



## ROLE OF MOBILE PHONES IN THE DEVELOPMENT OF RURAL AGRICULTURE SECTOR

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### ABSTRACT:

Rural people recognize the significance of mobile phones in the creation of economic and financial opportunities as well as the enhancement of social networks. Mobile phones are an affordable and readily available means of communication. The distance that separates individuals and organizations is effectively reduced by mobile phones, making it simpler and more efficient to share knowledge. The agricultural industry is becoming a business that requires more time and information. An agricultural system that makes decisions based on information must be required if we want to increase productivity. Farmers need to have access to the right information at the right time. We connect poor farmers to urban, regional, and global markets to improve services and governance for the rural poor and make agricultural markets more efficient and transparent. The current research focuses on encouraging smallholders to participate in agricultural innovation, trading facilities, weather information, financial services—payments, and agricultural news: applications that use mobile technology to deliver or retrieve agricultural/agronomy information and advice, and applications that provide news on topics related to agriculture.



**KEYWORDS:** organizations , agricultural markets , agronomy information and advice.

### INTRODUCTION:

Innovative services and applications that are utilized in the agricultural value chain in both developed and developing nations have resulted from the introduction of mobile technology and portable, wireless devices. Mobile agriculture applications are typically implemented further up the value chain, such as with processors or consumers, in developed markets where mechanization is more advanced and the agricultural labor force is significantly smaller than in many developing countries. Mobile technology is more frequently used to provide services to producers and traders in developing nations where agriculture accounts for a significant portion of the workforce. Nearly 40% of farmers in India have access to modern farming technology from any information source. Access to scientific information on fertilizer application, plant protection, farm machinery, harvesting, marketing, animal husbandry, and environmental issues is what mobile technology for farming means. Indian farmers' day-to-day operations have begun to benefit from mobile technology's ability to provide them with vital agricultural data on market prices and cutting-edge farming practices. The service provider is able to

further enhance the information and service it provides as a result of regular feedback from subscribers. They are working on new ways to improve the service, like adding a camera facility that lets experts send a picture of a diseased plant to them so they can talk to experts better and find a solution faster.

### **Applications of Mobile Technology in Agriculture Sector**

- Market data: Applications that deliver market information, including prices, using mobile technology.
- Trading facilities
- Weather data
- Data collection
- Payment, loan, and insurance services
- Advisory services: Applications that provide advice and information on agriculture using mobile technology.
- The applications of geography: Applications that make it possible to collect data and information about things like how to plan for water use, how to use natural resources, how to get agricultural inputs, how to market commodities, etc.
- ICT embedded in farm processes and equipment: Applications that improve the efficiency of farm machinery and agricultural procedures, as well as those that make it possible to track the transportation and sale of agricultural goods by using mobile technologies like RFID and the wireless Internet for labeling, tracing, and preserving one's identity. Applications that provide government-issued news on agriculture-related topics
- Controlling the irrigation pump: phones to remotely control irrigation pump sets and turn them on in faraway places.

### **Need Of Mobile Technology in Agriculture sector Helping Farmers Raise Their Incomes**

Mobile phones can be used as the foundation for early warning systems in today's fast-paced, dynamic environment to reduce agricultural risks and protect agricultural incomes. This finding can be explained in part by the fact that farmers who have access to information not only have the ability to look for new markets but also have a stronger bargaining position within the existing trade relationships.

### **Making Agricultural Marketing More Efficient**

The prices that are available for agricultural products in various locations can be provided by mobile phones to producers as well as consumers. According to a number of studies, farmers learn where they can sell for a better price when mobile phones are introduced to farming communities that did not previously have any form of connectivity.

### **Get Weather Information**

The government provides farmers with daily weather updates on a regular basis. Using this information frame, the worker can plan their activities, such as watering the plants, cutting the plats, and so on.

### **Data collection**

The government wants to know what the farmer has planted, right? so that the government can make decisions about the farmer's various plans.

### **Agricultural News**

The government can send news about agriculture-related topics directly to the mobile phone of the farmer.

### Agriculture with Mobile Technology

Food production and marketing systems around the world are rapidly evolving in response to the shifting environment of the agriculture sector. This is due to a number of things, including a high demand for food and an expanding global population. There are increasingly more national, continental, or international production standards for agricultural production.

Through mobile technology, services like m-Kisan are already reaching thousands of farmers in rural India. Utilizing mobile technology in the sector will, in my opinion, revolutionize the sector in the long run by increasing access to high-value markets, increasing compliance with sector standards, and improving support for farmers.

However, the effectiveness of public-private sector collaboration in agriculture extension services, effective analysis of farmer needs, and proper focus of mobile agriculture services on meeting identified needs will all be necessary for reaping the full benefits of mobile technology in agriculture.

In nations with a per capita income of more than \$400 but less than \$1,800, agriculture accounts for more than 40% of employment. That category includes India, where agriculture is estimated to directly or indirectly employ approximately half of the workforce.

In India and other emerging nations, a larger part of the populace inside this layer actually utilize a fundamental nitty gritty cell phone. Consequently, SMS now accounts for the majority of mobile services offered to the agricultural industry. Commodity pricing, weather information, crop disease updates, improved market connectivity, and access to mobile financial platforms are just a few of the key areas where they have an effect.

### Indian Farmers Use Mobile Phones to Control Irrigation

- Tata Teleservices, a mobile operator, is testing a technology that lets farmers remotely monitor and turn on irrigation pump sets in faraway locations using their mobile phones.
- The innovation, called Nano Ganesh, is being tried in two towns in the Indian territory of Gujarat.
- According to Lloyd Mathias, chief marketing officer of Tata Teleservices, farmers in India frequently walk several kilometers to the location of their irrigation pumps only to discover that there is no electricity available.

### How It Works:

Farmers now have the ability to remotely turn on and off the pump by dialing a code number from their mobile phones to a wireless device attached to the pump.

- 1) Mobile government services for Indian farmers  
Toll Free number for Farmers
- 2) Framers can get answers to their questions from the Government of India by calling the toll-free number 1800 180 1551. Farmers can obtain information about crops, foods, the weather, and other topics by calling this free toll-free number.
- 3) Kisaan SMS Portal Launched by the Humble President

On July 16, 2013, the Hon'ble President of India inaugurated the SMS Portal for Farmers developed by the Department of Agriculture & Cooperation, Government of India, as part of the celebrations marking the 85th ICAR Foundation Day. This portal will be used by the India Meteorological Department and Food grain Procurement Agencies to provide relevant information, seasonal and topical advisories, and SMS-based services to farmers in the state's language. The State Governments and their field formations, all the way down to the Block level, have also made significant efforts to utilize this integrated Portal. Since there are more than 33 crore mobile connections in rural areas, the Kisaan SMS Portal is likely to be very helpful to farmers and other stakeholders because farmers will receive timely and relevant information in their own language. The SMSs will get communicated exclusively to the ranchers inside the regional ward of an official, researcher or specialists for the yields or horticultural practice that such a rancher could have picked.

## **Advantages**

### **1) Controlling Irrigation Pump:**

This facility is mostly useful for farmers to save time by getting information about light and on or off their motor pumps.

### **2) Trustworthiness and reliability:**

It helps to send information and advice delivered through SMS to the farmers directly by the government. The information must be correct so that farmers can act on this information.

### **3) Reduce the gap between Government and Farmers:**

Mobile technology helps to reduce gap of communication between government and farmers. Toll free numbers provided by the government enable farmers directly contact to call centers and get information.

## **Disadvantage**

### **1) Network failure:**

It is one of the disadvantage of mobile phones if the network goes down then we cannot contact with the farmers.

### **2) Investment of huge money:**

To implement this SMS based system requires huge investment in it by the government and farmers also need to recharge their cards every month.

## **CONCLUSION**

The evidence presented in this paper demonstrated the significance of mobile phones in lowering the costs associated with information search and improving market efficiency. By utilizing of cell phones it found to persuade poor and uninformed ranchers towards more prominent market contribution and getting to high-esteem crops. Through a rise in the price and a decrease in the amount of food wasted, this change helps farmers earn more money. It is anticipated that the farmer's life will change as a result of the use of mobile-based information services.

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