

Smart Phone Applications In Agriculture

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INTRODUCTION:

Agriculture and farming have been always a basic need for past, present and future. All human survival and culture flourish only when farming community is well developed. Research, extension and farmers efforts have all contributed significantly in increasing food production. The India Meteorological Department, State Agricultural Universities. IITM. KVK. Government department, AMFU, FASAL and DAMU together work on collection, predictions and preparation of weather advisory based on present and past meteorological data. The importance part of the weather forecasting is dissemination of the information to the each and every farmer of the country. The wide spread network of mobile phones could be the game changer in this problem. The mobile app is one of the platforms, where a farmer can get all solution and information in just one touch. During decades. agriculture the past information and technology transfers are mostly done by village level workers, extension personals, scientists, subject matter specialists of KVKs, universities etc. With the

arrival of the internet, most of the information were tried to avail by e-based services. But it has reached only limited users due to installation cost of the computer devices, SMSs and voice message delivery systems are easy, but it requires a special type of options or formats to be sent to the system to get the precise information, therefore ICTs are moving in the direction of mobile apps and all mobile app is available both on Playstore and Appstore.

Mobile based applications are nearly verge of replacing the computer based services due to its cheaper cost and easy integration with various cellular services. Mobile based revolution is a package, which is led by smart phones, internet service providers and application developers. There are thousands of applications present today in the area of agriculture. Timely access to information is a crucial requirement for decision making in agriculture and allied sectors. Information and Communication technologies (ICTs) are facilitating faster access and exchange of information. Among ICTs there has been

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increasing use of mobile phones with a number of services provided by various agencies. With the increase in the number of apps for farmers, it is important to improve awareness on the specific information and services provided by these apps. With this in view, the present article covers various mobile apps, which enable access to get location specific weather based agro advisory.

MAUSAM

The Mausam mobile application is launched on the occasion of the 14th foundation day of Ministry of Earth Sciences on July 27, 2020 by Government of India. The aim is to improve the dissemination of weather. forecast and warning services based on latest tools and technologies. This app is designed and developed by International Crops Research Institute for the Semi-Arid Tropics, Indian Institute of Tropical Meteorology, R Pune and India Meteorological Department. The Mobile app has been dedicated to the general public and is designed to communicate the forecasts and weather information in a lucid manner. Apart from the weather forecasts, users will also be able to access the radar images and will be proactively warned of impending weather events. A mobile app is an important tool for the dissemination of weather information and warnings in a user-friendly and attractive manner.

Features Available on the App

Nowcast : It will showcase a threehourly of localized warning weather phenomenon and their intensity issued for districts of India and for about 800 stations. In case of serious weather, its impact also will be included in the warning; Current weather : Under this, data on the humidity, current temperature, direction, and wind speed for 200 cities will be updated 8 times a day. Information on sunrise, sunset, moonrise, and moonset will also be provided; City forecast : The app will provide the information on the past 24 hours and the 7 days forecasts of weather conditions in around 450 cities; Warnings : The app will also issue alerts twice a day for all the districts for the next 5 days in colour code (Orange, Red, and Yellow), in order to warn the citizens of dangerous weather. Red colour code will be the most dangerous category which will urge the authorities to take action, orange colour

code will prompt the authorities and public to be on alert and yellow code will prompt the authorities and the public to keep themselves updated. **Radar products** : The latest station wise radar products will be updated every 10 minutes.

MEGHDOOT

It has been developed by the India Meteorological Department and Indian Institute of Tropical Meteorology and Indian Council of Agricultural Research and launched

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in 2021. It is mobile application that will provide location, crop and livestock-specific weather-based agro advisories to farmers in local languages. The app would provide information in the form of images, maps and pictures. It will provide forecast relating to temperature, rainfall, humidity, and wind speed and direction. The app plays a crucial role in agricultural operations and advisories to the farmers on how to take care of their crops and livestock. The information would be updated twice a week on Tuesdays and Fridays. It has been integrated with WhatsApp and Facebook to help farmers share advisories among themselves. The app provides districtwise advisories on crop and livestock management issued by Agro Met Field Units (AMFU) every Tuesday and Friday based on the past and forecasted weather information. It will help the farmers to take weather-sensitive R humidity, wind speed, direction for 150 cities. decisions like sowing of crops, pesticide and fertilizer application, irrigation scheduling and vaccination of animals.

DAMINI

It has been developed by Indian Institute of Tropical Meteorology, Pune and Earth System Science Organization under the ministry of earth sciences and launched on the occasion of 57th foundation day celebration at IITM in 2020. The app monitors the lightning occurrence all over India and alerts the user of lightning near them by a GPS notification

under 20 km and 40 km and movement and direction of thunderstorm. Further, the Damini app also triggers warning about lightning strikes three hours in advance which can help reduce losses to life and property.

UMANG (Unified Mobile Application for New-age Governance)

It is launched in 2017 to bring major government services on a single mobile app, with a larger goal to make the government accessible on the mobile phone of our citizens. The Ministry of Electronics and Information Technology has added the Indian Meteorological Department weather services to the Umang Mobile App on 22nd May, 2020. The users will be able to check the weather forecast of their city in advance. It will forecast 7 weather related services including; Current weather : Current temperature, Information on sunrise/ sunset and moonrise/ moonset is also given. Nowcast : Three hourly warnings of localized weather phenomena and their intensity issued for about 800 stations, and districts of India by State Meteorological Centers of IMD. City forecast : Past 24 hours and 7 day forecast of weather conditions around 450 cities in India are given. Rainfall information : All India district Rainfall information daily, weekly, monthly and cumulative series are available. Tourism forecast : Past 24 hours and 7 day forecast of



weather conditions of around 100 Tourist cities in India are provided. Warnings : The alert issued to warn citizens of approaching dangerous weather. It is colour coded in red, orange and yellow are the alert levels with Red as the most severe category. Issued twice a day for all districts for the coming five days. **Cyclone** : Cyclone warnings and alerts provides the track of cyclonic storms along with likely time and point of crossing of coast. Impact based warnings, area/district wise are issued SO that appropriate preparation including evacuation of vulnerable areas can be done.

Bhuvan Hailstorm

It is developed by the Ministry of Agriculture and Farmers Welfare, Govt. of India. A mobile app has been developed to capture crop loss happened due to hailstorm. Agriculture officer will go to the field with R mobile or tablet loaded with this mobile app. This mobile app is able to capture following parameters : Photograph of field with latitude and longitude, name of crop, date of sowing, date of likely harvesting and source of will irrigation. This captured data automatically be plotted to Bhuvan portal and analysis can be done easily.

Kisan Suvidha

It is developed by the Ministry of Agriculture and Farmers Welfare, Govt. of India. It is an omnibus mobile app developed to help farmers by providing relevant information. The app provides information to farmers on weather, market prices, dealers, plant protection, IPM practices, seeds, expert advisory, Soil Health Card, godowns and cold storage in English, Hindi, Tamil, Gujarati, Odia and Marathi.

Features Available on the App

Weather : Weather information includes details of humidity, temperature, wind and rainfall for the current day and the forecast for the next five days. Unique features include extreme weather alerts like hailstorm or unseasonal rains. Market price: Provides latest market price of commodities in the nearest mandi and the maximum price in the district, state as well as in India. Prices are given of crops traded in a registered agriculture market or mandi of the particular district. CAgro advisory: Agro advisory section shows messages for farmers from agriculture officials and state universities in the local language. Soil health card: Information pertaining to soil health is available for farmers who have registered. **Dealers information**: Provides information on seed, pesticides, fertilizer, farm machinery dealers. Plant protection: This section gives pest, weed and disease-related information as well as management practices for each stage of crop development from Seedling/nursery to harvesting. One can also upload a picture of



the affected crop and get a response. Call to KCC: The app also directly connects the farmer with the Kisan Call Centre where technical graduates answer farmers' queries. Cold stores and godowns : Information on cold stores and godowns is also added.

CONCLUSION

Smartphone have been identified as one of those effective innovations which benefited a large number of people in the developing world. In India, mobile applications are transforming agriculture. Agriculture is prime sector of importance. To make agribusiness productive, smooth and respectable it is important that, it should be linked to recent technologies. These technologies need to be smarter, faster and cheaper to use. Mobile application one of such technology that can be used directly in agricultural growth. Although this channel of JRE MOCAgriculture and Allied Sector: An information dissemination is in juvenile phase but it's advantages can be seen in near future. The strategies for expansion of application based information require expulsion of obstacles like better modest handsets. compatible smart phones, multilingual platform, subsidizes internet packs, regular trainings and awareness amongst farmers. Smart phones are the example of overcoming adversity of connecting the rural digital divide, bringing monetary advantages and acting as

catalyst for social mobilization through improved communication.

REFERENCE

- **1.** Barh, A. and Balakrishnan, M. (2018). Smart phone applications: Role in agriinformation dissemination. Agricultural Reviews. 39(1): 82-85.
- **2.** Kumar, M. and Agarwal, L. (2020). Farming Empowering Community Through Mobile Applications. International journal of Scientific and technology research. 9(3) : 58-61.
- 3. Meena, R. L., Jirli, B., Kanwat, M. and K. Meena. N. (2018).Mobile applications for agriculture and allied sector. Int. J. Curr. Microbiol. App. Sci. 7(2): 2317-2326.

4. Sarkar, S., Kumar, B. and Kumar, S. (2021). Mobile Applications for Indian

Extended Arm for Farmers. Int. J. Curr. Microbiol. App. Sci. 10(3): 1913-1920.