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Utilisation pattern of m-Kisan portal by farmers of Nagarkurnool district of Telangana

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Abstract
This study was conducted to know the utilisation pattern of m-Kisan Portal by farmers of Nagarkurnool district of Telangana. Among the various projects in operation, m-Kisan Portal was selected for the study. Twelve respondents were selected randomly from each village that constituted 120 respondents for the study. It was observed that out of 120 respondents more than two-fifth (45.00 per cent) of farmers were utilising services with 5.83 per cent, 17.50 per cent and 21.67 per cent were using it weekly once, monthly once and whenever needed respectively. Low utilisation is because of poor awareness among farmers and lack of timely and relevant advisories. Further, the study also revealed that little more than one-third of the farmers (37.50 per cent) were utilising services for information regarding crop protection followed by 31.66 per cent for cultivation practices and weather information, 30.83 per cent for market prices and 25.83 per cent for quality inputs. Whereas 21.66 per cent, 20.00 per cent, 15.83 per cent and 13.33 per cent were utilizing m-Kisan for irrigation practices, livestock, alternate crops and post-harvest practices information respectively. From this study it was found that m-Kisan Portal utlisation among farmers usage was less. The reasons for this pattern may be because farmers were interested in getting information which need regular update like crop protection practices, crop production and weather information.

Keywords: ICTs, information technology, utilisation pattern, m-Kisan

Introduction
Extension services in India have gone through vicissitudes since the Green Revolution (from monologues & speeches to personal outreach to farmer to farmer extension to bulk use of non-P2P methods) when targeted approach centred around specific crops in irrigated areas of North India became the major focus. Before modified Agriculture Technology Management Agency (ATMA) scheme was launched in the year 2010, there was no dedicated manpower for extension in agriculture and allied sectors. The Government officials and specialists were also burdened with multifarious duties of implementation of projects, scheme and programmes besides participating in various meetings. Thus a large number of villages remain deprived of interactive methods direct training which were launched after Training & Visit Programme lost its relevance due to sheer disproportionate numbers (farmer population : extension workers) in the rain-fed area that was being focused upon. Due to vast size, huge population and difficult topography of the country, dissemination of information in timely manner was a major challenge. Electronic media also had its own constraints due to limitation in time slot available and vast area & subjects to be covered in variegated scenario of Indian Agriculture. Despite major improvement in the state of affairs on extension front, the divergent need of the farmers could not be fully addressed. Specific requirements of the farmers based on their crops and agro climatic situation also could not be addressed on a large scale. Therefore, during the XII Plan, a National Mission on Agricultural Extension & Technologies was formulated encompassing not only Extension & ICT but also Seeds & Planting Material, Mechanisation and Plant Protection. SMS Portal has been conceptualised to give a quantum leap in coverage of farmers and geographical area in a timely, specific, holistic and need based knowledge dissemination among the farmers by leveraging the power of mobile telephony in such a way that all sectors use this platform to not only reach out to the farmers but also to address their concerns and queries.

Pervasive and extensive use of the ICT is an important tool of agricultural extension. In agriculture, despite the rapid spread and potential of ICTs to facilitate farmer's access to information, many of the initiatives face common challenges, such as issues of sustainability,

affordability, ease of use, accessibility, scalability and availability of relevant and localised content in an appropriate language (Keniston, 2002; Dossani *et al*. 2005; Saravanan, 2010) [3, 2, 6]. SMS Portal was inaugurated by the Hon'ble President of India on July 16, 2013 and since its inception nearly 50 crore messages or more than 152 crore SMSs have been sent to farmers throughout the length and breadth of the country. These messages are specific to farmers' specific needs & relevance at a particular point of time. These messages generate heavy inflow of calls in the Kisan Call Centres where people call up to get supplementary information.

SMS Portal for Farmers has empowered all Central and State Government Organizations in Agriculture & Allied sectors (including State Agriculture Universities, Krishi Vigyan Kendras, Agromet Forecasts Units of India Meteorological Department, ICAR Institutes, Organization in Animal Husbandry, Dairying & Fisheries etc.) to give information/services/advisories to farmers by SMS in their language, preference of agricultural practices and locations. To put it succinctly, almost every Government Department, Office and Organisation from the Ministry Headquarters down to the level of Block having anything to do with agriculture and allied sectors in every nook and corner of the country has been authorised to use this Portal to provide information to farmers on vast gamut of issues. The situation assessment survey of farmers conducted during the 59th round of the National Sample Survey Organization (NSSO, 2005) provided valuable insights into reach of extension services across India showed that 60.00 per cent of farmer households did not access any information on modern technology that year. Claire *et al*. (2010) [1] reported that farmers face a lot of difficulties in getting timely, reliable and relevant information. This is mainly because the technologies developed for farmers were not suited to the farmer's capacity to take risk. This severely affects their ability to increase their productivity, profitability and income.

To overcome these challenges, mobile based ICTs are being implemented across the country. For instance, farmers can raise queries related to agriculture and allied sectors using their mobile phones through m-Kisan Portal which has been operating in every state of India. There is a need for research to know the utilisation pattern of among the farmers and their major constraints in effective utilisation of ICTs. Therefore, the present study was undertaken m-Kisan Portal with the above specific objective.

Methodology

The state of Telangana is purposively selected for this study which was formed on 2nd June 2014 and it is one of the potential state contributing more for the nation development. The economy of Telangana is mainly driven by agriculture. Two important rivers of India, the Godavari and Krishna flow through the state, providing irrigation. Rice is the major food crop. Other important crops are cotton, sugar cane, mango and tobacco. There are many multi-state irrigation projects in development, including Godavari River Basin Irrigation Projects and Nagarjuna Sagar Dam, the world's highest masonry dam. Telangana government is taking various development measures including ICT project for promotion of agriculture. However being a newly formed state, Telangana needs furthur suggestions for effective implementation of ICT projects for developing farming community. The government of India is also introducing digitalization in all sectors. Hence it is right time to take stock of possibility of digitalization in agriculture sector too. Even though for the past two decades, the government is implementing many ICT initiatives for dissemination of agriculture information, only limited studies are available about the extent of use of ICT projects in promotion of agriculture.

The present study was undertaken in Nagarkurnool district of Southern Telangana region which was purposively selected as it has more ICT projects operating in the region. m-Kisan Portal was operational in the study area. The other institutions like one college of Agriculture, Palem and one Krishi Vigyan Kendra, Palem and one Regional Agricultural Research Station also available in Nagarkurnnol district and who are providing agro-technological information through ICT services for the benefit of farming community. There are three revenue divisions available in Nagarkurnool district. They are Nagarkurnool, Kalwakurthy and Achampet. Nagarkurnool revenue division was purposively selected for this study since Kisan Call Centre was in operation in this division. There are 21 mandals available in Nagarkurnool revenue division of which four mandals viz., Thadur, Bijinepally, Thimmajipeta and Nagarkurnool were purposively selected for this study.

Since all these four mandals are very closer to the district head quarters and getting benefit of ICTs from long period and they are also very adjacent to college of Agriculture, Krishi Vigyan Kendra and Regional Agricultural Research station and very well exposed to ICT projects by these institutions. Collection of data and getting suggestions from the respondents will be of more appropriate for developing stratergies. There are totally 88 villages available in all the four mandals of which ten villages viz., Kummera, Lingasanapally, Vattem, Nandivadennam, Bijinepally, Ippalapally, Gummukonda, Palem, Malkapur and Gagallapalli were selected by random sampling method for study. From the selected ten villages, the list of farmers enrolled under ICT projects was obtained. A total of 1207 farmers were enrolled in these selected villages. Since the population size of all the selected villages was almost equal and in order to have a representative sample, 12 respondents were selected randomly from each village that constituted 120 respondents for the study. "Ex-post facto design" was employed for the study as the ICT project had already started working in the area. A detailed pre-tested schedule was prepared to know the extent of utilisation, utilisation pattern of services provided by the m-Kisan SMS Portal project. The appropriate responses were collected from the respondents through personal interview. The respondents were interviewed personally by a well-structured and pre-tested interview schedule. The data collected were coded, tabulated and analyzed using suitable statistical tools and the results were described in this paper.

Results and Discussion

Extent of utilization

The data in Table 1 indicated that more than two-fifth (45.00 per cent) of farmers were utilising services with 5.83 per cent, 17.50 per cent and 21.67 per cent were using it weekly once, monthly once and whenever needed respectively. Low utilisation is because of poor awareness among farmers and lack of timely and relevant advisories.

Mechanisms for registration of farmers to be simplified by involving common service centers/ Kisan Call Centres more pro-actively so as to get large number of farmers included in this service. Looking into literacy concerns in the farming community and limitations in receiving and interpreting text

based messages provision to send voice based advisories to those of the farmers who opt for it to be made.

Table 1: Extent of utilisation of m-Kisan SMS Portal

(n-120)

S. no.	Extent of Utilisation	Frequency	Per cent
1	Daily once	0	0.00
2	Weekly once	7	05.83
3	Monthly once	21	17.50
4	Whenever needed	26	21.67
5	Never	66	55.00
	Total	120	100.00

These findings were in line with research findings of Subhashsingh *et al*. (2010) [7] who noticed most the farmers usage of ICTs was less.

Utilisation pattern of ICT projects of specific information

The Fig. 2 indicated that little more than one-third of the farmers (37.50 per cent) were utilising services for information regarding crop protection followed by 31.66 per cent for cultivation practices and weather information, 30.83 per cent for market prices and 25.83 per cent for quality inputs.

Whereas 21.66 per cent, 20.00 per cent, 15.83 per cent and 13.33 per cent were utilizing m-Kisan for irrigation practices, livestock, alternate crops and post-harvest practices information respectively.

The reasons for this pattern may be because farmers were interested in getting information which need regular update like crop protection practices, crop production and weather information.

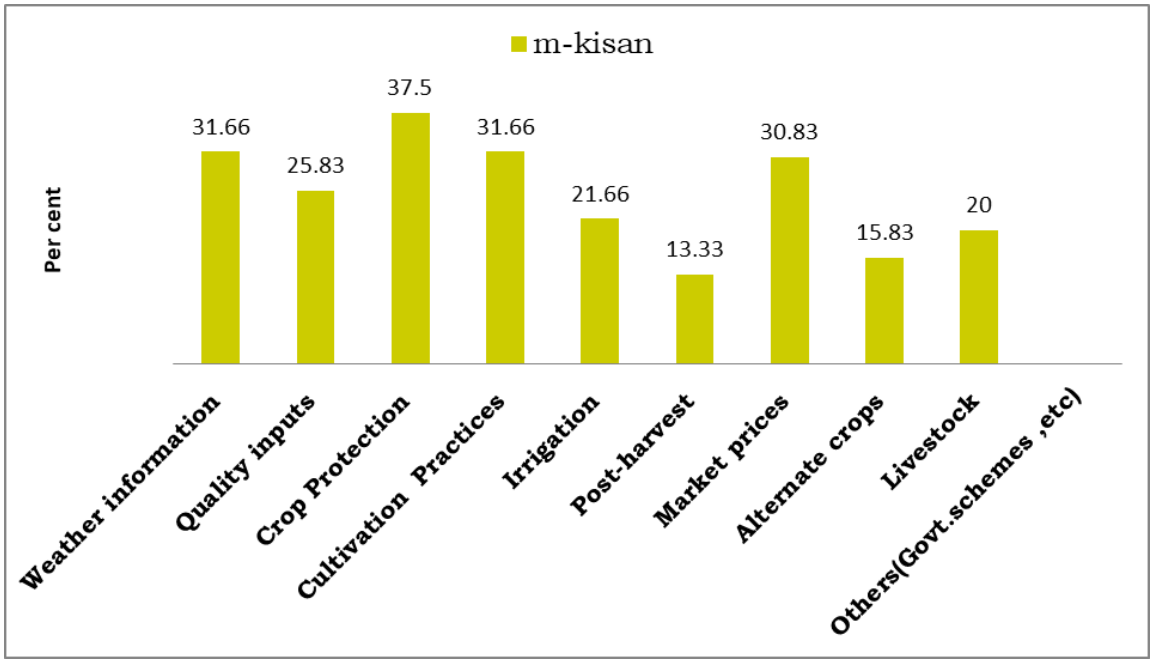

Fig 1: Type of information utilised

The findings are in line with research findings of Meena *et al*. (2010) who reported that most of the farmers expect information on high yielding varieties, plant protection practices and market information.

Conclusion

Information & Communication Technologies (ICTs) have a wide scope in providing information services to the farmers for the proper decision making regarding profitable farm businesses, given the low extension personnel to farmers' ratio in India. There are many ICT based initiatives which are trying to provide farm information, but among these very few projects are popular and effective among farmers. In this study it was observed that m-Kisan SMS Portal had low utilisation because of poor awareness among farmers and lack of timely and relevant advisories. Keeping in view the increasing awareness of farmers towards SMS based services in recent times, more services under the SMS Portal should be integrated. SMS based advisories tailor made to suit individual farmers' priorities which have proven to be a successful, need to be further up-scaled to bring in the concept of voice recognition based messaging wherein the farmer can further refine his query and get the information, which is close to his farming related issues.

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