

## Assessment The Efficacy of Kisan Mobile Advisory An Ict Tool for Agricultural Extension And Rural Development



### Agriculture

**KEYWORDS :** Kisan Mobile Advisory (KMA), SMS, ICT

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### ABSTRACT

*In present scenario agriculture being highly skill oriented and technical intensive needed to high priority. At present the ratio of farmers to one extension worker is quite low (1000: 1). Apart from less in number appointed RAEO or other extension workers disseminate the agricultural knowledge without having much accountability and expertise. This issue has created a gap between improved agriculture technologies and the end user (farmers). To address the issue Kisan Mobile Advisory Service (KMAS) was launched for sending information through Short Message Service (SMS) in Datia district through Krishi Vigyan Kendra Datia during 2011-12. The content of message was typed in Hindi language and information related to crop production, vegetable and fruit production, Insect pest control, horticulture, dairy farming, goatary, weather forecasting, Post harvest management and other agriculture and allied related information sent to end user. To evaluate the sending information and usefulness of information present study was constitutes, survey of 80 farmers 10 RAEOs and 10 Input dealer of district during 2013-14. Results of survey showed the majority of respondent agree about need based availability of information (95%), Easy to understand (85.83%), SMS work as reminder (97.91%), KMA gives alert to agricultural operations (100%), Save time and Money (96.66%), Appropriate information on time (97.91%), increase in productivity (84.16%) and Improvement in agricultural operation (85.83%).*

### Introduction

Agriculture in India comprising of crops, dairy, fishery, horticulture, agro-forestry with small enterprises like bee keeping, mushroom growing etc. needs the use of modern technologies to achieve the target growth. Rural farmers are producers and consumer also in the food chain; their action production harvesting and marketing are critical determinates of global food security. Need is to harness productivity along with sustainability, minimize post harvest losses and getting appropriate prices for produce. For this market, research, advice, credit, infrastructure, farmer organization development and business development services (Sulaiman, 2003).

At present the ratio of the farmers to the extension worker is 1000:1, which is really less. In modern world, information transfer to and from the rural farmers hinges upon the tools of information communication technologies (ICT) where telecenters and mobile phone application constitute major part. Since 1990s, telecenters have been experimented with a model to provide ICT opportunities to rural communities including farmers (Barbara and Foote, 2007). Research indicates mobile access has some-what contribute to the improvements of poor lives and supported poverty reduction (Silva and Zainudeen, 2007).

In Madhya Pradesh, the data revealed that total 6.0 crore population having 90,00,00 mobile phone which means that every five member farming family having one mobile phone. Kisan Mobile phone had been found very effective tool for dissemination of information among different categories of respondents for making agriculture sustainable in the use of ICT tools. Krishi Vigyan Kendra, Datia has used the linear model of communication i.e. SMCR, which involved four major components of communication process i.e. 'Sender/Source, Message / Information, channel / Medium and Receiver /Audience'. No single channel can be reached to such vast population within few seconds and low cost to convey as well as motivate the rural community today information. Keeping in view the importance of KVK-KMA and the constraints in farmer's field present study has been conducted with following objectives:

- To analyze the feedback or usefulness of KVK-KMA.
- To assess the impact of the KVK-KMA service on the respondents.

### Material and Method

Present study was conducted in Datia district of Madhya Pradesh. The district was selected purposively because this district was comes under Bundelkhand Zone, majority of the farmers (72 %) are comes under small and marginal group. The land holding may have bearing on usefulness of the SMS. Kisan Mobile Advisory Service (KMAS) was launched for sending information through short message service (SMS) in Datia district by Krishi Vigyan Kendra during 2011-12. Information regarding crop production, horticulture, dairy farming, weather forecasting, post harvest management/ value addition and other agricultural related information. Two KMA in a week have been delivered during the assessment years.

Present study was conducting in the year 2013-14. For collecting information a semi structure interview schedule was designed on the basis of available literature. Data were collect by personnel interview or discussion with all the respondents. Out of total registered 40 thousand KMA user 80 farmers, 10 RAEOs and 10 input dealers were selected for collecting the data. Data were analyzed by using frequency, mean and percentage.

### Result and Discussion

**Subject wise distribution of KMA:** Table – 1 revealed that during the assessment year total number of 104 Kisan Mobile Advisory disseminates among the KMA users, regarding crop production (33), plant protection (10), horticulture (10), soil science (08), fisheries (05), animal science (14), weather forecasting (09), Post harvest management or value addition (08) and miscellaneous (07). Nearly 50 percent of advisories were issued regarding crop production, horticulture and plant protection because the district having soybean, Sesamum, Black Gram Paddy, Gram, Wheat and Mustard in field crops, while small area of vegetable crops like potato, onion, chilli, Brinjal and Tomato with some cucurbits.

**Extent of Agreement of the respondents with KMA Statement:** Table -2 showed during assessment year the almost cent – percent farmers were agrees with the statements in received need based information, Easy to understand (87.50%), save time and money (90%) and increase in social contact (56.25%). Cent percent RAEOs with input dealers and 93.75 percent farmers were agree on the statement i.e. appropriate information on time. Most of the farmers with cent percent extension personnel and input dealers were showed their agreement to statement i.e. Develop information bank, increase in knowledge and increase in productivity of practicing crops 78.75, 87.50 and 52.50 percent respectively. KVK-KMA gives alert to agricultural operation and the SMS act as a reminder 100 and 93.75 percent farmers respectively, with 100 percent extension personnel and input dealers were show strong agreement to these statements. Total 57.50 percent farmers showed agreement with KVK-KMA prove to improvement in agricultural operation. Strong and cent-percent agreement of extension personnel and Input dealers for asked statement may be due to higher education level. Similar results were found by Sandhu et al. 2014 and Kumar et al. 2012.

**Discussion of farmers with KVK scientists on the basis of KMA:-** Table -3 showed that most of the farmers were discussed the problem related to KMA with KVK scientist. Maximum farmers 45 percent and extension personnel 58 percent were varied about problem related to plant protection, because of scented rice and soybean emerge as a new major crop, all respondents were shown their interest to protect them and get better yields.

**Distribution of KMA users according to their frequencies of contact with KVK:-** Table -4 showed that only `6.25 percent farmers were made regular contact to KVK to discussion about problems of farmers field as well as their solution. The findings get support from findings of Fusion, 2009 and Kumar et al., 2012.

**Distribution of farmers according to their adoption of KMA in different areas:** The majority of farmers fully adopted the delivered information through message (KMA) regarding plant protection, crop production, live stock management, horticulture, and weather forecasting and Soil Fertility i.e. 70.00, 58.75, 56.25, 52.50, 42.75 and 25.00 percent respectively (Table-5). It could be inferred from the findings that two third disseminated information fully adopted by the KMA user farmers because of district has major agricultural enterprise is crop production and livestock management therefore the farmers much attention to plant protection measures. Information regarding soil fertility management and weather forecasting were partially adopted by majority (75.00 and 53.25 percent), of KMA user farmers, respectively due to complexity of information in adoption. The

findings get support from findings of Kumar et al., 2012.

**Impact assessment of Kisan Mobile Advisory:** Majority of farmers (72.50 percent) were conveyed the message minimum to one another farmer in social system, while 8.75 percent conveyed to more than 3 farmers and only 18.75 percent would not convey the information to others (Table -6). As well as 50 percent RAEOs disseminate the information to 05-10 user farmers and about 30 percent input dealers also convey the information obtained from KMA to the user farmers. It could be concluded that not only extension personnel but also KMA user farmers and input dealer for some extent disseminate the information to other user farmers.

**Conclusion:**

With the economic, social, political and cultural development in the village the technologies like mobile, internet, teletext, video text and microcomputers should necessarily be used for communication with farmers. Indian agriculture has drastically changed after liberalization, globalization, marketization and privatization. The shift towards commercial and export oriented agricultural demands, information based approaches to agriculture communication is need of present scenario. The information disseminated via text message in “Hindi” or local language through mobile ICT can play a great role in enhancing efficiency of extension system by reaching large number of people. The information has to be tailored according to the enterprise, crops adopted by the farmers and based on the assessment of felt needs of the stakeholders. The information sent should be specific, brief and clear so that interest of the target group could be maintained.

**Table- 1 Area wise distribution of Kisan Mobile Advisory (KMA) issued during 2013-14**

S. No.	Area	Number	Percent (%)
1	Agronomy	33	31.73
2	Plant protection	10	9.61
3	Horticulture	10	9.61
4	Soil Science	08	7.69
5	Fisheries	05	4.80
6	Animal Science	14	13.46
7	Weather Forecasting	09	8.65
7	Post Harvest management (PHT)	08	7.69
8	Miscellaneous	07	6.73
9	Total	104	100

**Table – 2 Extent of Agreement of the respondent with Kisan Mobile Advisory statement during 2013-14**

S. no.	Statement asked for survey	Farmers Number-80	Rural Agriculture Extension officers (RAEO) Number-10	Input Dealer Number-10
1	Received Need based information	75 (93.75)	10 (100.00)	10 (100.00)
2	Easy to understand	70 (87.50)	09 (90.00)	08 (80.00)
3	SMS also act as reminder	75 (93.75)	10 (100.00)	10 (100.00)
4	KVK-KMA give alert to agricultural operations	80 (100.00)	10 (100.00)	10 (100.00)
5	Save time and money	72 (90.00)	10 (100.00)	10 (100.00)
6	Appropriate information on time	75 (93.75)	10 (100.00)	10 (100.00)
7	Increase in social contact and importance	45 (56.25)	09 (90.00)	08 (80.00)
7	Develop information bank	63 (78.75)	10 (100.00)	10 (100.00)
8	Increase in knowledge	70 (87.50)	10 (100.00)	10 (100.00)
9	Increase in productivity	42 (52.50)	10 (100.00)	10 (100.00)
10	Improvement in agricultural operations	46 (57.50)	10 (100.00)	10 (100.00)

**Table – 3 Discussion of farmers with KVK –Scientists on the basis of Kisan Mobile Advisory**

S. No.	Area of Problem Discussed	Farmers (%)	Extension Personal (%)
1	Crop Production	20	21
2	Insect and pest problem	45	58
3	Vegetable and fruit production	12	10
4	Soil testing and fertility	08	02
5	Fisheries	01	-
6	Live stock Production management	03	-
7	Post Harvest management (PHT)	04	04
8	Miscellaneous	07	05

**Table 4- Distribution of KMA users according to their frequencies of contact with KVK**

S. No.	Category of KMA users	Regularly	Rarely	Never
1	Farmers (80)	5 (6.25)	18(22.5)	57(71.25)
2	Extension Personnel (10)	3(30)	5(50)	2(20)
3	Input dealers (10)	00	1(10)	9(90)

**Table 5- Distribution of farmers according to their adoption of KMA in different Areas**

S. No.	Category of areas	Farmers (80)				
		Fully Adopted	Ranked	Partially Adopted	Ranked	Non- Adopted
1	Crop Production	47(58.75)	II	33(41.25)	V	-
2	Plant protection	56(70.00)	I	24(30.00)	VI	-
3	Horticulture	42(52.50)	IV	38(47.50)	III	-
4	Soil fertility	20(25.00)	VI	60(75.00)	I	-
5	Weather Forecasting	35(42.75)	V	45(53.25)	II	-
6	Live stock and production	45(56.25)	III	35(43.75)	IV	-

**Table 6- Distribution of KMA users according to their frequencies of message conveyed to others**

S. no.	Farmers		In-service Personnel		Input Dealers	
	Category of conveyed farmers	Farmer's (n=80)	Category of conveyed farmers	RAEOs (n=10)	Category of conveyed farmers	Input Dealers (n=10)
1	0	15(18.75)	0-05	02(20)	Regularly	00(00)
2	1-3	58(72.50)	05-10	05(50)	Rarely	03(30)
3	4-6	07(08.75)	10-15	03(30)	Never	07(70)

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