FARMERS' PREFERENCES FOR METHODS OF RECEIVING INFORMATION ON NEW FARMING PRACTICES: A STUDY BASED ON PADDY CULTIVATION

AM. Nahfees[1], MCM. Azwer[2] and RCG. Gamage[3]
[1,2] Main Library, South Eastern University of Sri Lanka
[3] National Institute of Library Information Sciences, University of Colombo, Sri Lanka
[1]nahfees@seu.ac.lk and [2]mcmazwer@seu.ac.lk

ABSTRACT: The paddy farmers are one of largest population in Sri Lankan agricultural sector. Ampara is the predominant district for paddy cultivation where majority of farmers are struggling to obtain accurate and reliable information on time. Therefore, the study is designed to describe information seeking behavior and information access methods of the paddy farmers. A conceptual model was developed based on the literature for the study. The empirical data were collected from randomly selected 110 farmers representing from 11 divisional secretariats divisions in the Ampara district. They were critically analyzed. The demographic characters such as age, educational level, farming experience and farm land ownership influence the paddy farmers' information needs and the information access methods. Not a single farmer is identified as none information seeker for paddy cultivation practices and a farmer needs information on at least a single cultivation practices. Information rich farmers in all cultivation practices obtain higher yield. It is true, by considering cultivation practices as individually. On field demonstration and video demonstration are the higher preference for information access methods. Field trip, group discussion and guest speaker or consultants are the second preferential methods. Publication and workshop are identified as third prefer methods. Web or electronic information, home study and practical short courses are the least preference methods for information access for the paddy farmers.

1. INTRODUCTION

The present era is called the information era". The information has become the most important element for every progressing society for better being. Aside from people, information is the single most valuable asset for development in any sectors. At every level, in every production, for every sector information is critical.

According to Tologbonse et al (2008) information is regarded as one of the most valuable resources in agriculture and rural development and it also as an important input in agriculture. The cultivation practices, production, processing and marketing of agricultural enterprises will continue to advance technically and the competitive farmer will be required to constantly acquire the information and update him or herself. Based on several literatures Information continue to flow to the agricultural community by several means such as publications(magazine, leaflets, booklets, news articles), seminars and workshops, practical short courses, group discussion, field trip, on field demonstration, radio, television, other electronic information sources, video demonstration, personal contact with friends, and other farmers etc.

The agriculture sector in developing countries is increasingly becoming knowledge intensive. Researchers at the global, regional, and national levels continue to generate new information. Yet as agriculture systems become more complex, farmers' access to a reliable, timely and relevant information source is critical to farmers' competitiveness. Economic information is especially necessary in today's farm economy for the sound management of agricultural resources. Supplying inputs, cultivation practices, producing farm products, processing and marketing in all over the world are all aspects that the agricultural producers must have an understanding of to be successful in this new era of farming.

Devadason and Lingman (1997) points out that the understanding of information needs and information seeking behavior of various professional groups is essential as it helps in the planning, implementation, and operation of information system, and services in work settings. In addition, since developing appropriate farmer educational and marketing strategies will depend on how farmer groups differ in their information search behavior, segmentation of farmers is crucial for designing effective extension and advisory services. Thus as farmers also tend to exhibit different levels of involvement in information search and use, a better understanding of farmers' agricultural information needs and information search behaviors could help to guide extension and other agricultural programs to better target specific groups of farmers.

Paddy farmers in the Ampara district especially in the coastal belt are obtaining information by the extension service, leaflets and advertisement from the dealers of agrochemicals, through relatives and other farmers, radio, TV, newspapers and etc. These days information is abundance and available in electronic forms in catchable ways such as news, video clips, audio clips, photos and images, diagrams, figures and graphs etc. They can be access quickly and easily even through mobile phone as well. . However, majority of the farmers in the region are unable to obtain this information clearly and accurately.

Ampara district is located in the south east of Sri Lanka in the eastern province. It has an area of 4,415 square kilometers. It is a multi religion and multi ethnic group district and the total population is 648,057 (Dept. of Census and Statistics, 2012). Ampara District is divided into 20 Divisional Secretary's Divisions (DS Divisions). The DS Divisions are further sub-divided into 507 GramaNiladhari Divisions (GN Divisions).

The Ampara District is basically an agriculture oriented region and mainly people are involving paddy cultivation. Majority of paddy farmers are commercial producers and produce more than their consumption. The education level of the farmers varies from primary to degree level (bachelors level) and few of them more than the degree.

Cultivating land area varies from one acre to 30 acres by a paddy farmer in the costal belt of Ampara district. Majority of paddy farmers interestingly engaged in the paddy cultivation industry and significant numbers of paddy farmers hire the land for paddy cultivation during a particular cultivation period of the year. There are two seasons available for paddy cultivation namely yala season from April to August and maha seasons from November to March. Almost one third of the population in this area involves in paddy cultivation (Central bank, 2013).

It is obvious that the farmers need to change the pattern of cultivation with the innovation of technological development in paddy cultivation. This information always meant to get farmers via extension workers, radio, Television, newspapers, agricultural pamphlets and bulletins, demonstration etc. Paddy farmers in this region need to give their effort to access the needed paddy cultivation knowledge from available sources and means, for better paddy farming system and to improve the better paddy yield. However, obtaining the accurate information and its flow is very poor in this region.

The present study was therefore designed to describe the paddy farmers' information access methods in paddy cultivation practices and their preferences in order to obtain new farming in the coastal belt of the Ampara district

The nature of the study is vast and it is necessary to find out the paddy farmers information access methods for new farming practices. Thus the study is delimited to farmers who are involving paddy cultivation with extent of acreage five or more than that and in both Yala and Maha season in every year.

Ampara is one of the majorpaddy cultivating districts in Sri Lanka. More than one thirds of the population involves in the cultivation and majority of them are commercial producers. The paddy cultivation advancing in technically as well as practically in the world, but these advancements do not reach to the paddy farmers accurately and precisely on time

Methods of accessing information of the farmers are differed from person to person with the level of education, experience, age, etc. This kind of study should help to find out the paddy farmers' and producers'information access methods and their preferences in receiving information on new paddy cultivation practices. It will provide proper guide for extension workers and officers of the department of agriculture to provide new farming information in easily catchable formats to farmers.

The result of this study will provide evidence based data to agricultural extension service professionals' intent upon designing and delivering appropriate information system. An understanding of the information behaviors and information perceptions of paddy farmers is fundamental to an attempt to construct a picture of farmers' information access methods.

2. METHODOLOGY

The population of the study was the paddy farmers of the coastal belt of the Ampara District from the 11 divisional secretariat divisions. Research was conducted as a survey by using questionnaires and interviewing the paddy farmers of each selected divisional secretariat division in the Ampara District.

Model of Wilson 2006 and Babu et al 2012 was used to develop the conceptual framework of this study. (Figure 1) in order to carry out study perfectly.This model itself describes the paddy farmers' information seeking behavior with needs of information, sources and types of information, factors that effects the information seeking behavior and the farmers' satisfaction. If the farmers satisfied by attaining high yield and profits, it will lead to nation development through agricultural development of the region

Primary data on paddy farmers' information needs and their information seeking or gathering behavior were collected from the 11 divisional secretariat divisions of the costal belt of the Amapra district. This study covers 108,258.75 acres of cultivating paddy land. In order to represent all categories of the population proportionally from the selected divisional secretariat division, totally 110 paddy farmers were selected for this study by using stratified random sampling techniques. Here the stratification made across the paddy farming extent. However minimum of four samples were obtained from each divisional secretariat division.

The data obtained from the survey was analyzed quantitatively by using statistical software Excel and Minitab. ANOVA, chi square and simple percentage test were performed by using Minitab software. In addition information obtained from some open ended questions was analyzed quantitatively. Information was derived from interview is also analyzed quantitatively and qualitatively. Results from open ended and questions and interview was specifically used to describe the studied variables.

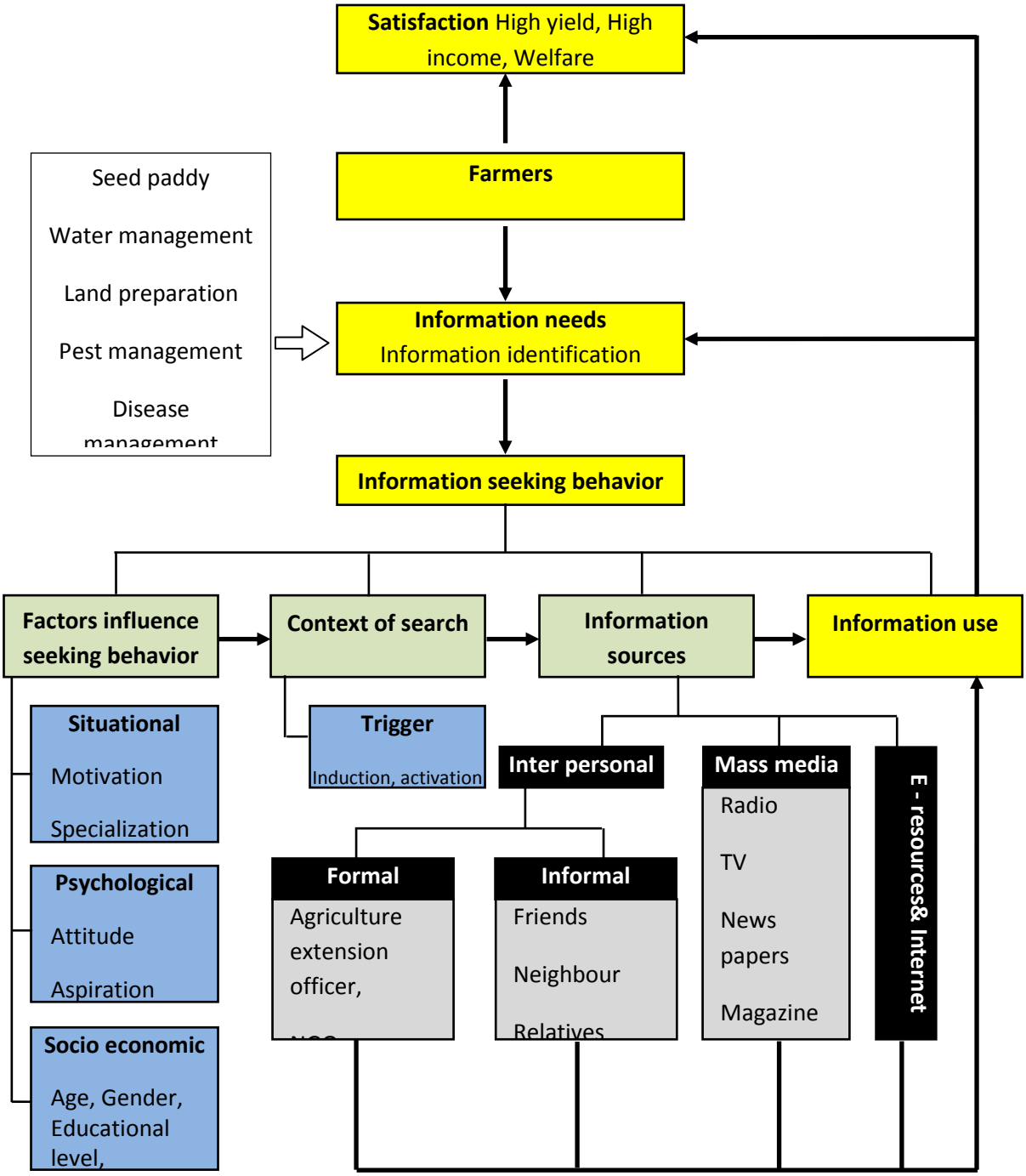

Figure 1: Conceptual model for the study

3. RESULTS AND DISCUSSION

With regard to the paddy farmer survey, the number of questionnaire distributed was 135 out of which 110 were completed and received at a response rate of 81.48%. (110).

The modern farmers are information seekers in order to increase their profit by upgrading their farming practices. There are several methods available for the access of information. In this study, the following 10 methods were used.

1. On field demonstration
2. Field trip

3. Web or electronic information portal
4. Publications
5. Group discussion
6. Guest speakers or consultant
7. Workshops
8. Practical short courses
9. Home study
10. Video demonstration

Farmers' preferences of acquiring information have been recorded with liken scale of four preferences level such as most prefer, prefer, less prefer and least prefer. These preferences have been obtained for the above mentioned ten modes of information access. The basic descriptive analysis is done in order to find out the frequencies and percentage of each level of preferences with the all information access methods separately. The result is displayed in Table 1.

Table 1: Information accessing methods and famers' preferences level

Methods	Most prefer		Prefer		Less prefer		Least prefer	
	Fr	%	Fr	%	Fr	%	Fr	%
On filed demonstration	108	98	02	02	-	-	-	-
Field trip	64	58	39	35	03	03	04	04
Web or electronic information	10	09	31	28	33	30	36	33
Publication	19	17	59	54	31	28	01	01
Group discussion	51	46	58	53	-	-	01	01
Guest speakers or consultant	38	35	52	47	19	17	01	01
Workshops	11	10	59	54	37	34	03	03
Practical short courses	05	05	37	34	41	37	27	25
Home study	01	01	39	35	34	31	36	33
Video demonstration	92	84	18	16	-	-	-	-

On field demonstration is the most preferred method by paddy farmers in the research area and it is 98 % followed by video demonstration with 84 % and field trip with 58 percent. Publication, workshops and group discussion fall in to the preference level by majority of the farmers. Practical short courses followed by workshops, home study and web or electronic information portal in a hierarchical order are selected by the paddy famers in less prefer category. Home study and web or electronic information portal are the least prefer method followed by practical short courses.

Each and every method was analyzed with the age groups and education level of the paddy farmers separately in order to find any association and correlations. ANOVA test is performed and the final results are displayed in the Table 2 and 3.

Table 2: ANOVA results of information access methods and the age groups of farmers

Information access methods	ANOVA "P" value	Predicted effect
On filed demonstration	0.211	No correlation
Field trip	0.003	Correlation
Web or electronic information	0.000	Correlation
Publication	0.000	Correlation
Group discussion	0.001	Correlation
Guest speakers or consultant	0.708	No correlation
Workshops	0.000	Correlation

Practical short courses	0.000	Correlation
Home study	0.000	Correlation
Video demonstration	0.555	Correlation

Table 3: ANOVA results of information access methods with the educational level of farmers

Information access methods	ANOVA "P" value	Predicted effect
On filed demonstration	1.000	No correlation
Field trip	0.000	Correlation
Web or electronic information	0.000	Correlation
Publication	0.000	Correlation
Group discussion	0.000	Correlation
Guest speakers or consultant	0.544	No correlation
Workshops	0.000	Correlation
Practical short courses	0.000	Correlation
Home study	0.000	Correlation
Video demonstration	0.041	Correlation

Today's agricultural sector, survival often depends on having on edge on information related to farming practices, the marketing, efficient allocation of available resources and use of innovative farming practices. The conceptual framework indicates the information sources such as interpersonal, mass media and electronic and internet resources for access of information. The proper information dissemination channel or methods could be making the access and use of information by the farmers in agricultural sectors.

Various methods, including on field demonstration, field trip, web and electronic information, printed materials (publication), group discussions, guest speakers, workshops, practical short courses, home studies and video demonstration have been analyzed in this studies in order to identify the preference method or methods in an order for dissemination of information in paddy cultivation in the Ampara district.

On field demonstration is hugely accepted accessing methods of information by all the farmers with the percentage of scale 98% most prefer and 2% prefer, followed by video demonstration with most prefer 84% and prefer 16%. Since these two methods give the information as visualized form, farmers can easily pick the information on their needs. The preference of field demonstration does not depend on the age and educational level of farmers and thus the method is highly accepted by all the groups of farmers. Also, preference of video demonstration is not affected by age of the farmers but is affected a little by the educational level of the farmers.

The majority of paddy farmers prefer field trip; most prefer 58%, prefer 35%, less prefer 3% and least prefer 4%. Farmers can access the information by observing the fact in field trip and the aged farmers usually do not like long field trip and there may be a little exception. Farmers' age and level of education have impact on field trip and it was clearly found by the ANOVA test between field trip and age and educational level of the farmers.

Group discussion and guest speaker are the another two methods preferred by majority of paddy farmers in the given order; group discussion shows most prefer 46%, prefer 53% and least prefer 1% while guest speaker exhibits most prefer 35%, prefer 47%, less prefer 17% and least prefer 1%. In group discussion,

farmers get together with some experts and discuss the problem where they can express their views, facts, needs, etc. It is one of inter personal methods and farmers can access the needed information effectively. Guest speaker is similar to group discussion where the speaker or the consultant gives the solution for the problem. Age and educational level of the farmers show strong impact on group discussion. Younger and educated farmers probably dominate the group discussion. Whereas guest speaker method is not shown any effect by age and educational level of the farmers.

The methods web and electronic information, home study and practical short courses are the least preferred methods; web and electronic information expresses most prefer 9%, prefer 28%, less prefer 30% and least prefer 33%, home study expresses most prefer 1%, prefer 35%, less prefer 31% and least prefer 33% and practical short courses expresses most prefer 5%, prefer 35%, less prefer 37% and least prefer 25%. These methods have dependency on education. As majority of farmers in the population is not much educated, their interest on this methods probably low. And also all these three methods have impact on age and educational level of the farmers. Most of younger farmers especially educated younger farmers like to move web electronic information, since it is quicker and information is in all forms like text, video, audio, picture, images, photos, diagram, etc as the information access media.

Publication like leaflets, magazine, newsletters, etc and workshops are preferred moderately by the farmers; publication expresses most prefer 17%, prefer 54%, less prefer 28% and least prefer 1% and workshop expresses most prefer 10%, prefer 54%, less prefer 34% and least prefer 3%. Since these two methods have a little attraction, farmers show moderate impression to these methods. The access of information through these two methods also depends on age and educational level of the farmers.

4. CONCLUSION

On field demonstration and video demonstration are the higher preference information access methods. Field trip, group discussion and guest speaker or consultants are the second ranks prefer methods. Publication and workshop are the third ranks prefer methods. Web or electronic information, home study and practical short courses are the least preference methods for information access for the paddy farmers.

All the information access methods but the methods on field demonstration and guest speaker are influenced by age and educational level of farmers.

According to the overall findings of the study, it was obvious that need to increase the access on information for paddy cultivation in order to increasing the productivity of paddy cultivation which will improve the wellbeing of farmers by increasing the overall profit of the cultivation. It will uplift to the region and lead to the development of the nation.

Agricultural extension officer needs to be trained or guided to the following in order provide better extension services to farmers' community

1. Observe and understand demographic characters of farmers in their concern area
2. Find the information needs areas in deeper of the farmers
3. Collect the relevant information
4. Find out suitable information access methods to the target farmers' community

5. Disseminate the information by using suitable method/s

5. REFERENCES

BABU, S.C., GLENDENNING, C.J., OKYERE, K.A. AND GOVINDARAJAN, S.K. (2012), Farmers' Information needs and search behaviors: case study in Tamil Nadu, India, IFPRI discussion paper 01165, International food policy research institute, Eastern and South Africa Regional Office.

Department of census and statistics, (2013), Paddy statistics http://www.statistics.gov.lk/agriculture

TOLOGBONSE, D., FASHOLA. O. AND OBADIAH, M. (2008), Policy issues in meeting rice farmers agricultural information needs in Niger state, journal of agricultural extension, Vol. 12 (2), pp 84 – 94

.

DEVADASON, F.J., AND LINGMAN, P.P., (1997), A methodology for the identification of information needs of users, IFLA journal, Vol. 123 (1), pp 41-51.

RIESENBERG, L.E., (1989), Farmers' preferences for methods of receiving information on new or innovative farming practices, journal of agriculture education Vol. 30 (3), pp 7-13.

WILSON, T.D., (2000), Human information behavior, Informing Science, Vol. 3(2), pp 49-55. [http://inform.nu/ArticlesNol3/v3n2p49-56.pdt, accessed 05.12.12].

WILSON, T.D., (2006), 60 years of the best in information research: on user studies and information needs, journal of documentation, Vol. 62(6), pp 658-670.