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## Analysis of extent of utilization of mobile phone services by farmers

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**Abstract**

The study was taken up to analysis of extent of utilization of mobile phone services by farmers which was conducted in Dharwad district which was purposively selected as it comes under the jurisdiction of UAS, Dharwad. From the point of researcher convenience, registered farmers list to mobile service of KVK, Dharwad, APMC, Hubli and weather based mobile services of UAS, Dharwad were collected for the study. From the list, 120 farmers were selected randomly. Thus the total sample size constitutes 120 respondents. The data were collected from the selected sample through personal interview with the help of pretested structured interview schedule. The results showed that cropping pattern information was utilized whenever needed by 59.16 per cent of the respondents and rest (40.83%) never utilized cropping pattern information. One third of the respondents utilized weather based services whenever needed followed by 34.16 per cent utilized monthly. Market information was utilized whenever needed by 42.50 per cent of the farmers followed by 36.66 per cent utilized monthly.

**Keywords:** KVK, APMC, utilization, mobile phone services

### 1. Introduction

Agricultural information is central in enhancing accelerated agricultural productivity, facilitating poverty alleviation and rural urban-migration among rural youth. Transfer of technology to farmers is not a onetime exercise because new farm technology is being constantly evolved. A continuous flow of technologies in an appropriate manner is vital to provide quick benefit of this development to the farmers (Mehta, 2003) [5]. With the current global ICT revolution, however, it has been found that ICTs portend great potentials for effective agricultural extension information transfer and information sharing (Omotayo, 2005 and Arokoyo, 2005) [6, 2] identified such potentials of ICT application in Agricultural Extension service delivery as in needs assessment, exploring production alternatives, exchanging and sharing of information by peers, training and demonstration, and community learning among others. The promise of ICTs in agricultural extension is that they can energize the collection, processing and transmission of data, thus making it possible to extend quality information faster in a bottom up and interactive channel of communication. ICTs have been found to be the only way in which farmers can access a variety of information sources that are accessible, affordable, relevant and reliable. The increasing use of ICTs in agricultural extension service delivery would narrow the gender disparities in terms of access to agricultural information. The transfer of agricultural information from research centers to farmers is very important as it helps farmers learn innovations which improve agricultural productivity (Sanusi *et al.*, 2010) [7]. In recognition of the significance of information in technology transfer Ajayi and Nwoko (1995) [1] opined that the emergence of information economy as a global phenomenon that organized production, conscious utilization of information and effective and efficient deployment of information is increasingly becoming the basis for creativity, productivity, and profitability. Hence, access to factors of production has probably ceased to be problems but rather ability to generate and intelligently use knowledge and information resources about these factors of production. Furthermore, for any true agricultural progress, farmers must know, understand and act on the available information. Therefore, how far farmers progress in their work depends largely upon the extent of utilization accurate and reliable information. Therefore this study was taken up to analyze extent of utilization of mobile phone services by farmers by interviewing the sample respondents in the study area. The standardized structure schedule was used to collect the data through personal interview technique.

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## 2. Methodology

**2.1 Study area:** The study was conducted in Dharwad district which was purposively selected as it comes under the jurisdiction of UAS, Dharwad and from the point of researcher convenience.

**2.2 Selection of respondents:** Registered farmers to mobile service of KVK, Dharwad, APMC, Hubli and weather based mobile services of UAS, Dharwad were selected for the study. List of farmers from KVK, APMC and UASD were collected for the purpose. From the list, 120 farmers were selected randomly. Thus the total sample size constituted 120 respondents for the study.

The required information was obtained from sample respondents by personal interview method with the help of structured interview schedule. The tabular analysis was made to document the awareness of farmers about agriculture information provided through mobile phone service by computing averages and percentages.

## 3. Results

### 3.1 Use of mobile phones for accessing the agriculture information

An appraisal of Table 1 revealed that majority (75.00%) called to retailer for accessing agriculture information as they used to come in frequent contact with them to purchase agriculture inputs and considered them credible source of agriculture information. Sixty five per cent of the farmers called to other farmers / relatives. Good relation with the friends and also relatives was the reason to consult them and 48.33 per cent of the farmers opted for Kisan call center as farmers got all their queries related to agriculture clarified here. While 30.00 and 21.66 per cent of farmers used Kisan help line and m- KISAN, respectively for accessing the agriculture information as they were major and credible source of agriculture information. Further it was revealed that only few farmers used internet (28.33%), facebook (4.10%), whats App (20.83%), and online video (11.66%) to avail the agriculture information. While meager (3.33%) used online version of farm publication, as majority of the farmers had less access and knowledge regarding these sources. This finding is in conformity with the findings of Kailash (2016) [3].

### 3.2 Over all distribution of the farmers according to use of mobile phones for accessing the agriculture information

Table 2 depicted that more than half (51.67%) of the respondents fall under low category in use of mobile phones for accessing the agriculture information followed by 25.00 and 23.33 per cent respondents who belonged to medium and high category, respectively. The reason might be that they were little aware and had less technical knowledge regarding mobile usage and less credibility towards it. This finding is confirmative with the findings of Kailash (2016) [3].

### 3.3 Extent of utilization of mobile phone services

Table 3 revealed that 37.50 per cent of the respondents utilized weather based services whenever needed followed by 34.16 per cent utilized monthly and only 10.00 per cent of them utilized the weather based services once in fortnight and 7.58 per cent utilized weekly, whereas 10.80 per cent of them never utilized it. The reason might be that the farming community is in great need to access and utilize weather based information for timely planning and managing crops

throughout the year. Further, cropping pattern information was utilized when ever needed by 59.16 per cent of the respondents and rest (40.83%) never utilized cropping pattern information. The probable reason might be that the most of the farmers are having larger land holding and are aware about cropping pattern through their ancestors and also from their high farming experience. With respect to cultivation practices information, 31.66 per cent of the respondents never utilized the mobile phone services followed by 27.50 per cent utilized it whenever needed, 20.80 per cent utilized monthly and 15.83 per cent utilized the cultivation practices information once in fortnight. While 4.16 per cent of them utilized the information weekly. The reason may be because farmers were most interested in knowing information about crop protection practices, quality inputs and cultivation practices. These findings are in line with research findings of Meena *et al.* (2011) [4], who reported that most of the farmers expect information on high yielding varieties, plant protection etc. Similarly 57.50 per cent of the farmers never utilized farm mechanization information while 37.50 per cent of them utilized whenever needed and only 5.00 percent of them utilized monthly and none of them utilized farm mechanization information daily, weekly and once in fortnight. This information was not utilized by majority of the farmers may be because of their poor awareness. The Table further revealed market information was utilized whenever needed by 42.50 per cent of the farmers followed by 36.66 per cent monthly and equal (8.33%) percentage of them utilized the information weekly and once in fortnight. While only 4.16 per cent utilized the market information daily. The reason might be that accurate, adequate and timely information on all aspects of crops traded is essential to operate efficiently hence it is utilized adequately by farmers and another reason might be the need of the farmers for updated market prices in nearby market yards. SMS to registered mobile number were utilized weekly by 42.50 per cent of the farmers followed by 32.50 per cent once in fortnight and 20.00 per cent of them utilized daily whereas only 5.00 per cent utilized monthly. The reason might be that all of them were registered farmers to SMS based mobile services and were utilizing it efficiently. About 48.33 per cent of farmers never utilized the service of voice communication of Kisan Call Center or Raita Chetana Help Line while 33.33 per cent utilized when ever needed followed by equal (14.16%) utilized the service monthly and once in fortnight, while none of them utilized daily and weekly, the reason for moderate utilization frequency might be because of lack of awareness and also some farmers preferred face to face contact rather than phone contact. In the same way 45.00 per cent of farmers never used agricultural portals, 33.33 per cent used whenever needed and 21.66 per cent used monthly whereas none of them utilized daily, weekly and fortnightly. Further the table revealed that 35.83 per cent of the farmers never utilized agriculture apps while 30.00 per cent utilized whenever needed followed by 22.50 per cent utilized monthly and 11.66 per cent utilized once in fortnight. The probable reason might be that utilization required technical skills and knowledge to use them and farmers were lacking such knowledge and skills. These findings were in line with research findings of Subhashsingh *et al.* (2010) [8] and Vishwatej and Angadi (2013), who noticed the usage of ICTs, were moderate to low in rural areas.

### 3.4 Over all extent of utilization of mobile phone services

It is clear from Table 4 that 38.33 per cent of the respondents

had low utilization of mobile phone services followed by 33.33 per cent of the respondents had medium utilization of mobile phone services and 28.33 per cent had high extent of utilization of mobile phone services. It was found that some farmers in spite of having awareness of mobile phone services

were not utilizing them. The probable reason might be that they do not have positive attitude towards mobile phone services and were less acquainted to such services and also required technical skills in utilizing which farmers were lacking.

**Table 1:** Use of mobile phones to access agriculture information by farmers (n = 120)

Sl. No	Mobile application and services	Farmers	
		Frequency	Percentage
<b>By calls</b>			
1	Kisan Call Center	58	48.33
2	Kisan Help Line	36	30.00
3	m- KISAN	26	21.66
4	Call other farmer/ relative	78	65.00
5	Call to retailer	90	75.00
<b>By smart phones</b>			
6	By internet	34	28.33
7	Online video/ webcast	14	11.66
8	Online version of farm publication	04	3.33
9	Facebook	05	4.10
10	WhatsApp	25	20.83

**Table 2:** Over all use of mobile phones to access agriculture information by farmers (n = 120)

Sl. No.	Categories	Frequency	Percentage
1	Low (< 2.15)	62	51.67
2	Medium (2.15 to 4.34)	30	25.00
3	High (> 4.34)	28	23.33
Mean= 3.25		SD= 2.57	

**Table 3:** Extent of utilization of mobile phone services for accessing information on agriculture productivity

Sl. No.	Mobile phone services	Extent of utilization											
		Daily		Weekly		Once in fortnight		Monthly		Whenever needed		Never	
		F	%	F	%	F	%	F	%	F	%	F	%
1	Weather based services	0	0.00	9	7.58	12	10.00	41	34.16	45	37.50	13	10.80
2	Cropping pattern information	0	0.00	0	0.00	0	0.00	0	0.00	71	59.16	49	40.83
3	Cultivation practices information	0	0.00	05	4.16	19	15.83	25	20.80	33	27.50	38	31.66
4	Farm mechanization information	0	0.00	0	0.00	0	0.00	6	5.00	45	37.50	69	57.50
5	Marketing information	5	4.16	10	8.33	10	8.33	44	36.66	51	42.50	0	0.00
6	Utilizing SMS to the registered mobile number	24	20.00	51	42.50	39	32.50	6	5.00	0	0.00	0	0.00
7	Voice communication to Kisan Call Centre or Raita Chetana Helpline	0	0.00	0	0.00	5	4.16	17	14.16	40	33.33	58	48.33
8	Agriculture portals	0	0.00	0	0.00	0	0.00	26	21.66	40	33.33	54	45.00
9	Agriculture apps	0	0.00	0	0.00	14	11.66	27	22.50	36	30.00	43	35.83

**Table 4:** Over all extent of utilization of mobile phone services for accessing information on agriculture productivity (n = 120)

Sl. No.	Categories	Frequency	Percentage
1	Low (<13.35)	46	38.33
2	Medium (13.35 to 16.16)	40	33.33
3	High (>16.16)	34	28.33
Mean= 14.75		SD= 3.31	

#### 4. Conclusion

Mobile phones are one of the key tools of information communication technology which promoting the economics conditions as well as reducing the poverty. It is rapidly spreading in rural areas and farmers are getting more benefit from it. Use of mobile phone very easy for farmers either is educated or uneducated. farmers are using different methods and technologies to increase their productivity and trying to reduce traditional methods. ICT has played an important role in various sectors of the society and has increased the information system in different communities. Information technology in agriculture also more popular where farmers can easily get latest information of weather by using internet

and directly check the market information of different crops. It is very important to empower the farmers and provided latest information about their agriculture produce timely where farmers can earn good money and reduce the poverty by using communication technology tools.

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