



HOW WILL DIGITAL INDIA IMPACT ON AGRICULTURE IN INDIA?

Jagannath Biswal

Faculty, Department of Economics, Khallikote Autonomous College, Berhampur.

“Agriculture is our wisest pursuit, because it will in the end contribute most to real wealth, good morals and happiness.”

Thomas Jefferson.

“Digital India is more for the poor and underprivileged. It aims to bridge the gap between the digital haves and have-nots by using technology for citizens.”

Shri Rabi Shankar Prasad

Hon’ble Minister of Electronics and Information Technology, GOI Digital India and Indian Agriculture

Agriculture sector forms an important part of Indian Economy. The share of agriculture in national income of India is about 17.9 percent which is very high compared to the other developed countries such as in USA 3% share and in Canada 4% share is contributed by agriculture sector towards national income. India is the world’s largest producer of pulses and spices and second largest producer of wheat, rice, cotton etc. In such a scenario, it becomes imperative that the agriculture sector in India should be updated continuously through wise use of technology and innovation.

Agriculture sector in India faces a lot of infrastructural issues. But there are a lot of other issues which affects the productivity significantly. In India, most of the farmers do not have the relevant information which they need. The information can be related to the technological innovations, financial sources, insurance etc. The farmers in India require agri-information. Most of the farmers are dependent on the information spread through word of mouth in rural India. Only a small population of farmers receives information through TV or radio. After the farmers have cut the crop, they require market information to select the best prices and vendors. Unfortunately, due to lack of proper facilities, they have to depend on multiple middlemen, who take away all the margins and only a nominal amount comes to the pockets of poor farmers. It is very unfortunate that the sector which employs more than 50 percent of Indian population is lacking so much.

While the problems related to the infrastructure like warehouses, machines etc. should be resolved but digital Indian initiative by government of India can do wonders in agriculture sector. Digital India is basically a platform to provide the people of India various services through digitally enabled devices. It comprises of providing services via internet on phones, computers etc. The objective of digital India in agriculture sector is to provide the government services to the farmers in rural and urban areas electronically.

Pillars of Digital India

The new initiative of Government of India is Digital India has recently launched by PM Narendra Modi on 1st July 2015 with the vision to transform India into a digitally empowered society and knowledge economy. It envisions empowering citizen’s with access to government services and livelihood related services, among others. It aims at ensuring the government services are made available to citizens without any or through less paperwork. The pillars of Digital India are:

1. Broadband Highways.
2. Universal Access to Phones.
3. Public Internet Access Programme.
4. e-Governance – Reforming government through Technology.
5. e-Kranti – Electronic delivery of services.
6. Information for All.
7. Electronics Manufacturing – Target NET ZERO Imports.
8. Information Technology for Jobs.
9. Early Harvest Programmes.

The one thing which is the most useful for Rural India is the seeing up of an Online National Agriculture Trading market to help farmers of India and increase the agriculture. By 2019, the two-way platform will be created between Farmers and Buyers. This will be done through the broadband connectivity across the rural India.

Digital India And Its Benefit To The Farmers

Let us look at some of the important points which will impact Farmers in big way through this initiative.

1. Farmers now have many available options to sell their produce.



2. They will have the options to sell and buy fruits and vegetables and other produce across India through online platform.
3. Currently Farmers have to sell their produce to few mandis and market committees and they charge high amount of tax from them.
4. Farmers can sell their produce to mandis or to online platform.
5. The direct link between seller and buyer will erase out the mediators which will increase the profit margin of farmers and it will also benefit the end product customer also.
6. This online trade will be free of cost so it's a service with no cost again it will boost producer's income.
7. An agency would be setup to monitor the smooth functioning in online trading, it will also look after the transportation facilities after the online purchase/sell.

Government's Initiatives Implemented So Far

Government has, among others, initiated several measures viz.

1. Government has put in operation three portals viz. farmer portal, kisan call centre and m-kisan portal to help farmers take informed decisions for efficient farming under varying agro-climatic conditions.
2. Under the e-Governance program, soil health card software has been standardized and web-based software developed to provide integrated nutrient management recommendations.
3. Under National e-Governance Plan in Agriculture [NeGP-A] information is provided to farmers through multiple channels including Common Service Centres Internet Kiosks and SMSs. Currently, 12 identified clusters of services provide information on weather, soil health, seeds, nutrients, pests, irrigation, crops, good agricultural practices, farm machinery, marketing infrastructure, farm commodity prices, arrivals, procurement points, electronic certification for export & import, drought relief & management, livestock, fisheries management, training, monitoring implementation and evaluation of schemes. The first phase of the project is under implementation in seven states out of 28 in the country
4. National Bank for Agriculture and Rural Development has also designed agricultural portals for farmers.

Aim of the Government for the Agriculture Sector

Here's what the Government aims to do for farmers:

Create A Virtual Agriculture Market

The Government wants to make a common electronic platform which will allow farmers to sell their produce to buyers, anywhere in the country. The Centre has set aside Rs. 200 crore for the creation of this National Agriculture Market online trading portal. The platform has launched on April 14, 2016 and will tackle the problem of distress selling. It aims to connect 585 mandis in the country. The government also pitched for more start-ups in agriculture.

Ensure More Farmers Get Access To Crop Insurance Scheme

The Union cabinet in January 2016 had approved the Pradhan MantriFasalBima Yojana. In this scheme, a premium of 2% of the sum insured will be charged from farmers for all Kharif crops and 1.5% for all Rabi crops. The Government will cover the remaining insurance premium. The government have covered entire anticipated farm income under the scheme. Even in case a farmer fails to till his fields due to drought-like conditions, he will be compensated to a certain extent.

Encourage Use of Modern Technology And Equipment

ITC is successfully operating a brilliant platform called e-chaupal. These e-choupals are run by local farmers provided with some basic training to operate the web tools. The company provides all the necessary infrastructural facilities for this programme. The farmers can get various information related to weather conditions, prices in the market and other news related to agriculture. It provides a virtual market where the farmers can sell their crops at the prices available in the market. TCS owned platform "mKRISHI" provides advisory services to the farmers over mobile phones in audio-visual mode. The farmers put their query and get the status of their queries through electronic messages. They can get expert advice when the experts are available. Additionally, the information like weather conditions, prices, new methods and techniques etc. are also provided to the farmers.

Information and Communication Technology (ICT) has incredibly increased agriculture production and productivity in terms of raising crop productivity and profitability per unit area and resources. By June, 2014, rural India had about 122.4 million [68.32%] households with mobiles exhibiting mobile connectivity has become a basic service in rural areas. Rural mobile subscriber base is growing twice as faster compared to urban subscriber base. As of March 2015, the national tele density was 79% and rural tele density 46.5%. Telecom Policy aims to increase rural tele density to 60% by 2017 and 100%

by 2020. Study of the IMAI revealed 80% using it for communications, 67% for online services, 65% for e-commerce and 60% for social networking. Mobile phones can be effectively utilized for purpose including generating, processing, transmitting, disseminating, sorting, archiving and retrieving critical information and data relating to agriculture.

Increase Reach of Soil Health Card Scheme

The Prime Minister, while distributing soil health cards among farmers, spoke about the importance of the scheme. The Government plans to target over 14 crore farmers. The scheme will help them improve productivity by providing them basic information on fertilizers. The farmers can also get soil tests under this scheme. Per drop, more crop is what the government is giving importance to. The government initiated several measures for sugarcane farmers. The dream of the government is to increase the reach of the soil health card scheme.

Digital India Through E-Sagu, Community Radio, Digital Green

Digital India is a boon for agriculture sector. One of the latest digital India initiatives is “e-sagu”. It provides expert advices to the farmers at their doorsteps only. With the use of internet and audio-visual communication facility, the advices are provided to the farmers regularly regarding the various techniques to increase the farm productivity. Another emerging digital tool is Community Radio (CR). Community Radio fulfils the information needs of the farmers using radio station facilities. Digital Green is a brilliant initiative that accomplishes the task of dissemination of agricultural information using videos.

There are a number of other initiatives taken under digital India programme which gives the farmers information about source of finances, warehouses availability, government subsidies, soil testing and irrigation facilities, preventive actions in case of droughts and floods, complaints redressal facilities and many other such facilities. All of these initiatives under Digital India programme have been helping the Indian farmers increase their productivity and earn more and more profits.

Set Up Irrigation Projects In Rural Areas

The Prime Minister told the farmers about the Government’s plan to expand irrigation. In a bid to reduce dependence on the monsoon, the Government had approved a sum of Rs. 50,000 crore to be spent on setting up irrigation projects in rural areas through Pradhan MantriKrishiSinchai Yojana. The major objective of the Pradhan MantriKrishiSinchai Yojana is to achieve convergence of investments in irrigation at the field level. It will also expand cultivable area under assured irrigation.

M- Services

Mobile phone is the preferred delivery medium with focus on mGovernance and mServices. The mAgriculture and mGramBazar, out of the seven components covered under mServices, directly impact agricultural extension and marketing services. The project will benefit small farmers. It seeks to

1. Transform rural India into a digitally empowered knowledge economy.
2. Provide universal phone connectivity and access to broadband in 250,000 villages.
3. Extend timely services to farmers through information technology and its tools.
4. Enhance efficiency in agricultural governance through digital literacy and electronic delivery of services.

Obstacles/Challenges before the Government

Though it is a good initiative but GOI has to face some challenges to make this plan successful. A proper training program, uninterrupted services, electricity, availability of smart phones, tablets and computers to almost every farmer can be big challenge. However due to these hurdles present in the system, Digital India is not able to provide the maximum benefits to the farmers. Most of the farmers live in rural India. The farmers at these remote and backward places do not have access to internet, smartphones and computers. Without fulfilling these basic infrastructural requirements, Digital India initiatives can't provide benefits to them. Even in the areas where the farmers have access to these appliances, due to rampant digital illiteracy in rural areas, they are not able to make proper use of them.

For India, at a time when national, regional and international research institutes have already developed technologies, farmers need motivation and encouragement to adopt these proven yield-enhancing, cost-efficient and environment-friendly technologies. Acknowledging the slow impact of the ICT initiatives of the government and private sector, the digital India project should pay undivided attention to provide accurate information from authentic sources to farmers on time on various aspects as identified by various field studies, viz.

1. Details of location specific crop production technology.
2. Economics of crop, livestock and fish farming.
3. Authorize sources of timely availability of standard quality inputs [seeds, fertilizers, pesticides etc.] farm equipment, sprinklers, drippers, among others, along with costs.



4. Post-harvest management technology and facilities including transport, storage, processing, preservation, packaging and marketing.
5. Commodity prices, weather, measures to minimize impact of drought and climate change.
6. Detailed procedure for availing bank credit, crop and subsidies, land records etc.
7. Government's programs providing subsidy and other facilities to develop irrigation potential, rainwater harvesting, soil and water conservation measures, soil and water testing facilities, prevention and control of pests and diseases, biogas, minimum support prices.
8. Contract farming, value chain system, warehouse receipt.
9. Reclamation of degraded, saline and alkaline land.
10. Mechanism to redress grievances. Accordingly, farmers need ICT enabled portals for following purposes which can be developed, rigorously field tested and made available to farmers.
11. Technology: Production enhancing proven crop-specific technologies [from pre-sowing to harvesting and post-harvest management] based on soil & water analysis. Separate for dry land & irrigated farming focusing efficient use of seeds, fertilizers, water, pesticides, degraded, saline & alkaline land.
12. Production inputs & farm equipment: Crop-specific reasonably priced standard quality production inputs [seeds, fertilizers, pesticides, etc.] and farm equipment and machinery along with sources of availability.
13. Post-harvest services: Storage, transport, processing, packaging.
14. Institutional services: Land records, farm credit, insurance, marketing, weather, farmer producers' organizations, market yards, procurement centres.
15. Government facilities: Availability of subsidies, assistance available to mitigate effects of climate change, drought, floods, earthquake, cyclones.
16. Role of the state Government: State government's department of agriculture, state agricultural universities, KrishiVigyanKendras, regional research institutes, farmer producers organizations, corporate/industrial/business manufacturing/production and distribution of farm inputs, farm equipment & machinery, rural financial institutions, insurance companies, among others, have a significant role and added responsibility to contribute their professional knowledge to develop digital ecosystem for agriculture and make available to farmers.

Conclusion

Digital India programme has a lot of potential for agriculture sector. To utilize this untapped potential, the government should provide the digital infrastructure and digital literacy to those farmers who don't have access to these facilities. Timely feedback should be taken from the farmers whether the information provided to them under digital India programme is helpful for them. The farmers should be encouraged to give suggestions so that the farmers can be provided more and more facilities. The government is taking a lot of steps to make facilities under Digital India accessible to all the farmers. But it will take some years for Digital India programme to prove a big success in agriculture sector.