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Dissemination of Farm Information through Kisan Mobile Sandesh

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ABSTRACT

In the information age, the role of appropriate information package and its dissemination to clientele is of paramount importance. It is not enough to generate information but also to ensure that the required information is delivered to the end users at the earliest and with the least dissemination loss. It can be achieved through effective utilization of various media and channels. Though, India has not remained as an exception to this fact and providing farm information to its farmers through different media and channels. Mobile has brought revolution in information and communication and become the medium of masses in rural areas too because of its unique potential of portability and easy availability. Keeping in view of its potential KVK Kurukshetra started dissemination of farm information through SMSs to the farmers. During 2010-11 forty five technical messages have been flashed on farmers mobile which include 12, 16, 02, 01, 02 and 12 messages on crop production, crop protection, horticulture, animal husbandry, soil conservation and others, respectively. Later, CCSHAU, Hisar in collaboration with Indian Meteorological Department has also started weather based agro-advisories to the farmers of Haryana state through SMS in March, 2011. The SMS alert is being sent twice a week. The present study was conducted in two parts *i.e.* 2010-11 in Kusrukshetra district 2015-16 in Sonipat district of Haryana.

Key words: Dissemination, information, sandesh

INTRODUCTION

Presently the ratio of the farmers to the extension worker is 1000:1, which is hampering the flow of agricultural knowledge to the farmers. Thus, the dissemination of information hinges around the tools of information communication technologies (ICTs). Therefore, every country which has modernized its agriculture and achieved sustainability in its agricultural production has done so with the effective utilization of various media to disseminate the farm technology to millions of its farmers. Though, India has not remained as an exception to this fact and providing farm information to the farmers through different media i.e. radio, TV and print media since independence.

Apart from radio and TV, mobile phone has become popular in rural areas and most of the people having access to this. The potential of mobile phone has not been properly utilized for dissemination of farm technologies. Now it is cheaper and flexible medium available to disseminate the farm technologies quickly and simultaneously to large mass of ruralities by giving a variety of treatments to the message. Therefore, a new service called Kisan Mobile Sandesh (KMS) for dissemination of scientific information to the farmers and extension functionaries has been started by KVK Kurukshetra in collaboration of Srishti Gyan Kendra, Rohtak (NGO) based on linear model of communication including sender, message, channel and receiver. Initially 6000 farmers from 11 districts of Haryana have been registered for receiving the KMS. Precise & accurate information on crop production, crop protection, animal husbandry and other farming aspect are being flashed time to time to raise productivity and reduce cost of cultivation.

Parganiha *et al.* (2012) found that message was medium understandable for large majority (44%) of the farmers and it was highly understandable for 80 and 53.33 per cent of In-service Personnel and Input Dealers, respectively. While, Kisan Mobile Service (KMS) provided a vide bouquet of agricultural information ranging from their land preparation to harvesting and storage and also about allied enterprises. The message was Needful & Timely for 64 percent of the farmers and about 68 and 53.33 percent for In-service Personnel and Input Dealers respectively. Less numbers of farmers

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(08%), In-service personnel (00%) and Input dealers (6.67%) were reported the massage was Not Needful & Not Timely for them. The technology was fully applicable for about 40 percent of farmers. It was also found that technology imposes high impact on 58 percent of farmers, 72 percent and 53.33 percent of In-service Personnel and Input Dealers.

Singh *et al.* (2012) concluded that majority of the respondents i.e. 56.7 per cent were young i.e. less than 30 years of age. Eighteen per cent of the farmers belonged to Middle age category while one fourth (25.3%) were of more than 45 years of age. More than 1/3rd of the respondents (70.6%) were Medium category farmers having land between 2 to 10 hectares while 18.0 per cent were small and marginal farmers and 11.3 per cent were large category farmers. Majority of the respondents (65.3%) were of medium category having education between 10th to secondary or having any diploma. About one fourth of the respondents (22.6%) had high educational level while 12.0 per cent were of low educational level. However, 80 per cent of the respondents having medium level of education were able to comprehend the information sent via mobile set as SMS. While in low education category group only 16.6 per cent could comprehend the information easily. The 85.2 per cent respondents with high education level were able to comprehend the information. Nearly 80 per cent respondents reported information was not so comprehensible. Majority of medium category farmers (73.5%) reported the information as useful followed by large farmers (64.7%). More than 50 per cent (55.5%) small and marginal farmers also found the information as useful.

Kumar *et al.* (2014) reported that advisory through mobile message was needful and timely for 82 percent of the farmers and 88.57 and 66.67 percent for extension personnel and input dealers respectively. Less number of farmers (15%), extension personnel (11.43%) and input dealers (26.67 %) were reported the message needful but not timely. Further, the sent advisory messages were medium understandable for large majority of farmers (49%) and highly understandable for 82.87 and 60 percent of extension personnel and input dears respectively. The advisory messages were fully applicable for 42 percent of farmers, 80 percent of extension personnel and 53.33 percent of input dealers. The technology puts high impact on 62 percent of farmers, 80 percent of extension personnel and 60 percent of input dealers.

Patra *et al.* (2016) indicated that most of the respondents (44 per cent) were belong to young age group (between 18- 35 years) followed by medium age group (between 36-50 years) 36 percent whereas only 20.00 per cent represents to old age group (above 50 years). It was also indicated that time specific advisory services had more importance for kisan mobile service followed by weather forecasting and market information and farmers were utilizing the mobile services mostly in the field of agronomic practices followed by plant protection measures and input support.

Patel *et al.* (2017) observed that messages were medium to highly understandable for a large majority i.e 41.25 per cent to 42.50 per cent of farmers and highly understandable for 80 per cent and 50 per cent of in-service personnel and input supplier, respectively. They also indicated that messages were needful and timely for 67.50 per cent of farmers and about 70 and 50 percent for in-service personnel and input supplier, respectively. The messages were fully applicable for 44 per cent of farmers and medium and partially applicable were reported by 16 per cent & 24 per cent of members of farmers, respectively. It was also found that message was fully applicable for in-service personnel (60 %) and input supplier (50 %).

Patil *et al.* (2017) reported that majority (70.73 per cent) of farmers found difficulty in clarification of the message, if any doubt arises was the foremost constraint in using KMAS. This was because there was no feedback cell or helpline centre, except the farmer make a return call to KVK scientist and it involve cost to the farmer. Whereas, information is sometime not relevant (39.02 per cent), poor network connectivity (21.95 per cent), SMSs were not timely (15.45 per cent), difficult to operate mobiles (11.38 per cent), irregular charging of mobile due to electricity problem (07.32 per cent) and adoption of KMAS messages is risky (05.69 per cent) were the less important constraints faced by the farmers and technical words in the message (63.41 per cent) was the second most serious constraint. Further, CCSHAU, Hisar in collaboration with India Meteorological Department, Ministry of Earth Science, Govt. of India has been rendering weather forecast based District level Agromet Advisory Service for benefit of farmers under “Gramin Krishi Mausam Sewa”. The crop and location specific weather based agro-advisories are provided to the farmers since 21st March, 2011. At present, the SMS alert is being sent twice a week to the registered farmers. Presently more than 151000 farmers registered themselves for this service across the entire state of Haryana. These messages providing real time agricultural information and boosting knowledge to improve decision making ability of farmers. Therefore, keeping all the facts in view this study was planned to analyze the reaction of farmers towards

Kisan Mobile Advisory Service as a source of reliable, accurate, easy to understand and timely information about various agricultural technologies.

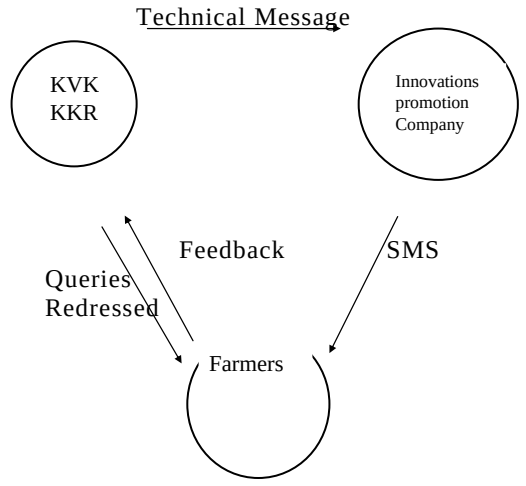
METHODOLOGY

The present study is based on opinion of farmers on the messages flashed in a span of one year during October 2010 to September 2011, October 2015- September 2016 of Kurukshetra and Sonipat District, respectively. For collecting information, a semi structured interview schedule was designed on the basis of availability of literatures. More than 1000 farmers, field extension functionaries and input dealers of each district have been registered for this service and out of which 120 farmers of each district were selected randomly for the present study. Thus in all 240 farmers, 25 field extension functionaries and 25 input dealers were selected as respondents and they were asked to provide their feedback on certain aspects. To assess the overall impact of the technology, the responses of the respondent farmers were recorded on a four point continuum scale for each aspects assigned scores like (Parganiha (2012), Understanding of the Message (Highly-3, Medium- 2, Low- 1, Not-0), need and Time Based Information (Needful & Timely-3, Needful & Not Timely-2, Not Needful & Timely-1, Not Needful & Not Timely-0) and applicability of Message (Fully-3, Medium-2, Partially - 1, Not-0). Finally, an index was worked out to assess the overall impact of technology with the help of following equations.

$$TI = \frac{O}{S} \times 100$$

Where
TI= Technology imact index of a respondents
O= Total scores obtained by respondents
S= Total obtainable score

Flow of information from and to KVK kurukshetra



RESULTS AND DISCUSSION

Profile of the Farmers

Gender wise participation

It is evident from the table 1 that majority of the respondents were male. It may be due to the male dominance in farming as well as in the society.

Table 1: Gender wise distribution of the respondents

n-=240

Category	Number	Percentage
Male	219	91.25
Female	21	08.75

Socio Economic Profile

The data presented in table 2 shows that 52.1 per cent of the respondents were of young age followed by middle and old age. Further, 37 per cent of the respondents were above matric followed by matric, middle and primary and having marginal farms (49.6 %)

Table 2: Profile of the respondents

n-=240

Particulars	Category	Number	Percentage
Age	Young	125	52.1
	Middle	71	29.6
	Old	44	18.3
Education	Illiterate	0	00.0
	Primary	27	11.3
	Middle	41	17.1
	Matric	83	34.6
	Above matric	89	37.0
Land holding	Marginal	119	49.6
	Small	82	34.2
	Large	39	16.2

Messages Flashed

As depicted in table 3 during 2010-11 forty five technical messages have been flashed on farmers' mobile which include 12, 16, 02, 01, 02 and 12 messages on crop production, crop protection, horticulture, animal husbandry, soil conservation and others, respectively.

Table 3: Distribution of SMSs Flashed during 2010-11 (Kurukshetra)

Category of SMS	No. of SMS
Crop Production	12
Plant Protection	16
Horticulture	02
Animal Husbandry	01
Soil Conservation	02
Others	12
Total	45

Opinion of Farmers on Messages Flashed

The data presented in table 4 clearly shows that all the respondents found this service useful, easy to preserve, provide timely , relevant and accurate information and time and money saving. Further, majority (85.41 percent) of the farmers found it easy to understand. As many as 35.41 percent of them contacted the KVK for further quarries and 32.50 of them told that this service helps in establishing better linkage with KVK. Similar type of results were also reported by Parganiha (2012) and Patel *et al* (2015).

Table 4: Distribution of farmers according to their opinion

n-=240

Aspect	No. of farmers	Percentage
Easy to preserve	240	100
Useful	240	100
Timely	240	100
Accurate	240	100
Relevant	240	100
Feedback to KVK	85	35.41
Easy to understand	205	85.41
Time & money saving	240	100
Help in better linkage with KVK	78	32.50

Preservation of Information Provided Through Kisan Mobile Sandesh

It is evident from the Table 5 that 10.83, 24.16 and 65.0 percent of respondents took notes on a paper 'regularly', 'sometimes' and 'never', respectively, for the purpose of preservation of farm information, while 15.83 percent of them maintained a diary for this purpose, majority of them persevered the information simply memorizing or in the inbox of mobile.

Table 5: Respondents According to Method and Frequency of Preserving Information Provided Through Kisan Mobile Sandesh

n-=240

Method of preservation	Regularly	Sometimes	Never
Notes on a paper	26 (10.83)	58(24.16)	156 (65)
Maintaining a diary	00	38 (15.83)	202(84.17)
Simply memorizing (inbox of mobile)	98 (40.83)	142 (59.17)	00

Figures in parentheses indicate percentage

Respondents Discussions of Contents of Information Provided Through Kisan Mobile Sandesh With Others

The data presented in Table 6 indicated that 26.5 and 34.2 percent of them discussed message given through KMS 'regularly' and 'sometimes', respectively, with their fellow farmers (including neighbours, friends and relatives). Discussion with family members was found to be done by 46.7 and 45.8 'regularly' and 'sometimes', respectively. However 11 and 4 percent of them found to have discussed with the extension workers 'regularly' and 'sometimes', respectively. While, 18.3 percent and 15 percent of them 'regularly' and 'sometimes', respectively, held discussion with the farm scientists.

Table 6: Number of respondents discussed contents of Kisan Mobile Sandesh with others

n-=240

Person with whom discussed	Regularly	Sometimes	Never
Fellow farmers	64 (26.6)	82 (34.2)	94 (39.2)
Family members	112 (46.7)	110 (45.8)	18 (7.5)
Extension workers	26 (10.8)	10 (4.2)	204 (85)
Farm Scientists	44 (18.3)	36(15.0)	160 (66.7)

Figures in parentheses indicate percentage

Field Extension Functionaries and Input Dealers Discussions of Contents of Information Provided Through Kisan Mobile Sandesh With KVK Scientists

The data presented in table 7 showed that 32, 48 and 20 percent of field extension functionaries discussed the information with KVK Scientists regularly, sometimes and never, respectively. Further, a few input dealer discussed the information with KVK Scientists sometimes. Similar results were also reported by Kansana et. al (2015).

Table 7: Distribution of KMS users Field Extension Functionaries and Input Dealers discussed contents of Kisan Mobile Sandesh with KVK Scientists

n-=25

Category of KMS Users	Regularly	Sometimes	Never
Field Extension Functionaries	8(32)	12 (48)	5(20)
Input Dealers	0(0)	3(12)	22(88)

Figures in parentheses indicate percentage

Impact of technology

The data presented in table 8 depicted that technology puts high impact on 61.67, 76 and 60 percent of farmers, field extension functionaries and input dealers, respectively. While, low impact was also reposted on few respondents. The results are in line with Parganiha *et. al.* 2012 Kumar *et. al.* (2014).

Table 8: Number of respondents according to overall impact of technology

Category	Farmers		Field Extension Functionaries		Input dealers	
	Number	%age	Number	%age	Number	%age
Low	20	08.33	3	12.00	2	08.00
Medium	72	30.00	3	12.00	8	32.00
High	148	61.67	19	76.00	15	60.00
Total	240	100.00	25	100.00	25	100.00

CONCLUSION

It may be concluded that majority of the farmers found this service very useful for providing information to them. Majority of them preserved messages through simply memorizing and had discussed the contents of KMS with fellow farmers and family members. Kisan Mobile Advisory is the most useful tool for dissemination

of farm information and also enhances efficiency of extension service by reaching large number of farmers in a short span of time. The farmers were helped by SMSs in timely decision making process. The service provide more lead time to the farmers so that they are able to minimize farm losses and also increase their farm productivity with efficient farm management of day to day farm operations. It is also concluded that Field Extension Functionaries and Input Dealers are also sensitize in this regard because they are the primary information source of farmers.

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