



ROLE OF MOBILE PHONES IN THE DEVELOPMENT OF RURAL AGRICULTURE SECTOR

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ABSTRACT:

Mobile is an affordable and accessible means of communication, rural peoples understand the importance of mobile phones to create economic and financial opportunities and improve social networks. Mobile phones effectively reduce the gap between individuals and institutions, making the sharing of information and knowledge easier and more effective.

Agricultural sector is becoming a more time-consuming and information-intense business. If we require a higher productivity then we must require an information-based decision-making agricultural system. Farmers must be get information at the right time and place.

For making agricultural markets more efficient and transparent we link poor farmers to urban, regional and global markets, improving services and governance for the rural poor. Present study deals with promoting and involving smallholders in agricultural innovation, trading facilities, weather information, financial services- payments, agricultural news: applications that provide news on agriculture-related subjects, applications that use mobile technology to deliver or retrieve agricultural/agronomy information and advice.



KEYWORDS: Development Of Rural , Agriculture Sector, higher productivity

INTRODUCTION

The introduction of mobile technology and portable, wireless devices has led to the creation of innovative services and applications that are used within the agricultural value chain in developed and developing countries. In developed markets where mechanization is more advanced and the agricultural labor force is significantly smaller than that of many developing countries, mobile agriculture applications tend to be implemented further up the value chain, for example with processors or consumers. In developing countries where a large proportion of the workforce is employed in agriculture, mobile technology is more commonly used to deliver services for producers and traders.

In India, near 40 per cent of farmers have access to modern technology for farming from any source of information. "Mobile technology for farming" means access to scientific information on

fertilizer-application, plant-protection, farm-machinery, harvesting, marketing and animal-husbandry, environmental information.

Mobile has started playing an increasingly useful role in the daily business of Indian farmers by providing them with much needed agricultural information related to modern farming techniques and market prices. The regular feedback from subscribers help the service provider to further improve the service and information provided. They are developing new strategies to make the service more effective, such as including a camera facility that enables transfer of diseased plant's photograph to experts for better communication and efficient solution.

Applications of Mobile Technology in Agriculture Sector

- Market information: Applications that use mobile technology to deliver market information including prices.
- Trading facilities
- Weather information
- Data collection
- Financial services- Payments, Loans, Insurance
- Advisory Services: Applications that use mobile technology to get agricultural information and advice.
- Geospatial applications: Applications enabling data and information related to water use planning, natural resources utilization, agricultural input supply and commodity marketing etc.
- Embedded ICT in farm equipment & processes: Applications that enable greater efficiencies in farm equipment and agricultural processes, and traceability in agricultural products' transport and marketing through mobile technologies such as RFID, wireless Internet, for labeling, traceability and identity preservation
- Operations monitoring, quality control, and product tracking
- Agricultural news: Applications that provide news on agriculture-related subjects by the government
- Controlling irrigation pump: Mobile phones to remotely monitor and switch on irrigation pump sets in far flung locations.

Need Of Mobile Technology in Agriculture sector

Helping Farmers Raise Their Incomes

Into the today's dynamic and fast environment mobile phones can serve as the backbone for early warning systems to mitigate agricultural risks and safeguard agricultural incomes. One reason for this finding is that farmers equipped with information have a stronger bargaining position within existing trade relationships, in addition to being able to seek out other markets.

Making Agricultural Marketing More Efficient

Mobile phones can give the information to both producers and consumers of the prices offered for agricultural products in various locations. A number of studies have shown that when mobiles are introduced to farming communities that previously lacked any form of connectivity, prices unify as farmers learn where they can sell for a better price.

Get Weather Information

The farmers can get regular weather information by the government day by day. By using this information farmer can plan their activity about plantation, giving water to plants, cutting the plots etc.

Data collection

Government wants to get the information from the farmer about what they have planted? So that government can take the decisions about various plans about the farmer.

Agricultural News

Government can give information about news on agriculture-related subjects by the government directly to the farmer's mobile.

Agriculture with Mobile Technology

In the changing environment of the agriculture sector food production and marketing systems are rapidly changing globally. This is because of several factors including increasing global population, high demand for food. There are now more requirements for agriculture production either in the form of national, continental or international production standards.

In India, services such as m-Kisan are already reaching thousands of farmers in rural areas through mobile technology. In my view, employment of mobile technology in the sector will improve support for farmers, improve compliance with sector standards, increase access to high value markets and in the long run revolutionize the sector.

However, deriving the full benefits of mobile technology in agriculture will depend on factors such as the effectiveness of public-private sector collaboration in agriculture extension services, effective analysis of farmer needs and proper focusing of mobile agriculture services to meet identified needs.

The agriculture sector employs more than 40% of total labour force in countries which have a per capita income of more than \$400 and less than \$1,800. India falls within that strata and it is estimated that agriculture directly / indirectly employs about 50% of the total workforce.

In India and other developing countries, a majority of the population within this stratum still use a basic no-frills mobile phone. As a result, it emerges that most mobile services provided to the agricultural sector are via SMS. Their impact is felt in several key areas including commodity pricing, weather information, crop disease updates, better connectivity to the markets and access to mobile financial platforms.

Indian Farmers Use Mobile Phones to Control Irrigation

Mobile Operator Tata Teleservices is testing technology that allows farmers to use their mobile phones to remotely monitor and switch on irrigation pump sets in far flung locations.

The technology, called Nano Ganesh, is being tested in two villages in the Indian state of Gujarat.

In India, where the electricity supply is erratic, farmers often walk several kilometers to where their irrigation pumps are located, only to find that there is no electricity available, Lloyd Mathias, chief marketing officer of Tata Teleservices.

How It Works:

By dialing a code number from his mobile phone to a wireless device attached to the pump, farmers can now remotely monitor the electricity supply, and also switch the pump on and off.

Government Services for Indian farmers by Mobile Channel

1) Toll Free number for Farmers

Government of India provide the facility to framers to ask their questions on the toll free No1800 180 1551. By calling on this toll free number the farmers can get information on the crops, foods, weather etc.

2) Kisaan SMS Portal Launched by the Humble President

During celebrations 85th ICAR Foundation Day, Hon'ble President of India launched on 16.07.2013 a SMS Portal for Farmers created by the Department of Agriculture & Cooperation, Government of India. India Meteorological Department and Food grain Procurement Agencies will use this portal for disseminating relevant information, giving topical & seasonal advisories and providing services through SMSs to farmers in language of the State. The State Governments and their field formations down to the Block level also have come forward in a big way to use this integrated Portal. Considering availability of more than 33 crore mobile connections in the rural area, Kisaan SMS Portal is likely to be very useful to farmers and all other stake-holders as timely and relevant information will be provided to farmers in their own language. The SMSs will get transmitted only to the farmers within the territorial jurisdiction of an officer, scientist or experts for the crops or agricultural practice that such a farmer might have opted for.

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

This paper provided evidence on the role of mobile phones in reducing information search costs and increasing market efficiencies. By using of mobile phones it found to motivate poor and uneducated farmers towards greater market involvement and getting to high-value crops. This change helps increase in the earning earnings of the farmer through higher price and decrease in wastages of food products. By using mobile-based information services, it is expected that life of the farmer will change.

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