



E-ISSN: 2278-4136  
P-ISSN: 2349-8234  
JPP 2019; SP1: 487-489

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(Special Issue- 1)

2<sup>nd</sup> International Conference

“Food Security, Nutrition and Sustainable Agriculture -  
Emerging Technologies”

(February 14-16, 2019)

## Constraints and suggestions faced by the scientists/ service providers and beneficiaries of kisan mobile advisory services in Barwani district of Madhya Pradesh

**Lalita Nargawe and Yagya Dev Mishra**

### Abstract

Information Communication Technology (ICT) is today becoming as important as food. Even in rural India, ICTs are having a profound impact in changing the rationale of development activities and strategies. In spite of these farmers abstain from using it due to various constraints. In this view, a study was conducted to assess the impact of Kisan Mobile Advisory as perceived by the beneficiaries. The study was conducted in Barwani district of Madhya Pradesh by selecting a sample of 140 beneficiaries of KMAS as respondents. The sample was selected through proportionate random sampling method. The data collection was done with the help of structured interview schedule and analysed using appropriate statistical methods. Results of the study revealed that use of complex words was the top ranked constraint stated by maximum number of respondents (65%) followed by poor mobile network (62.14%), language related problems (60.71%), length of content (56.42%), lack of information about availability of resources/ inputs (53.57%) and lack of extension activities stated by 51.42 per cent respondents. The study recommends the need for considering constraints faced by beneficiaries as they influence the accessibility and utilization pattern of KMAS. It was suggested by 70 per cent of the respondents that local needs & preferences for the messages should be considered while taking decisions about SMS. Other important suggestions are; Use of local & familiar words in messages (61.42%), Economics of techniques delivered through message should be highlighted (53.57%), Improvement in coverage & efficiency of agricultural information delivery systems (50.71%), Timely delivery of messages (47.85%) and location specific data based information should be provided (35%). This research paper shows the suggestions in flow of information exchange and enhance knowledge achievement in Agricultural information dissemination.

**Keywords:** KMA, SMS, RAO, ICT Mobile

### Introduction

Introduction Information and Communication Technologies (ICTs) are facilitating faster sharing of information and innovations and acting as a key agent for changing agrarian situation and farmers lives by improving access to information and sharing knowledge. The information and communication technologies like radio, TV, newspaper, telephone and magazines are playing a major role in agricultural development since early decades. Now the modern Information Communication Technologies (ICTs) as mobiles and computers have created an information revolution. Information Communication Technologies (ICTs) has been widely established in India as important source of information and a promising tool for socio-economic development during past few decades. Information Technologies (IT) has been described as the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numeric information by a micro-electronics based to a combination of computers and telecommunication. In the past few years, the usefulness of Information Communication Technologies (ICTs) especially, Internet and cell phone has been felt in agriculture sector to bridge the gap between scientific recommendations and its application by the farmers.

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Recent development in ICT has created new opportunity to ensure that farmer can get information they need. Mass media play an important role in information distribution and in political market and public policy making. Mass media are effective in awareness and even to the extent of leading an individual to involvement at intellectual level.

Information communication technology can be used to strengthen communities and farmers' organizations for their own capacities and better representation of their own part when negotiating input and output prices, land claims, resource rights and infrastructure projects. ICTs help in providing up-to-date information on various aspects of farming like information on latest technologies, weather updates, inputs and product prices, consumer trends and many more which ultimately improve farmers' socio-economic status.

Despite rapid spread and enormous potential of ICTs application in agriculture sector, it is being access on a limited scale due to various issues like weaker IT infrastructure in rural areas, sustainability, and affordability, ease of use, accessibility, scalability and availability of relevant and localized content in appropriate language.

## Methodology

### Description of study area

The study was conducted in purposively selected Barwani district of Madhya Pradesh. The district was selected because the KMAS programme is running in the district since last eight years. The city is also called the Paris of Nimar. The district lies in the South Western corner of Madhya Pradesh. The Narmada River forms its northern boundary. The Satpura range lies to its south. The district shares its boundaries with Maharashtra state in south. The Barwani district is surrounded by Dhar and Khargone districts of M.P. in north and east borders, respectively. Barwani district has an area of 3665 KM<sup>2</sup>. The total population of the district on the basis of 2011 census is 1,385,659. The temperature of Barwani during April and May goes as high as 48°C making it the hottest place of India. Average annual rainfall of the district is 676 mm. The Barwani is predominantly tribal district comes under XI

Nimar valley Agro-climatic Zone. The district is mainly having medium black soils. Major crops of Barwani district are Cotton, Jowar, Maize, Wheat and Chili.

### Sampling technique

The design of research is the most important and crucial aspect of the research methodology. An inclusive block wise list of registered KMAS beneficiaries was collected from KVK, Barwani which is providing regular SMS to the farmers under KMAS. The Beneficiaries of KMAS programme of KVK served as respondents of the study.

The Number of respondents from each block was selected following Proportionate random sampling method with the formula given below.

$$n_h = \frac{N_h}{N} \times n$$

Where,

$n_h$  = sample size for stratum h

$N_h$  = population size for stratum h

$N$  = total population size

$n$  = total sample size

Respondents were selected from the list of beneficiaries using systematic random sampling method. Thus, a total of 140 respondents served as sample for the study.

### Results and Discussion

The respondents were asked to express the constraints experienced by them in using KMAS. With respect to the major constraints experienced by the respondents have been given in table 1 with rank order. The respondents expressed their views on the basis of messages they received under KMAS. Use of complex words was the top ranked constraint stated by maximum number of respondents (65%) followed by poor mobile network (62.14%), language related problems (60.71%), length of content (56.42%), lack of information about availability of resources/ inputs (53.57%) and lack of extension activities stated by 51.42 per cent respondents.

**Table 1:** Constraints faced by the beneficiaries of KMAS (n =140)

S. No.	Constraints	No. of Respondents	Percentage	Rank
1.	Use of complex words	91	65.00	I
2.	Poor mobile network	87	62.14	II
3.	Language related problems	85	60.71	III
4.	Length of content	79	56.42	IV
5.	Lack of information about availability of resources/ inputs	75	53.57	V
6.	Lack of extension activities	72	51.42	VI

The respondents expressed their views on the basis of messages they received under KMAS. Use of complex words was the major constraint followed by poor mobile network, language related problems, length of content, lack of information about availability of resources/ inputs and lack of support from extension system. Similar constraints like narrow band width and poor ICT and mobile infrastructure were reported by Reddy (2009) and Bhavnani *et al.* (2008) [1]. Patil *et al.* (2008) [2] also found that illiteracy, cost and lack of awareness are the major adoption constraints of ICT programme.

The scientist also stated their limitations in implementing KMAS as lack of immediate feedback on message content, lack of expertise in implementing centres, limitation of two messages in a week, limitation of letters in a message, poor

and insufficient network in interior areas and lack of coordinated approach.

### Constraints faced by the scientists in implementation of KMAS

The scientists from KVK Barwani and nearby KVKs who either worked or working in the area were contacted to express their limitations/constraints in implementing this ambitious programme. Following points emerged in analysis of the scientists' views on the issue.

1. Lack of immediate feedback from beneficiaries for improvement in message content.
2. Lack of proper categorization/ classification of farmers as per their need or area of interest limit the actual usage of information and dilute the focus of the farmers.

3. Delay in sending messages as per immediate need due to unavailability of scientists/experts on time.
4. Limit of messages (two SMS in a week) fixed by the farmers' portal holds the delivery of important contents on time.
5. Sometimes limit of number of letters per message creates problem in sending complete technology with necessary elaboration.
6. Frequent change of mobile numbers by the farmers creates problem of updated list of beneficiaries.
7. Late/ untimely delivery of message due to poor network in interior areas.
8. Several times, the KVK is facing a problem of poor server connectivity or network which hampers the timely delivery of need based information.
9. Lack of cooperation and coordination among fellow

experts.

Suggestions were sought from respondents for enhancing impact and applicability for adoption of agricultural and allied technology through KMAS. An extensive list of suggestions was offered by the respondents. Out of them, the important suggestions have been listed in the Table 2.

It was suggested by 70 per cent of the respondents that local needs & preferences for the messages should be considered while taking decisions about SMS. Other important suggestions are; Use of local & familiar words in messages (61.42%), Economics of techniques delivered through message should be highlighted (53.57%), Improvement in coverage & efficiency of agricultural information delivery systems (50.71%), Timely delivery of messages (47.85%) and location specific data based information should be provided (35%).

**Table 2:** Suggestions for enhancing its impact and applicability for agricultural and allied technology through KMAS (n =140)

S. No.	Suggestions	Frequency (f)	Percentage	Rank
1.	Local needs & preference for the messages should be considered	98	70.00	I
2.	Use of local & familiar words in messages	86	61.42	II
3.	Economics of techniques delivered through message should be highlighted	75	53.57	III
4.	Improve coverage & efficiency of agricultural information delivery systems	71	50.71	IV
5.	Ensure timely delivery of message	67	47.85	V
6.	Location specific data based information should be provided	49	35.00	VI

### Suggestions of KVK scientists for improvement in KMAS

The KVK scientists were asked to offer suggestions for enhancing impact and applicability of KMAS. A detailed list of suggestions was offered by the concerned scientists. Following are the important suggestions emerged after a thorough analysis.

1. Limit for number of messages per week need to be increased at least up to four as per farmers' need.
2. Limit of message length (number of letters per message) should be increased.
3. The KVK should prepare a categorized/classified list of farmers as per their major crops/ enterprises to provide targeted need based information and to avoid ritual messaging.
4. Farmers need to be educated about minimizing the risk and maximizing the profits using timely available technological, market and weather related information in agriculture and allied sectors.
5. A complete team of experts should work on this task in a coordinated manner for desired results.
6. Farmers should avoid frequent change of their mobile numbers, once get registered with the portal.

### Conclusion

Major constraints experienced by the respondents are; use of complex words, poor mobile network in interior areas, language related problems, length of content and lack of information about availability of resources/ inputs.

The limitations/constraints perceived by the scientist are; lack of immediate feedback on message content, lack of expertise, limitation of number of messages in a week, limitation of letters in a message, poor & insufficient network in interior areas and lack of coordinated approach at institution level.

The respondents suggested that local needs & preferences for the messages should be considered while taking decisions about messages. Moreover, use of local & familiar words in messages, economics of techniques delivered through message should be highlighted, timely delivery of messages should be ensured.

The programme can be improved by increasing number of messages per week, eliminating limit of message length, educating farmers about importance of timely information and coordinated effort of implementing team will serve the purpose in a better way suggested by the scientists associated with KMAS.

The study concludes medium level overall impact of Kisan Mobile Advisory Services as per perception of beneficiaries. On the basis of the findings, it can be concluded that applicability, subject matter, timeliness and felt need are most vital in planning any mobile based advisory. The socio-economic and agricultural profile of the farmer should be properly analyzed before advocating any technological interventions. Proper communication network and infrastructure is a prerequisite for such initiative. The service provider needs to develop a strong feedback system for continuous improvement.

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