

2

MOBILE APPLICATIONS IN AGRICULTURE[#]

*Ajay Kumar Prusty¹, Bibhuti Prasad Mohapatra²,
Sandeep Rout³ and Chitrasena Padhy¹*

Abstract

Mobile application, a popular ICT tool has a great potential to be used for knowledge sharing among farmers. This review study undertaken to gather the various information and types of applications available for farmer benefits derived by farmers were seeking solutions to minimise crop and livestock losses with easily available information, to carry out regular learning. The constraint may be the network and poor internet, which can be resolved by the government for the development of the farmers.

Keywords: Application, Extension, Farmer, Mobile, Smartphone.

[#]General Article

¹M.S.Swaminathan School of Agriculture, Centurion University of Technology and Management, Paralakhemundi, Odisha-761211, India

²Department of Extension Education, College of Agriculture, Odisha University of Agriculture and Technology, Bhubaneswar, Odisha-751003, India

³Faculty of Agriculture, Sri Sri University, Cuttack, Odisha-754006, India

Email - sandeeprou1988@gmail.com

Introduction

The number of mobile applications is increasing with time to provide support to agriculture and allied sectors for the benefits of farmers with the latest technology and information. An application in mobile is software on a mobile phone or tablet that enables the users to access particular information; making payments and transactions; send messages; etc. An application can be downloaded for free or with payment from any online store like Google Play Store, Apple App Store, Samsung Galaxy Apps, LG SmartWorld, Sony Apps, Amazon Appstore etc., through a wireless connection in devices (mobiles/tablets) connected with the internet.

The main advantage of mobile apps for a farmer is easy access to information about agriculture and allied sectors in mobile devices. The apps in mobile devices store information that can be easily accessible to the farmers and some information the requires internet connectivity for access to them such as information about disease and pest, package and practices of crops, meteorological information, information related to schemes, banking information etc. The mobile helps in having dynamic, real time, back and forth communication at convenient times for the farmers and the experts rather than only SMS services which were only in one direction. Mobile assists the farmers in staying up-to-date with the information worldwide. Studies reveal that mobile phones have an effective impact on the reduction of poverty and identify convenience accessibility as the major challenge in accumulating the full prospective (Bhavnani *et al.* 2008).

Information plays a key role in a farmer's life by enhancing their knowledge and strengthening their decision-making ability. Farmers use multiple sources of information, that may be harmonizing or substitutes to them and the single sources of information don't satisfy the needs of farmers also (Mittal and Meher, 2016). More than 50% of the new Internet users are expected to come from rural communities. Cheaper mobile handsets, the spread of wireless data networks, and evolving preferences of the consumers would make the internet and mobile applications penetrate the rural regions increasing the usage (Jain and Sanghi, 2016). Smartphones and Mobiles have become an omnipotent device in human interface and communication and they become a supreme tool for grassroots agricultural extension linkage. Grassroots extension functionaries, *viz.* agri-input dealers and there should be training to use smartphones and use applications with ICT tools for the progressive (Panda *et al.* 2020).

Popular Agriculture Mobile Applications used by Farmers in India

1. Kisan Suvidha

For the event and empowerment of the farmers and villages of rural areas it was launched by Honourable Prime Minister Narendra Modi in 2016. The application design is efficient and provides a user friendly interface. Kisan Suvida was developed by the Ministry of Agriculture and Farmers Welfare for farmers in facilitating the dissemination of data on Market Prices, Agro-advisory, Weather, Extreme Weather Alerts, Plant Protection, Dealers – Fertilizer, Seed, Farm Machinery, Pesticide, animal husbandry, crop insurance, Call to Kisan Call. Farmers get to learn and practice several new technologies provided in the

application. Problems regarding agriculture can be solved with direct communication of farmers and scientists in the platform provided by the application. The knowledge is currently provided in English, Hindi, Odia, Tamil, Gujarati, Marathi, Punjabi, Telugu and Bengali. In a study it had been reported that 28% of the farmers had the opinion that this application was very effective, while of 54% farmers had the opinion that this application had a medium level of effectiveness (Agashe *et al.* 2019).

2. IFFCO Kisan Agriculture App

This application was launched in 2015 by IFFCO Kisan, a subsidiary of Indian Farmers' Fertilizer Cooperative Ltd. It aspires to assist Indian farmers to make knowledgeable decisions with the help of modified information associated with their needs. The farmers can access a range of instructive modules which include weather, agricultural advisory, agriculture information library within the style of the text, market prices, audio, videos and images with the selected language of farmers. The application also provides helpline numbers to induce connection with Kisan center Services. The application supports eleven languages across India viz. English, Hindi, Odia, Telugu, Bengali, Tamil, Punjabi, Malayalam, Marathi, Kanad and Gujrati.

3. RML Farmer: Krishi Mitra

RML Farmer may be one kind of agriculture application where farmers can carry on with the newest product and market prices, accurate usage of fertilizers and pesticides, weather outlook and advisory, farm and farmer related news. It also provides agricultural guidance and news concerning the government's agricultural policies and schemes. Farmers can make a selection from larger than 450 crop varieties, 1300 mandis, and 3500 weather conditions regions across 50,000 villages and 17 states of India. It functions with the assistance of explicit tools planned to inspect or provide information on several aspects of farming practice. Eg. CropDoc assists the farmers in identifying situations that affect their crops at the appropriate time and recommends relevant actions; Farm Nutri suggests common and specific nutrient recommendations, which are offered inside the kind of a suggested fertilizer dose.

4. Pusa Krishi

This application was launched by the Union Agriculture Minister in 2016. It aims to assist farmers to get information regarding technologies developed by the Indian Agriculture Research Institute (IARI), assisting the farmers to receive increased returns. The application helps farmers by providing them information associated to novel kinds of crops developed by Indian Council of Agriculture Research (ICAR), sustainable farming cultivation practices also because farm machinery and implements help in elevating the income of farmers.

5. AgriApp

AgriApp supplies whole information on crop cultivation, crop protection and each one related agriculture allied services. It too enables farmers to avail complete knowledge associated with "High value, low product" kind of crops from varieties, soil/ climate, to harvest and storage measures. A choice to communicate with experts, video based

education, news, online markets for insecticides; fertilizers etc. are accessible on the application.

6. Kheti-badi

'Kheti-Badi' may be a social proposal application. It assists to push and help 'Organic Farming' and give relevant information/issues associated with farmers in India. Agriculture now-a-days is highly infatuated with genetically modified seeds, fertilizers and chemical pesticides; this application assists farmers towards switching their chemical farming into organic farming. However, this application at present is only available in three languages (Hindi, English and Marathi).

7. Whatsapp

It should come off as a surprise to many, but one in every of the foremost widely used app for texting is bridging gaps between farmers. Departments of Agriculture at some states have utilised this public podium to form several groups with progressive farmers who connects them through their Smartphones. It originally started with groups of officials with android phones and later it was introduced to agricultural communities with large number of farmers involved with it.

8. Krishi Gyan

Works on the identical aspect as Whatsapp communication but is taken into consideration to be better because it doesn't require mobile numbers of individuals to stay connected. Aside from supplying common information on farming, it enables Indian farmers to attach with Krishi Gyan experts and enquire questions associated with farming, and search answers inside the applying through notifications. The farmers in addition as agriculture enthusiasts can still share their answers with each other.

9. Crop Insurance

The application assists farmers to analyse premium for notified crops and provides information points in time and company contacts for his or her crop and site. It can also be accustomed to get particulars of the regular sum insured, premium details, extended sum insured and subsidy information of any notified crop in any notified area. It's further linked to its web portal which caters to all or any or any stakeholders including farmers, states, insurance companies and banks.

10. AgriMarket

It was launched alongside the Crop Insurance application by the Government of India, the application was developed with an intention to remain farmers on top of things crop prices and dispirit them to travel for distress sales. Farmers can acquire information linked to values of crops in markets inside 50km of their smartphone location with the AgriMarket Mobile Application.

Conclusion

Mobile technology is steadily transforming the conventional method towards modern methods of using the internet in smartphones to access the information and

technology needs of farmers. All these mobile applications help to reduce transportation, middlemen and transactional waste in agriculture. These applications are helping to boost overall business performance and reducing the negative environmental impacts of farming. Any kind of information is one click away for the farmers recently. However, several new mobile applications are being introduced regularly, so it is highly important to select which application to use by checking if the applications provide up to date information with credibility and fulfilling all the requirements of the farmers.

Reference

1. Agashe, R., Verma, S. and Singh, P. (2019). Opinion of Farmers Regarding Effectiveness of Information Dissemination through Kisan Suvidha Mobile Application in Surguja District of Chhattisgarh. *Journal of Krishi Vigyan*. 7(2): 270-272.
2. Bhavnani, A., Chiu, R. W. W., Janakiram, S., Silarszky, P. and Bhatia, D. (2008). The role of mobile phones in sustainable rural poverty reduction. retrieved November, 22.
3. Jain, N. and Sanghi, K. (2016). The Rising Connected Consumer in Rural India. The Boston Consulting Group.
4. Mittal, S. and Mehar, M. (2016). Socio-economic factors affecting adoption of modern information and communication technology by farmers in India: Analysis using multivariate probit model. *The Journal of Agricultural Education and Extension*. 22(2): 199-212.
5. Panda, C.K., Divakar, S., Paswan, A., Azad, C. and Tyagi, S. (2020). Smallholder Farmers' Perception on Mobile Phone Advisory Potential in Farming in Bhagalpur, India. *Current Journal of Applied Science and Technology*. 38(6): 1-8.