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Utilization pattern of kisan mobile advisory service (KMAS) in Banaskantha district of Gujarat state, India

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Abstract

This study was conducted to know the utilization pattern of KMAS by the farmers of Banaskantha district of Gujarat state. A sample of 123 respondents was drawn using multistage sampling technique. Data collection was done with the help of structured schedule by personal interview of the respondents. Results regarding utilization pattern of KMAS indicated that more than three fourth of the farmers (75.60 percent) had utilized dairy farming related messages, followed by pest management (62.60 percent), disease management (60.98 percent) and weather information (58.54 percent) related messages. Cent percent farmers received the messages in text mode, followed by 70.73 percent reported that messages received were easy to understand, respondents reported that messages received were needful and timely (57.72 percent), reported that messages received were fully applicable (61.79 percent) whereas 56.10 percent read the message immediately after message received. Overall utilization pattern was found medium level among three fourth of the farmers (74.80 percent).

Keywords: Farmer-subscribers, KMAS, utilization pattern

Introduction

Many of the farmers suffer from a lack of up to date, accurate and timely information because of their remote location, or simply because they don't know how and where to get trustworthy information. The agricultural information and customized knowledge is required to improve farmer's decision making ability that may enable to increase their production and productivity. Use of KMAS scheme in main line extension system of KVK is a new ICT initiative to meet needs expectation of farmers.

KMAS is started by ICAR with the aim of passing the agricultural information to maximum number of farmers in local language through SMS free of cost. It is operated by KVKs all over the India. Subject areas of KMAS are Agronomy, Plant protection, Horticulture, Animal science, Home science, Dairy, etc. KMAS provides information free of cost, location specific, in local language and cost effective to other media sources. KMAS has been launched in 192 KVKs all over India and KVK Deesa is one of the selected KVKs for implementation of scheme. KVK is using Kisan Portal, Ministry of Agriculture, Government of India to send the SMS to the farmers.

There is a need for research to know the utilization pattern of KMAS among the farmers and their major constraints in effective utilization of KMAS. Therefore the present study was undertaken with the above specific objectives.

Methodology

The study was confined to *ex-post facto* research design as the independent variables have already made impact on utilization of ICT that was studied by the researcher (Kerlinger, 1976). Multi stage sampling technique was employed in the study. The study was conducted in Banaskantha district of Gujarat state, where Krishi Vigyan Kendra (KVK) is providing agricultural technological knowledge through KMAS. KVK Deesa is selected by ICAR for mobile advisory services among 192 selected KVKs in first phase since 2009. The jurisdiction of work of KVK Deesa is Banaskantha district, hence it was selected purposively. Banaskantha district comprises of 14 talukas. Out of these fourteen talukas, six talukas were purposively selected on the basis of more number of subscriber farmers of KMAS. Three villages from each selected taluka were purposively selected on the basis of higher number of subscriber farmers of KMAS. Village wise list of subscriber farmers was obtained from KVK Deesa. Random sampling method was used in selection of respondents in proportion to 30 percent of the subscribers from each selected village. Finally, a sample of 123 farmers was drawn for the study.

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The data were collected with the help of structured schedule by personal interview of the respondents.

Results and discussion

Extent of utilization of KMAS of message received

Table 1: Distribution of the farmer-subscribers of KMAS according to the extent of utilization of KMAS (n=123)

Sr. No.	Areas	Extent of utilization			
		Very frequently	Frequently	Less frequently	Not at all
		Frequency			
1.	Weather information	72 (58.54)	42 (34.15)	08 (06.50)	01 (00.81)
2.	Crop management				
	Nutrient management	50 (40.65)	50 (40.65)	21 (17.07)	02 (01.63)
	Water management	60 (48.78)	48 (39.02)	15 (12.20)	00 (00.00)
	Weed management	60 (48.78)	39 (31.71)	22 (17.89)	02 (01.63)
	Soil management	50 (40.65)	51 (41.46)	19 (15.45)	03 (02.44)
3.	Plant protection				
	Pest management	77 (62.60)	38 (30.89)	08 (06.50)	00 (00.00)
	Disease management	75 (60.98)	42 (34.15)	05 (04.06)	01 (00.81)
	Seed treatment	33 (26.83)	65 (52.85)	21 (17.07)	04 (03.25)
4.	Horticulture				
	Nursery preparation	25 (20.33)	33 (26.83)	56 (45.53)	09 (07.32)
	Plantation crops	16 (13.00)	45 (36.59)	48 (39.02)	14 (11.38)
	Vegetables	22 (17.89)	52 (42.28)	44 (35.77)	05 (04.06)
5.	Livestock management				
	Dairy farming	93 (75.60)	26 (21.14)	03 (02.44)	01 (00.81)
	Poultry	02 (01.63)	02 (01.63)	09 (07.32)	110 (89.43)
	Sheep and goat	03 (02.44)	02 (01.63)	08 (06.50)	110 (89.43)
6.	Post-harvest management				
	Value addition	28 (22.76)	64 (52.03)	25 (20.33)	06 (04.88)
	Market information	54 (43.90)	59 (47.97)	08 (06.50)	02 (01.63)
7.	Input price	24 (19.51)	69 (56.10)	29 (23.58)	01 (00.81)

Note: Figures in () parentheses indicate percentage

A perusal of data in Table 1 indicated that, majority (75.60 percent) of farmers very frequently utilized the messages related to dairy farming, followed by pest management (62.60 percent), disease management (60.98 percent) and weather information (58.54 percent). Further messages related to input price (56.10 percent), seed treatment (52.85 percent), value addition (52.03 percent) and market information (47.97 percent) were frequently utilized by the farmers. Messages related to horticulture; nursery preparation (45.53 percent), plantation crops (39.02 percent), vegetables (35.77 percent) and input price (23.58 percent) were less frequently utilized by the farmers. About ninety percent (89.43 percent) of the

farmers had not utilized the messages regarding poultry, sheep and goat rearing.

Firstly, from the above discussion it could be concluded that almost all farmers had utilized dairy farming related messages, secondly they used plant protection related message and thirdly they used weather information related messages, because in the study area the agriculture and animal husbandry farming systems are more prevalent and hence the farmers shown interest in relevant messages got from KMAS. This finding is partially in line with the findings of Kanavi (2014) [1].

Table 2: Distribution of the farmer-subscribers of KMAS according to the message delivery

S. No	Particulars	Frequency	Percentage
Mode of sending or receiving message			
1.	Text message	123	100
	Text with picture	08	06.50
	Voice message	29	23.58
Understanding of the message received			
2.	Easy to understand	87	70.73
	Difficult to understand	26	21.14
	Not Understand	10	08.13
Need and time of the message			
3.	Needful and Timely	71	57.72
	Needful but Not Timely	21	17.07
	Not Needful but Timely	26	21.14
	Not Needful and Not Timely	05	04.07
Applicability of message			
4.	Fully Applicable	76	61.79
	Partially Applicable	33	26.83
	Not Applicable	14	11.38
Reading habit of farmers			
5.	Immediately	69	56.10
	Within a week	32	26.02
	After a week	12	09.75
	Not at all	10	08.13

It could be noted from the Table 2 that, cent percent of the farmers received the messages as text message followed by 23.58 percent of them used voice messages and only 06.50 percent used text message with picture for sending messages. The findings indicate that all farmers received text messages because all those who have the mobile phones, they received text message but they might be not aware about the voice message or message with picture mode facility available in their handset.

Majority (70.73 percent) farmers said that the messages received were easy to understand whereas 21.14 percent farmers found that received messages were difficult to understand and only 08.13 percent farmers reported that messages received were not understood. Almost all the respondents under study were literate and KVK scientist who prepared the message in a manner so that farmer can understand easily. Farmers might have found difficulty in understanding the technical words in message regarding plant protection and use of herbicide as these are more technical in nature. This finding is in conformity to the findings of Patel *et al.* (2015) [4].

Majority (57.72 percent) of farmers said that messages received were needful and timely. Further forty percent of farmers said that messages received were either not needful but not timely, and only (04.06 percent) of farmers said that messages received were not needful and not timely. This might be due to the fact that all the farmers do not have same requirement of information, hence one message may be useful for a farmer and may not be useful for the others. However, majority of farmers have found the messages needful and timely. This finding is in line with the research findings of Parganiha *et al.* (2012) [3], Kumar *et al.* (2014) and Patel *et al.* (2015) [4].

Majority (61.79 percent) of farmers reported that messages received were fully applicable followed by messages received were partially applicable (26.83 percent) and messages received were not applicable (11.38 percent). This might be because of the resource variation among the farmers. Due to lack of resources they might not be in a position to use the message. This finding is in partial agreement with the findings of Patel *et al.* (2015) [4].

More than half (56.10 percent) of the farmers read the message immediately when they receive the message followed by read the message within a week (26.02 percent), read the message after a week (09.75 percent) and only 08.13 percent of the farmers never read the message received.

This indicates that the urgency of information need of farmers vary to a great extent accordingly they read message. This finding is supported by the findings of Kanavi (2014) [1].

Extent of overall utilization pattern of KMAS

Table 3: Distribution of the farmer-subscribers of KMAS according to the extent of overall utilization pattern of KMAS

Sr. No	Extent of overall utilization	Frequency	Percentage
1.	Low (below 36.50)	24	19.51
2.	Medium (from 36.50 to 47.16)	92	74.80
3.	High (above 47.16)	07	05.69
Total		123	100.00

Mean= 41.83 S.D= 5.33

The results depicted in Table 3 clearly showed that nearly three fourth (74.80 percent) of the farmers had utilized the KAMS service to medium level, followed by low level (19.51

percent) and only 05.69 percent had high level of utilization of KMAS.

The farmers had primary to middle school education, medium level of scientific orientation and medium level of extension participation these might be the reasons for the above results.

Conclusion

From the above discussion, it could be concluded that almost all farmers had utilized dairy farming related messages, secondly they used plant protection related message and thirdly they used weather information related messages. Majority of the farmers got text messages, most of the messages were easy to understand, needful and timely, were applicable in farming and immediately read by them. Thus KMAS have a wide scope in providing information services to the farmers of our country for proper decision making for profitable farming where the extension personnel to farmers ratio is low. The increasing penetration of mobile networks and handsets in India presents an opportunity to avail useful information more widely and speedily to the farmers. KMAS could help agricultural markets, forecasting department and advisory services to operate more efficiently, and might help to overcome some of the other challenges faced by the sector.

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