).
2. Following the Opening session, the Plenary Session will be conducted in the form of presentations by discussants, which will set the context with broad development trends that drive vulnerabilities and risks facing food and agriculture as well as deep transformations in the sector. The session will delve into how the implementation of Kenya's Vision 2030 and the Big Four Agenda as well as regional and international aspirations such as Agenda 2063 of the African Union, Vision 2050 of the East Africa Community and Sustainable Development Goals (SDGs) of the United Nations at large will help the agriculture sector enhance its resilience against COVID 19 Pandemic, disasters and climate change. The Panel will consist of a team of multi-stakeholders to provide different perspectives.
3. Each discussant presentations will be followed up by break-out sessions conducted in the form of participant discussions, guided by Session Chairs, who will guide more in-depth deliberations during the discussions. In these sessions, participants will share innovative approaches, technologies and practices that will be instrumental for the implementation of the identified priorities to make food and agriculture more resilient to COVID 19 Pandemic, disasters and climate change.

6.0 The following questions will guide contributions and further conceptualization of the sessions:

I. Science and Technology

- What role has science and technology played in reducing risks and strengthening resilience of food and agriculture systems and dependent livelihoods? i.e. how science and technology are used in risk assessment/strengthening the understanding of risks, strengthening risk governance, making the business case for investing in risk reduction and early warning, preparedness and disaster recovery in the agriculture sector in general?
- What are the success factors of innovative use of science and technology for resilience building in the agriculture sector?
- What are the key technical know-how requirements and collaborative structures and processes needed to strengthen resilience in the agriculture sector? How to develop collaboration and partnership with the scientific and technology institutions?

II. Food and agriculture

- What role food and agriculture play for resilient and sustainable nutrition and livelihoods? What are the food and nutrition security related risks facing livelihoods and how is this issue being framed in government policy and programmes?
- How do food and agriculture systems drive change patterns of hazards and risks in sustainable nutrition and livelihoods?
- What should be the policies, programmes and actions for safeguarding food and nutrition security?

Innovative design of sessions is encouraged to facilitate the sharing of successful experiences as well as failures and to arrive at common recommendations as well as opportunities for collaboration and partnerships.

The Final Plenary Session will share the outcomes of preceding Parallel Sessions and facilitate a dialogue on how all concerned stakeholders – policy makers, government officials, farmers, academia, civil society as well as the private sector – will further promote innovative approaches to boost actions by the agriculture sector and stakeholders to support agriculture research.

The Working Group Chair's summary of the conference deliberations will focus on the identified priorities and recommendations that will provide a way forward.

7.0 Conference Programme, Topics and Speakers

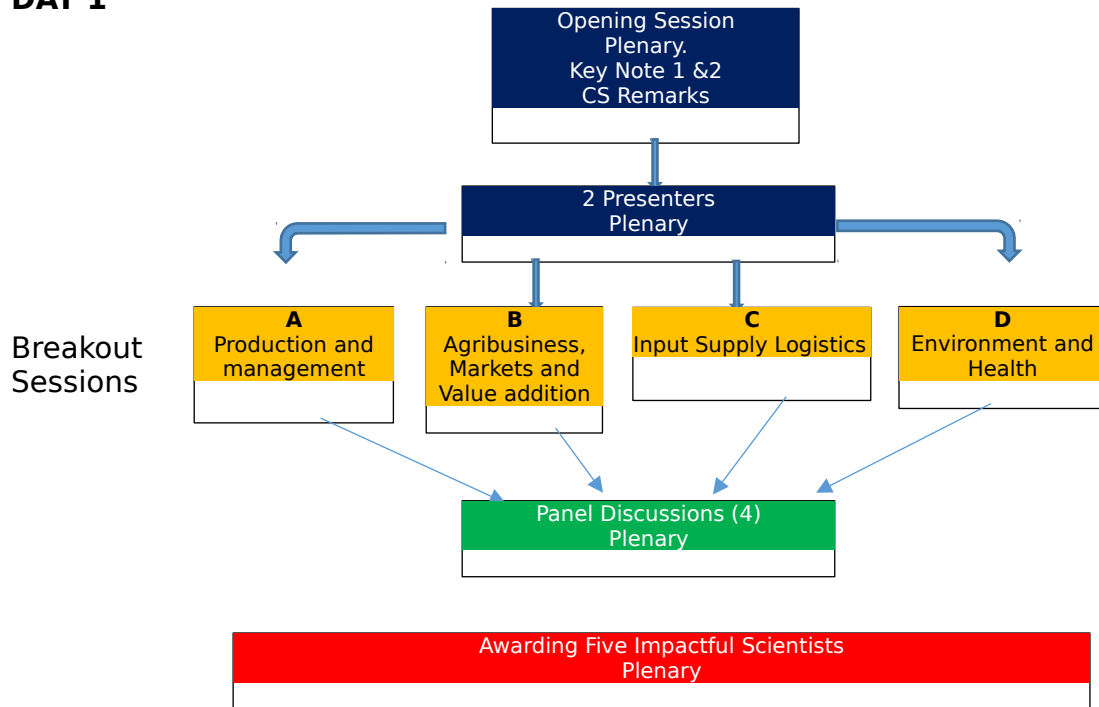
| Day 1 (21st October, 2020) | | |
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| Time | Topic | Facilitator |
| 09:00 – 09:30 | Welcome for dignitaries and delegates to the conference and to KALRO with brief introductions (Chair) | Chair: Dr. Eliud Kirger , (Director General, KALRO) Rapporteurs: 1. Dr Jack Ouda (Overall) 2. Dr Alice Murage |
| 09:30 – 10:00 | Introduction to HiPCARK and the 2 nd Agriculture Research Conference (Chair, Working Group, Prof. John Wesonga) | |
| 10:00 – 10:10 | Remarks by The HiPCARK Patron (Principal Secretary, Prof. Hamadi Boga) | |
| 10:10 – 10:30 | Key Note Address 1: Emergency-proofing Food Security and Livelihoods Resilience – the daunting realities for the agriculture sector under COVID 19 Pandemic <i>Speaker:</i> Dr. Stephen Were Omamo (WFP) Deputy Director and Coordinator of Food Systems Strategy, Policy and Support, Policy and Programme Division, Rome, Italy | |
| 10:30 – 10:50 | Key Note Address 2: Synthetic Biology: Applications in Food, Nutrition and the Environment <i>Speaker:</i> Prof. Paul Freemont Head, Structural and Synthetic Biology Imperial College, London | |
| 10:50 – 11:10 | HEALTH BREAK | |
| 11:10 – 11:30 | Opening Remarks: The Cabinet Secretary -MoALF&C (Hon. Peter Munya) | |
| 11:30 – 12:10 | Topic: Resilient Food and Agriculture Systems in Kenya within the COVID-19 Pandemic: Opportunities and Challenges <i>Presenters:</i> 1. Jane Karuku (Chair, COVID-19 Emergency Response Fund, Former President, AGRA) 2. Jimmy Smith (Director General, ILRI) | Chair: Dr. Moses Siambi (CIMMYT) Rapporteurs: 1. Dr. Margaret Makelo 2. Dr. Geoffrey Kamau |
| BREAKAWAY SESSIONS TO DISCUSS THE ABOVE TOPIC | | Every Breakaway Session to have - Chair: |
| 12:10 – 1:10 | 1. Production and management 2. Agribusiness, markets and value addition | |

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| | 3. Input supply logistics | Rapporteur: |
| | 4. Environment and health | |
| 1:10 – 2:30 | LUNCH BREAK | |
| 2:30 – 3:30 | <p>Panel Discussions: Climate Impacts on Agriculture and Food Security</p> <p>Panelists:</p> <ol style="list-style-type: none"> 1. Keith Cressman (Locust Forecasting Expert, FAO) 2. Prof Mathu Ndung’u (Zoonotics; Chancellor, JKUAT) 3. Dr. Emmanuel Nkurunziza (DG, Regional Centre for Mapping of resources for Development, ICT, Observatory and monitoring) 4. | <p>Chair: Prof. Douglas Miano (UoN)</p> <p>Rapporteurs:</p> <ol style="list-style-type: none"> 1. Dr. Samuel Mbuku 2. Peter Njenga |
| 3:30 – 4:00 | HEALTH BREAK | |
| 4:00 – 5:30 | <p>Presentation of certificates and Trophies to 5 Remarkable Scientists</p> <p>Chief Guest: CS, MoALF&C (Hon. Peter Munya)</p> | Chair: Prof. Margaret Hutchinson (DVC UoN) |
| Day 2 | | |
| 09:00 - 09:45 | <p>Topic: Agriculture and Food Supply Post COVID-19</p> <p>Presenters:</p> <ol style="list-style-type: none"> 1. Prof. Willis Kosura (UoN) (Professor of Agricultural Economics, University of Nairobi) 2. Kate Krukiel (Digital Cooperatives) (Sera Afrika) 3. Peter Njonjo (Co-Founder and CEO of Twiga Foods) | <p>Chair: Dr. Roy Mugira (NACOSTI)</p> <p>Rapporteurs:</p> <ol style="list-style-type: none"> 1. Dr. Mumina Shibia 2. Francis Nyambariga |
| BREAKAWAY SESSIONS TO DISCUSS THE ABOVE TOPIC | | |
| 9:50 – 10:50 | 1. Production and management | Chair: Rapporteur: |
| | 2. Agribusiness, markets and value addition | |

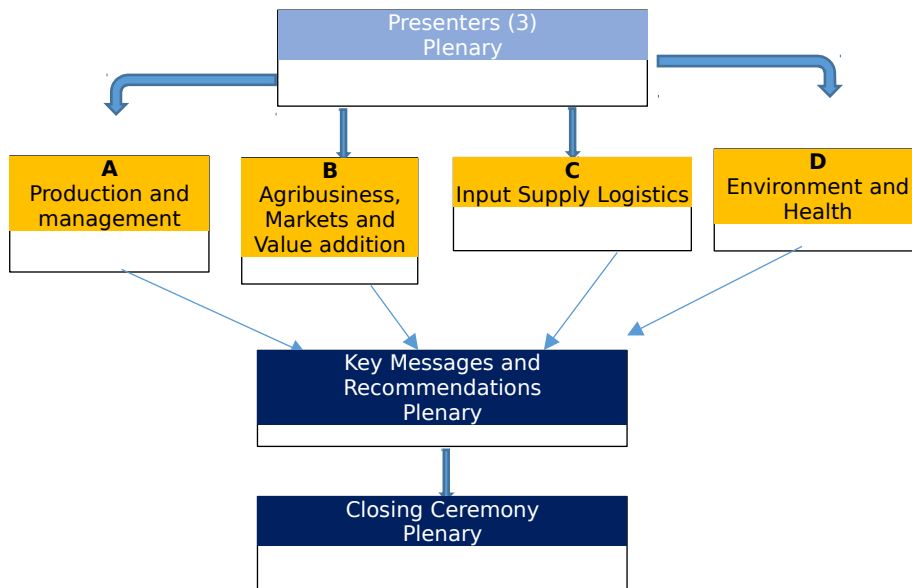
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| | 3. Input supply logistics | |
| | 4. Environment and health | |
| 10:50 – 11:10 | HEALTH BREAK | |
| 11:10 – 12:00 | The way forward: Summary of the workshop – Key recommendations / messages I suggest here we have brief presentations from moderators of the three break-out sessions for 30 minutes before getting into key messages and recommendations | Chair: Prof. John Wesonga Rapporteurs: 1. Dr. Jack Ouda 2. Peter Njenga |
| 12:00 – 12:45 | Closing Ceremony (Chief Guest) | |
| 12:45 – 1:00 | Vote of thanks and announcements | |
| 1:00 – 2:00 | Lunch and departure | |
| | END | |

DIAGRAMMATIC REPRESENTATION OF THE PROGRAMME

DAY 1



Day 2



Annex A: Conference Working Group members

- **Prof. Hamadi Boga** – Principal Secretary, State Department for Crop Development and Agricultural Research – Ministry of Agriculture, Livestock, Fisheries and Cooperatives (MoALF&C)
- **Prof. John M. Wesonga** – Jomo Kenyatta University of Agriculture and Technology (JKUAT) - Chair
- **Prof. M. Jesang Hutchinson** –University of Nairobi (UoN)
- **Dr. Festus Murithi** – Kenya Agricultural and Livestock Research Organization (KALRO)
- **Dr. Jonathan Muriuki** – World Agroforestry Centre (ICRAF)
- **Seth O. Onyango** – Kenya Tsetse and Trypanosomiasis Eradication Council (KENTTEC)
- **Dr. Wellington Mulinge** – Kenya Agricultural and Livestock Research Organization (KALRO)
- **Dr. Roselyne Wambugu** - Kenya Animal Genetic Resources Centre (KAGRC)
- **Dr. Oscar Magenya** – State Department for Crop Development and Agricultural Research
- **Dr. James M. Kimondo** – Kenya Forestry Research Institute (KEFRI)
- **Dr. Joseph M. Macharia** – State Department for Crop Development and Agricultural Research.

Annex B: Departmental Steering Committee Members

- Dr. Oscar Magenya (Chair)
- Francis Nyambariga (Secretary)
- Dr. Margaret Makelo (Member)
- Peter Njenga (Member)
- Tobias Osano (Member)
- Charity Muriuki (Member)
- Nyanje Kitsao (Member)