Smartphone Apps for Agri-information dissemination during Covid19 lockdown

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Introduction

The reach of smartphone even in rural areas extended the Information & Communication Technology services beyond simple voice or text messages. Several smartphone apps are available for agriculture, horticulture, animal husbandry and farm machinery Information about policies, good agricultural practices, market prices of commodities, current demand of commodities and various useful agriculture schemes are helpful to farmer for reaping good profits. Thus, it is important for farmers to have all such information on their door steps. Even though all information is available on public domain, it is a very tedious task to farmer to access it. Mobile or Smartphone applications could avail all such information with changing seasons and climate. The smartphone app is one of the platforms, where a farmer can get all solution and information in just one touch. Smartphone apps revolutionized the connectivity and used for transferring agri-information to farmers. According to the statistics, there are two billion smartphones user across the globe in 2016 (EMarketer, 2016). Data also concludes that India has the third largest smartphone user after China and USA which overs around 167.9 million in 2015 (EMarketer, 2016). During the past decades, agriculture information and technology transfers are mostly done by village level workers, extension personals, scientists, SMS (Subject Matter Specialists) of KVKs, SAUs etc. with the arrival of the internet, most of the information were tried avail by web-based approach/e-based services.

Abstract

The use of mobile technologies as a tool of intervention in agriculture is becoming increasingly popular. Smartphone penetration enhances the multi-dimensional positive impact on sustainable poverty reduction and identifies accessibility as the main challenge in harnessing the full potential in agricultural space. Different elements affected the agriculture development; however, the most essential bottlenecks are lack of instant information and drudgery involved in farming practices. To conquer these issues, agriculture should be made more alluring and done smartly. Coronavirus (covid19) Lockdown harms Agriculture Sector in India, as farmers are unable to get the latest information regarding various agricultural issues, market Status & other relevant information related to the agriculture & allied sector, smartphone apps act an important tool for agricultural information dissemination during this period. There are varieties of mobile applications, utilized over the globe for different segments, including farming, but in our country, the usage is still is limited. In India, there are enormous opportunities for utilizing smartphones as a part of agribusiness improvement. Its utilization is vital for quick growth and easy access to information to Indian agriculturists, farmers, and growers.

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Mobile Apps Help Farmers in Following Aspects

1. Spreading agriculture-related information to farmers in the poorest communities are made easier with the help of computing, integrated IT systems, online education and proliferation of mobile phones.

2. It helps farmers to make better land decisions.

3. It can enable soil condition to be monitored in conjunction with weather information in order to better plan the planting and harvest season.

4. GIS can be used to provide pre-emptive information on pest and animal diseases so farmers can respond accordingly to the level of risk.

5. Optimising the use of fertiliser, seeds and water can also be done by utilising mobile and cloud computing technology.

The USDA’s ARS recently released the first two of a suite of mobile phone apps viz ‘Land info’ and ‘Land cover’. It connects the agriculture producers around the world and provide them with shared knowledge on ways to maximize their land productivity while protecting its resources for future generations. Reuters Market Light (RML) is a subscription based SMS service that provide localized information on commodity prices, crop institution and weather. Smartphone mobile apps designed and developed by Jayalakshmi agrotech from India are the most commonly used agriculture apps in India. The mobile apps are in regional language to break the literacy barrier and deliver the information in the Simplest manner. Farmer link is a mobile solution for enabling the coconut value chain in Philippines. This was created by Grameen foundation and combine satellite data and farm data collected by mobile equipped field agents to help coconut farmers increase productivity, deals with crop pest and diseases.

Various smartphone apps for agriculture & allied sector, which will be very helpful for farmers during the covid19 lockdown period are discussed below, as this a very crucial time of Indian farmers for carried out various agricultural practices & marketing. This apps provide enormous information which will be very beneficial for farming community to update with the field condition, weather condition & market condition. This apps provide information about weather forecasting, advisory services, market prices of agricultural produces, govt scheme, subsidies & crop insurance information.

**Kisan Rath**

In recent lockdown condition in India due to corona virus pandemic, Ministry of Agriculture & Farmers’ Welfare, Govt. of India recently launched a mobile app “Kisan Rath” to facilitate transportation of food grains and perishables during the lockdown period. This mobile application is developed by the National Informatics Centre (NIC) to ensure farmers and traders are able to find transport for Agriculture and Horticulture produce. Kisan Rath App will greatly facilitate farmers, FPOs and Cooperatives in the country to have the choice to find a suitable transport facility to transfer their agriculture produce from farm gate to markets. This app also help farmers, traders to connect with transporters. It helps connect farmers and traders to a network of more than 5 lakh trucks and 20,000 tractors. Here are multiple types of transports available. With the primary transport, the goods can be moved from the farm to the mandis, local warehouses or the collection centres of farmer producer organisations. As for the secondary transport, it can be used to move goods from the local mandis to intra and inter-State mandis, processing units, railway stations, warehouses or wholesalers. Moreover, there are transports with refrigerators also available. In order to help farmers and transporters use the application with ease, the app even brings support for the Hindi language. During lock down, farmers are finding it difficult to book tractors and trucks for transporting their produce. This app will help them bring their commodities to mandis and other market yards.

**Kisan suvidha**

Launched in the year of 2016-17. It provides information on current weather and forecast up to next 5 days. It also provide information about market prices of crop/commodities in nearest town.

**RML farmer-Krishi Mitra**

This app provides information on latest commodity and Mandi prices, precise usage of pesticide and fertiliser, Weather forecast and advisory, Government agriculture policy and scheme. In this apps, users can choose from 450 crop variety, 1300 Mandis, 3500 weather locations, across 50,000 village and 17 states in India.

**Pusa krishi**

Launched by Ministry of Agriculture and Farmers Welfare. In 2016, farmers can easily get Information about technology by IARI, which will help in Increasing returns. This app also provides information on various of crops variety developed by ICAR.

**AgriAPP**

This apps provides complete information on crop production & crop protection. It enables Farmers to across all the Information related to “High Value, low Product” category crop varieties. It also provides information on soil & climate status of particular area. Video-based learning is the unique feature of this apps.

**Kheta-badi**

It is a social initiative app, which aims to promote and support ‘organic farming’ and provide important information related to farmers in India. This app helps farmer to switch their chemical farming to organic farming.
Currently available in four languages (Hindi, English, Marathi and Gujarati).

**Krishi gyan**

This app doesn’t require the mobile no. of individual to stay connected. It provides general information on farming. As well as it enables Indian farmers to connect with Krishi Gyan experts and asks them questions related to farming and get answer within the application through notification.

**Crop insurance**

This app helps farmer to calculate insurance premium for notified crops and provides information cut-off dates and company contacts for their crop and location. It can also be used to get details of normal sum insured, extended insured, premium details and subsidy information of any notified crop in any notified area.

**Agri market**

This apps is Launched along with crop insurance app by Government of India. Farmers can get information related to prices of crops in markets within 50 km of their own device location using the Agri market mobile app.

**CCMobile app**

“CC” stands for Connected Crops and the app tends to connect farmers with their crop. The users can read the environment metrics like temperature, humidity, wind velocity and moisture remotely. They can also compare those metrics over a period of time, say weekly, fortnightly or monthly to assess the status of their crop. The sensor readings are available through SMS / email alerts, graphing and historical data.

**Spray guid**

Ensuring the right composition, viscosity or consistency of pesticide or other agricultural solutions is important. The app calculates the amount of solute, the amount of solvent, the mixing time and the spraying areas so that you get the best value from your investment. Users can share their experience including data and results with others over their social accounts. This apps save time & efforts as well as reduced the human error & accidents.

**IFFCO kisan**

Offered by Indian Farmers Fertiliser Cooperative Limited (IFFCO), the app is dedicated to farmers of India. They can seek advice from agriculture experts and scientists and explore its library to know about crops, agriculture cycle, agriculture field preparation, water management, disease control and agriculture proactive actions. They can also know about the commodity trade prices across various food and vegetable marketplaces in India and access weather forecast (temp, RH, rainfall possibility, expected wind speed & its direction in the set preferred location) on their phone.

**AgMobile**

From making the soil right to the plantation to manuring and irrigation, to harvesting and monetizing the produce, the app is to help you at every stage. Take stock of weather, related forecasts and maps, watch live commodity market prices and seasonal comparison, and capture news that can affect your agricultural endeavour. The data or insights are derived from Barchart and Successful Farming. Also, learn commodity trading skills and listen to crop advisor, grain merchandiser, analyst, or broker, etc.

**Machinery guide**

This app assists the farmers with using the farm equipment for various purposes like soil cultivation (cultivator, rotator, roller, etc.), sowing, manuring, planting, fertilization, pest control, produce sorting, harvesting, irrigation, etc. precisely. The app graphically explains how to make the optimum use of the devices and keeps a watch on them via GPS connectivity.

**RiceXpert**

This app is developed by the Scientists of ICAR-NRRI, Cuttack, Odisha. RiceXpert is developed for the farmers to provide real time information on insect pests, nutrients, weeds, nematodes and disease-related problems, rice varieties for different ecologies, farm implements for different field and post-harvest operations. Other components such as information about news, announcement and advisory services, frequently asked questions on the related subject, team involved etc. are also included. The app has web-based application systems which facilitates flow of information from the farmer to the farm scientist and get their instant solution. Farmers can use this App as a diagnostic tool in their rice fields and make customize queries for quick solution of their problems through text, picture and voice that would be addressed by NRRI experts.

**BigHaat-Agriculture app**

BigHaat is the India’s largest agriculture platform. BigHaat provides agriculture inputs directly to the farmers / Kisan doorstep. Big Haat provides access to latest agriculture technology and techniques to Indian farmers. Its aim is to make agriculture more profitable.

**Gramophone - Krishi Mitra, agriculture app**

Gramophone is one stop solution for farmers for all kind of agricultural needs. Farmers can buy quality seeds, pesticides, crop nutrition, implements and agri hardware, Gramophone App uses modern technology to improve farm income by providing quality products and right information to the farmers. Farmers can access localised package of practice, crop advisory, and weather information. This app also provides daily weather updates and nearby mandi prices (Mausam ki jankari, mandi bhav) which helps farmers to make right decisions. Gramophone farming app provides information on all major crops. Farmers can connect with agri doctors/experts and local farming community to get
answers to their queries.

**Agri media video app**

Agri Media Video App is one of the most popular in mobile apps for farmers in the video category. It is an online marketplace bringing farmers, agriculture input/output, farming retail and fulfilment service on an online platform. It also provides chat service for farmers to solve their query related to agriculture with the option of upload images of infected crops. Farmers can easily chat with agriculture expert and discuss their problems. This smartphone application also provides various videos related to agriculture practice, new technologies, successful farmers, rural development, agriculture news, new govt. schemes related to agriculture etc.

**Kisan yojana**

This app is developed by Agriculture News Network (ANN). It provides information about all Govt. schemes to Kisan. It commutes the information gap between the rural people and Govt. It also provides the schemes of the different relative states Government. This mobile application also saves the time and travel expense of Kisan to reach the state Govt office for various purpose.

Other apps like Smart crop, Mandi trade, Kishan market are the online market space providing space for farmers to sell their produce after collecting information regarding market prices. Farm-o-pedia in Gujarat, Agri smart in Punjab, Krishi Suchak in Karnataka provide information regarding specific area.

**Conclusion**

Smartphones have been identified as one of the most effective innovations which benefited a large number of farming community & agricultural professional. In India, mobile applications are transforming agriculture. To make agribusiness productive, smooth and respectable it is important that, it should be linked to recent technologies. Mobile application one of such technology that can be used directly in agricultural growth & development. Smartphones are the example of over coming adversity of connecting the rural-digital divide, bringing monetary advantages and acting as catalyst for social mobilization through improved communication. The smartphone apps also act as a most important tools for farmers in providing information related to crop growth status, weather forecast & advisory, farm advice, market price & post-harvest management, in this covid19 lockdown condition due to corona pandemic.

**References**

Barh, A., Balakrishnan, M., 2018. Smart phone applications: Role in agri- information dissemination, Agricultural Reviews 39(1), 82-85