International Journal of Agricultural Extension and Rural Development Studies
Vol.9, No.4, pp.38-44, 2022
Print ISSN: ISSN 2058-9093,
Online ISSN: ISSN 2058-9107

Importance of Available Information Sources for Users: The Case of Fadis and Mechara Agricultural Research Centers, Ethiopia

Abune Gudeta
Agricultural Extension and Communication Research Debrezeit Agricultural Research Center, P.O.Box 32. Bishoftu, Ethiopia

Citation: Gudeta A (2022) Importance of Available Information Sources for Users: The Case of Fadis and Mechara Agricultural Research Centers, Ethiopia, *International Journal of Agricultural Extension and Rural Development Studies*, Vol.9, No.4, pp.38-44

ABSTRACT*: This study was conducted to examine the importance of available information sources for users of Fadis and Mechara Agricultural Research Centers, in East and West Hararghe Zones, Ethiopia. The study went further to investigate the perceived effectiveness and efficiency of the available information services in the study areas. No study has been done on this topic in these study areas. Questionnaire was used as a data collection tool along with observation checklist and focus group discussion guide. Questionnaire was distributed to entire (63) agricultural researchers of the two research centers for data collection. The collected data was analyzed using descriptive statistics and content analysis. The findings of this study revealed that research paper, mobile phone were the most commonly used sources (98.4%), followed by textbooks (96.8%), farmers, friends, acquaintances (95.2%). The availability, accessibility and usability of information sources was moderate to low in the study areas. Therefore, efforts need to be made to improve the usefulness of the available information sources at the study areas.*

KEYWORDS: available, information sources, information users,

INTRODUCTION

Agricultural information generation and dissemination are necessary for the development of agricultural products and having adequate and well-presented information will improve the efficiency of rural development, policies, projects and programmes. Similarly, agricultural information provision should be the basic component of rural development programmes [9]. According to [13], information technology's main role in rural development is to provide people with information of any kind they require because information is necessary for development. Study done by [11] indicated that lack of agricultural information is a key factor that has greatly limited agricultural advancement in developing countries. Anything human beings interact with or observe can be a source of information [3]. The information source is a medium in which knowledge and/or information is stored. In other words, it is understood as something that contains and/or stores information [4].

Sources of information are tools that can possibly meet the information needs of different categories of users. They are the information carriers. There are different sources of information but what matters are 'what' sources are available and relevant to the different categories of users and what sources of

information are useful for their different seeking behaviour, and mainly for utilization in order to accomplish tasks/needs. Information sources are various means by which information is recorded for use by an individual and organization. Sources of information are: radio, television, extension workers, cooperative societies, friends and colleagues, newspapers and magazines, books/leaflets, phones, libraries and institutes. Also, observation of people organizations, speeches, documents, picture and art work can also be described as information sources. Information services are the activities performed to facilitate any stage of the life cycle of information. The life cycle includes the creation, organization, use and disuse. Information services can be defined as services which provide (serves) data, knowledge, and information that are of interest to users. The interaction is that an information service collects (retrieves), manages (structures) and stores data. Productivity is measured as the ratio of agricultural input to output however; individual products are measured by weight and their densities.

Thus, agricultural information interacts with, and influences, agricultural activities in a variety of ways. This tends to imply that agricultural information can help informed decision-making regarding land, labour, livestock, capital and management. Appreciating the role of information, [14] brought forward that information of adequate quality is necessary condition for improvement of all areas of agriculture. According to [17], for information to be of optimum use, it must have the following qualities: relevance, accuracy, timeliness, currency, clarity and must be cost effective and an effective and efficient delivery system of essential information and technology services to farmers will facilitate their critical role in decision-making towards improved agricultural production, processing, trading, and marketing. Reference [10] attested that farmers' need to have access to agricultural information in order to improve their agricultural production and that farmers' need to have access to financial information for their actual performance as well as access to credit". Improved access to and use of agricultural information is essential if present-day global problems such as food insecurity, climate change, sustainable and more effective use of natural resources and biodiversity are to be addressed, [5]. Currently agricultural information is often not immediately accessible and the benefits that could be derived from its use are restricted. Enhanced access by Extension service officers would stimulate effective extension service delivery that would result in better use by farmers and other agriculture sector players along the value chain.

Statement of the Problem

Today, information technology has developed rapidly and has had a huge impact on information seeking behavior. According to [1] a number of factors such as ease of use of system, and users' beliefs, perceptions and training, have been cited as contributing to user acceptance and effective usage of a computer-based information systems. It therefore becomes pertinent that adequate knowledge about the information seeking behavior of this users' group is vital for developing library collections, services and facilities to meet their information needs effectively. However, anecdotal evidences show that understanding usefulness of available information sources is crucial to the effective and efficient provision of timely and relevant information and the design of information systems and services. Reference [7] brought forward that understanding how users search for information has enormous practical implications for both commercial and academic endeavours. Reference [8] suggests that substantial web information seeking or searching studies are necessary to refine user's knowledge of web information spaces, their design and maintenance, and training related issues.

Information has to be captured and made available to those who need it at the appropriate time in order to avoid unwanted duplication and repetition of endeavours, which leads to wastage of resources. Reference [15] brought forward that there is no doubt that improved information flow has positive effect on the agricultural sector and individual producers, but gathering and distribution of information is difficult and expensive activity. No user studies were conducted on the same topic in the study areas. If the usefulness of existing information sources is not well known, it is difficult to design proper provision of information systems and service. Therefore, the current study was aimed to examine the usefulness of available or existing information sources to put direction for future improvement of the information sources so that the information flow can be effective and efficient.

Objectives of the study

The general objective of the study was to examine the usefulness of available information sources in the study areas.

Specific Objectives

1.To investigate information source used in the study areas.
2. To identify usefulness of information sources for users
3. To assess the perceived effectiveness and efficiency of information services.

RESEARCH METHODOLOGY

Description of the Study Areas

Fadis and Mechara Agricultural Research Centers are two among seventeen research centers currently operating under Oromia Agricultural Research Institute (OARI). Fadis and Mechara Agricultural Research Centers found in Eastern Hararghe and Western Hararghe zones respectively in the Eastern part of Ethiopia. Fadis Agricultural Research Center is located in East Hararghe zone at 38 Kilometre from Haramaya University. It was established in the year 2008. There are 32 researchers in Fadis Agricultural Research Center. Mechara Agricultural Research Center is also located in West Haraghe Zone at 343 KM from Haramaya University. It was established in the year 2005.

Sampling Method

The entire agricultural researchers those who were working in Fadis and Mechara Agricultural Research Centers were study population. Census method was preferred for this study since no other method is accurate like census when the universe is small. A total of 63 researchers were study population and all questionnaires completed and returned with 100% response rate.

Data Type and Collection Method

Closed ended and open -ended questions were used to develop personal profile of the respondents. Total of two focus group discussion (FGD) were used which contained seven participants for easy moderation of discussion.

Data Analysis Method

Statistical Package for Social Sciences (SPSS) software version 20 was used for data analysis to generate percentage, frequency distribution. Categorization of themes contained in data, linking of themes and ideas and exploring new ideas were involved. This research study followed the [6] six steps during qualitative data analysis process and although the steps are described in linear order, Creswell described "an interactive practice" to analysis. That is there is a recursive element to follow these steps. The process is not simply static, linear order of analysis.

RESULTS AND DISCUSSION

Demographic Features

Of the 63 respondents, 61(96.8%) were male and 2(3.2%) were female. The acquired data confirmed that a large number of respondents 46(73%) were below 30 years old. Out of the total respondents almost 14(22%) were 31-40 years old. Majority of the respondents 40(63.5%) had a bachelor degree and 23(36.5%) of them had a master's degree. A large number of respondents 32(50.8%) were assistant researchers-I, 14(22.2%) junior researcher-I, 8(12.7%) were assistant researcher-II, 6(9.5%) were associate researcher-I, 2(3.2%) were researcher-II and 1(1.6%) of the respondents was senior researcher.

Information Sources Used by Respondents

Respondents were asked about the sources they had used to get information they needed. Research paper, mobile phone were the most commonly used sources (98.4%), followed by textbooks (96.8%), farmers, friends, acquaintances (95.2%). The least used information sources were radio and newspaper with percentages of 58% and 60.3%, respectively as the accessibility of these sources was limited at centres. The group participant opined that even though it was possible to access radio Frequency Moderation (FM) from mobile phone, it is difficult to obtain information related with their research activities. This leads to implication that research paper, mobile phone SMS, are the most commonly used information sources followed by textbooks, farmers, friends and colleagues while newspapers followed by radio programs are the least used information sources by the respondents.

Table 1. Information sources used

Sources	Yes (N)	Yes (%)	No (N)	No (%)
Research Papers	62	98.4	1	1.6
Mobile phone SMS	62	98.4	1	1.6
Textbooks	61	96.8	2	3.2
Farmers, Friends, colleagues	60	95.2	3	4.8
Computer, CD-ROMS	59	93.7	4	6.3
Internet resources	59	93.7	4	6.3
Leaflet /Booklet	57	90.5	6	9.5
Television programs	48	76.2	15	23.8
Newspapers	38	60.3	25	39.7
Radio programs	37	58.7	26	41.3

Source: Survey computation results, 2018

Availability, Accessibility and Usability of Printed Information Sources

The respondents were asked how available, accessible and usable the printed information sources are. Availability, accessibility and usability of printed information sources are among the factors that affect information needs and information seeking behavior. Reference [16] brought forward that accessibility, availability and familiarity of sources used determines the suitability of the information. The current study result revealed that the respondents can access the available information sources even though the availability and accessibility of information sources are low with percentage of 65.1. The usability of printed information sources in Fadis and Mechara agricultural research centres was moderate to low with percentages of 54 and 34.9. The current observation confirms the findings of previous study [12] shows graduate students' information needs and information seeking behavior was influenced primarily by the demand on their course requirement, availability of information sources, ease of access and use. The current study also revealed that availability and accessibility of information sources are low and even the available and accessible sources are less usable as they cannot provide appropriate and up-to-date information.

Table 2. Availability, accessibility and usability of printed information sources

Sources' characteristics	Highly		Moderately		Lowly		Not at all	
	N	%	N	%	N	%	N	%
Availability	20	31.7	2	3.2	41	65.1	0	0
Accessibility	21	33.3	1	1.6	41	65.1	0	0
Usability	7	11.1	34	54.0	22	34.9	0	0

Source: Survey computation results, 2018.

Most Frequently Used Communication Channel

Most frequently used channel of communication by agricultural researchers are face-to-face/personal meeting (63.5%), followed by email (25.4%) and telephone call (11.1%). The group participants also opined that they communicate face-to- face when they need and seek information for their research work since they require information from primary sources for problem identification. The findings of [14] revealed that internet as the first communication channel while the present study indicated that face-to-face/personal meeting as the most commonly used communication channel. But, [2] argued that internet was the first communication channel. This shows that researchers most frequently used face-to-face/ personal communication channel for seeking information for research activities, since they conduct research within community.

Table 4. Most frequently used communication channels

Channels	N	%
Face-to-face/personal meeting	40	63.5
E-mail	16	25.4
Telephone call	7	11.1
Postal mail	0	0
Fax	0	0

Source: Survey computation results, 2018

Perceived Effectiveness and Efficiency of Information Services

Effectiveness refers to the ability of a system (Centre library) to adequately satisfy users' information needs, while efficiency refers to achievement of stated objectives at lowest possible cost (making the available information readily accessible for utilization). The respondents' opinion was sought on the effectiveness and efficiency of the existing information services and systems at the centres using Likert scale. The group participants at Mechara Agricultural Research Centre confirmed that the information services and systems were less effective and less efficient because the centre Library was also used as a store. Group participants at Fadis Agricultural Research Centre said information exchanges among agricultural researchers was not good because of limited willingness among staff to share information/material obtained through training. So, the information services and systems at the centre were perceived to be less effective and less efficient. As indicated in table 6, the majority (52.4%) perceived that information services at centres were less effective and less efficient (49.2%). This is related with the availability, accessibility and usability of information sources.

Table 6. Perceived effectiveness and efficiency of information services

Scales	N	%
Least effective	6	9.5
Less effective	33	52.4
Effective	23	36.5
Very effective	1	1.6
Least efficient	8	12.7
Less efficient	31	49.2
Efficient	24	38.1

Source: Survey computation results, 2018

REFERRENCES

[1] Agbonlahor, R.O. (2005). Cognitive Issues in the Design of Information System Interfaces. African Regional Center for Information Science Readings in Information Science and Technology series, vol.1 University of Ibadan, Nigeria.

[2] Ayalu Teshome. (2015). Information seeking behavior of Accademic Staffs of Assossa Univerisity, Ethiopia. MSc. Thesis. Haramaya University, Haramaya.

[3] Bates M.J. (2012). Fundamental of Forms of Information. Journal of American Society for Information Science and Technology, 57 (8), 1033-1045.

[4] Bisto, C.M.L. (2012). An Analysis of the Information Behaviour of Geography Teachers in Developing African Country –Lesotho. Review of International Geography Education Online, 2, 192-218.

[5] CIARD, (2011). Introduction to "Access, sharing and transformation of agricultural data and information" breakout session accessed from (http://www.ciard.net) on 22th April, 2013.

[6] Creswell John W. Research Design: Qualitative, Quantitative and Mixed approaches. 3rd Edition. 2009.

[7] Cutrell, E. and Guan, Z. (2007). *What are you looking for? An eye tracking study of information usage in web search*, 407- 416.

[8] Fourie, I. (2002). A review of web information seeking/searching studies: implications for research in the South African context. Progress in Library and Information Science in South Africa: Proceedings of the second biennial DISSAnet Conference. Pretoria, Danida, 49-75.

[9] LawalIro, S., Boadi, B. Y., Oladokun, O. and Kalusopa, T. (2014). The Generation and Dissemination of Agricultural Information to Farmers in Nigeria: A Review OSR Journal of Agriculture and Veterinary Science (IOSR-JAVS) e-ISSN: 2319-2380, p-ISSN: 2319-2372.Volume 7, Issue 2 Ver. I, PP 102-111 [www.iosrjournals.org www.iosrjournals.org] site visited on 28/07/2017.

[10] Mokotjo, W. and Kalusopa, T. (2010). Evaluation of the agricultural information service (AIS) in Lesotho. *International Journal of Information Management*, 30: 350-356

[11] Oladele, O.I. (2011). Effect of Information Communication Technology on agricultural information access among researchers, extension agents and farmers in South Western Nigeria. *Journal of Agriculture and Food Information*, 12: 167-176.

[12] Samuel and Richard. (2011). Information needs and information seeking behavior and Use of information Resources by Mba graduate Students at Nigerian University. *An International Multidisciplinary Journal, Ethiopia. Vol.5 (4) Serial No.21, July, 2011. ISSN 1994-9057(print). ISSN 2070-0083(Online)*

[13] Shimla. (2012). Role of Information Technology in Development of Rural Himachal. Project report, 30-June, 2012.

[14] Singh, N. and Rani, M. 2013. Information Seeking Behavior of Faculty of Chitkara University (Punjab): A Case Study. *International Journal of Information Dissemination and Technology*, 3 (2): 94-98.

[15] Slavoljub Milovanivic. (2014). The role and potential of information technology in agricultural Review Article. Economics of Agriculture 2/2014 UDC: 004.738.5:631.

[16] Tackie, S.N and Adams, M. 2007. Information needs and seeking behavior of Engineers in Ghana, a case study of the Volta Ruler Authority. *African Journal of Library, Archives and Information Science, 17 (2): 69-78.*

[17] Vidanapathirana, N.P. (2012). Agricultural information systems and their applications for development of agriculture and rural community, a review study. 1- 14.