

# Stakeholders Workshop on Farmer-Centric Digital Transformation of African Agriculture



Srikanth Rupavatharam, Mukund Patil, Pranuthi Gogumalla, G Murali Krishna, G Kishore Kumar, Shalander Kumar, and ML Jat

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# Stakeholders Workshop on Farmer-Centric Digital Transformation of African Agriculture

Srikanth Rupavatharam, Mukund Patil, Pranuthi Gogumalla, G Murali Krishna,  
G Kishore Kumar, Shalander Kumar, and ML Jat

The CGIAR Initiative on Digital Innovation  
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)  
Kenya Agricultural & Livestock Research Organization (KALRO)



INITIATIVE ON  
Digital Innovation



December 2024





*Key moments from the Stakeholder Workshop on Farmer-Centric Digital Transformation of African Agriculture.*



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## Background

The science of Digital Agriculture has been gaining prominence with the advent of fast-paced technological progress that can enhance last-mile delivery to smallholder farmers. Digital Agriculture offers a wide range of technology solutions for farmers, including smart farming, precision agriculture, data-driven decision support, extension systems, channels for improved market access, and financial services (Townsend et al., 2019). Digital Agriculture can contribute to increased productivity and profitability of farms and strengthen access to diverse marketing channels and resilience to climate change. However, in most cases, Digital Agriculture technologies have not been adequately accessed by smallholder farmers, women, and youth (CTA, 2019). The United Nations Secretary General's strategy on the use of digital technologies to accelerate the achievement of SDGs identifies food security as a critical area that will be profoundly disrupted by advances in Digital Agriculture (United Nations, 2018).

The CGIAR Research Initiative on Digital Innovation has achieved substantial progress, generating 207 results, including 101 knowledge products, 43 innovations, 18 capacity-sharing activities, four policy change results, and four innovation use results. The CGIAR focused on developing innovations across five Work Packages in 2024, such as online platforms for research and learning, digital twin systems, an index for assessing digital inclusiveness, and remote sensing analytics – we are on track to achieve all End of Initiative outcome goals in 2024.

Technology is critical to changing agricultural development, and digital agriculture can be a significant game changer in boosting productivity and enhancing climate change resilience in the country. As a leading International Drylands Agriculture Institute, ICRISAT was delighted to have had its 50<sup>th</sup> Anniversary inaugurated by the Honorable Prime Minister of India, Mr Narendra Modi, in February 2022 (<https://www.narendramodi.in/prime-minister-narendra-modi-addresses-50th-anniversary-celebrations-of-icrisat-in-hyderabad-559900>) During his speech there was special emphasis on Digital Agriculture as a focus area of the Government of India in the Global South Collaboration.

The rapid development of artificial intelligence (AI) underscored the transformative role of data and digital technologies in the sustainable transformation of agrifood systems. Our AI pilots developed 14 results that highlighted the strengths and weaknesses of advanced analytics when applied to CGIAR's data and knowledge assets. Despite technological advancements, our three challenge areas remain valid: the digital divide, inadequate information systems, and limited digital capabilities, particularly in low- and middle-income countries in the Global South.

In May 2024, CGIAR's Initiative on Digital Innovation chose to engage through ICRISAT's Digital Agriculture team with stakeholders in Kenya to expand Global South collaboration. Stakeholders included government departments, non-government organizations, private companies, farmers, farmer collectives, and startups. Hence, a stakeholder workshop was planned to involve all the agricultural domain actors in the ecosystem in Nairobi, Kenya. ICRISAT and KALRO aimed to enhance the penetration of digital tools and platforms for sustainable agriculture development and also provide an opportunity to bring ICRISAT's partners to launch the Plantix app in Swahili—a detailed agenda is provided in Annexure 1.

The stakeholder workshop, which was held in person on 10 December 2024 at Holiday Inn, Nairobi, involved the Kenya Agricultural & Livestock Research Organization (KALRO), ICRISAT's Digital Agriculture team, the CGIAR's Digital Innovation initiative, and experts from government, civil society/ NGOs, policy think tanks, and the private sector.

The main objectives of the stakeholders' workshop on Digital Agriculture were —

- To understand the status, challenges, and opportunities in Africa
- To discuss potential thematic R&D areas for multi-stakeholder collaborative programs
- To define investment and policy needs in Africa
- To create a working group/community of practitioners of Digital Agriculture in Africa



## Inaugural Session

The “Farmer-Centric Digital Transformation of African Agriculture” workshop commenced with a welcome address by **Dr Rupavatharam**, Senior Scientist, Digital Agriculture, ICRISAT. Dignitaries on stage included **Dr ML Jat**, Deputy Director General-Research interim and Global Research Program Director, Resilient Farm and Food Systems, ICRISAT, **Dr Anil Rai**, Deputy Director General (ICT), Indian Council of Agricultural Research (ICAR), **Dr Salim Kinyimu**, ICT Director, KALRO; and Mr **Rob Strey**, CTO, Plantix.

**Dr ML Jat** formally introduced the workshop agenda and extended his gratitude to the participants on behalf of the CGIAR’s Initiative on Digital Innovation and ICRISAT. He emphasized the importance of leveraging the diverse expertise present in the room to co-create comprehensive solutions for advancing digital agriculture in Africa. Dr Jat emphasized participatory learning as central to the workshop, ensuring farmers remain at the heart of all discussions. He noted the presence of representatives from Kenya, India, Ethiopia, and Malawi governments, reflecting the strong foundation for Global South collaborations in Digital Agriculture.

**Dr Anil Rai lauded the** CGIAR-ICRISAT-KALRO initiative for convening the workshop in Nairobi and revealed insights into India’s progress in digital agriculture driven by the Indian Council of Agricultural Research (ICAR). He recalled his discussions with the team led by KALRO’s Director General at his office in New Delhi, which called for an initiative like this workshop to **promote** Global South collaborations to enable mutual learning and opportunities for institutions that will help smallholder farming. Dr Rai emphasized ICAR’s commitment to standardizing digital agriculture practices and announced the upcoming national workshop on digital agriculture in India. He stressed the importance of aligning research and policy frameworks to reach smallholder farmers in Africa effectively. He **cited** how India can enable its Digital Public Infrastructure platforms (AgriStack and VISTAAR) to **support** entrepreneurs and help smallholder



*Dignitaries and experts inaugurating the workshop on Digital Transformation of African Agriculture.*



*Official launch of the Plantix Mobile App in Swahili for Kenyan farmers.*

farmers in the Global South.

A notable highlight of the session was the launch of the **Plantix mobile application** in Swahili, spearheaded by Mr **Rob Strey**, CTO of Plantix, and Mr Korbinian Hartberger, of Plantix. **Dr Rupavatharam** introduced the app's localization efforts and reminded the pioneering efforts on AI-driven farming through a partnership between Plantix and ICRISAT that began a decade ago. Mr **Strey** provided an overview of the Plantix journey in India along with ICRISAT. Plantix has become the largest agricultural application in Google Play Store having more than 40 million users with around 100,000 Kenyan farmers as of now. However, he emphasized that the launch of Plantix in Swahili (the first African language translated) has the potential to reach out to more local communities in Kenya and beyond. Mr Hartberger joined Mr Strey and the other dignitaries in officially launching Plantix in Swahili.

Dr Salim Kinyimu, Director of ICT Data and Digital Investment from KALRO, presented the rationale behind digitization in Kenya and the steps leading towards precision agriculture. He highlighted the role played by ICT in high-performance computing, data customization, analytics, and dissemination through e-extension platforms. Dr Salim also mentioned KALRO's national farmer registration activities, mobile application, and toll-free call center that provides services to extension officers and farmers.

The session concluded with a vote of thanks to ICRISAT and CGIAR for their continuous support in enabling the localization and dissemination of digital solutions through Global South collaborations that can transform smallholder agriculture in Africa.



## Insights into Digital Innovations in Agriculture

The workshop had a series of insightful presentations by experienced speakers who demonstrated various facets of digital innovations that have transformed smallholder agriculture. Each presentation reflected unique approaches, challenges, and solutions for smallholder farming.

### Presentation 1: Digital and Geospatial Innovations @ ICRISAT with Impact at Scale through Partnerships

**Presenters:** Dr Srikanth Rupavatharam and Dr Mukund Patil, ICRISAT



Dr Rupavatharam opened the session by showcasing ICRISAT's digital and geospatial innovations and their impact on smallholder farmers all around the globe. ICRISAT's expertise and hands-on development of AI-enabled digital innovations were elaborated with a focus on digital platforms for soil health management, intelligent agricultural systems advisory tool (ISAT), climate-smart technologies, and market linkage platforms. Dr Patil gave insights into the development of innovative digital platforms and how businesses and farmers use them at the last mile. An overview of groundbreaking projects involving America's National Aeronautics and Space Administration (NASA), the Indian Space Research Organisation (ISRO), and local governments using remote sensing technologies was described. Data-driven farming is the key expertise of ICRISAT's team, which was evident from the presentation.

## 2. ICAR Digital Innovations: Opportunities for Africa

**Presenter:** Dr Anil Rai, ICAR

Dr Rai highlighted India's advancements in Digital Agriculture under ICAR and its relevance for Africa. He outlined key initiatives like the India AI Mission, Agri Drone Program, and Drone Didi Scheme, which empower farmers with cutting-edge technologies. He also emphasized the importance of South-South collaborations, with India sharing its expertise in platforms like eNAM and crop-specific advisory systems to foster agricultural transformation in Africa.





### 3. KALRO's Farmer-Centric Digital Innovations

**Presenter:** Dr Salim Kinyimu, KALRO

Dr Kinyimu gave a detailed presentation on KALRO's farmer-centric digital platforms, such as the KALRO Selector and the KAO Platform, which provide location-specific recommendations and weather advisories. He shared insights into their success in reaching smallholder farmers through SMS, mobile apps, and web platforms. Dr Kinyimu stressed the importance of partnerships in extending Digital Agriculture's reach across Kenya.



### 4. Agricultural Information Exchange Platform

**Presenter:** Dr Florence Kinyua, GIZ

Dr Kinyua introduced GIZ's Agricultural Information Exchange Platform, which promotes knowledge-sharing and stakeholder collaboration. The platform leverages digital tools to bridge gaps in access to market information and agronomic practices to improve crop production systems and link financial services for farmers. She also gave insights on how smallholder farmers have on-demand access to hyper-local information that is contextual and in their local language. The presentation also emphasized gender inclusivity, two-way communication, agnostic data sourcing, and an open-source platform with common architecture as critical elements for the success of GIZ's digital intervention in Africa.



### 5. Monitoring Croplands Using Remote Sensing Data and Machine Learning Algorithms

**Presenter:** Dr Gumma Muralikrishna, ICRISAT

Dr Muralikrishna demonstrated the use of remote sensing technologies and the role played by machine learning in revolutionizing cropland monitoring. His presentation highlighted case studies from semi-arid regions in Asia and Africa. He stressed the need to use big data analytics for strategic planning in development projects, as remote sensing can bring much-needed insights on temporal and spatial scales. These innovations can optimize resource use and provide actionable insights into crop health, productivity, and climate change impacts.



## 6. Role of Digital Innovations in Risk-Reduction and Resilience Building in Asia and Africa

**Presenter:** Dr Rupsha R Banerjee, ILRI

Dr Banerjee highlighted the role of digital innovations in building resilience among livestock farmers in Asia and Africa. She showcased tools and a digital platform for real-time risk assessment and disaster response that addresses mitigation of climate impacts. Her presentation was on how innovative approaches in crowdsourcing for collecting and disseminating market, household nutrition, and pasture information through digital enablement reached more than 400 pastoralist groups in Kenya and Ethiopia. The value of integrating local knowledge with advanced digital tools to achieve sustainable outcomes was well demonstrated.



## 7. Supporting Farmer-Centric Digital Transformation

**Presenters:** Mr Paul Bartel and Pierre C Sibiry Traore, ICRISAT

Mr Bartel and Dr Sibiry presented on SERVIR West Africa, a flagship program consortium of 11 institutions led by ICRISAT for farmer-centric digital transformation. Crosscutting 13 services through a geospatial open-source digital platform. Seasonal and sub-seasonal forecasting, crop mapping, conditions assessment, locust monitoring, groundwater monitoring, and monitoring stakeholders' financial instruments are some services offered through the SERVIR program. They shared success stories of integrating geospatial data and digital platforms to deliver actionable advisories. Their presentation emphasized capacity building, data standardization, and fostering local partnerships to achieve scalability and sustainability.

These presentations collectively offered a comprehensive view of Digital Agriculture's potential to address key challenges in enhancing productivity and improving smallholder livelihoods.





## Panel Discussion I: Harnessing Digital Solutions for Farmer-Centric Agriculture

The workshop featured an engaging panel discussion that focused on critical aspects of Digital Agriculture and its transformative potential in Africa. The discussions provided valuable insights as participants shared their experiences, challenges, and actionable strategies for leveraging digital innovations in agriculture.

**Moderator:** Dr Irene Kimani, KALRO

### Panelists:

- Mr Willard Kapindu, Chief Agricultural Communication Officer, Department of Agricultural Extension Services, Malawi
- Ms Janet Gessa, Lead ICT Content Development, KALRO
- Dr Shalander Kumar, Deputy Global Program Director, Enabling Systems Transformation, ICRISAT
- Ms Jackie Wangombe, Program Manager, Digital Green
- Mr Samuel Mulvu, Youth Farmer, Kenya



*Experts discussing digital solutions for farmer-centric agriculture in Africa.*

This panel focused on assessing the real-world impact, opportunities, and barriers of digital solutions in agriculture.

- **Digital Solutions and Farmer Decision-Making:** Youth farmer Samuel Mulvu highlighted the value of digital tools in aiding farmers with weather information, helping them make informed decisions on planting, crop selection, and adopting suitable practices.
- **Impact Metrics of Digital Innovations:** Ms Janet Gessa emphasized the importance of diverse dissemination pathways such as SMS, IVRS, mobile/web apps, and call centers. She discussed KALRO's tools, like the KALRO Selector and KAO Platform, which provide weather forecasts and crop variety recommendations, as well as their website tracking tool for monitoring farmer engagement.



- **Malawi's Success Story:** Mr Willard Kapindu discussed Malawi's initiatives, such as the National Agricultural Management & Information Systems and plant health clinics, which have enhanced market access, credit facilities, and farming efficiency.
- **Bridging the Gap Between Farmers and Technology:** Ms Jackie Wangombe shared insights on overcoming barriers such as low smartphone penetration and digital literacy. Digital Green's approach to working with extension agents, cooperatives, and FPOs has reached over 10,000 farmers, demonstrating the importance of human-centered design.
- **Challenges and Collaboration:** Dr Shalander Kumar pointed out that digital solutions often lack problem-specific adaptability. He stressed the need for context-specific tools and collaborative efforts among public institutions, private players, and research organizations to achieve last-mile connectivity.
- **Gender and Digital Empowerment:** Ms Gessa and Mr Kapindu addressed gender disparities, emphasizing that targeted efforts, like distributing smartphones to women farmers in Malawi, can enhance access to information and foster inclusivity.

## Panel Discussion II: Roadmap for Digital Agriculture in Africa and Beyond

**Moderator:** Dr Shalander Kumar, ICRISAT

### Panelists:

- Dr Peter Kibet, Research Scientist, KALRO
- Dr Girum Ketema, Director, Digital Agriculture and Rural Initiatives, Ethiopian Agricultural Transformation Institute
- Dr Anil Rai, Deputy Director General-ICT, ICAR
- Ms Clarisa Msafari, Women Farmer, Taita/Taveta County, Kenya
- Mr Korbinian Hartberger, Co-founder, Plantix

This panel explored the investment trends, sustainability, and future roadmap for digital agriculture.



*Strategic roadmap discussion on investments and policies for Digital Agriculture in Africa.*

- **Investments and Emerging Trends:** Dr Peter Kibet discussed the rise of AI in agriculture and growing interest in carbon credits, citing examples of biochar and organic farming initiatives.
- **Sustainability in Digital Agriculture:** Dr Girum Ketema highlighted Ethiopia's government-led efforts and contract farming models. He emphasized the importance of fintech solutions and private-sector engagement to sustain digital innovations.
- **Indian Success Stories:** Dr Anil Rai shared India's robust digital infrastructure and government programs like the India AI Mission, Agri Drone Program, and Drone Didi Scheme. These initiatives have empowered startups and women farmers, setting a precedent for other countries.
- **Farmer Perspectives:** Ms Clarisa, a women farmer, emphasized the need for investments in crop insurance, better market information, and weather forecasts. She outlined the barriers smallholder farmers face, such as outdated equipment and limited smartphone access.
- **Viability of AgTech Investments:** Corby Harbenger shared insights on startup sustainability, citing Plantix's growth journey and India's supportive startup policies. He stressed the need for government backing and funding to drive innovation and long-term impact.

## Key Takeaways from the Panel Discussions

- **Farmer-Centric Solutions:** Digital tools must address the specific needs of smallholder farmers, focusing on accessibility, usability, and affordability.
- **Collaborative Efforts:** Partnerships among governments, private players, and research institutions are vital for scaling digital agriculture solutions.
- **Gender Inclusivity:** Bridging the gender gap through targeted initiatives like smartphone distribution and training for women farmers is essential for equitable transformation.
- **Sustainable Investments:** Ensuring the long-term viability of digital agriculture requires a mix of public funding, private investment, and policy support.
- **Localized Approaches:** Context-specific solutions co-created with local stakeholders are crucial for achieving widespread adoption and impact.

These discussions underscored the importance of a unified, inclusive, and farmer-first approach to Digital Agricultural transformation in Africa and beyond.

## Interactive Session: Insights from Organizers and Participants

The **Interactive Session**, led by Mr Paul Bartel and Dr Srikanth Rupavatharam from ICRISAT, provided a platform for meaningful dialogue between workshop organizers, participants, and key stakeholders. It was a unique session that emphasized collaboration and actionable insights for advancing farmer-centric digital transformation.

**Mr Paul Bartel** began by reflecting on the day's discussions, emphasizing the need for digital innovations catering to African agriculture's unique challenges. He highlighted the significance of integrating localized data with scalable digital tools to address climate risks, improve decision-making, and enhance farm productivity. He shared SERVIR's experience and emphasized how partnerships with regional organizations and governments have driven impactful digital transformation. **Dr Rupavatharam** elaborated on the broader vision of co-creating inclusive digital solutions. He reiterated the importance of working collaboratively across disciplines and sectors, drawing on the workshop's diverse participation. Stressing the need for problem-specific tools, he pointed out that scalable digital solutions must be tailored to local contexts to ensure effectiveness and adoption.



Most of the session featured an open discussion with participants who shared insights, raised challenges, and posed questions. Key highlights from the interaction included:

- **Mr Bartel asked the participants a simple question:** Why were they here at the workshop, and what would their takeaway be? Another interesting question was, 'Who do you think should have been in this workshop?' There were many suggestions, such as people in the market segment, cooperatives, more private sector people, county government representatives, elected officials (policymakers), and bankers, which were well appreciated.
- Participants expressed the need for tools adapted to specific agroclimatic zones, supported by reliable data and user-friendly platforms. A question on barriers to digital empowerment elicited answers that pointed to limited access to smartphones, gender disparities, and digital illiteracy. These were identified as critical obstacles requiring urgent attention.
- **In a discussion on partnerships and business models,** collaborative frameworks involving public institutions, private sector players, and farmer organizations were emphasized as essential for scaling digital innovations.
- **There is consensus on capacity building of farmers, extension agents, and entrepreneurs on digital tools as the most critical activity for digital transformation in Africa.**

Mr Bartel and Dr Rupavatharam concluded the session by summarizing the shared vision for a digitally empowered agricultural future. They emphasized the critical role of stakeholder collaboration and Global South partnerships, inclusive technology design, and sustained investment in digital infrastructure to overcome existing challenges in Africa. This interactive segment exemplified the workshop's unique way of fostering dialogue, enabling knowledge exchange, and driving actionable strategies to transform agriculture through digital and geospatial innovations.



*Stakeholders engaging in an open discussion on Challenges and Future Directions of Digital Agriculture.*

## Key Outcomes

The “Stakeholders Workshop on Farmer-Centric Digital Transformation of African Agriculture” has thrown light on interesting issues that cannot be ignored from the standpoint of smallholder farming in Africa. Some key outcomes from the workshop are:

- **Cross-Sector Collaboration:** Recognizing the importance of partnerships between governments in the Global South, involving the private sector, research institutions, and farmer organizations to develop scalable, inclusive, and sustainable digital solutions. Encouraging South-South collaborations to adapt and replicate successful models of digital transformation. Develop problem-specific solutions by co-designing tools with farmers to ensure their relevance and usability.
- **Localization of Digital Tools:** The success of platforms like Plantix demonstrated the significance of adapting technologies to regional contexts, languages, and farmer-specific needs.
- **Bridging the Digital Divide:** Both panel discussions highlighted barriers such as limited smartphone access, poor internet connectivity, and gender inequalities in technology usage. Implementing feedback loops and targeted initiatives is essential to empowering women farmers with digital solutions and ensuring equitable digital empowerment.
- **Policy Support for Digital Agriculture:** The role of government-led initiatives in creating an enabling environment for AgTech adoption was emphasized. Examples include India’s Digital Public Infrastructure, like AgriStack/ VISTAAR, that play a critical role in enabling digital transformation of smallholder farming can happen in Africa through similar initiatives. Ensuring long-term funding mechanisms for digital innovations and promoting private-public partnerships for resource mobilization was emphasized.
- **Capacity Building:** Training and empowering farmers, particularly women and youth, to use digital tools effectively emerged as a priority. Strengthening knowledge-sharing platforms to document and disseminate best practices in digital agriculture was also emphasized

## Way Forward

To translate the workshop discussions into actionable outcomes, the focus must shift toward strengthening collaborations in the Global South through partnerships among institutions such as the CGIAR, ICRISAT KALRO, and other key stakeholders. Developing scalable and localized digital agriculture solutions is essential to address smallholder farmers’ diverse challenges in Africa. Tailored solutions must prioritize accessibility and usability to bridge the digital divide while addressing barriers such as connectivity, affordability, and digital literacy. Collaboration across governments, private enterprises, research institutions, and community organizations is vital to maximize impact. Investments in digital infrastructure, including improved connectivity and device access, are necessary to ensure equitable adoption. Establishing robust frameworks for monitoring and evaluation will enable stakeholders to measure the success of digital interventions and refine strategies based on data-driven insights. By leveraging AI and data-driven tools, Africa’s agricultural landscape can achieve transformative growth while creating resilient and inclusive systems. This integrated approach will position stakeholders to address pressing agricultural challenges effectively and equitably. Digital literacy will allow open access to equitable markets that would benefit the farmers and increase their profitability. There is also a growing need for investment in developing multidisciplinary digital skills and knowledge.

The workshop captured critical opportunities as a road map as listed below :

- Government and private investments in Digital Agriculture are urgently required. Such investments will enable the automation of field operations like seeding, weed control, harvesting, tilling, and chemical application, ensuring efficient performance in any weather conditions throughout the year.



- Reforming African agricultural policies is crucial to make them more market-oriented while fostering a digitally-driven environment. Enhancing digital connectivity in rural areas is essential for providing affordable data and easy access to farming information.
- Bridging the gaps in Africa's Digital Agriculture sector is crucial for the effective adoption and scaling of digital agriculture solutions. These gaps include inadequate access to digital infrastructure, insufficient awareness and technical expertise, limited financial accessibility, lack of interoperability among digital agriculture platforms, and insufficient emphasis on sustainability.
- A common Digital Public Infrastructure platform like India's AgriStack that benefits all stakeholders in Africa. The repository should be maintained for all the digital tools and their dependency files/packages/libraries.
- The agricultural universities in Africa are good at agricultural sciences but poor at digital transformation. Thus, collaborations between universities and information technology institutions will be helpful to develop tools backed by science.
- Establishing a Community of Practice (CoP) for Global South collaboration on digital transformation in agriculture. A CoP can be a powerful mechanism to share knowledge, foster innovation, and strengthen capacity among countries in the Global South. The established CoP will encourage South-South collaborations to implement and validate innovative digital transformation models at mirror sites, which will also provide opportunities for cross-learning.
- The solutions need to have a human-centric design, but at the same time, must be aligned with the digital strategy adopted by the country. This approach can bridge the gap between high-level policymaking and grassroots implementation, ensuring that digital transformation benefits smallholder farmers and supports national agricultural priorities.

## Conclusion

This workshop can be seen as a starting point for developing a digital agriculture strategy for Africa. The workshop's goal of fostering partnerships to advance the Digital Agriculture strategy towards a farmer-centric digital transformation of African agriculture has started. A strategic working paper will be developed, incorporating the participants' recommendations, along with the Roadmap for Digital Agriculture in Africa through Global South collaborations.

## Annexure 1: Workshop Agenda

### Agenda of The Stakeholder Workshop On “Farmer Centric Digital Transformation of Africa Agriculture”

Organized by ICRISAT & KALRO on 10 December 2024 @ Holiday Inn, Nairobi, Kenya

|               |                                                                                                                                                                                                                                         |                                                                                                                                                     |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 08.30 - 09.00 | Registrations                                                                                                                                                                                                                           | Admin support                                                                                                                                       |
|               | Inaugural Session                                                                                                                                                                                                                       |                                                                                                                                                     |
| 09.00 - 09.05 | Welcome and Introduction                                                                                                                                                                                                                | Dr ML Jat, Dy. Director General-Research -interim                                                                                                   |
| 09.05 - 09.10 | Remarks South-South Collaboration                                                                                                                                                                                                       | Dr Anil Rai, ICAR, Govt. of India                                                                                                                   |
| 09.10 - 09.30 | Address by Chief Guest                                                                                                                                                                                                                  | Director, ICT, KALRO, on behalf of Director General                                                                                                 |
| 09.30 - 09.40 | Launch of Plantix in Swahili                                                                                                                                                                                                            | Plantix and guests on stage                                                                                                                         |
| 09.40 - 10.00 | Group Photo and Tea Break                                                                                                                                                                                                               |                                                                                                                                                     |
| 10.00 - 10.20 | Presentation from CGIAR-ICRISAT                                                                                                                                                                                                         | Dr Srikanth Rupavatharam & Dr Mukund Patil, ICRISAT                                                                                                 |
| 10.20 - 10.40 | Presentation from KALRO                                                                                                                                                                                                                 | Dr Salim Kinyimu, Director, ICT, KALRO                                                                                                              |
| 10.40 - 11.00 | South-South Collaboration                                                                                                                                                                                                               | Dr Anil Rai, GoI-ICAR                                                                                                                               |
| 11.00 - 11.20 | Role of ICAR in South-South Collaboration                                                                                                                                                                                               | ADG, ICAR                                                                                                                                           |
| 11.20 - 11.40 | Presentation from CGIAR Digital Initiatives                                                                                                                                                                                             | Dr Rupsha Banerjee, ILRI                                                                                                                            |
| 11.40 - 12.10 | Presentation from Donor                                                                                                                                                                                                                 | Ms Florence Kinyua (GIZ)                                                                                                                            |
| 12.10 - 12.30 | Presentation from Govt. of Kenya                                                                                                                                                                                                        | Dr Evan                                                                                                                                             |
| 12.30 - 13.30 | Lunch break                                                                                                                                                                                                                             |                                                                                                                                                     |
| 13.30 - 14.45 | <b>Panel Discussion Topic:</b> Role of Digital Agriculture in Transforming Smallholder Systems<br><b>Moderator:</b> Irene Kimani<br><b>Rapporteur:</b> Dr Kishore Kumar & Dr Pranuthi                                                   | 1. Mr Willard Kapindu (Gov of Malawi)<br>2. Ms Janet Ngesa (KALRO)<br>3. Dr Jacqueline Wang'ombe<br>4. Dr Shalander Kumar (ICRISAT)                 |
| 14.45 - 16.00 | <b>Panel Discussion Topic: Investments, Sustainable Business Models &amp; Enabling Policy for Digital Agriculture in Africa</b><br><b>Moderator:</b> Dr Shalander Kumar<br><b>Rapporteur:</b> Dr Mukund Patil & Dr Murali Krishna Gumma | 1. Dr Anil Rai (ICAR, India)<br>2. Dr Girum Ketema Teklemariam<br>3. Ms Emma Murangiri (Kenya Ministry of Agriculture)<br>4. Mr Peter Kibet (KALRO) |
| 16.00 - 16.20 | Tea break                                                                                                                                                                                                                               |                                                                                                                                                     |
| 16.20 - 16.50 | Open Discussion “ <b>Way Forward for Digital Agriculture in Africa</b> ”                                                                                                                                                                | All participants, anchored by Mr Paul Bartel & Dr Srikanth Rupavatharam                                                                             |
| 16.50 - 17.00 | Wrap up and vote of thanks.                                                                                                                                                                                                             |                                                                                                                                                     |

**Participants:** ICRISAT, IFPRI, CIMMYT, ICARDA, ICRAF, ILRI, KALRO, Department of Agriculture (Kenya), AGRA, Private Startups, NGOs (including participants from Kenya, India, Uganda, Ethiopia, Senegal, and Tanzania)

## Annexure 2: List of Participants

|    | Name                      | Organization              | Email address                                                                            |
|----|---------------------------|---------------------------|------------------------------------------------------------------------------------------|
| 1  | Paul Bartel               | ICRISAT- SERVIR WA        | <a href="mailto:p.bartel@icrisat.org">p.bartel@icrisat.org</a>                           |
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| 9  | Peter Kibet               | KALRO                     |                                                                                          |
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The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is a pioneering International Organization committed to developing and improving dryland farming and agri-food systems to address the challenges of hunger, malnutrition, poverty, and environmental degradation affecting the 2.1 billion people residing in the drylands of Asia, Sub-Saharan Africa, and beyond.

ICRISAT was established under a Memorandum of Agreement between the Government of India and the CGIAR on the 28 March 1972. In accordance with the Headquarters Agreement, the Government of India has extended the status of a specified "International Organisation" to ICRISAT under section 3 of the United Nations (Privileges and Immunities) Act, 1947 of the Republic of India through Extraordinary Gazette Notification No. UI/222(66)/71, dated 28 October 1972, issued by the Ministry of External Affairs, Government of India.

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