The assessment of Kisan mobile advisory services (KMAS) as effective way of transfer of technology in Chambal division of Madhya Pradesh

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Abstract

Kisan Mobile Advisory Services (KMAS) is one of the initiative part of the ICT tools, is employed by the Krishi Vigyan Kendra, Lahar, Bhind, (M.P.) which provide location specific and crop specific farm advisory services and facilities to farming community in a given areas. In this programme the mobile number of progressive farmers, Farmer friend, Extension officers and input dealers were registered and grouping is dune as per the crop enterprises basis for facility of filtering purpose. 16568 progressive farmers were registered. The usual messages are being serving twice a week and timely information/advices are communicating as per the need based. Out of this farmer only 250 progressive farmers were selected for the studies. Result of study shows that messages was partially understandable, needful and timely, partially applicable and majority of Progressive Farmer agree with the help of this service save time and money, increase in social contact, increase in knowledge, increase in productivity and the content was fully adoptable. The study indicate that KMA is one of the most useful tool for dissemination of agriculture information to farmer and also can play a greater role in enhancing efficiency of extension service by reaching large number of peoples.

Keywords: Information and communication technologies (ICTS), Kisan mobile advisory services (KMAS), Kisan mobile sandesh (KMS)

Introduction

Dissemination of the required and recent agricultural information to the farmers in scattered villages All Over the Bhind District at the variegated geographical .The transfer of technology to farmers is not a onetime exercise because new farm technology is being constantly evolved (Mehta, 2003) now the modern information communication technologies (ICTs) as mobiles and computers have created a revolution. In the 21st century, cost effective and efficient communication technologies are required to take lead in the changing agricultural scenario. Pioneering ICT experiments in India show that rural livelihood are greatly enhanced by access to information on improved agricultural practices, pest & disease control, market & weather etc. In modern world, information transformation transfer to the rural farmers hinges upon the tools of ICT where tele-centers and mobile phones application constitute major part. Since 1990s, telecenters have been experimented with a model to provide ICT opportunities to rural communities including farmers (Barbra and Foote, 2007). Research indicates mobile access has somewhat contribute to the improvements of poor lives and supported poverty reduction (Silva and Zainudeen, 2007). Kisan mobile advisory services (KMA) is one such initiative of ICT which provide location specific and crop specific farm advisory services and facilities to the farming community in a given area. The KMA services through messages have been provided to the progressive farmers with consultation of expert of different field to improve farmer's agricultural technical knowledge with decision making ability, so that they may enable to increase their production and productivity

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to fulfill market demands with securing better quality life and income in present competitive agrarian economy. Kisan mobile advisory had been one among those and worked successfully in disseminating the latest information in the district to the ultimate users. In Madhya Pradesh, the data revealed that 6.0 crore population having 9, 00,000 mobile phones (Kumar *et al*. 2012). Realizing the importance of Kisan mobile advisory services, some of the researchable questions relevant in this context are: What are the socio-personal, economic, communication and psychological characteristics of progressive farmers progressive farmers s, How are these services utilized by the progressive farmers, Is there any impact of services of KMA on progressive farmers, What are the opinion of KMA users about the services, What are the constraints faced by the users to avail the information, Is there any influence of background characteristics on indicators of KMA services? To answers these research gaps, the present study entitled "The Assessment of Kisan Mobile Advisory Services (KMAS)As Effective way of Transfer of Technology in Chambal Division of Madhya Pradesh.

Materials and Methods

The present study was conducted in Bhind district of Chambal division. The district was purposively selected for the study as one of the Krishi Vigyan Kendra under the jurisdiction of RVSKVV, Gwalior is functioning here and is responsible for providing KMA services to the farmers. Further in Bhind district was selected purposively as maximum number of registered farmers availed the KMA services provided by the KVK. From the District, 250

Progressive Farmer were selected randomly. Thus, the total sample size consists of 250 Progressive Farmer .To assess the Assessment of KMA services a device was developed and responses of the Progressive Farmer were recorded on three point continuum scale for each nine aspects and assigned a scores. Finally an index was worked out considering the nine parameters to assess the impact of KMA services with the help of following equations:

$I = Tsr/ Tos X 100$

Where,

I =   Impact of KMA on Progressive Farmer

Tsr = Total scores obtained by Progressive Farmer

Tos = Total obtainable score

Results and Discussion

To study this aspect, factual information related to farmers were collected and analyzed. Socio-personal, economic, psychological and communication characteristics of farmers were studied in terms of age, gender, education, land holding, annual income, farming experience, material possession, social participation, innovativeness, scientific orientation, mass media exposure and extension contact.

Profile of progressive farmer

Table 1 show that vast majorities of the progressive farmer (75%) were in medium age group. About 81.16% of the Progressive Farmer respondents were male, Most of the Progressive Farmer (33.49%) were illiterate, Majority of the Progressive Farmer (46.00%) were having small size of land holding, An overwhelming majority of the Progressive Farmer (85.38%) were having medium annual income, Most of the Progressive Farmer (67.65%) were having

Table 1: Profile of respondents [n=250]

S. No.	Socio-personal, economic, communication and psychological profile	Percentage (Majority of Population)
1	Age	75.00 (belongs to middle age group i.e. 36 to 50 years)
2	Gender	81.16 (were male)
3	Education	33.49 (were illiterate)
4	Size of land holding	46.00 (were small farmers i.e. 2.51-5.0 acres)
5	Annual income	85.38 (medium)
6	Farming experience	67.65 majority were having 15-32 years of experience
7	Material possession	63.50 (medium)
8	Social participation	68.50 (no membership)
9	Innovativeness	76.93 (medium)
10	Scientific orientation	83.26 (medium)
11	Mass Media Exposure	52.38 Half of the respondents had medium mass media exposure
12	Extension contact	59.61 Low extension contact)

medium farming experience, Maximum number of Progressive Farmer (63.50%) were having medium level of material possession, As far as social participation is concerned, majority of the Progressive Farmer (68.50%) were neither member nor office bearer in any social organization, number of Progressive Farmer (76.93%) were having medium level of innovativeness, Major proportion of the Progressive Farmer (82.26%) were having medium level of scientific orientation, Half of the Progressive Farmer (52.38%) were having medium level of mass media exposure, More than half of the Progressive Farmer (59.61%) had low extension contact.

Assessment of Kisan mobile advisory services (KMAS)

The Result reveled that KMA is one of the most useful tool for dissemination of agriculture information to farmer and also can play a greater role in enhancing efficiency of extension service by reaching large number of peoples. The result obtained indicated (Table 2) that messages were partially to highly understandable for large majority i.e. 46.40 to 34.00% of Progressive Farmer.

Further, the data shows that messages were needful for 90.84 per cent of the Progressive Farmer. KMA provided a vide bouquet of agricultural information's ranging from their land preparat progressive farmer ion to harvesting and storage and timeliness also about allied enterprises but needfulness of the messages was very important. The findings were nearby to the findings reported by Saxena *et al*. (2011). The finding regarding time based information revealed that majority of Progressive Farmer (52.38%) agreed that the messages were timely. The results are in consonance with the results of Sandhu *et al*. (2012). As far as applicability of message is concerned, the result indicated that message was partially to fully applicable for about 66.40 % to 34.40% of Progressive Farmer. It is evident from the data that 58. 40% farmers expressed their views regarding KMS that it saved the time and money. The findings were nearby to the findings reported by Saxena *et al*. (2011). The farming community resides at villages of our country. In villages farmers have a very close relationship with each other and hence are in regular touch and interact among themselves. In case of receiver i.e. the message reader, was regarded as a very important person among the villagers as he acts also as a communicator or interpreter of the KMA. The result indicated that the total 81.20% of the Progressive Farmer. agree that this increased their credibility and technical reliability

Table 2: Distribution of Progressive Farmer according to different parameters [N=250]

Parameter	Frequency (%tage)
1. Understanding of the message	
A. Highly understandable	85 (34.00)
B. Partially understandable	116(46.40)
C. Not understandable	53 (21.20)
2. Need based information	
A. Needful	228(91.20)
B. Somewhat Needful	21(8.40)
C. Not Needful	5(2.00)
3. Time based information	
A. Timely	130(52.00)
B. Undecided	111(44.40)
C. Not timely	15(6.00)
4. Applicability of message	
A. Fully applicable	86(34.40)
B. Partially applicable	166(66.40)
C. Not applicable	21(7.60)
5. Save time & money	
A. Agree	221(88.40)
B. Disagree	11(4.40)
C. Undecided	21(7.60)
6. Increase in social contact	
A. Agree	203(81.20)
B. Disagree	10(4.00)
C. Undecided	39(15.60)
7. Increase in knowledge	
A. Agree	214(85.60)
B. Disagree	15(6.00)
C. Undecided	21(7.60)
8. Increase in productivity	
A. Agree	172(68.20)
B. Disagree	45(18.00)
C. Undecided	120(48.00)
9. Adoption of KMA Services	
A. Fully adopted	118(47.20)
B. Partially adopted	68(27.20)
C. Not adopted	72(28.80)
10. Overall impact of KMA service	
A. Low (<50 Scores)	36(14.40)
B. Medium (50-99 Scores)	185(74.00)
C. High (>99 Scores)	38(15.20)

among the farming community and apparently Progressive Farmer. had clearly stated that the KMA has increased their social contact and importance as a resource with creditability and reliability. The findings supported by Kansana *et al*. (2015).

Area wise distribution of problems discussed by KMA service users with sms of KVK

Table 3 showed that the major areas of problem

Table 3: Area wise distribution of problems discussed by KMA service users with SMS of KVK

S. No.	Area of problem discussed	Extent of discussion Frequency (%tage)				Mean scale value	Rank
		Once in a month	Fortnightly	Never	Occasionally		
1	Crop production Management	71(28.40)	5(2.00)	91(36.40)	83(33.20)	2.22	I
2	Livestock & Dairy production management	52(20.80)	6(2.40)	93(37.20)	99(39.60)	1.70	V
3	Insect, pest and Disease Management	63(25.20)	5(2.00)	100(40.00)	83(33.20)	2.12	II
4	Horticultural & Ornamental Crops	33(13.20)	5(2.00)	127(50.80)	85(34.00)	1.58	VI
5	Weather forecasting	19(7.60)	8(3.20)	97(38.80)	126(50.40)	1.78	III
6	Post-harvest management	18(7.20)	8(3.20)	100(40.00)	126(50.40)	1.77	IV

Table 4: Opinion of KMA service users in making the KMA service more effective (N=250)

S. No	Opinion	Frequency	Rank
1	The message should be simple and understandable	47(18.80)	V
2	Message should be appropriate to the farming situation	41(16.33)	VII
3	The message should be serve in local language	107(42.80)	I
4	Voice message facility should be provided	81(32.40)	III
5	Along with the name of the insecticides, pesticides etc, approximate market prices should also be communicated	45(18.00)	VI
6	Message on agriculture related enterprises should also be provided	8(3.20)	VIII
7	Market related up to date information should be given	76(30.40)	IV
8	Message on latest technologies on agriculture and allied sector should be provided	98(39.20)	II

discussed by KMA service users for getting solution were crop production management ranked first followed by Insect, pest and Disease Management, Weather forecasting, Post-harvest management, Livestock & Dairy production management and Horticultural & Ornamental Crops ranked second, third, fourth, fifth and sixth respectively. However, as far as the extent of discussion of KMA service users with SMS of KVK is concerned, maximum respondents rarely discuss the problems with the SMS of KVK to get the solutions.

Opinion of KMA service users in making services more effective

As par as opinion of KMA service users in making services more effective is concerned, the results revealed that majority of the Progressive Farmer (Table 4). opined that messages should be served in local language followed by providing messages on latest technologies on agriculture and allied sector, providing voice messages, market related up to date information, simple language should be used, along with names of insecticides, pesticides etc. approximate market prices of the same should be provided, message appropriate to their farming

situations and messages on agricultural related enterprises should be provided.

Relationship between profile characteristics and assessment indicators

Table 5: Relationship between profile characteristics and impact of KMA services

S. No.	Characteristics	Correlation coefficient 'r'
1	Age	-0.447[NS]
2	Gender	0.562*
3	Education	0.653*
4	Land holding	0.159[NS]
5	Annual income	0.239*
6	Farming experience	-0.452[NS]
7	Material possession	0.395*
8	Social participation	0.259*
9	Innovativeness	0.487*
10	Scientific orientation	0.698*
11	Mass media exposure	0.678*
12	Extension contact	0.509*

* Significant at 5% level of significance,
[NS] Non-significant

It is clear from the results that out of the twelve variables, nine variables viz. gender, education, annual

income, material possession, social participation, innovativeness, scientific orientation, mass-media exposure and extension contact were significantly related with assessment of KMA services, whereas age, land holding and farming experience had no relationship with the assessment of KMA services on the progressive farmer (Table 5).

Conclusion

Regarding the assessment of Kisan mobile advisory services, the overall assessment was found to be of medium level. The messages delivered through KMA services were partially to highly understandable, needful and timely as reported by majority of the progressive farmer. The message was partially to fully applicable for about 66.40% to 34.40% of Progressive Farmer. The Progressive Farmer agreed that this increased their credibility and technical reliability among the farming community and apparently Progressive Farmer had clearly stated that the KMA has increased their social contact and importance as a resource with creditability and reliability. Crop production was the area sought by majority of the Progressive Farmer for getting solution. Further, majority of the Progressive Farmer opined that messages should be served in local language which will speed up the rate of adoption of messages transmitted through KMA services. The innovative information and communication technology like Kisan Mobile Advisory is proving as one of the important step to transform the present agricultural information system at grass root level.

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