

India Digital Agriculture Conference 2024

Friday, 11th October 2024 | Hotel The Park, New Delhi



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INDIA DIGITAL AGRICULTURE CONFERENCE 2024

11th October 2024, The Park Hotel, Sansad Marg, New Delhi

The launch of the Digital Agriculture Mission by the Government of India, with an allocation of Rs 2817 crore, is a revolutionary step that will elevate agriculture to the next level in terms of automation, efficiency, productivity, and profitability. This mission will also create vast opportunities for companies in IT, AI, ML, IoT, Data Analytics, Drones, Robotics, Precision, and Digital Technologies.

To further this mission, the India Digital Agriculture Conference 2024 was organized by the Indian Chamber of Food and Agriculture in partnership with IIT Ropar.



The day-long event featured discussions aimed at revolutionizing traditional farming systems, essential for catalyzing innovation by promoting the adoption of cutting-edge technologies and fostering collaboration among farmers, tech developers, and researchers. It highlighted the importance of sustainable practices through digital tools to build climate-resilient agricultural systems.

Policy makers discussed ways to facilitate policy dialogue among government representatives, researchers, and industry experts, focusing on aligning policy frameworks with technological advancements to create a supportive environment. Additionally, the event provided a platform for enhancing market linkages via digital platforms to streamline supply chains, boost market access, and improve smallholder farmers' livelihoods.

This event not only addressed current challenges in agriculture but also laid the groundwork for future strategies positioning India as a leader in the global agri-tech ecosystem

INAUGURAL SESSION

The inaugural ceremony began with the traditional lighting of the lamp, symbolizing a bright and auspicious start to the event. Following this, bouquets were presented to the dignitaries as a mark of respect and to honor their presence and contributions to the occasion. This graceful beginning set a respectful tone, underscoring the significance of the event and the esteem held for the distinguished guests.

Mr. Ashwani Bakshi, CEO of the Indian Chamber of Food and Agriculture, then delivered the welcome address to the esteemed guests and dignitaries. He expressed his gratitude to the audience and sponsors for their role in making the event a success.



Shri Devesh Chaturvedi, Secretary of Agriculture for the Government of India, the chief guest at the event.

Other dignitaries on the dais were :

- **Dr. Akhilesh Gupta**, Former Secretary SERB,
- **H. E Mr. Jagannath Sami**, High commissioner, High commission of the Republic of Fiji,
- **H. E. Mr. Isse Abdillahi Assoweh**, Ambassador, Embassy of the Republic of Djibouti,
- **Mr. Navneet Ravikar**, CMD Leads Connect Pvt Ltd.,
- **Smt. Suneeti Tuteja**, Senior Director &Head, Food&Agriculture Dept, BIS
- **Dr. Prashant Kumar Mittal**, DDG- NIC and
- **Dr. Radhika Trikha**, CEO IIT ROPAR-TIFAWADH

Mr Ashwani Bakshi, CEO, ICFA as we confront the realities of climate change, embracing digital agriculture is essential for ensuring food security and promoting sustainable farming practices. By



investing in digital solutions and fostering collaboration across sectors—government, private industry, and civil society—we can create a more resilient agricultural future that addresses the challenges posed by climate change and meets the needs of a growing global population. To ensure a sustainable and resilient future, we must leverage the power of digital technologies. Digital agriculture represents a transformative approach to farming, utilizing technology to enhance productivity, sustainability, and resilience, especially in the context of climate change



Smt. Suneeti Toteja, Senior Director & Head of the Food and Agriculture Department at the Bureau of Indian Standards (BIS) discussed 'Standardization of Digital and Smart Agriculture in India.' She highlighted BIS's pivotal role in setting standards for digital agriculture, ensuring technologies like IoT,



precision farming, drones, and digital platforms are accessible, secure, and interoperable across the sector. By establishing standards for sensors, data privacy, geospatial data, and sustainability practices, BIS is fostering uniformity and scalability in these innovations, enhancing farm productivity and bridging the digital divide to make advanced technologies available to small and marginal farmers. This effort drives inclusive and sustainable growth in Indian agriculture.

Dr. Alok, Co-founder of Leads Next Tech, stresses



the urgency of addressing global food security, especially given the impacts of climate change on food systems. He emphasizes the need for a clear understanding of demand and supply chain interconnections to meet Sustainable Development Goals (SDGs) effectively. Dr. Alok advocates for hybrid technological approaches that can adapt to regional complexities, ensuring solutions tailored to local challenges. Integrating such adaptive technologies can help create resilient systems capable of meeting food security demands in a rapidly changing environment.

Dr. Akhilesh Gupta, former Secretary of SERB and Senior Advisor at the Department of Science and Technology, Government of India, , underscores the role of digital technologies in promoting climate-smart agriculture. He points out the importance of



data-driven tools like GPS and GIS for gathering precise information to guide farming practices. Dr. Gupta also highlights AI's transformative role in enhancing agricultural efficiency and accountability. He mentions collaborations between ICAR and IMD, where digital climate advisory services provide farmers with essential agro-advisory information. These advancements empower farmers to adopt adaptive practices, enhancing agriculture's resilience to climate change

Call for Digital Agriculture Initiatives of ICFA and IIT Ropar “Indian Digital Agriculture Council (IDAC)” by Dr Radhika Trikha , CEO, IIT Ropar TIF AWaDH



The India Digital Agriculture Council (IDAC), co-led by IIT Ropar and ICFA, is a pioneering initiative aimed at transforming Indian agriculture through technology, knowledge-sharing, and policy integration. This platform unites industry leaders, government bodies, agri-tech innovators, researchers, and farmers, with the goal of aligning agriculture with modern digital advancements. IDAC seeks to empower the agricultural sector by promoting digital literacy and adopting cutting-edge technologies such as drones, AI-powered crop monitoring, and precision farming systems. Through collaborative partnerships and strong policy advocacy, IDAC aims to address rural challenges, streamline supply chains, and strengthen farm-to-market linkages.



His Excellency M. Isse Abdillahi Assoweh, Ambassador of the Republic of Djibouti, emphasizes the significance of advancing agriculture in Djibouti through digital agriculture integration. He highlights how technology can transform traditional farming methods, enhancing



efficiency and sustainability in regions often impacted by harsh climates and limited arable land. Ambassador Assoweh also underscores the growing collaboration between India and African nations, including Djibouti, to address global food insecurity. By sharing agricultural technologies, knowledge, and resources, these partnerships can foster innovation and resilience, supporting food security across the continent and beyond.

His Excellency Mr. Jagannath Sami, High Commissioner of the Republic of Fiji, asserts that **Fiji** asserts that Fiji is actively seeking partnerships to address pressing challenges related to food security and climate change. He stresses the urgent need for innovative solutions and collaborations to enhance



agricultural resilience and sustainability in the face of environmental threats. Through cooperation with local and international entities, Fiji aims to develop strategies that not only ensure food security for its citizens but also contribute to global efforts to combat climate change. These initiatives represent Fiji's commitment to creating a more sustainable future for its people and the planet.

In his inaugural address, Shri Devesh Chaturvedi, Secretary of Agriculture for the Government of India highlighted the importance of the Digital Agriculture Mission. He explained how this mission is crucial in leveraging technology and data-driven solutions to modernize Indian agriculture. By providing farmers with real-time information and



comprehensive support systems, the mission aims to improve decision-making processes and enhance rural livelihoods. Shri Chaturvedi emphasized that integrating digital agriculture will be instrumental in transforming India's agricultural landscape, fostering greater efficiency and sustainability in farming practices while addressing the sector's current challenges.

Dr Radhika Trikha, CEO, IIT Ropar TIF AWaDH proposed the Vote of Thanks



PANEL DISCUSSION

Panel Discussion I - Climate-Smart Agriculture: Harnessing Digital Technologies for Sustainable Farming

Panelist:

- **Moderator : Mr. Dushyant K. Tyagi**, Chief Executive Officer, Farmgate Technologies Pvt Ltd
- **Smt Suneeti Toteja**, Senior Director & Head, Food and Agriculture Department, BIS
- **Mr. Amit Kumar**, Co-Founder and COO, Eeki Foods
- **Ms. Shikha Dutta**, Head Government Affairs, Innoplexus AG
- **Dr Prafull Gadge**, CEO & Principal Scientist, Biome Technologies Pvt Ltd
- **Mr. Rajeev Kumar**, Deputy General Manager, SOA-CII, Siksha 'O' Anusandhan
- **Mr. Daman S. Walia**, President/CEO, ARCTECH Inc. (Virtual)



The panel on Climate-Smart Agriculture: Harnessing Digital Technologies for Sustainable Farming examined how digital tools such as IoT, AI, and precision agriculture can enhance agricultural productivity and sustainability while addressing climate challenges. Key discussions covered the importance of standards in food and agriculture, tech-driven solutions for sustainable farming, and scientific innovations propelling green technologies. Experts underscored advancements like smart irrigation, climate forecasting, and crop modeling, which enable real-time, data-driven decisions and strengthen resilience to climate impacts. However, challenges like cost, accessibility, and data security persist. The panel also highlighted the need for supportive policies, targeted funding, and enhanced agricultural education to empower farmers, particularly smallholders, in adopting sustainable, technology-based practices for long-term resilience and food security.

PANEL DISCUSSION

Panel Discussion II - Democratizing AgriTech: Bridging the Digital Divide in Agriculture

Panelist :

- **Moderator : Dr. N Kulkarni**, President, Sustainable Food and Agriculture, Jain Irrigation Systems Ltd
- **Mr. Utkarsh Kapoor**, CEO & Co-Founder, Qboid ioTech
- **Mr. MJ Saxena**, MD, Ayurved Foundation
- **Mr. Anil Pareek**, Chief Strategy Officer, Leads Connect Services Pvt. Ltd.
- **Mr. BG Gupta**, Advisor, IT Applications in Business & Governance
- **Mr. Ashutosh Singh**, COO, Ayekart (Virtual)



The session on Democratizing AgriTech: Bridging the Digital Divide in Agriculture emphasized the need to make advanced agricultural technologies accessible to farmers at all levels, particularly those in rural and underserved areas. The growing digital divide in agriculture creates disparities in productivity and income between tech-enabled farmers and those lacking access to such innovations. Democratizing AgriTech involves providing farmers with affordable tools, real-time data, and digital platforms that empower them to make informed decisions, improve yields, and enhance sustainability. By fostering equitable access to technology, education, and infrastructure, we can ensure that the benefits of AgriTech reach all farmers, thereby boosting rural economies, enhancing food security, and building resilience against climate change.

PANEL DISCUSSION

Panel Discussion III - Precision Farming: The Convergence of Drones, GIS, IoT, and AI

Panelist:

- **Moderator: Dr Radhika Trikha**, CEO, IIT Ropar TIFAWaDH
- **Mr. Nitin Prajapati**, Director- Chief of Products, Omagri RPA Agriculture Infrastructure & Solutions Pvt Ltd
- **Mr Roy Postigo**, Trade Specialist, Peru Embassy
- **Dr Rabi N Sahoo**, Principal Scientist, IARI
- **Prof. Alka Arora**, (ICAR-IASRI)
- **Mr. Sumer Singh Johal**, Linux Foundation (Virtual)



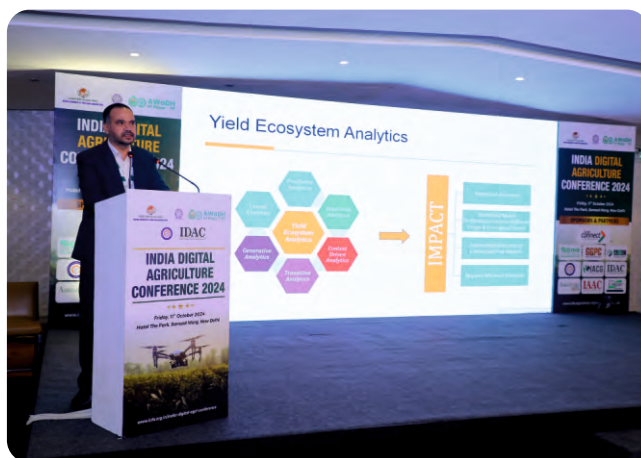
The panel on Precision Farming: The Convergence of Drones, GIS, IoT, and AI, moderated by Dr. Radhika Trikha, explored how advanced technologies are transforming agriculture. Mr. Nitin Prajapati discussed the role of drones and IoT in providing real-time crop monitoring and optimizing resources. Mr. Roy Postigo highlighted Peru's use of GIS for efficient land management and improving exports. Dr. Rabi N Sahoo focused on AI and IoT integration at IARI to enhance decision-making and farm management. Prof. Alka Arora emphasized the importance of AI in predictive modeling and the need for farmer training. Mr. Sumer Singh Johal underscored the role of open-source platforms in scaling precision farming technologies. The panel concluded that collaboration, farmer education, and infrastructure are key to realizing the full potential of precision farming.

PRESENTATIONS

Mr. Bharath Settipaly, Head of IT at Leads Connect Services Pvt Ltd, delivered a presentation on the topic Digital Platform for Supply Chain Optimization. He discussed how the integration of population dynamics, space technology, and artificial intelligence (AI) is crucial for modernizing the agricultural supply chain. Mr. Settipaly highlighted the importance of maintaining transparency and traceability through blockchain technology, ensuring secure and efficient tracking of agricultural products from farm to market. He also touched on scenario analysis, which allows stakeholders to predict outcomes and make informed decisions. During his presentation, Leads Connect launched AGRANI, a cutting-edge platform designed to optimize the agricultural supply chain by leveraging digital technologies, enhancing efficiency, and empowering stakeholders across the system.

Dr. Alok Mukherjee, Co-Founder and Director of Leads NexTech India Pvt Ltd, delivered an insightful address on Data-Driven Decision-Making in Agriculture, focusing on the challenges and limitations of yield modeling. He emphasized the critical role that data plays in helping farmers and agricultural stakeholders make informed decisions to optimize crop production. However, Dr. Mukherjee highlighted several challenges in yield modeling, including the complexity of integrating diverse data sources such as weather patterns, soil health, and crop varieties. He also pointed out limitations in the accuracy of predictive models due to uncertainties in climate conditions and the availability of high-quality data. Despite these challenges, he emphasized the potential of advanced technologies like AI and machine learning to improve yield predictions, offering more reliable tools for future agricultural planning and resource management.

Mr. Saurabh Arora from IIT Ropar's TIF AWaDH delivered a compelling presentation on National Digital Agriculture Impact: Startup Success Stories. He focused on the Priority Area Agriculture and Water Technology, showcasing how startups are driving innovation in these critical sectors. Mr. Arora highlighted various success stories where technology and innovation interventions have significantly improved agricultural productivity and water resource management. He discussed the role of platform technologies in facilitating this transition, enabling seamless integration of digital solutions such as AI, IoT, and data analytics. By harnessing these technologies, startups are contributing to a brighter future for agriculture, ensuring sustainable practices, enhancing water conservation, and empowering farmers with better tools for decision-making. Mr. Arora emphasized that the ongoing digital transformation is not only addressing current challenges but also paving the way for long-term resilience and growth in the agricultural sector.



Recommendations of the India Digital Agriculture Conference 2024

In light of the discussions, insights, and presentations at the India Digital Agriculture Conference 2024, several key recommendations emerge to further enhance the impact of digital agriculture in India and beyond. These recommendations aim to address the challenges and opportunities identified during the event, ensuring the sustainable growth of the agricultural sector through technology integration.

1. Fostering greater partnerships between government, industry, research institutions, and farmers to encourage the adoption of digital technologies. Establishing platforms for continuous dialogue will help identify challenges, share best practices, and accelerate the implementation of innovative solutions.
2. Initiating training programs aimed at enhancing digital literacy among farmers, particularly in rural and underserved areas. These programs should focus on practical applications of digital tools in agriculture, empowering farmers to leverage technology for better decision-making and improved productivity.
3. Advocating for the establishment of comprehensive standards for digital agricultural technologies, including IoT, drones, and data analytics. A robust standardization framework will ensure interoperability, security, and accessibility of technologies, facilitating their widespread adoption across the sector.
4. Encouraging policymakers to create a supportive regulatory environment that incentivizes the adoption of digital agriculture practices. This includes providing subsidies or financial assistance for technology implementation and fostering innovation through research grants.
5. Prioritizing investment in digital infrastructure, including internet connectivity and data accessibility in rural areas. Improved infrastructure is essential for enabling farmers to access digital tools and platforms that can transform their farming practices.
6. Developing initiatives that provide farmers with access to affordable financing options for adopting digital technologies. This could include microloans, grants, or partnerships with financial institutions that understand the unique needs of the agricultural sector.
7. Promoting the use of data analytics to drive informed decision-making in agricultural practices. Encourage the development of user-friendly data platforms that provide farmers with real-time insights into weather patterns, market trends, and crop performance.
8. Emphasizing the importance of sustainability in all digital agriculture initiatives. Encouraging practices that not only enhance productivity but also promote environmental conservation and climate resilience.
9. Identifying and scaling successful digital agriculture initiatives and technologies that have demonstrated measurable impacts on productivity and sustainability. Sharing success stories will inspire broader adoption and innovation in the sector.
10. Establishing a framework for monitoring and evaluating the impact of digital agriculture initiatives. Continuous assessment will help refine strategies, ensuring that they effectively address the evolving needs of the agricultural community.

By implementing these recommendations, stakeholders can significantly enhance the role of digital agriculture in India, fostering a more sustainable, efficient, and productive agricultural sector capable of meeting future challenges and opportunities.

GLIMPSES OF EVENT





भारतीय कृषि एवं खाद्य परिषद्
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