

India Centre of Excellence for Food Convergent Innovation

# Digital Farming as Anchor to an Integrative Backbone to Support Convergence of Agriculture, Nutrition, Health, and Economic Outcomes

*ROUNDTABLE DISCUSSION  
 ON THE OCCASION OF THE LAUNCH OF  
 PULSE INNOVATION PLATFORM-INDIA (PIP-INDIA)*

Jaypee Siddharth, Rajendra Place, Delhi

March 8, 2017

3:30-6:30 p.m.

Conference Hall 2

**Pulse Innovation Platforms**  
*Transforming Traditional and Modern Worlds through Food*

PIP- Global	     
	     
PIP- India	     
	      

## Background to PIP-India

For more than a decade, the McGill Center for the Convergence of Health and Economics (MCCHE) and its network of national and international partners have articulated what is now known as Convergent Innovation (CI), a solution-oriented integrative approach for single and collective action that reinvents the way we innovate, compete, and collaborate (see attached strategic brief). CI involves academia with public, private, and civil society actors to target single and collective action in both traditional and modern farm, food, and health systems around the world. Food has been taken as the most powerful bridge between agriculture, industry, and health sectors that is core to sustainable development and affordable healthcare for all. Within food, pulses are arguably the poster child among agricultural commodities for the development of a CI approach that targets the health of people, planet, and economy.

Over the last four years, academic, private, and public sector partners in the Global Pulse Innovation Platform (PIP) have spearheaded a social movement that has led to 2016 being declared the International Year of Pulses (IYP). PIP functions as an open innovation forum where members network and connect to identify and address bottlenecks hindering innovation and to build synergies. The Global PIP – launched in Montreal on March 10-11, 2016 – will serve as the core food convergent innovation hub of the sector for years to come.

This roundtable discussion for a PIP-India digital backbone, convened on the occasion of the PIP-India launch on the evening of March 8, 2017 is in continuity to a series of workshops hosted over the last few years by MCCHE and its co-leaders in India, namely the International Food Policy Institute (IFPRI-South Asia; CGIAR-A4NH), The INCLIN Trust and Tata Cornell Initiative for agriculture and nutrition (TCi). The program convenes India leaders from academia, private sector, civil society, and governments, most of whom have been engaged in the PIP-India journey for some time. PIP-India is to be the first program of a broader Center of Excellence in Food Convergent Innovation.

## Roundtable: An Integrative Digital Backbone for Convergent Innovation

Adoption of Information and Communications Technologies (ICT) for agriculture has been proven to be successful at the farm support level. With timely delivery of customized information, ICT platforms such as the mKRISHI® of Tata Consultancy Services (TCS) have demonstrated significant benefits to the farming community through increased productivity and improved access to inputs and markets. However, there is a greater role envisioned for ICT than that of a novel means of extension service with lower transaction cost. The Pulse Innovation Platform (PIP) – India positions ICT as a key enabler in fostering innovations in the pulses sector that bring together sustainable economic benefits from increased agricultural productivity, better nutrition through behavioural studies and change communication and as a consequence, enhanced health status. To achieve this vision, additional modules such as rural livelihood opportunities are to be built and other databases (such as health and nutrition) integrated to establish a digital infrastructure that could then be used by a variety of interlinked developmental efforts. The idea is to progressively move from individual, to household, to community, region, state, national, international and global levels by bringing together, in a solution-oriented manner, modular geo-referenced open-source repositories of knowledge, including trends, insights, innovation, best practices protocols, process/outcomes metrics, etc. to

support decision making, policy, and action for better targeting, more impact, and adaptive learning for all sectors and all actors involved.

This high-level roundtable discussion invites leaders and thinkers from government, industry, and civil society representing various sectors to share their ideas and concerns towards building this national platform. Using the TCS model, we will explore a vision for a platform that integrates multiple modules to support economic prosperity through sustainable food production and value addition that also contribute to food security, nutrition, health, and affordable healthcare for all. What are the challenges that would limit the scope and reach of such a platform in India and how to deal with them? How to identify and build upon critical leverage points? The discussion will be structured around three consecutive panels:

1. **Strengthening Digital Platform for Agricultural Production**– How do we strengthen the platform within the agricultural context? Right now, there is certain data in the knowledge base as well as some participants such as producers, input providers, credit institutions etc. What is missing? Who or what could be added to make the platform bring more value? Or is it complete/good in its current state? For instance, can the platform support service providers such as equipment rentals, land preparation contractors, seasonal labourers etc.? Can it assist pest management and adverse climate condition advisory using advanced technology such as remote sensing and image analysis? Is there an opportunity for financial institutions to develop innovative products with the support of the platform? Could the platform ensure stable and diversified access for the farmer to local, regional, state, national and international markets? How could the government and NGOs participate to benefit from the information that could feed into policy making?
- **Integration to Support All Dimensions of Livelihood Beyond Income** i.e. water, sanitation, food security, nutrition, health, and education – How can the digital farming platform be enriched in a modular manner to foster integration for the many food security, agriculture-nutrition, mother/child health, poverty alleviation, and/or rural development programs on the ground and higher level state and national policy? What are the existing data sources that could be linked? What are the types of data that could be relevant to this purpose? What are available digital technologies and resources that could empower this data and knowledge base? How to invent novel form of distributed ownership, responsibility and leadership to design and manage interfaces? How to expand the reach of the platform itself (popularization programmes, push for adoption and dealing with challenges such as limited telecommunication facilities)?
- **Expanding the Scope and Reach for Rural/Regional Development and Integration with /State/National/Global Supply Chains, Markets, and systems** – How to leverage the penetration of the digital platform to support other income generating activities for the farmers? For micro, small, medium, and large agri, food, and other support enterprises to create vibrant rural economies? What are the possibilities that this platform can open to support better convergence between agriculture, nutrition, health, and economic outcomes at regional, state, national, or global levels? Can regional disaggregated data be used to provide insights into identifying auxiliary agricultural activities, value addition opportunities,

non-agricultural economic enterprises etc. at regional levels? Can there be two-way integration with state, national/global supply chains, markets, and systems

## Agenda and Invited Participants

*Chair and Moderator: Narendra Arora*

3:30-3:40pm	<p>Welcome and Introduction of PIP-India as First Program at India Center of Excellence in Food Convergent Innovation</p> <ul style="list-style-type: none"> <li>- Ajit Kumar, NIFTEM</li> <li>- Laurette Dube, MCCHE</li> </ul>
3:40-4:15pm	<p>Digital farming for small scale agriculture an anchor of integrative backbone of food CI ecosystem: challenges and possibilities –</p> <p>Anchor presentation to structure round table discussions</p> <ul style="list-style-type: none"> <li>- Srinivasu Pappula, TCL</li> <li>- Laurette Dube, MCCHE</li> <li>- Satya Dash, IIML</li> </ul>
4:15-5:00 pm	<p>Roundtable 1: Strengthening Agricultural Production – 45 minutes</p> <ul style="list-style-type: none"> <li>- Anchor commentaries <ul style="list-style-type: none"> <li>o Sushil Charturvedi</li> <li>o Arabinda Kumar Padhee, ICRSAT</li> <li>o Hemendra Mathur, Bharat Innovation Fund</li> <li>o Lee Moats, Pulse Canada</li> </ul> </li> </ul>
5:00-5:40pm	<p>Roundtable 2: Broadening scope to dimensions of livelihood beyond income – 40 minutes</p> <ul style="list-style-type: none"> <li>- Anchor commentaries <ul style="list-style-type: none"> <li>o Moni Madaswamy, National Informatic Center Govt. of India</li> <li>o Arun Panda, Ministry of Health</li> <li>o Rajiv Tandon, PATH-India</li> <li>o Seema Puri, IDA</li> <li>o Vinay Kumar, Digital Green</li> </ul> </li> </ul>
5:40-6:20pm	<p>Roundtable 3: <b>Expanding the Scope and Reach for Rural/Regional Development and Integration with /State/National/Global Supply Chains, Markets, and systems</b></p> <ul style="list-style-type: none"> <li>o Tushar Pandey, YES Bank</li> <li>o Vilas Shirhatty, TCL</li> <li>o Ruchira Jaitly, DSM</li> <li>o Srinath Reddy, IPHF</li> </ul>

	<ul style="list-style-type: none"> <li>○ Gordon Bacon, Pulse Canada</li> </ul>
6:20-6:30pm	Challenges, Possibilities and Next Steps for PIP-India Digital Integrative Backbone <ul style="list-style-type: none"> <li>- Laurette Dube, MCCHE &amp; PIP-India</li> <li>- Ajit Kumar, Vice-Chancellor, NIFTEM</li> </ul>
6:30pm	Meeting adjourned

## Participants

<b>Ajit Kumar</b>	Vice-Chancellor, NIFTEM
<b>Arabinda Kumar Padhee</b>	Director, Country Relations, ICRISAT, New Delhi
<b>Arun Panda</b>	Ministry of Health and Family Welfare, Government of India
<b>Ashutosh Upadhyay</b>	Dean (Academics); Associate Professor and Head, Department of Food Science and Technology, NIFTEM
<b>Dora Koop</b>	Managing Director, MCCHE
<b>Gordon Bacon</b>	CEO, Pulse Canada
<b>Hemendra Mathur</b>	Venture Partner at Bharat Innovations Fund
<b>Laura McBreaity</b>	Post-doctoral Fellow, University of Saskatchewan and McGill University
<b>Laurette Dubé</b>	Founding Chair and Scientific Director, MCCHE
<b>Lee Moats</b>	Chair, Saskatchewan Pulse Growers
<b>Moni Madaswamy</b>	Professor Emeritus & Chairman, Centre for Agricultural Informatics & e-Governance Research Studies (CAIRS), Shobhit University Meerut (India) & Director General (Retd), National Informatics Centre (NIC), Government of India
<b>Narendra Arora</b>	Executive Director, The INCLIN Trust International
<b>Rajiv Tandon</b>	Technical Director, PATH
<b>Ritika Pandey</b>	Senior Program Manager, Digital Green
<b>Ruchira Jaitly</b>	Director, Strategy and Nutrition Challenges, DSM
<b>Sarika Mehta</b>	Partner, SM Associates
<b>Satya B. Dash</b>	Chairperson, Centre for Marketing in Emerging Economies, Indian Institute of Management Lucknow, Noida, India
<b>Satyendra Singh</b>	Project Manager, NIFTEM
<b>Seema Puri</b>	National Vice President, Indian Dietetic Association
<b>Srinath Reddy</b>	President, India Public Health Foundation
<b>Sushil Charturvedi</b>	Head, Division of Crop Improvement, IIPR
<b>Tushar Pandey</b>	Sr. President, YES Bank LTD & Distinguished Fellow, YES Institute
<b>Vilas R. Shirhatti</b>	Chief Advisor Nutrition, Tata Chemicals
<b>Vinay Kumar</b>	COO, Digital Green