

Mobile Apps: Empowering Indian Farmers to Make Informed Decisions

Dr. Murai Atul. M¹ and Dr. Shelke P. P.²

¹Subject Matter Specialist (Agricultural Extension), Krishi Vigyan Kendra, Tondapur Tal. Kalamnuri Dist. Hingoli. 431701 (M.S.)

²Senior Scientist and Head, Krishi Vigyan Kendra, Tondapur Tal. Kalamnuri Dist. Hingoli. 431701 (M.S.)

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Introduction

India is an agricultural country about 58.00 percent of households depends upon agriculture as their main source of livelihood. The rural India is currently moving fast towards digitalization and use of information communication technology. The timely access to information is crucial requirement for decision making for farmers in agriculture and allied sectors. The smart phones penetrated in rural India helping in bridging the digital divide, as a result development of mobile application by Indian Council of Agricultural Research New Delhi, State Agricultural Universities and Private Institute. Now there are no of apps which address farmers, farm women and rural youth to find out the price of commodities, plant protection, lightening alert, weather, cultivation practices of various crops and other advisory. Mobile Application is most convenient and useful medium to guide the farmers regarding various crop production technologies. Through using this mobile application, we can get scientific guidance how to carry out operation, sowing method, post-harvest management of any crops or vegetables. Farmers can also easily solve their farming problems, related to insect/pest infestation or any other problems.

A farming app can be a farmer's best friend in agriculture, which can increase their productivity without spending single rupees. The farmers can easily download this app from Google play store without paying a single rupee. Agricultural expansion can be greatly accelerated through modern tools and techniques that are now relatively cheap as compared to beginning, mobile apps can help farmers to access information on weather forecasts, market prices, and agricultural technologies.

The growth of mobile communication technology creating several opportunities for empowerment of farmers. There is need to create awareness on specific information and



services provided by this application. Moreover, it's time to focus more on digital agriculture for a growing and prosperous India.

Mobile Application: Is software on mobile phone handset and tablet computer that enables users to access specific information related to agriculture.

Advantage of Mobile Applications in Agriculture

- Mobile Application is convenient source of information to farmers.
- It's encouraged critical thinking of farmers and stimulates motivation.
- Get information at any point of globe.
- Save time and money.
- It can be used offline and have helpful features.
- Identification of diseases and provide solution to overcome it.
- To educate farmers on soil management practices to optimize crop production.
- The commodity price can be delivered in real time mode.
- Mobile app helps farmers to reduce environment impact of agriculture and increase sustainability.
- All information related to farming viz, soil, climate, rainfall, seeds and machinery, weather forecasting and lighting alert at any time is available on fingertips of farmers.
- The information is compiled in such a way that farmer's does not waste time while retrieving and obtained information quickly.
- some mobile apps can help farmers to create personalized crop calendars or to identify and manage pests and diseases.

Different Mobile App in Agriculture and Allied Sectors

1. Kisan Suvidha

Kisan Suvidha app was developed by Ministry of Agriculture and Farmers Welfare to help farmers for getting relevant information of agriculture and allied activities. This app provides information about current weather as well as next five days forecast, market prices of agricultural commodities in nearby areas, plant protection, dealers, fertilizers, seeds, expert advisory, machinery equipment, cold storage, and integrated pest management practices and through using this app farmers call directly connect to Kisan Call Centre.

2. Pusa Krishi

The Ministry of Agriculture and Farmers Welfare Government of India has launched this app in the year 2016. The purpose is to provide information about technology direct to farmer

fields. This app helps farmers to increase income through providing information about new varieties of crops developed by Indian Council of Agricultural Research, New Delhi resource conservation methods, farm machinery its implementation and crop production technologies to farmers.

3. Crop Insurance

The Department of Agriculture and Farmers Welfare developed for providing details to farmers to calculate and notified crop insurance. The apps help farmers to calculate insurance premium of notified crop based on coverage, area, and amount of loan. This app can also be used for getting sum insured, premium details and subsidy information of crops. This app serves as a guide and calculator for farmers regarding insurance.

4. Agrotech V.N.M.K.V, Parbhani

This app's developed by Directorate of Extension Education Vasant Rao Naik Marathwada Agricultural University, Parbhani. This application provides information on crop cultivated in kharif, summer, early seasonal and other crops. It includes information about crop variety, disease, and pest management, weed management, cost-effective methods of crop cultivation and video gallery include information about Swachh Bharat, Vidyapeeth Aaplya Dari and Umed programme organized by VNMKV, Parbhani .

5. Integrated Pest Management on Major Crop

This application was developed under Rastriya Krishi Vikas Yojana of Vasant Rao Naik Marathwada Krishi Vidyapeeth, Parbhani. The app includes information about Integrated Pest Management of cash crops, pulses, grains, cereals, and others.

6. Turmeric Cultivation Technology

Turmeric Cultivation Technology an innovative app developed by Vasant Rao Naik Marathwada Krishi Vidyapeeth, Parbhani. The farmer can get information on various uses of turmeric, types of turmeric, tillage operation, growing stages, variety, rhizome selection and its treatment, sowing methods, fertilizer management, irrigation, pest and disease management, harvesting/storage, post-harvest technology, information on export of turmeric and research centre regarding production and processing of turmeric in India.

7. Umang

It is an initiative component of Digital India developed into 13 different commentaries in 2017. The objective was to make government services available online and round clock to



all people in country. The app provides facility of payment, registration, searching information along with total 162 different services.

8. IIFCO Kisan Agriculture

The app was developed by a subsidiary of Indian farmer fertilizer cooperative Ltd. 2015 in 11 languages. The app enables access to various modules like weather, market prices, expert advice, news, agricultural information library in form of video and audio format and provide facility of Kisan Call Centre services.

9. Aatmnirbhar Krushi Application

The app is designed to facilitate early weather alerts to farmers. The data related to soil type, soil health, moisture, climate, and water are integrated into chart whereas, at same time it has been analysed to generate individual insights regarding crop selection, fertilizer requirements.

10. Shetkari

Shetkari Mitra is a multi-functional mobile app designed for farmers. It provides information on government schemes, crop management, agribusiness, market rates and success stories of farmers in agriculture.

11. Shetkari Masik Mobile App

Shetkari Masik is popular magazine related to agriculture developed by Department of Agriculture, Maharashtra in 1956. The app has simple interface which require mobile internet and Wi-Fi connectivity to register in app. Once you download, we can read magazine with internet connectivity.

12. e-Krishi

e-Krishi provides personalized crop calendar for popular agricultural fields as well as useful agricultural information like land preparation, crop sowing, crop planning, fertilizer management, seed treatment, pest, and disease management, weed treatment and irrigations.

13. Damini Lighting Alert

Damini Lightning Alert application is developed to warn user about lightening alert on user's location. Using this application, we can see light happened in last 5 and 10 minutes.

14. Plantix

The app is developed by PEAT, Germany for providing plant disease diagnostic and monitoring. The app provides users worldwide with customized information about best



practices, information on preventive measure. The app provides the possibility to send damage or affected plant parts via directly with smart phones and guides farmers through identification of diseases in simple manner it enables real time monitoring of pest and diseases.

15. APEDA Farmer Connect

This app is developed by agricultural and processed food products export development authority it's allow farmer to apply online for farm registration and approval by state government. The farmer can track status of application also and authorized government officer and farmers can login to access information. The app has in-built GPS capabilities to identify farm location.

16. e-Nam Mobile App

The app was developed by Small Farmer Agribusiness Consortium (SFAC), ministry of Agriculture and Farmers Welfare, Government of India. It is electronic trading portal promoted by GOI which network existing mandis to create a unified national market for agricultural commodities. The farmers can view State wise list of e-NAM mandis, arrivals in mandis and maximum/minimum price prevailing in any mandi.

17. Pashu Poshan

It was developed by National Dairy Development Board (NDDB). This app is helpful to calculate balanced ration of through which we can optimized cost considering to animal profile. The dairy farmers can know the correct quantity and mix of feed and fodder to be fed to milch animals.

18. Meghdoot

The Ministries of Earth Science and Agriculture developed this mobile application to provide information regarding weather forecast relating to temperature, humidity, rainfall, wind direction and wind speed which plays a crucial role in agricultural operation and to provide advisories to farmers on crops and livestock.

19. Bhuvan Hailstorm App

The app was developed by Ministry of Agriculture and farmer welfare, Government of India. This app takes photograph with geographical location to capture crop loss which has happened due to hailstorm. The captured data goes directly to Bhuvan portal which helps to analyse data in easy mode.

20. Krishi Video Advice mobile app



The application was developed by National Institute of Agricultural Extension Management MANAGE with NIC, Hyderabad. The aim is to provide advisory services related to agriculture and allied sectors on issue related to farming. The farmer/extension officer can use this app to capture three images of crop live from farmers filed itself and upload the same.

Conclusion

The emergence of digital revolution and penetration of internet in rural areas has motivated farmers to access new app that would keep pace with modern technology. The mobile application related to agriculture and allied sectors provide need based, credible and current information and meet requirements of farmers/farm women/rural youth and extension functionaries. Hence, the application should aim at holistic development of agriculture with link between farmers and consumer through a gender sensitive technology.

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