

REPUBLIC OF KENYA



MINISTRY OF AGRICULTURE, LIVESTOCK, FISHERIES AND IRRIGATION

# PROGRAMME

## Inaugural High Panel Conference on Agriculture Research in Kenya

**VENUE:** ICRAF

**DATE:** 13<sup>th</sup> and 14<sup>th</sup> September 2018

### THEME

Priority Setting in Agriculture Research: Towards Sustainable Food and Nutrition Security in a Changing Climate



Two-day Conference: 13 - 14 September, 2018

# Inaugural High Panel Conference on Agriculture Research in Kenya

Venue: ICRAF

## THEME

### Priority Setting in Agriculture Research: Towards Sustainable Food and Nutrition Security in a Changing Climate

## 1. Introduction

Agriculture is the backbone of Kenya's economy accounting for 70 percent of the workforce and 25 percent of the annual GDP. Consequently, agriculture has a critical role to play in the realization of national development as articulated in various documents and proclamations such as **Kenya's Vision 2030** and the **Big Four Agenda** as well as contribute to 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. To ensure that agriculture plays the role as envisaged above, there is need for research to provide insights and innovative technologies for overcoming challenges along the value chains and increase productivity in the context of a changing climate. It is in this light that the government established the State Department for Agricultural Research to oversee agricultural research in the country and to ensure research initiatives and outputs are mainstreamed into sector planning. One of the priorities of the State Department is to develop a research agenda that will provide a roadmap for, and prioritize research that will move agriculture to the next level. In developing the research agenda the State Department seeks to engage stakeholders to ensure that research agenda accommodates their interests and aspirations. The agenda should also be visionary and progressive, making agriculture play its role in the long term development of the country.

The conference on agriculture research agenda therefore brings together various stakeholders to discuss key issues in agriculture. The conference provide information which will be useful in finalizing the agricultural research. Motivated by the "*Falling Walls Conference*" the conference brings together leading personalities drawn from key sectors that influence agricultural research. It is envisaged that this conference will initiate discussions on selected issues in agriculture research and that the discussion shall continue in the future with the conference being held annually. The aims of the Conference are:

- 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 researchers and their findings and innovations which 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 and identify interventions for addressing the issues for consideration by the policy makers and other stakeholders.

The inaugural conference focuses on the following seven (7) issues:

1. Exploring the Research-Policy Interface
2. Scanning the Agricultural Research Funding opportunities
3. Progressing the Kenya Agricultural Research Agenda
4. Creating synergy between and among the producers of knowledge
5. Bridging the gap between technology generation and practice
6. Data and information analysis and visualization
7. Human Resource Development and management

There will be a keynote address that will introduce the key concepts and highlight with case studies the importance of agriculture research to national development. The following is a short brief on the prioritized issues.

## 2. Keynote address: The Role of Agriculture Research in Addressing Emerging Challenges and Contributing to national development

The keynote address shall serve as a curtain raiser to demonstrate the significance of research in addressing emerging issues such as climate change, fall army worm infestation or the Cypress aphids using scientific innovations. The presentation shall broadly highlight the role of research in addressing the challenges and providing solutions and new technologies that enable breaking of ground and venturing into new frontiers. It shall point at how research can contribute to the agrarian revolution in Kenya and realization of national vision and government agenda. The presentation shall broadly point at the importance of the selected topics namely: Research-Policy Interface, Agricultural Research Funding, Research Collaboration and Partnerships,, dissemination of research outputs and technology transfer, the role of ICT and related technologies in data collection, analysis and visualization. The presentation shall also highlight the importance of human and physical capital in agricultural research.

### Speaker

- **Prof. Hartmut Stützel**, Leibniz University of Hannover (LUH), Germany

## 3. Closing the Gaps in Research-Policy Interface: The role of policy in driving agricultural research

There is always an interaction between policy and research. On the one hand policies affect research while on the other hand research helps develop better policies. This track shall focus on how better policies can be developed using research findings. A critical review of existing policy framework in Kenya shall be presented. Case studies of policy frameworks elsewhere shall serve as benchmark. The following questions will guide the presentation and discussion

- Which policies are required to transform agriculture in Kenya?
- How can research be made to be a critical driver in the Kenya economy?
- Which policies and other governance instruments hinder research from contributing to agricultural transformation?
- Which policies anchor or support research e.g. National Agricultural Research Policy How do we make research a tool that supports the national development?
- How do we create a supportive policy environment for agriculture research?
- Why haven't existing policies resulted in food security?
- What changes are needed to make the policies work?

### Speaker

- **Dr. Milton Ayieko** - Director, Tegemeo Institute of Agricultural Policy and Development, Egerton University

### Panelists

- Prof. Hamadi Boga - State Department of Agriculture Research MoALFI
- Dr Martin Kropff – Director General CIMMYT
- Dr. Gabriel Rugalema - FAO Country Representative
- Dr Segenet Kelemu - DG ICIPE
- Dr. Rose Ngugi - Kenya Institute for Public Policy Research and Analysis (KIPPRA)

## 4. Closing the gaps in Agricultural Research Funding- Funding Models for Agricultural Research

While ideas are the engine of research, finance is the fuel that propels the ideas to useful findings and innovation. Meaningful research therefore can only be realized if finances are available. This track will examine how financial resources may be mobilized for national research. There are various models of funding that will be presented and discussed. Examples of topics to be covered include

- Comparative case studies of agriculture research funding e.g. the Australian dollar for dollar model and German model
- How to make farmers and legislators demand research
- Role of the private sector in funding agriculture research
- County government in funding research
- Alignment to Malabo declaration
- Embedding research in large scale agricultural investments such as the Kenya Climate Smart Agriculture Project

### Speaker

**Dr. Helmut Blumbach**, Director, DAAD Nairobi

### Panelists

1. Dr. Jemmimah Onsare - National Research Fund (NRF)
2. Dr. Moses Rugutt - National Commission for Science Technology and Innovation (NACOSTI)
3. Dr. Florence Wambugu – Director and CEO, Africa Harvest
4. Dr. Catherine Watson - Chief of Programme Development - ICRAF
5. Dr. Eliud Kireger – Director General - Kenya Agricultural and Livestock Research Organization (KALRO)

## 5. Kenya's Agricultural Research Agenda

A draft Agriculture Research Agenda has been developed. The conference provides a good opportunity to obtain feedback from the various stakeholders who will be attending the conference. Highlights of the draft research agenda shall be presented and discussed by the stakeholders present.

### Speaker

**Dr. Margaret Makelo**, SDAR

## 6. Closing Gaps in Research Collaboration and Partnerships: Creating synergy among the producers of knowledge

There are various actors involved in agriculture research in Kenya ranging from KALRO and its institutes, universities and international agricultural research organizations. Often there is limited collaboration among researchers in the various research organizations. This results in duplication of research activities with wastage of resources and lack of synergy. It also makes it difficult for the government and development agencies to obtain a complete picture of findings and technologies on any given issue for appropriate action. It is desirable to establish mechanisms that promote collaboration and joint dissemination of findings and technologies arising from research at the various organizations. This track shall therefore explore mechanisms and modalities that may be used to enhance collaboration among the various actors. The key question is how can universities, local research institutes, international research organizations, initiatives such as Food Africa, and other agencies like KIPPRA complement one another in addressing wicked issues relating to, among others, soil fertility and its suitability for crops; improvement of varieties and breeds; adoption of technology; extension; markets for produce in the agricultural sector?

### Speaker

**Prof. Ladisy Chengula** – World Bank

## 7. From the Lab to farm to Fork: Bridging the gap between technology generation and practice

One of the great weaknesses in agriculture research is the inability of the research findings to translate to technologies utilized by farmers and other value chain players for increased agricultural production, reduction of spoilage and value addition. Only few research findings end up being utilized by farmers and other players. This track will therefore seek to discuss and identify causes of such inefficiencies and come up with strategies for closing the gap. The following questions will guide the discussion:

- Why are research products and technologies lying idle in shelves?
- How can the technologies be packaged, disseminated to improve uptake?
- What role can the private sector and government play in the conversion of research findings to commercial products?
- What are the hindrances to packaging ready technologies
- How can technologies be made attractive?
- What will make the Kenyan farmer to start adopting and taking up new technologies again?
- How can the gap between researchers and consumers of research products be closed (farmers/private sector players)

### Speaker

**Dr. Paul Guthiga** – ILRI ReSAKSS-ECA

## 8. Closing Gaps in ICT and related Technologies for agricultural research

A lot of decisions are made in agriculture for which a large volume of data is required. Such data exist but is scattered in various sources. The pool of data continues to grow making it extremely difficult to analyze and interpret the data for decision making. With the advent of ICT, there are various opportunities for collecting, storing, distributing, analysing and visualizing data for effective decision making. Issues such as climate changes can be modelled and expected scenarios developed making it possible to devise timely and effective interventions. With the use of GIS technologies and geospatial tools, soil fertility data can be collected and analyzed resulting in better fertilizer management. However, the power of ICT has not been adequately harnessed in Kenya and therefore this track will seek to explore opportunities in big data for improved agricultural production. The following are sample questions to be addressed:

- How can data be collected, stored, shared analysed and visualized?
- How can existing data from satellites and data already in shelves etc. be utilized?
- How data be collected, analyzed and visualized to enable site-specific recommendations to address issues such as soil fertility or pests?
- Which tools exist for harnessing big data?
- How can we use climatic data for climate-proofing agricultural production?
- How can existing scientific data be captured, stored, shared and analyzed to provide new insights?

### Speaker

**Kiringai Kamau** – Programme for Agricultural Capacity Development in Africa (P4ACAD Africa), University of Nairobi

## 9. Closing Gaps in Human Resource Development and Management for Agricultural Research

Human resource is considered one of the most critical factors of production and indeed in research the scientists are the most critical asset. For effective research a pool of motivated researchers should be attracted, developed and maintained. There should be mechanisms to recruit and retain new talents, motivate existing ones and replace scientists who exit through the various ways. There exist gaps in human resource that hinder effective research in Kenya. This track therefore will address the issue of ensuring a highly motivated team of agricultural research scientists. The following issues will be discussed:

- Situational analysis of agricultural research human capital in Kenya;
- How do we deal with aging scientists?
- How can we do succession planning for agricultural scientists in Kenya?
- How do we create critical mass of agricultural science educators in Kenya?
- How do plan for employment/internship for younger scientists to inject new blood;
- How do we make agriculture research attractive to the youth and how motivate them to participate
- How do we encourage more women to take part in agriculture research and ensure gender parity?

### Speaker

**Dr. Nienke Beintema**, Head of the Agricultural Science and Technology Indicators (ASTI), IFPRI, Washington

## Annex A: Conference Working Group members

- **Prof. Hamadi Boga** – Principal Secretary, State Department of Agriculture Research – Ministry of Agriculture, Livestock, Fisheries and Irrigation (MoALFI)
- **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)
- **Prof. Theophilus M. Mutui** – National Biosafety Authority (NBA)
- **Dr. James M. Kimondo** – Kenya Forestry Research Institute (KEFRI)
- **Prof. George N. Chemining'wa** –University of Nairobi (UoN)
- **Prof. Stephen G. Kiama** –University of Nairobi (UoN)
- **Dr. Joseph M. Macharia** – State Department of Agriculture Research
- **Dr. Jane A. Otadoh** – State Department of Agriculture Research
- **Dr. Oscar Magenya** – State Department of Agriculture Research

# 13<sup>th</sup> September - Day one Programme

## Annex B: Conference Program, Topics, Speakers and Moderators

Time	Topic	Facilitator
8.00-9.00	Registration and light catering (tea and snacks)	ICRAF and SDAR
9:00-9.30	<b>Session 1: Opening session</b>	<b>Chair:</b> Dr Josephine Songa <b>Rapporteur:</b> Dr Joseph Macharia
	Welcome remarks (5 min)	<b>Dr Ravi Prabhu</b> – DDG ICRAF Host
	Workshop objectives, approach and introductions (15 min)	<b>Prof. John M. Wesonga</b> – Chair Conference Committee
	Opening Remarks (10 min)	<b>Prof. Hamadi Iddi Boga</b> – PS SDAR
	<b>Session 2: Closing the gap in the research policy interphase</b>	<b>Chair:</b> Dr. Josephine Songa <b>Rapporteur:</b> Dr. Joseph Macharia
09.30-09.50	Keynote address: The Role of Agriculture Research in Addressing Emerging Challenges and Contributing to national development (20 Min)	<b>Prof. Hartmut Stützel</b> – Leibniz University of Hannover (LUH), Germany
09.50-10.05	Eye-opener 1: Agriculture Research Policy: Governance and Support for Agriculture Research (15 Min)	<b>Dr. Milton Ayieko</b> – Director, Tegemeo Institute of Agricultural Policy and Development, Egerton University
10.05-10.20	Eye-Opener 2: Human Resource Development and management for Agricultural Research (15 Min)	<b>Dr. Nienke Beintema</b> – Head of the Agricultural Science and Technology Indicators (ASTI), IFPRI Washington
10:20-11.20	Panel discussion – Closing the gap between research and policy <b>Panelists:</b> Prof. Hamadi Boga - PS SDAR Dr. Martin Kropff - DG CYMMIT Dr. Gabriel Rugalema - FAO Country Rep. Dr. Segenet Kelemu - DG ICIPE Dr. Rose Ngugi - Executive Director - KIPPRA	Moderator – <b>Amandla Ooko-Ombaka</b>
11.20-11.30	Group photo and health break	
	<b>Session 3: Closing the gaps on knowledge production and delivery - parallel sessions</b>	<b>Chair:</b> Dr. Wanjiru Rutenberg – AWARD <b>Rapporteur:</b> Jane Otadoh
	Session 3A: Conference Hall	
11.30-11.50	Eye-opener 3: Exploring the Agricultural Innovation continuum - Research, Incubation, scale up and the market: The case of Kenya Climate Smart Agriculture project (20 Min)	<b>Dr. Ladisy Chengula</b> – World Bank
11.50-12.05	Eye-opener 4: Reshaping marketing and distribution of farm produce: The case of Twiga Foods (15 Min)	<b>Grant Brooke</b> – CEO Twiga Foods
12.05-12.20	Eye-opener 5: Harnessing big data, ICT and related Technologies for agricultural transformation (15 Min)	<b>Kiringai Kamau</b> – P4ACAD Africa, UoN
12.20-13.20	Panel Discussion: Harnessing Data for Decision making <b>Panelists:</b> Prof. Meoli Kashorda – Executive Director Kenya Education Network (KENET) Prof. Muliaro J. Wafula - JKUAT Erick Khamala - Managing Director, LocatelT Ltd Zachary Mwangi - Director General, Kenya National Bureau of Statistics (KNBS) Joel Onditi – Pathways International	Moderator: <b>Anja Bengelstorff</b> – DAAD

Time	Topic	Facilitator
	<b>Session 3B: Board Room</b>	
11.30-11.45	Eye-opener 6: Strengthening Research extension linkages to support the small scale farmer (15 Min)	<b>Dr. Paul Guthiga</b> – ReSAKSS-ECA
11.45-12.00	Eye Opener 7: Mainstreaming research and Learning in big Development initiatives: The case of the Drylands Development Programme (15 Min)	<b>Dr. Phosiso Sola</b> – ICRAF DRYDEV
12.00-12.15	Proposals for the Kenya Agriculture Research Agenda (KARA) (15 Min)	<b>Dr. Margaret Makelo</b> – SDAR/ <b>Dr. Oscar Magenya</b> – SDAR
12.15-13.15	Podium discussion on improvement into the draft Kenya Agriculture Research Agenda (KARA) <b>Panelists:</b> Prof. Esther M. Kahangi – JKUAT Dr. Margaret Makelo _ SDAR Dr. Paul Guthiga- ReSAKSS-ECA	Moderator: <b>Hermann Manyora</b>
13.15-14.15	Lunch	
	<b>Session 4: Closing the gap on agricultural research Priority and funding</b>	<b>Chair: Dr. Moses Siambi - ICRISAT</b> <b>Rapporteur: Patrick K. Chege – SDAR</b>
14.15-14.25	Discussion Synopsis: Proposals for the Kenya Agriculture Research Agenda (KARA)	<b>Dr. Margaret Makelo</b> – SDAR/ <b>Dr. Oscar Magenya</b> – SDAR
14.25-14.45	Eye Opener 8: Learning from the German Research Model: Organisation, Funding and Incentives towards excellence	<b>Dr. Helmut Blumbach</b> – Director, DAAD Nairobi
14.45-15.45	Podium Discussion on Research Priorities and Funding <b>Panelists:</b> Dr. Jemmimah Onsare – National Research Fund (NRF) Dr. Nienke Beintema – (ASTI) Dr. Moses Rugutt – DG NACOSTI Dr. Florence Wambugu-Africa Harvest Dr. Catharine Watson – Chief of Programme Development ICRAF Dr. Eliud Kireger – DG KALRO	Moderator: <b>Hermann Manyora</b>
15.45-16.15	Coffee/Tea and health break	
16:15 – 17.35	Policy Take Aways: Summaries from Rapporteurs (5 Minutes each for Session 1, 2, 3 and 4)	
18:00-20.00	Cocktail/reception and Awards	SDAR/ICRAF

## 14<sup>th</sup> September - Day Two Programme

Time	Topic	Facilitator
	<b>Session 6: Breakfast Meeting with Policy Makers</b>	<b>Rapporteur: Dr. Oscar Magenya</b> – SDAR
08:00-8.30	Introductions, expectations and objectives	<b>Prof. Hamadi Iddi Boga</b> – SDAR
08:30-8.50	Presentation of session key points, resolutions and research agenda	<b>Prof. John M. Wesonga</b> – Chair of Committee
08.50-09.50	Feedback from invited Policy Makers	Moderator: <b>Prof. Fred Segor, PS SDI</b>
09.50-10.00	<b>Closing Remarks from Hon Mwangi Kiunjuri – CS Agriculture, Livestock, Fisheries and Irrigation</b>	
10:00	Vote of thanks and presentation of gifts to guests	
10:30	Tea and Departure	