

Assessment of Kisan Mobile Advisory (KMA) Service for Dissemination of Agricultural Information in Mehsana District of Gujarat State

M. R. Patel¹, M. V. Patel² and R. A. Patel³

ABSTRACT

In present scenario, agriculture being highly skill oriented and technically intensive needed a high priority. At present the ratio of farmers to extension worker is quite low (1000:1). Maximum RAEO or other extension workers disseminated agriculture knowledge without having much accountability and expertise. This issue has created a gap between improved agriculture technology and the end user (farmer). To address the issue Kisan Mobile Advisory Service was launched for sending information through SMS in Mehsana District through Krishi Vigyan Kendra during January 2014. The content of messages were typed in Gujarati language and information related to crop production, crop protection, vegetable and fruit production, spice crops, dairy farming, weather forecasting, post harvest management and other agricultural and allied related information sent to end users. To evaluate and information and usefulness of information, the present study was conducted with survey of 80 farmers, 10 in-service personnel and 10 input suppliers of district during 2014-15. The result of survey shows that messages were highly understandable for majority (42.50 %) of the farmers. It was highly understandable for 80 per cent and 50 per cent KMA member of in-service personnel and input supplier category, respectively. The messages were needful and timely for 67.50 per cent of KMA member of farmers' category and about 70 per cent and 50 per cent for in-service personnel and input supplier, respectively. As far as applicability of message is concerned, messages were fully applicable for about 44 per cent of KMA member of farmers' category whereas medium and partially applicable were reported by 17.50 per cent and 22.50 per cent of members, respectively. It was also found that messages were fully applicable for in-service personnel (60 %) and input supplier (50 %). Majority of the farmers (72.50 %) conveyed the messages minimum to at least another farmer in social system.

Key word : KMA, SMS, RAEO, ICT mobile

INTRODUCTION

Indian agriculture is essentially small farm agriculture with the majority of farmers owning less than 1 hectare land. Small and marginal farmers now constitute over 80 per cent of farming households in India. The average farm size has been declining. The land and water resource base for an average farm holding has declined over the last few decades. There are wide gaps in yield potential and national average yields of most the commodities. "In addition to stressed natural resources and very inadequate rural infrastructure, there are clear evidence of technology fatigue, run-down delivery systems in credit, extension and marketing services and of insufficient agricultural planning at district and lower levels" (Planning Commission, 2011). Access to adequate information is very essential to increase agricultural productivity (Sharma *et al.*, 2012)

Agricultural extension services can play an important role in addressing many of these challenges. Perhaps, there is no agency at the ground level, other than agricultural extension services that can provide knowledge support to farmers and other intermediaries and at the same time support programme implementation. Considering the changing nature of agriculture and the evolving challenges, producers currently need a wider range of support, including organizational, marketing, technological, financial and entrepreneurial. To be successful, farmers require a wide range of knowledge from different sources and support to integrate these different bits of knowledge in their production context. Traditional public- sector extension services use a variety of extension programmes to overcome barriers to technological adoption without much success (Aker, 2010). Typically poor and illiterate, rural Indian farmers generally have very limited access to information regarding improved farm techniques (Jain, 2011).

¹Krishi Vigyan Kendra, Ganpat Vidyanagar District: Mehsana- 384 012 (Gujarat), ²Present correspondence Address : ³ Subject Matter Specialist (Extension Education), Krishi Vigyan Kendra, Ganpat Vidyanagar-384 012, District- Mehsana (Gujarat)

The extension workers and farmers ratio is a dismal figure in India. This clearly indicates about the inadequate manpower for agriculture extension work in India. All these things have made to think beyond the traditional agriculture extension and subsequently led to the increase application of ICT in agriculture. ICTs essentially facilitate the creation, management, storage, retrieval, and dissemination of any relevant data, knowledge, and information that may have been already been processed and adapted (Batchelor, 2002; Chapman and Slaymaker, 2002; Rao, 2007; Heeks, 2002). ICTs now include computer-based applications and communication tools such as social media, digital information repositories (online or offline), digital photography and video, as well as mobile phone (Balaji et al., 2007). Despite the rapid spread and potential of ICTs to facilitate farmers' 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 localized content in an appropriate language (Keniston, 2002; Dossani, Misra, and Jhanveri, 2005; Saravanan, 2010). At present in India a number of ICT initiatives in agriculture are present out of which, KMAS is the approach adopted by KVK Mehsana in Gujarat.

METHODOLOGY

The present study was conducted in Mehsana District of Gujarat. The majority farmers come under small and marginal group. The land holding may have bearing on usefulness of the SMS. Kisan Mobile Advisory Service was launched for sending information through Short Message Service (SMS) in Mehsana District by KVK during 2014. Information regarding crop production, crop protection, horticulture crop, dairy farming, weather, post harvest technology, value addition and other agriculture related information were included.

For collecting information, a semi structured interview schedule was designed on the basis of availability of literatures. Data were collected by personal or discussion with all the respondents. Out of total registered 31014 users, 80 farmers and 10 in-service personnel and 10 input suppliers were selected randomly for collection of data. The data were analyzed by using frequency, mean and percentage.

RESULTS AND DISCUSSION

Kisan Mobile Advisory Service was started with the aim of passing the agricultural information to maximum numbers of farmers in shortest and cheapest way and also timely advice without any distortion of the message.

Initially, SMSs were sent in local language font (Gujarati) but messages were not displayed to end users due to Comprehensibility. Later on it was decided to use the English alphabet for passing information in local language. A total number 43 SMS's was sent pertaining to different disciplines related with agriculture in 2014-15. Maximum 39.5 per cent SMSs were sent in the field of Agronomy (Crop Production) followed by Plant Protection (37.2 %). Rest 23.3 per cent SMSs included information on Animal Husbandry, Horticultural crops, Weather, Input Advisory and other agriculture related information.

Table 1 : No of SMS's sent pertaining to different discipline.

Area	No of SMS
Agronomy (Crop Production)	17 (39.5)
Plant Protection (Crop Protection)	16 (37.2)
Animal Husbandry	3 (6.9)
Weather	1 (2.32)
Input Advisory	1 (2.32)
Miscellaneous	5 (11.6)
Total	43

Comprehensibility of message or understanding the message

The result obtained indicated that messages were medium to highly understandable for a large majority *i.e* 41.25 per cent to 42.50 per cent of farmers category. It was highly understandable for 80 per cent and 50 per cent KMS members of in-service personnel and input supplier category, respectively. No members of any category of KMS were reported that messages were not understandable for them (Table 2). These findings were in line with the findings reported by Omprakash and S.K. Shrivastava 2012.

Table 2: Distribution of the respondents according to comprehensibility understanding of the message

Particular	Farmers (n=80)		In service personnel (n=10)		Input supplier (n=10)	
Highly understandable	34	42.50	8	80.00	5	50.00
Medium understandable	33	41.25	2	20.00	3	30.00
Low understandable	13	16.25	0	00.00	2	20.00
Not understandable	0	00.00	0	00.00	0	00.00

Need and Time base information

KMS provided a wide bouquet of agricultural information's ranging from their land preparation to harvesting and storage and also about allied enterprises but needfulness and timeliness of the messages was very important. The data presented in Table-3 indicated that messages were needful and timely for 67.50 per cent of the KMS members of the farmers' category and about 70

and 50 percent for in-service personnel and input supplier, respectively. The message was not needful and not timely for them, as reported by less numbers of farmers (10 %), in-service personnel (00.00%) and Input Supplier (10 %).

Table 3: Distribution of respondents according to need and time based information.

Particular	Farmers (n=80)		In service personnel (n=10)		Input supplier (n=10)	
Needful & Timely	54	67.50	7	70.00	5	50.00
Needful but Not timely	10	12.50	2	20.00	2	20.00
Not Needful but timely	9	11.25	1	10.00	2	20.00
Not Needful & Not timely	7	8.75	0	00.00	1	10.00

Applicability of messages

As far as applicability of message is concerned, the data presented in Table 4 indicates that message was fully applicable for about 44 per cent of KMS members of farmer's category. Medium and partially applicable were reported by 16 per cent & 24 per cent of members of farmer's category, respectively. It was also found that message was fully applicable for in-service personnel (60 %) and input supplier (50 %).

Table 4: Distribution of the respondents according to applicability of message

Particular	Farmers (n=80)		In service personnel (n=10)		Input supplier (n=10)	
Fully Applicable	32	44.00	6	60.00	5	50.00
Medium Applicable	14	17.50	2	20.00	3	30.00
Partially Applicable	18	22.50	2	20.00	2	20.00
Not Applicable	16	20.00	0	00.00	0	00.00

Distribution of KMA users according to the frequency of messages conveyance

Majority of farmers (72.50 %) conveyed the message minimum to at least one farmers in social system, while 10 per cent conveyed messages to more than 3 farmers and only 17.50 per cent did not convey the information to others (Table 5). 40 per cent in service personnel also disseminated the information to 5-10 user farmers and about 30 per cent input supplier conveyed the information obtained from KMA to the user farmers.

It could be concluded that not only in-service personnel but also KMA user farmers and input supplier to some extent disseminated the information to other user farmers. This finding was similar to the finding reported by Kansana and Singh, 2015.

Table 5: Distribution of KMA users (Respondents) According to their frequencies of messages conveyed to other

Category of conveyed farmers	Farmers (n=80)		In service personnel (n=10)		Input supplier (n=10)			
0	14	(17.50)	0-5	3	(30.00)	Regularly	00	(00.00)
1-3	58	(72.50)	5-10	4	(40.00)	Rarely	3	(30.00)
4-6	8	(10.00)	10-15	3	(30.00)	Never	7	(70.00)

CONCLUSION

Indian agriculture has drastically changed after liberalization globalization, marketization and privatization. A shift towards commercial and export oriented agriculture demands, information based approaches to agriculture communication. The information disseminated via text messages in local language through mobile SMS can play a greater role in enhancing efficiency of extension service by reaching a large number of peoples as well as there is great scope for collection and dissemination of agricultural and rural information. This initiative confirms the fact that farming community is also geared to accept the changes evolving in agriculture and in ICT.

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REFERENCES

- B.S. Kansana; Pradeep Singh; Pushpendra Singh and A.K. Singh. 2015. Assessment the efficiency of KMS in ICT tool for Agril. Ext. and Rural Development. *IJSR*-Volume-4, Issue:1.
- Batchelor, S.2002. Using ICTs to Generate Development content. IICD Report 10. The Hague : International Institute for Communication and Development.
- Jain, S. 2011. Information Empowerment of Rural People in Agriculture through e-Choupal. *Journal of Community Mobilization and Sustainable Development*, 6(1): 57-61.
- Keniston, K. 2002, Grassroots ICT Projects in India: Some Preliminary Hypotheses. *ASCI Journal of Management*, 31 (1&2).
- Omprakash Parganiha; S.K. Shrivastava; A.K. Chaubey and J.L. Nag. 2012. Impact of KMA on Agricultural Technology Dissemination. *Indian. Research Journal of Extension Education*, special issue volume-II, 175-178.

Planning Commission. 2011. Draft on Faster, Sustainable and More Inclusive Growth - An approach to Twelfth Five Year Plan", available at http://planning.commission.nic.in/plans/planer/12appdrft/approach_12plan.pdf.

Sharma, A, A, Sharma and A. Saxena. 2012. Information utilization among rural fish farmers in Uttarakhand. *Journal of Community Mobilization and Sustainable Development*, 7(1):95-100.

Sulaiman, R. 2003. Agricultural Extension Involvement of private sector. National Bank for Agriculture and Rural Development, Mumbai, India.