

Agricultural content dissemination: a study among farmers in Kottayam district of Kerala

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Abstract

Information is essential for development of any human being in his/her daily life. India is a country, where majority of the people are involved with agricultural activities. For rural farmers, their information requirement is very specific and time bound. It is found that most of the farmers are illiterate, but their information seeking habits are at satisfactory level. Both central and state governments have implemented many schemes to the farmers in order to utilize and develop the agricultural activities. A study on the information needs and use of farmers will help to identify the information gap existing among the rural community so that effective mechanism can be evolved to fill the information gap. Hence, an attempt is made to conduct a small survey among the farmers of two panchayats namely 'Kumarakom' and 'Aymanam' of Kottayam district, which is famous for paddy cultivation. Survey method was used to conduct the study and the findings reveal that 51% of the farmers require information for their daily use in agriculture. Various information channels are also examined and the study shows that considerable efforts in using ICT application have to be taken to provide information support for the sustainable agriculture development of the rural community. This study also recommends the establishment of ICT enabled Rural Information Centres in each Panchayat under Kerala Agricultural University to utilize information effectively.

Keywords: Agricultural content, Information Needs, Rural community, Information Communication Technology, Agricultural development, Rural Information Centres

1. Introduction

Information plays vital role in meeting the information needs of human activities which are available in many formats such as print and non print, categories such as primary, secondary and tertiary, channels such as formal and informal. Development of any country is based on the availability of high quality information and making available of the same to the users in right time. India is a country, where about three-fourth of the population living in rural areas need basic information. Due to lack of awareness and knowledge on information, most of the rural people are either not utilizing or under-utilizing the information. The economic development of any country is possible if there is progress in agriculture sector. Some of the factors which affect the agriculture sector growth are inadequate financial support, inadequate manpower to disseminate the information to the rural farmers, lack of communication and technologies and so on¹.

Farmers are the important component of the nation, who are the least beneficiaries of the information due to many reasons such as illiterate, less exposure to the outside world, lack of communication are the reasons for limited or underutilization of information². The use of information by farmers in specific operation will be helpful on how the information are sought by the farmers in the next round of research apart from increasing the productivity and welfare outcomes³.

The most important at this juncture is, to understand the farmer community thoroughly like how they are availing the services, what are the problems they are facing while accessing the information, in what way the existing system is useful to the farmers and how can be improved the system.

2. Background of the study

Agriculture forms the basic occupation of rural community and the dissemination of right information in right time is indispensable for the sustainable growth of agriculture. To them, they are investing their capital as well as their physical and mental efforts in agriculture. "The absence

of the provision of appropriate information among rural farmers, withdrawal of government support from agricultural sector just after the relaxation of economic reforms in 1991, risk in the credit systems, the problems faced by the farmers in cultivating in semi-arid regions, poor income from agriculture, lack of alternative sources for income etc led to a rise in rate of farmer suicides”⁴. Hence provision of information in the right time has become a necessity for putting an end to such disasters.

Utilizing information in agriculture sector helps to enhance farm productivity and thereby raise the standard of living of the rural community. This also helps to take right decisions about using the variety and quality of crops to be used for cultivation and the appropriate place to sell their finished products. The knowledge about weather trends, best practice in farming and timely access to market places and prices are some of the important factors that enable the farmers to benefit from cultivation. “As part of the governmental efforts for agricultural development, an information network namely Agricultural Marketing Information Network (AGMARKNET) was launched in March 2000 by the Union Ministry of Agriculture. This network which has been implemented by National Informatics Centre links around 7000 wholesale markets in India with State Agricultural Marketing Boards and Directorates for effective exchange of information. This e-governance portal facilitates generation and transmission of prices, commodity arrival information from agricultural produce markets and online dissemination to producers, consumers, traders and policy makers at a quick pace. This portal helps to reduce disparity of information regarding the agricultural prices and so is very helpful to stakeholders”⁵.

Information on various aspects is required for the farmers living in the remote areas of Kottayam district for enhancing their agricultural activities. Even though there exists one Krishi Bhavan in each panchayat and the e-governance project of the Department of Agriculture, Government of Kerala namely “KISSAN” is working round the clock, it is found that the genuine requirements of the farmers are not addressed in the true sense. The information to their specific needs is not provided in most instances and they try with the old methods of treatments for plant diseases and cultivation. So they find it difficult to get better yield from cultivation. This is one of the main reasons for the non-steady growth in agricultural sector.

The study reveals that an uninterrupted agricultural information support system is highly essential for sustainable development in agriculture among rural community. In Kumarakom and Aymanam panchayats of Kottayam district, paddy is the main cultivation . Due to vivid changes in the climate and lack of proper information transfer mechanism, farmers are not informed of the preventive measures against the environmental disasters and so considerable damage and loss in agriculture sector has been experienced in these areas.

3. Need for the study

Information on agricultural based activities is very much important and needed for the farmers to improve their productivity level and development of the agricultural activities. If the farmers did not get information on specific needs, they cannot introduce the new techniques and it will be difficult to get the better yield from cultivation. Lack of timely information is one of the major reasons for non-steady growth in the agricultural sector. In Kottayam district, paddy is the main cultivation and information on agricultural related matters is required to the farmers living in the remote areas. Two panchayats namely Kumarakom and Aymanam of Kottayam districts of Kerala is famous for paddy cultivation. Some of the information systems such as Krishi Bhavan and e-Governance project of the Department of Agriculture is functioning round the clock. In this circumstances, it is decided to study the farmers information needs, which will help to know the problems faced by the farmers and what are the remedies should be taken to strengthen the agricultural activities.

The absence of sufficient Agricultural Information Systems and Information kiosks in the remote areas of these panchayats, has led to the need for the present study. The aim of the study is to find out the information needs of the rural farmer community, various information sources used by them, their awareness level of ICT application in the transfer of information and the initiatives taken in this direction.

4. Review of Literature

Literature on previous studies will help to lead the investigation in right direction. Some of the studies carried out on farmers' information are listed below:

Elizabeth conducted a study on Agricultural Information needs of women farmers in Mubi region, Adamawa state among 300 respondents in 2006. The findings of the study revealed that arable crop farming was the major work carried out by the women farmers and animal husbandry was given least priority since they were involved with house hold activities. It is also found that

Maize, Sorghum, groundnut were crops cultivated in common. The study recommended that importance to be given to weather, soil management, fertilizers, marketing, agricultural insurance and so on⁶.

Sreenivasulu and Nandwana (2001) in their study discussed in detail about Agricultural Research Information System Network (ARISNET) for India and its module. The study also reviewed the strength and development of Agricultural Institutes Libraries in India, Agriculture University Libraries and Indian Council for Agricultural Research (ICAR) Institutes libraries. The study emphasized that Agricultural libraries and information centres have to play major role in development and service of the nation⁷.

Obidike (2011) conducted a study on rural farmers problems in accessing information. The study insisted to establish information centres for rural communities in Nigeria, and such system should be in a position to provide agriculture information to the rural farmers in a comprehensive manner⁶.

5. Objectives of the study

The present study has the following objectives

- * To find out the information needs of the rural farmer community in Kottayam district
- * To find out the nature and type of information required by the farmers
- * To examine the information communication channels and the information sources used by the farmers
- * To find out the awareness of ICT application in transfer of information

6. Methodology of the study

The study is a descriptive one. Questionnaire method has been used to collect the data from the respondents. A total of 110 questionnaires have been distributed to the respondents of Kumarakom and Aymanam panchayats of Kottayam district of Kerala. Out of 110 questionnaires, 95 of them have respondents with response rate of 86.36%.

7. Scope and Limitation of the study

The scope of the present study is confined to 95 respondents Kumarakon and Aymanam panchayats of Kottayam district, since studying all the respondents will be time consuming. It is

a small attempt to know the farmers information needs and the future researchers can attempt with more number of panchayats and number of respondents.

8. Data Analysis

8.1. Frequency of Information Needs by Farmers

Table 8.1: Frequency of Information Needs

Sl. No.	Frequency of Information needs	No. of Response	Percentage
1	Daily	42	44.21%
2	Sometimes	48	50.53%
3	Never	5	5.26%

From the Table 8.1, it is identified that 50.53% of farmers stated that they need information sometimes followed by 44.21% of farmers need information daily and only 5.26% of the farmers were on the opinion that they do not need information for agricultural activities. Overall, it is noted that majority of the respondents (50.53%) need information sometimes.

8.2. Nature and Type of Information needs of the farmers

Table 8.2: Information needs on cultivation

Sl.No.	Areas of information needed	No. of Responses(as per their preference)	Percentage
1	Improved variety crop production	56	58.95%
2	Availability of seeds	61	64.21%
3	Type of pesticides to be used	43	45.26%
4	Type of fertilizers to be used	48	50.53%
5	About weather conditions	19	20.00%
6	About water management techniques	31	32.63%
7	Modern equipments used	9	9.47%
6	Modern methods of cultivation	23	24.21%

(Since the number of respondents used more than one options, the percentage has exceeded 100.)

It is evident from the Table 8.2 that majority of the rural farmers (64.21%), (58.95%) and (50.53%) required information on availability of seeds, improved variety of crop production and type of fertilizers to be used. 45.26% of the respondents stated that they needed information for pesticides to be used and information for weather condition, modern methods of cultivation and modern equipments used were the least preferred information.

Thus, it is found that majority of the respondents used information for availability of seeds, improved variety of crop production and type of fertilizers to be used and information on weather condition, modern method of cultivation and modern equipments used were least preferred by the farmers.

8.3. Information needs about finished products

Table 8.3: Information needs about finished products

Sl.No.	Areas of information needed	No. of Responses(as per their preference)	Percentage
1	Marketing of finished products	78	82.11%
2	Transportation facilities to markets	47	49.47%
3	Market rates of products	45	47.37%
4	Commodity sales market locations	31	32.63%
5	Places for getting maximum profit	42	44.21%

(Since the respondents used more than one option, the percentage has exceeded 100.)

The results shown in the Table 8.3 reveals that more number of respondents (82.11%) need information about marketing of finished products and Transportation facilities to markets (49.47%), Market rates of products (47.37%), Places for getting maximum profit (44.21%) and Commodity sales market locations (32.63%) occupied second, third, fourth and fifth position. Finally, it is concluded that majority of the respondents (82.11%) opted information for marketing of finished products.

8.4: Farmers' information needs on farming related schemes

Table 8.4: Farming related schemes

Sl.No.	Farming related schemes	No. of Responses(as per their preference)	Percentage
1	Subsidies provided by the Government	59	62.11%
2	Insurance schemes on crops	35	36.84%
3	Information on Bank Credit schemes	33	34.74%
4	Schemes for Irrigation facilities	15	15.79%
5	Schemes introduced by the Government	46	48.42%

(Since the respondents used more than one option, the percentage has exceeded 100)

The results shown in the Table 8.4 reveals that regarding the benefit schemes, majority of the respondents (62.11%) needed information for Subsidies provided by the Government (62.10%), followed by Schemes introduced by the Government (48.42%) and 36.84% and 34.74% stated for Insurance schemes on crops, information on Bank Credit Schemes and only 15.79% opined that they needed information on schemes for irrigation facilities. Overall, it is found that majority of them needed information subsidies provided by the government and less number of respondents stated that they need information on schemes for irrigation facilities.

8.5. Information seeking Communication Channels

Table 8.5: Information communication channels

Sl. No.	Information channels	Response	Percentage
1	Newspapers	54	56.84%
2	Television	32	33.68%
3	Radio	9	9.47%

The analysis of Table 8.5 shows that out of various information channels, majority of the farmers used Newspapers (56.84%) followed by watching Television 33.68%, and only 9.47%

used radio as communication channel. Overall, newspaper was used as communication channel by more number of users.

8.6. Information seeking Sources

Table 8.6: Information Sources

Sl.No.	Information Sources	Response	Percentage
1	Agriculture Magazines	24	25.26%
2	Books	2	2.11%
3	Databases	8	8.42%
4	Krishi Bhavans	48	50.53%
5	Krishi Vigyan Kendras	12	12.63%
6	Karshaka Information Systems Services And Networking (KISSAN)	53	55.79%
7	Non-Governmental Organizations	21	22.11%
8	Agriculture Extension classes	42	44.21%
9	Agriculture Exhibitions	25	26.32%
10	Inquiring with fellow farmers	67	70.53%
11	Panchayat libraries	5	5.26%

(Since the respondents used more than one option, the percentage has exceeded 100)

The results in the Table 8.6 reveal that farmers are cautious about the decision to be taken with regard to agricultural activities. They depend upon many sources to get the related information on various factors affecting crops and farming. Their preference of using the information sources as per preference are Inquiring with fellow farmers (70.53%), KISSAN (55.79%), Krishi Bhavans (50.52%), attending Agriculture Extension classes (44.21%), attending Agriculture Exhibition (26.32%), reading Agriculture Magazines (25.26%), and approaching Non-Governmental Organizations (22.11%),visiting Krishi Vigyan Kendras (12.63%), searching Databases (8.42%) and visiting Panchayat libraries (5.26%). Combining all, it is found that inquiring with fellow farmers, KISSAN and Krishi Bhavans were the most preferred sources and books, panchayat libraries and databases were the least preferred sources.

8.7. Awareness of the use of ICT application

Table 8.7: Awareness of the use of ICT application

Sl.No.	Information is transferred with the help of ICT application to the various centres	Response	Percentage
1	Agree	13	13.68%
2	Disagree	82	86.31%

Table 8.7 shows that majority of the rural farmers were not aware of the fact that information were transferred to various centres using ICT application.

8.8. Use of ICT application for getting information

Table 8.8: Use of ICT application for getting information

Sl.No.	Using ICT applications to get information	Response	Percentage
1	Use Internet	8	8.42%
2	Use Mobile Phone	44	46.31%
3	Use Information Kiosks	15	15.78%
4	Follow SMS alerts	33	34.73%

Table 8.8 reveals that the preference of the rural community in the use of ICT applications are as follows: Use Mobile phones (46.31%), follow SMS alerts (34.73%), Use Information Kiosks (15.78%) and Use Internet (8.42%).

9. Findings

The findings of the study reveal that the rural farmers are frequently in need of agricultural related information. Their needs are specific for different purposes. The information channels they depend upon for getting information are newspapers, television, and radio. Among

these majority of them read newspapers for getting authoritative and relevant information. Most of the leading newspapers provide extensive news on agriculture published by experts and the farmers are able to understand in depth the practices adopted for improving productivity in cultivation and marketing opportunities. The weekly supplement pages of these dailies provide information on farm mechanization, timely application of fertilizers, crop protection and disease, horticulture, animal husbandry, food processing, expert advice for all related queries are published in local languages and hence the rural farmers with minimum education are able to follow this regularly.

The findings further showed that a good number of farmers are in the habit of watching TV programmes on agriculture, as this has a visual impact for improving productivity. Very few of them listen to radio also. The other major sources used by them are visiting Information centres of government and non-governmental organizations like Krishi Bhavans, Krishi Vigyan Kendras, panchayat libraries, attending extension classes, exhibitions, and reading magazines, books, searching databases etc. The mostly used source among the rural community to get on-site information is to inquire with fellow farmers. The e-governance project of government of Kerala namely Karshaka Information Systems Services And Networking (KISSAN) is found to gain more confidence among the rural population.

It is found that very few farmers are aware of the water management techniques offered by the Government of India. Even though there is an average rainfall of 45 to 52 cms yearly, the lack of awareness of the farmers to manage the water resources for irrigation has led to the destruction of many farms both during rainy and drought seasons. The study shows that only a very few farmers are aware of the role of ICT in the transfer of information to the various centres discussed above. Even though there are many facilities like Internet and Information Kiosks to access information, due to computer illiteracy it is found that the utilization of the above facilities are very low. But due to the familiarity in using mobile phones, most of them make agriculture related inquiries through mobile phones and the SMS alert service of the government has a good response.

10. Recommendation

This study recommends the establishment of ICT enabled Rural Information Centres with sufficient computers and facilities to use Information Kiosks in each panchayat with Kerala

Agricultural University as the apex body to utilize the research information received from various Agricultural Information Systems effectively. As most of the rural farmers are computer illiterate, a computer operator may be appointed to help the farmers in accessing information.

11. Conclusion

The study reveals that the farmers are frequently in need of information pertaining to their agricultural activities. The information received is mostly used for enhancing their agricultural productivity by using improved crop varieties, farm mechanisms, equipments, organic fertilizers and pesticides. Information on weather conditions and water management mechanisms can enable them for planting good variety of crops in the appropriate time to obtain maximum productivity for bringing benefits to their family income and thereby raise the standard of living of rural farmers. In this context, the investigators recommend that Rural Information Centres with sufficient computers and facilities to use Information Kiosks in each panchayat with Kerala Agricultural University as the apex body to utilize the research information received from various Agricultural Information Systems effectively.

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