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INFORMATION NEED OF FARMERS FOR MOBILE BASED AGRO-COMMUNICATION

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The study was conducted in 5 districts of Karnataka state with the main objective to know information needs of farmers for getting agriculture related information through mobile phones (Agro-communication). In this study 200 farmers were personally interviewed with the help of pre tested questionnaire. It was found that majority of the farmers expressed that Agriculture and Horticulture followed by Govt schemes related for crop loans as major needy areas in addition to weather information. This study also attempted to identify non-agricultural needs of rural community in terms Human health, Education and Employment. It was found that there is need for information related to Human health. This study also attempts to find out the extent of loss occurred due to lack of information in different verticles under agriculture and non agriculture sector. It was found that majority of the farmers expressed there will be significant loss due to lack of information in the fields plant protection and human health.

Introduction

As Information Communication Technologies are creating a revolution in all sectors of human life, farming community is not an exceptional one. Different mobile based services like Text messages, voice messages, help lines, Agri Apps are launched by both Govt departments and other organizations. Even crop specific Apps are also developed mainly for commercial crops. Several mobile phone based agricultural extension projects have been deployed in India like, aAqua (Krithi et al. 2011), Avaaj Otalo, (Patel et al. 2010), mobile digital video (Rikin et al. 2009). Similarly, IFFCO Kisan Sanchar Limited (IKSL), BSNL, Reuters Market Light (RML), Nokia Life Tools, Fisher Friend Project, Rubber Board and Department of Agriculture, Haryana State provide services through SMS and Voice messages containing agriculture related information like market price, weather updates, news on agricultural policies and best agricultural practices (ICTFSECBP, 2009; Fafchamps & Minten, 2012; Saravanan, 2010). The Department of Agriculture, Government of Tamil Nadu, in collaboration with IITM's RTBI has been disseminating agricultural information to farming communities of five delta districts, through voice messages delivered on farmers' mobiles. Central Govt has also launched different mobile Apps for information dissemination like Kisan Suvidha, Pusa Krishi, Mkishan Application etc., Mobile application plays a key role in fulfilling the agricultural information needs of the farmers as it has many advantages such as easy and convenient access, reach to areas where there is no other ICT infrastructure like internet, fixed lines etc., and is easily afforded by farmers (Ravinder and Vister, 2010). ICT in different forms has been widely taken up in India by various local or national non-governmental organizations followed by private and public sector agencies (Saravanan, 2010), as a tool to disseminate agricultural information amongst farmers. But success of such ICT intervention largely depend on how relevant is the information disseminated. Thus assessment of information need of the farmer is very important to design and disseminate right information to farmers at right time.

Methodology

The survey method was used to conduct the study and questionnaire was used as a data collection tool for the fulfilling the objectives of the study. The random sampling technique was used for the spot selection of farmers. The data collected through questionnaire, observation and informal interviews was thoroughly organized and tabulated using simple statistical methods like percentage, mean and standard deviation.

The survey was conducted in 5 districts- Shivmogga, Chikkamangalur,Tumkur,Hassan and Kolar of Karnataka state with pre designed questionnaire. Personal interview method was adopted for data collection from 200 farmers. From each district 2 taluka were randomly selected and in each taluka 2 villages were randomly selected and from each village 10 farmers were randomly selected to make sample more representative. Thus the total sample for the study was 200 farmers

Sample Profile

Majority of the farmers considered for the study belongs to small farmers (60.50%), followed by medium (22%) farmers and big farmers (17.5). With respect education**,** it was observed that majority of the farmers belongs to middle of school level of education (38.50%) and only 10 per cent of farmers were graduates. With respect to age, it was observed that majority of the farmers belongs to medium age group (52.00%) followed by low age group (31.00%). Only 17 per cent of the farmers belong to high age group.

Findings and Discussion

I. Information Needs of the Farmers Regarding Agriculture and Non-Agriculture Sectors

Table 1: Information need of the farmers

Type of Information	Frequency	Percentage
Agriculture	99	49.5
Govt. Schemes	23	11.5
Weather	18	9
Bank interest rates	16	8
Electricity supply	16	8
Human health	14	5.5
Animal husbandry	3	5
Employment	3	2
Education	7	1.5

Table.1 reveals that majority of the respondents need more information through mobile based services about Agriculture (49.50%) followed by government schemes related to agriculture (11.50%), Weather (9%). In non-agriculture sector information need is expressed more for Human health related information (5.5%) followed by Employment and Education.
This clearly shows that, there is information gap in the areas of Agriculture and agriculture related Govt schemes. Farmers require timely information related to their crops and schemes. It was found that along with agriculture farmers also are in need of information in other verticals like health. This calls for an mobile based extension strategy with a integrated approach.

II. Significance of Needs

To have a deeper understanding of information need in different verticals of agriculture and non-agriculture information needs, study was perculated to know the extent of loss occurred due to un -availability of particular information at right time. It was studied by asking the respondent to express the percent of loss against each need mentioned by the farmer.

II)a. Significance of Needs in Agriculture Verticals

Table.2: Percent of loss in agriculture verticals due to lack of information

% loss	Plant protection		Variety		Seedling method		Fertilizers dose and application		Water manage		Harvesting &Post harvest	
	F	%	F	%	F	%	F	%	F	%	F	%
0-10%	32	16	25	12.5	33	16.5	29	14.5	43	21.5	37	18.5
10-20%	48	24	41	20.5	60	30	50	25	99	49.5	49	24.5
20-30%	46	23	31	15.5	42	21	62	31	26	13	18	9
30-40%	54	27	36	18	45	22.5	17	8.5	24	12	52	26
40-50%	19	9.5	30	15	10	5	27	13.5	8	4	40	20
50-60%	1	0.5	26	13	3	1.5	11	5.5	0	0	4	2
60-70%	0	0	7	3.5	7	3.5	3	1.5	0	0	0	0
70-80%	0	0	0	0	0	0	0	0	0	0	0	0
80-90%	0	0	0	0	0	0	0	0	0	0	0	0
90-100%	0	0	0	0	0	0	1	0.5	0	0	0	0
Grand Total	**200**	**100**	**200**	**100**	**200**	**100**	**200**	**100**	**200**	**100**	**200**	**100**

From the table.2, we can notice that majority of farmers facing 30-40 per cent loss in not getting right information about plant protection followed by 10-20 per cent loss in not getting right information about water management, seeding method and variety, 20-30 per cent loss in not getting right information about fertilizers dose and application and not getting information related to Harvest and Post harvest.

The results to some extent agrees with the finding of Nitin Bhagachand Bachhav(2012) who concluded from a study in Maharastra state, India that majority of the farmers need information on availability of seeds (74.29%) crop production (70.86%) and insecticide availability (62.29%) followed by water management (34.28%).

Institutions providing different mobile based services to farmers have to focus more on providing right and timely information to farmers with respect to Plant protection followed by information about varieties, fertilizer doses and harvest and post harvest which includes processing and Market rates.

II)b. Significance of needs in non-Agriculture Verticals

Table 3: Percent of loss in Non agriculture verticals due to lack of information

% loss	Health		Education		Employment		Rail		Power		Water		Ration	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%
0-10%	29	14.5	18	9	28	14	36	18	60	30	37	18.5	63	31.5
10-20%	24	12	82	41	7	3.5	8	4	18	9	10	5	5	2.5
20-30%	78	39	3	1.5	3	1.5	4	2	4	2	21	10.5	60	30
30-40%	61	30.5	75	37.5	88	44	71	35.5	47	23.5	74	37	34	17
40-50%	8	4	22	11	74	37	81	40.5	71	35.5	58	29	38	19
Grand Total	**200**	**100**	**200**	**100**	**200**	**100**	**200**	**100**	**200**	**100**	**200**	**100**	**200**	**100**

From the Table.3 it can be noticed that majority of farmers facing 30-40 per cent loss due to lack of information related to Health, employment and water, 40-50% of loss in case of rail and Power supply and in case of ration loss is mentioned up to 10% due to lack of right information at right time.

Many a time while designing any extension strategy for farmers only farming related information needs are given more focus, this study clearly shows that other needs of the farmer should also be considered and mobile based extension services should also provide information regarding Human Health, Education, Employment, Power and Water ,Ration distribution supply at right time.

Conclusion

This study has tried to throw light on the potential of information in affecting the agricultural sector as a whole. The study has reported there is a need to see information need of a farmer in a integrated way. Mobile technology trying bridge the gap in Agricultural information accessibility is a significant turning point in e-agricultural extension system but information should not be disseminated on “Push” basis, instead it should also be “Pull” basis, where in farmer should be able to access the right information at right time based on his need. All these mobile based agricultural extension services should aim at reducing the cost of cultivation and increasing the farm productivity, which is possible when farmers information needs are clearly spelled out and met. Farmer should be made available with all required as well as possible options in his figure tips, so that it facilitates him to take a informed.

References

1. Achigbue Edwin I & Anie Sylvester O, ICTs and Information Needs of Rural Female Farmers in Delta State, Nigeria; Library Philosophy and Practice 2011.
2. Agwu, A.E., Ekwueme, J.N. and Anyanwu, A.C. (2008). Adoption of improved agricultural technologies disseminated via radio farmer programme by farmers in Enugu State, Nigeria. African Journal of Biotechnology, 7 (9), 1277-1286.
3. Akanda A.K.M. & Roknuzzaman Md. (2012), Agricultural Information Literacy of Farmers in the Northern Region of Bangladesh, Retrieve from www.iiste.org/Journals/index.php/IKM/article/download/.../2663.
4. Bachhav, Nitin Bhagachand Mr., "Information Needs of the Rural Farmers: A Study from Maharashtra, India: A Survey" (2012). Library Philosophy and Practice (e-journal). Paper 866.
5. Dr. Arvind Kumar Sharma. Information Needs and Sharing Pattern among Rural Women: A Study. IASLIC Bulletin, 2007 52(3), 156-167.

6. Elizabeth, Sabo. Agricultural information needs of women farmers in Mubi region, Adamawa State; Journal of Tropical Agriculture, 2007 45 (1-2) 69–71.
7. Hossin, Arman & Islam, Shariful. Information Needs of Rural Women: A study of Three Villages of Bangladesh; Library Philosophy and Practice 2012 available at http://www.webpages.uidaho.edu/~hossin/shariful.htm.
8. Information Seeking and Use among Urban Farmers in Kampala District, Uganda Byamugisha Ikoja-Odongo Nasinyama Lwasa, Retrieved from, www.cabi.org/GARA/ShowPDF.aspx?PAN=20083298139.
9. K Sarada; Community Information Services: Nature & Relevance, DESlDOC Bulletin of Information Technology, 1999, 19 (1), 45-47.
10. Krithi Ramamritham, Chaitra Bahuman and Anil Bahuman. (2011). AQUA: ICT-enabled Knowledge Services to Farmers in India, Success Stories on ICT/ICM in AR4D in Asia and the Pacific Region, (eds) Malcolm Hazelman, S. Attaluri, Asia-Pacific Association of Agricultural Research Institutions Bangkok, Thailand.
11. L.Shanta Meitei and Th. Purnima Devi. Farmers information Needs in Rural Manipur: an assessment. Annals of Library and information studies, 2009, 56(2), 35-40.
12. M. Ganesan*[1], Jayalakshmi Umadikar[2] and Suma Prashant[3],Assessment of Mobile Voice Agricultural Messages Given to Farmers of Cauvery Delta Zone of Tamil Nadu, India,the journal of community informatics.
13. Malhan I V & Rao Shivarama (2007) Agricultural Knowledge Transfer in India: a Study of Prevailing Communication Channels; Library Philosophy and Practice 200, Retrieved from available at http://www.webpages.uidaho.edu/~malhan/rao.htm.
14. Mittal Surabhi & Tripathi Gaurav Role of Mobile Phone Technology in Improving Small Farm Productivity, Journal of Agriculture & Social Sciences, 2009, 22 (Conference Number), 451-459.
15. O. J. Okwu and B. I. Umoru, A study of women farmers' agricultural information needs and accessibility: A case study of Apa Local Government Area of Benue State, Nigeria, African Journal of Agricultural Research Vol. 4 (12), pp. 1404- 1409, December, 2009 (Available online at http://www.academicjournals.org/AJAR).
16. Ravinder Kaur Dhaliwal and Vister Joshi. (2010). Mobile Phones - Boon to Rural Social System. Literacy Information and Computer Education Journal, 1(4).
17. Rikin Gandhi, Rajesh Veeraraghavan and Kentaro Toyama and Vanaja Ramprasad. (2009). Digital Green: Participatory Video and Mediated Instruction for Agricultural Extension, USC Annenberg School for Communication. Published under Creative Commons Attribution-Non Commercial-Share Alike 3.0 Unported license. 5(1), 1-15.
18. Saima Sadaf, Asif Javed & Muhammad Luqman, Preferences of Rural Women for Agricultural Information Sources: A Case Study of District Faisalabad–Pakistan, Journal of Agriculture & Social Sciences Available at http://www.fspublishers.org.
19. Saravan R, Raja P & Tayeng Sheela; Information input pattern and information need of Tribal Farmers in Arnuchal Pradesh, Indian Journal of Extension Education, 2009, 45 (1&2), 51-54.
20. Saravanan, R. (2010). India, In: Saravanan (Ed.) ICTs for Agricultural Extension: Global Experiments, Innovations and Experiences. New India Publishing Agency (NIPA), New Delhi, 115-168.
21. Shankaraiah,N (2011), Attitude of farmers and Scientists towards technologies dissemination through MMS, M.Sc. (Agri.) Thesis, (unpub.), University of Agricultural Sciences, Bengaluru.
22. Suresh Chandra Babu et. al (2011) Farmers' information needs and search behaviors: Case study in Tamil Nadu, India, Retrieve from http://ageconsearch.umn.edu/handle/126226.
23. Tologbonse D; Fashola O. & Obadiah M., Policy Issues in Meeting Rice Farmers Agricultural Information Needs in Niger State, Journal of Agricultural Extension, 2008 , 12(2), 84-94.