

AgTech Thursdays

Session II: Action on the Ground & Impact on Farmers & Livelihoods

27 August 2020
5:00 – 6:15 PM

Summary Report

Watch the full session here: https://youtu.be/KW-XaP_n25k



India Livelihoods Collective

India Livelihoods Collective is India's first non-financial and non-funding commitment based collaborative platform to leverage cross-sectoral expertise of organizations, enabling collective action towards creation of sustainable and local livelihoods in rural and urban India.

www.ilc.org.in

CSRBOX

CSRBOX is India's leading CSR knowledge and impact intelligence driven collaboration platform for the development community. It serves as an enabler, encouraging partnerships between CSR stakeholders. At CSRBOX, we are committed to the idea of advancing social impact and change. Whether you are a Donor agency looking to invest in transformative and sustainable projects or an implementation leader dedicated to accomplish your organization's goals, CSRBOX can help you achieve your objectives. With years of experience in working on social development projects with non-profits, corporate and social enterprises, we excel in catalysing the vibrant social transformation movement in India by driving collaborations and partnerships for good. With research, strategy and designing tailored programs in the CSR ecosystem, we help our clients solve their most challenging issues.

<https://csrbox.org/>

MicroSave Consulting

MicroSave Consulting (MSC) is a boutique consulting firm that has, for 20 years, pushed the world towards meaningful financial, social, and economic inclusion. With 11 offices around the globe, about 180 staff of different nationalities and varied expertise, we are proud to be working in over 65 developing countries. We partner with participants in financial services ecosystems to achieve sustainable performance improvements and unlock enduring value. Our clients include governments, donors, private sector corporations, and local businesses. We can help you seize the digital opportunity, address the mass market, and future-proof your operations.

<https://www.microsave.net/>

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Introduction

AgTech Thursdays is an innovative webinar series, organized in collaboration with CSRBOX & MicroSave Consulting. The use of digital technology is set to play a transformational role in modernizing and organizing agricultural activities in a bid to double the farmers' income by 2022. In coherence, the series aims to bridge the knowledge to action gap in this direction by identifying latest trends, progress in agriculture technology and boost for agri-businesses. It will highlight the various avenues for interventions to take place, success stories of diverse AgTech players & AgTech enablers in strengthening the value chain at various levels. The series would provide a holistic view, encapsulating the challenges & learning towards improving technology adoption rates and time-efficient product development & delivery to provide scalable, low-cost and customized solutions to the farmers to increase and sustain the livelihoods outcomes in agriculture.

Session I of the series, held on 20th August 2020, discussed the classification of agtech startups into the following categories based on their intervention areas - farm management and data analytics, agri-input marketplaces, agri-output marketplaces, agri financing and fintech, livestock management and mechanization/novel farming and the case study of PayAgri, an agtech startup from the agri-output marketplaces category. Session II - Action on the Ground & Impact on Farmers & Livelihoods was conducted virtually on 27th August 2020 and aimed to build on this classification with case studies of diverse agtech startups shared by their founders themselves.

Key Highlights & Speakers of Session II:

Moderator - Mr. Suman, Sr. Manager, Dr. Reddy's Foundation

Suman has over a one and half decade experience in leading and managing rural livelihoods, agriculture and skill development programs. He specializes in entrepreneurial development programs, skill development for wage employment.

Mr. Kunal Prasad, Co-Founder & COO, CropIn

CropIn is a farm management and data analysis startup with an intuitive, intelligent, self-evolving system that delivers future-ready farming solutions to the entire agricultural sector. With capabilities of live reporting, analysis, interpretation and insight that span across geographies, they are digitizing every farm, while data-managing the entire ecosystem.

<https://www.cropin.com/>

Mr. Shyam Sunder Singh, Co-founder, DeHaat

DeHaat operates in the agri-input marketplace and is building AI-enabled technologies to revolutionize supply chain and production efficiency in farm sector. It is currently operating in eastern India - Bihar, UP and Odisha.

<https://agrevolution.in/>

Mr. Ranjith Mukundan, Co-founder & CEO, Stellapps

Stellapps is a startup working in livestock management since 2011. It is the first of its kind startup in India working towards the digitization of the dairy supply chain. Digitization of the Agri-Dairy supply chain in the emerging markets is where they help unlock unprecedented value on a very large scale.

<https://www.stellapps.com/>

Mr. Arjun Ahluwalia, Founder & CEO, Jai Kisan

Jai Kisan is an agrifinancing startup leveraging technology and long standing value chain networks to facilitate a suite of financial products for the rural Indian. It provides equipment, input and invoice financing services.

<https://www.jai-kisan.com/>

Session II: Action on the Ground & Impact on Farmers & Livelihoods

Mr. Suman, Sr. Manager, Dr. Reddy's Foundation began Session II of the AgTech Thursdays series by introducing the panelists and setting the context. After discussing the context of agtech and startups followed by the case study of PayAgri in Session I held on 20th August 2020, Session II aimed to build a deeper understanding of agtech initiatives in Farm Management and Data Analytics, Agri-input Marketplace, Livestock Management and Agri Financing through the founders themselves.

CropIn Technology Solutions

CropIn is a full stack agritech company started in 2010 providing agtech products and services across the value chain. It is currently operating in 52 countries and has impacted 2.1 million farmers. **Mr. Kunal Prasad, Co-Founder & COO, CropIn** shared the key products and services for customers like businesses, collectives, farmers and organizations. The **Smart Farm** services provide advisory to farmers from sowing to harvesting and digitize their land plots through a mobile app available in multiple local languages. They allow farmers to manage their farm activities efficiently and make informed decisions regarding crop selection, sowing period and input usage. Early warning messages and data based decisions reduce losses due to weather fluctuations and increase savings. CropIn also assists organizations to adopt principles and strategies required to reach international markets.

Smarrisk is an Artificial Intelligence based platform enabling smart risk management. The platform allows monitoring crops through satellites and calculating the estimated yield to plan market linkages. **MWarehouse** is an initiative facilitating the collection, aggregation, storage and market linkages for the agricultural produce. The end customers attain an end-to-end traceability of the produce and predictive harvest schedules help customers to plan their purchase in advance. These data based predictive tools reduce the storage requirement and loss of perishable items and provide customers with good quality produce in time. **Smartsales** is a tech platform where retailers and suppliers can record their transactions - sale and purchase of inputs like seeds, fertilizers and chemicals

Mr. Kunal advised that the first step for adopting agtech is digitization of the farmers and farm assets. A digitized dataset on the farm size, cropping pattern and farmers is a prerequisite to real-time advisory and ecosystem engagement with input, finance companies, dealers and distributors.

Mr. Kunal ended his address with some case studies from CropIn's projects. A project with Jeevika in Bihar & Madhya Pradesh achieved a 32 % increase in productivity and a 9% reduction in losses in 3 years. CropIn is also successfully working with the Punjab government for traceability and with TATA Trusts and CInI on project Lakhpati Kisan in Jharkhand.

Q.1. What is the scope of genetically modified crops?

There are 2 segments of opinion on this topic - one segment believes that GM crops can be used to increase production and the other segment of environmentally sensitive people believe that it is against sustainable agriculture as it demands spraying of chemicals.

Q.2. How active are the farmers on the platform? Do you find more activity through field teams or intermediary teams?

The activity fluctuates between cropping seasons - 90% farmers are active during the kharif season whereas 50-60% during the rabi season. Overall, 60% farmers are active throughout the year. The extension workers play a critical role in digitisation.

DeHaat

Mr. Shyam Sunder Singh, Co-founder, DeHaat started by discussing some of the key challenges of **farmers** like low productivity, access to quality input, access to market, exploitation by the middle men and the challenges of the **agri businesses** - post harvest losses, visibility of products in process and poor quality of produce.

DeHaat aims to act as a bridge between these 2 players - the farmers and the agri businesses for better customisation through a physical cum digital model. It provides farmers **access to good quality agri inputs** with personalized recommendations on dosage which leads to 10-15% savings in cost of production, GIS based crop **advisory, credit and insurance services** which lead to 20% increment in farm productivity and **market linkages** linking farmers directly to institutional buyers. **DeHaat centres** and call centres are established on ground and the **micro enterprise model** is used to ensure last mile delivery of services and apps. A farmers **mobile application** has been introduced for interaction and peer learning among farmers and to seek external support.

DeHaat has successfully impacted 3,20,000 farmers and generated 900 micro entrepreneurs. It deals with more than 400 tons of agri produce per day and 4,000 agri inputs are ordered per day.

Q.1. Your model aims to delete middle men - are they not important to ensure last mile delivery of services?

DeHaat micro entrepreneurs are community based people having an agri background who ensure last mile connect. We partner with middle men associated with the farmers, not compete with them. Our aim is to integrate within their system to establish systems that benefit the farmers.

Q. 2. How is it translating into value for farmers and micro entrepreneurs together?

Micro entrepreneurs generally have limited access to input products; DeHaat provides them this access, a ready network of farmers, a regular monthly income and reduces the effort that goes into maintaining inventories. The benefits of this strengthened ecosystem go to the farmers who get quality inputs and information.



Image Credits - DeHaat

Stellapps

Mr. Ranjith Mukundan, Co-founder & CEO, Stellapps brought in a dairy perspective to agtech. He started by giving a background of dairy in the country. There are about 76 to 80 million dairy farming households, majority women with small holdings and a 300 million bovine population. Dairy contributes 7.6 % to the national GDP. 42% of milk produced is retained by producers, 33% stays in the unorganised sector and 25% reaches the organised market. This percentage is higher than other sectors due to the long efforts of initiatives like AMUL.

A smallholder dairy farmer earns less than 35 rupees per day, has no access to formal financial services due to lack of data and risk involved, no access to high end services and inputs and less cattle size leading to poor yield.

Stellapps was started in 2011 with a supply chain and end-to-end digitisation approach to digitise farm extension services, dairy supply chain and financial services. Mr. Ranjit shared the key interventions of Stellapps in this direction:

- Animal wearable - a fit-bit for animals which can track the nutritional level, enable preventive health care and provide real time view of animals' living conditions to banks.
- Herd management - an initiative to bring all local technicians, nutrition personnel, vets under one platform and plan data driven interventions.
- Grade-to pay - aims to convert milk into money, eliminating the role of middle men.
- Reception docks at chilling centres allowing dairy processors to achieve quality and quantity of produce and establish premium market linkages.

Stellapps through the above interventions has successfully increased the income levels of farmers from 36 rupees to 4,800 per day, productivity & number of cattle. 10 million litres of milk is digitized per day and Stellapps is currently working with 3 million farmers with the potential to scale up.

Q.1. How can we get the cattle monitoring device at an affordable price?

The Animal Wearable is a process, not only a product. It can be established based on a basic assessment of location starting with developing some prerequisites in terms of nutrition and extension.

Q.2. What is the criticality of market linkages? How are you innovating in these?

Commodity market linkages have been achieved; We try to highlight the quality and characteristics of milk and milk products ensure premium market linkages. Awareness around the nutritional characteristics of milk and milk products among the customers can increase demand for premium milk products extensively.



Jai Kisan

Jai Kisan is a financial technology platform operating in 9 states and UTs. **Mr. Arjun Ahluwalia, Founder & CEO, Jai Kisan** started with an example to highlight how credit is not a service, it is an expectation in our country. The bigger problem is not access to credit but access to rightly priced credit and lack of digitisation of transactions and land records.

Jai Kisan aims to enable the rural population to build a digital footprint online and access other credit products and financial services like insurance and savings. Jai Kisan operates with a philosophical goal to decrease cost of capital and other financial services. It is NABARD's first equity investment with access capital at lower rates and a network of FPOs.

Jai Kisan offers 3 financial products catering to the pre and post harvest needs of the farmers - equipment financing, input financing and invoice financing. It maintains a digital database to understand the customers better and provide customised solutions. These credit services have reduced the time of lending and borrowing, increased liquidity, reduced losses in yield and increased profits due to more crop cycles.

Jai Kisan currently has 9000+ active borrowers, an average ticket size of 1.5 lakh rupees per customer and tenures ranging from 1 month to 3 years. It disburses 15-20 crores on a monthly basis and aims to reach 25-30 by end of 2020 and expand the geography and number of borrowers.

Q.1. Does JaiKisan provide credit for purchasing tractors? - overfunded - only propels
Tractors are highly overfunded and only propel. Hence, Jai Kisan does not fund tractors, we provide credit for irrigation facilities and other equipment.

Q.2 Is the credit provided collateral based? What is the time frame within which they have to repay?
How do you deal with cases of failed repayments?

Our loans are not collateral based, they are backed by equipment and value chain players. The tenure ranges from 1 month to 2-3 years depending on type of finance and the type of crop cycle of the farmers. We keep the lenders interests and expectations in mind and the terms of repayment are discussed with the farmers in advance. We encourage landless farmers to take loans and our experience with them has been positive as they are more hard working, financially responsible and diligent.





Q. How are you helping in terms of capacity building of farmers - a constraint to leveraging digital platforms?

CropIn - We conduct training through extension workers with the support of technical consultants and agronomists initially; quarterly assessments are conducted to analyze the technology usage and we re-engage with the farmers whenever usage drops. Hence, we follow a combination of both digital and physical.

DeHaat - We provide in-person support by an extension team at the cluster level through on-field demonstrations. Capacity building sessions are conducted for the FPO leaders, trickling down to the farmers.

Stellapps - We use the opportunity when the farmers come to the milk collection centres 2 times a day, they are segregated into low touch, moderate and intense groups. A team of vets, paramedicals go on farm visits regularly.

Jai Kisan - We leave the agri and poultry advisory to the value chain players and focus on financial advisory. Field officers provide insights on financial discipline to farmers to ensure financial stability and independence and the account managers and customer experience team interact with the farmers to understand their experiences and needs.

Q. How have your products/services helped farmers during this Pandemic times?

The Pandemic has acted as a catalyst for agtech adoption since agriculture is the only sector that did not stop functioning. We have experienced an exponential growth in terms of adoption and the willingness to learn among farmers!

Key Take-Aways

- The key services provided by CropIn include – Smart Farm, Smartrisk, MWarehouse and Smartsales.
- The first step towards adopting agtech is digitization of farms and farmers.
- DeHaat aims to act as a bridge between the farmers and agribusinesses.
- A combination of both physical and digital interventions is necessary for the success of agtech initiatives.
- The key interventions of Stellapps in dairy farming include - Animal wearable, Herd management, Grade-to pay and Reception docks at chilling centres.
- Awareness among customers around the nutritional and quality aspects of milk products can increase demand for premium products leading to a positive impact on the income of dairy farmers.
- Jai Kisan offers 3 products – equipment financing, input financing and invoice financing to provide pre and post harvest support to farmers.
- The COVID-19 Pandemic has acted as a catalyst for technology adoption.