East Africa Digital Farmers Conference & Exhibition 25th - 27th April 2018

# SPEAKER TOPICS



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## Topics

#### Enabling agribusiness and food security through ICT

Enhancing crop and livestock production through optimizing inputs, plant pest and disease management, post-harvest loss management, value addition, improving nutrition and health outcomes resulting from agricultural interventions, and reduced time in decision making through rapid information access. The theme will focus on platforms and services, technologies and applications aimed at improving productivity, such as ICT technologies and services that boost climate smart agriculture, GPS, GIS, disease forecasting for plant disease management especially those with potential for causing epidemics; use of drones in crop management, precision agriculture, use of mobile apps for the giving information dissemination on agricultural input, and crop management solutions. ICT application in value addition processes and enhancing nutrition –bio fortification and fortification- will be addressed.

#### Use of forecasting and modelling for predicting disease and agricultural output

- Innovative technologies for crop and livestock production and management: Drones, GPS, GIS.
- Boosting post-harvest and value addition through digital applications: nanotechnology, robotics
- ICT application in enhancing climate smart agricultural technologies
- Application of digital tools for measuring impact
- Use of ICT to enhance service provision along agricultural value chains
- Enhancement of multi-sectoral linkages through ICT: Agriculture, nutrition, trade and health, for better optimization of resources and improved outcomes.

#### Market linkage

A constant bottleneck to the realization of agriculture as a profitable commercial enterprise particularly for small holder farmers is the lack of market access and intelligence. Majority of the initiatives addressing concerns in the agricultural value chain have largely focused on increasing productivity with little focus on improving market access and building requisite entrepreneurial skills for the farmer. A large proportion of small holder farmers and cottage industries continue to miss opportunities from lucrative markets. For example, mango growers in Tana River county of Kenya are largely forced to trade through middlemen who provide low prices for the mangoes. Many maize farmers in the country's grain basket region are usually left stranded with no market options when the National Cereals and Produce Board (NCPB) cannot take in their maize. Through this theme, the conference shall highlight gaps and opportunities to strengthen market access and demonstrate the role of various players in boosting market linkages.

The role of e-financing and application of ICT in facilitating financial transactions where they were initially not accessible will be demonstrated. Such services facilitate access to farming advice, marketing, and even financing and insurance options. The mobile telephone for example has worked as a financial operative tool and has helped both large and small scale enterprises to transact including in places where financial institutions such as banks had no reach.

#### Use of smart apps/mobile technologies to improve market access

- Digital platforms and their role in providing financial solutions to small holder farmers
- ICT applications in payment of temporary and farm workers
- Bringing markets to small holder farmers

#### Social media and digital platforms as marketing/advertising avenues for agriprenuers

#### ICT in supply chain management for efficient use of resources and increased accountability

Improved awareness and information dissemination. The intricate nature of the farmer in the region requires effective ways to communicate and disseminate information. All countries in the region represent farmers who speak different languages, belong to a broad range of socio economic and cultural inclinations and engage in varying agricultural activities. Their geographical spread and literacy levels are vast, with majority inhabiting rural areas where infrastructure is not well developed or non-existent. The theme, in addition to demonstratinggapsineffectingcommunication, willdemonstrate how effective communication channels through correct use of mediaplat forms have revolutionized agriculture and empowered custodians of agricultural enterprises.

#### Use of mobile apps as information sources for seed input and crop and livestock

- Gaps in information dissemination efforts
- Understanding the dynamics of agricultural end users of ICT technologies for better targeting of approaches
- Cybercrime and its impact on delivery

Strengthened policy and regulation: a major impediment to agricultural development is weak policy and regulation and poor enforcement of existing laws and regulations. Plant protection organizations (PPOs) in the region have strengthened delivery through online platforms that ease application processes, inform on status of various crop diseases and provide updates on laws and regulations. Several other agricultural enterprises have resulted in similar approaches. Regional bodies and governments have also used on-line platforms to develop, update and disseminate policy. E-government platforms across various ministries have resulted in improved service delivery and monitoring and evaluation processes. The role of government in developing and implementing comprehensive and sustainable national e-strategies as well as the role of private sector in boosting such efforts will be discussed.

#### Role of public and private sector in ICT policy formulation

- Opportunities for PPPs in strengthening the policy environment to enhance agricultural productivity
- Application of ICT tools in improving accountability in the public sector (and private?).
- Digitization of regulation and certification processes
- National e-platforms for improved service delivery: what is in it for the agricultural sector

- Research and development- Successful cases of ICT application in research include bioinformatics, application of programs for interpretation of gene sequencing data, use of GPS, GIS, disease forecasting, crop suitability assessment and modelling, data cubes, geospatial data, satellite imagery and remote sensing, agricultural science, technology and innovation (Agri-STI), exploratory analytics and database visualisation and agricultural weather modelling, and modelling. Open data access across research institutions has also made information sharing much easier. The success and challenges in adopting many of such technologies to boost agricultural research outcomes will be highlighted. The use of ICT to move agricultural innovations from the laboratories to end users will also be discussed.
- Shifting towards open access data: the gains and challenges
- ICT tools for enhancing agricultural and livestock research: Forecasting, modelling, bioinformatics, biotechnology, GPS and predictive analytics
- Data and citizen science, and Data walking and Big data analytics: business unusual
- Digital tools for analytics and early warning systems
- Accurately interpreting the impacts of climate change using digital tools, for informed decision making
- Us of ICT in upscaling and out scaling agricultural technologies
- Improved capturing of developmental impacts through application of ICT tools in M&E programs.

Capacity development: A major challenge in adopting ICT technologies by end users is the low level of ICT literacy. In addition, infrastructural support to necessitate adequate training as well as use of ICT innovation is limited. Stakeholders will discuss gaps in ICT literacy, including gender barriers, policy requirements to address such gaps, the role of e-learning to fast track capacity building initiatives.

### Role of PPs in fostering ICT literacy and application.

- Understanding training needs for end users of ICT technologies: Who? Where? What? Why?
- Infrastructural needs for ICT capacity development
- Institutional support/frameworks/policies/Curricula for ICT application in tertiary institutions
- E-learning and virtual platforms for improved and extended capacity development

