

**ASSESSMENT OF INFORMATION NEEDS OF SMALL-SCALE FARMERS IN
DUTSIN-MA LOCAL GOVERNMENT, KATSINA STATE**

BY

AGBER MERCY NGUEVESE

And

IORFA TERUNGWA PH.D

Abstract

The aim of this study is to assess the information needs of small-scale farmers in Dutsin-Ma Local Government in Katsina State. It examines the challenges they face, their preferred sources of agricultural information, and the specific areas of knowledge they seek. The research methodology incorporates questionnaire to collect data from a representative sample of small-scale farmers within the area of study. The findings have proven that farmers in this area confront significant challenges related to information access, often stemming from infrastructure deficiencies and low awareness of available agricultural resources. Their most sought-after information pertains to crop production techniques, pest and disease management, market prices, and weather forecasts. The paper underscores the paramount importance of addressing the information needs of small-scale farmers to boost agricultural productivity and improve their livelihoods. To this end, it recommends among other things, substantial infrastructure improvements, and awareness campaigns to inform farmers about existing resources, diversification of information dissemination channels, customized information tailored to specific needs, and initiatives to bridge gender disparities in information access. By implementing these recommendations, stakeholders can empower small-scale farmers in Dutsin-Ma Local Government, enabling them to enhance their agricultural practices and secure sustainable economic growth.

Keywords: Assessment, Information, Needs, Small-scale, Farmers

Introduction

Information is required for individual growth and development and by extension, societal growth and change. Ekoja (2014) said information is needed for personal, social and/or work – related activities of individuals and for the development of societies and states. The world is in an era where the source of wealth and power is more from information and human mental creativity than physical resources. Lack of information is believed to act as a barrier to development because of the importance of information provision in capacity building” and

“empowering communities (Wakelin & Simelane, 2015). The presence of information creates options, sets the stage for meaningful decision-making and alternative approaches to problem solving are examined for final decisions. Information is an important tool used in the realization of any objective or goal set by individuals. Information also is man’s related knowledge in all subjects in all forms and from all sources, which will help users to make rational decisions.

Information may be described as the working tools and empowerment for a change that will lead to enhancement in productivity for the small-scale farmers, if properly packaged and disseminated. To understand information need, it is necessary to understand the context of human needs that created the need for information. Information users need information for problem solving, current awareness, and recreational purposes and for up-dating of their knowledge. Information need is construed in the sense of data or a set of data specially required that will enable the user to make an appropriate decision on any related problem facing him or her at any particular time. The information needs of farmers can be addressed through the use of information resources. These information resources include bill boards, posters, magazines, newspapers, newsletters, encyclopedias, leaflets, films, tapes, videos, CD-ROM to mention but a few. The identification of information needs of small-scale farmers will lead to the means of information utilization that will help them take decisions to develop on their farming activities.

Farming is described as technical activities in which farmers often encounter some problems in executing the tasks. Agpalo (2017) says farming involves the cultivation and tillage of the soil, dairying, the production of crops, growing and harvesting of any agricultural products upon forest land, the raising of livestock (cattle, poultry, bees to mention but a few) as commercial enterprise. Farming is viewed as the act of cultivating crops and rearing animals for

human consumption. Farmers are described as people that are engaged in the business of farming operations, preparation of the products for market, storage or delivery to market and many other farm related activities. This study describes farmers as people that are involved in the production of food for the citizenry. In this sense, they produce the raw materials that industries used in manufacturing cloths, foods and alike, without them (farmers) this may not be possible because of the vital role they play in the production work. Farmers are grouped into large scale farmers and small-scale farmers. Large scale farmers are those commercial farmers that employ modern methods and mechanized tools in doing their farming activities. They cultivate farms on a large scale or quantity for commercial purposes.

Small-scale farmers are those subsistence farmers that employ traditional methods and traditional tools in farming. They have been categorized as partial economic men because of their duality in goal attainment (Williams, 2010). This makes farming as a means of both sustenance and cash income. Thus, a small-scale farmer considered not only as someone outside the country's monetary economy but also as a poor credit risk. The dual set goal and the farmer's small land holdings force him into mixed cropping which inevitably reduces his yields even when all necessary technological inputs have been added. In the same vein, Ilo (2018) reports that, small-scale farmers use traditional tools and techniques; these tools and techniques are not efficient to generate the required output. And these kinds of people live and work under difficult conditions making their farming a drudgery and time consuming. Furthermore, the small-scale farmers work relentlessly, carrying out the bulk of marketing and processing of produce. Therefore, small-scale farmers are seen as small landowners that engage in farming as an occupation to cater for themselves and family and act as little source of income when the

produce are sold for the purchase of farm inputs, such as fertilizers for the next farming season. Small-scale farmers are exploited by middlemen, produce merchants and opportunist city dwellers who take advantage of the farmer's agricultural surpluses and lack of preservatives to pay farmers ridiculously low prices for their produce. The significance of small-scale farming, can thus, not be over emphasized as they form the food basket of the nation, and a source of export materials. Assessing the information needs of small-scale farmers is central.

Assessment in this context could be described as the process of examining the information needs of small-scale farmers in order to know the right type of information resources and sources that will address their information needs. Small-scale farmers need agricultural information to improve on their farming practices and these information needs range from the use of fertilizer, pest and disease control, higher yield/agriculture production, planning at the right time, weed control, improved seed, post-harvest-loss/preservation, agricultural credits, agricultural cooperation and many more. Small-scale farmers need agricultural information to enhance or boost their productivity and also are informed of modern farming system in order to meet up with challenges that may arise in their occupation. The information needs of the farmers are not the same but varies base on the environment, sex, educational level, and most importantly, it is based on the agricultural activities of the farmers. In order to get high yield and bumper harvest as well as become economically and socially viable, small-scale farmers need information on different areas that will help them improve their farming skills, techniques and strategies (Opara, 2014). This information are communicated to small-scale farmers through sources.

In all forms of human endeavour, effective communication is absolutely imperative. Dissemination of information which is the most effective tool of communication goes a long way in making an individual, group of people and society to become more informed, more educated and more aware of issues, roles and responsibilities around them. Good information shapes the attitude of people in a society as well as their perceptions and methods of doing things. One of the agencies and services put in place to diffuse agricultural information and disseminate to farmers to satisfy their information needs is the agricultural extension service. Ekoja (2014) posits that, the common meaning made out for extension services is that it involves the conscious use of communication of information. This information can be disseminated to the small-scale farmers through farm broadcast, extension publication training, extension advisory services demonstration and exhibitions including those mounted at agricultural show, farmers' field days and the host of others. The role of information in enhancing agricultural development cannot be underestimated, information is a veritable tool in the production, marketing and distribution of agricultural produce particularly in Nigeria where majority of the farmers are uneducated and as such face paucity of information on how to develop their agricultural produce. It is against this background that this study seeks to investigate information needs of small-scale farmers in Dutsin-Ma local government area of Katsina state Nigeria.

Statement of the Problem

Information distribution is a key to eradicating poverty and hunger. Small-scale farmers also need to know what and how their counterparts are doing in advanced countries and this can improve their harvest and productivity. Without adequate information, particularly to the small-scale farmers, there will be lack of awareness about new developments within the agricultural

sector and this may lead to low productivity and consequently a danger to the survival of the nation. The inability of small-scale farmers to get information that will satisfy their information needs may result in poor production output, food insecurity and inability to feed the nation.

Unfortunately, literature and personal observation had revealed that, small-scale farmers are not adequately or properly informed about agricultural innovations and programmes that could improve their productivity. The crude method of farming applied by small-scales farmers in Dutsin-Ma local government area of Katsina State suggests that they are out of tune with information on how to apply innovative methods of production to achieve high productivity and enhance their standard of living. Small-scale farmers in Dutsin-Ma local government area of Katsina State have the difficulty of accessing adequate information they need to make them attain self-sufficiency in farming enterprise. This may lead one to wonder how small-scale farmers can increase their productivity in the farming business considering the global trend concerning information provision and access that would address their information needs. So many researches might have been carried out on information needs of farmers but there is no much attention on small-scale farmers, these calls for the present study. Therefore, the study seeks to assess the information needs of small-scale farmers in Dutsin-Ma local government area of Katsina state Nigeria.

Research Question

The specific objectives of the paper are as follows:

1. What are the information needs of small-scale farmers in Dutsin-Ma local government area of Katsina State?

2. What are the problems affecting the information needs of small-scale farmers in Dutsin-Ma local government area of Katsina state?

Review of Related Empirical Studies

Ekoja (2004) carried out a study on information needs of farmers in five ecological zones in Nigeria. The research design used for this study was the descriptive survey. The population comprised in the farmers found in the five ecological zones are Bida, Ibadan, Maiduguri, Umudike and Zaria. A sample of 100 farmers was studied in each zone, making a total of 500. The research instruments for data collection were questionnaire and documentary sources and both were complemented by interviews. The collected data was analysed using frequency counts and simple percentages. As a result, most Nigerian farmers have great desire for agricultural information which is attested to by the findings relating to their information needs in this study. The reviewed study is similar to this study because it is all about farmer's information needs. However, the reviewed study investigated the information needs of farmers and sources through which they get information while, the present study focused on information needs of small-scale farmers but not farmers generally, the study also went further to investigate the types of information resources small-scale farmers used and problems affecting their information needs which were not part of the reviewed study.

In other study, Njoku (2004) investigated the Information Needs and Information Seeking Behaviour of Fishermen in Lagos State, Nigeria. The study examined information needs, sources and problems encountered by the fishermen in a bid to obtain information. The survey was carried out in the rural fishing communities of the state. Using questionnaire supported with interviews, personal observation and examination of relevant records, data were collected from

500 fishermen in the different fishing communities in the state. The simple percentage was used to analyse the data. Results show that the information needs of fishermen in Lagos state are mostly occupation directed. Their chief sources of information include colleagues, friends, neighbours and relatives. Results also show that the fishermen in Lagos State are mostly illiterate, married and male adults in their middle ages; where and how to obtain credit facilities remain the most important information need of the fishermen; lack of awareness about where to obtain information on modern fishing technology is the most common problem of the fishermen in their attempt to seek information. This shows that there is acute shortage of information and fisheries extension officers in the field of information dissemination. The reviewed study is related to the present study in the sense that both studies investigated information needs of farmers but the reviewed study covers information needs and seeking behaviour of fishermen while the present study focused only on information needs of small-scale farmers. Also, the reviewed study investigated the information needs, sources of information and problems faced in getting information. The present study covers these objectives and went further to investigate the types of information resources used by small-scale farmers. The reviewed study adopted survey design, as well as questionnaire, interview and personal observation were used as instrument for data collection, while the current study used descriptive research design and questionnaire for data collection.

Similarly, Olabode (2008) studied the Information Needs of Selected Rural farmers in Ekiti East Local Government Area of Ekiti state. The study was aimed at identifying the information needs of the selected rural farmers, sources of accessing information as well as problems militating against access to information needs. The study employed survey research

design and the total sample of the comprised 120 rural farmers. The instrument for data collection was questionnaire and structured oral focus grouped interviews schedule. The collected data was analysed using frequency counts and percentages. The study discovered that, the rural need information on farming methods, improved varieties, income generation, farming techniques, agricultural support services and land preparation. The study also found that, extension workers, co- farmers, churches, traditional rulers, political leaders and peer groups are the major sources of information to rural farmers. The equally showed that, the problems of the rural farmers include high illiteracy rate, absence of rural public libraries and information centres, absence of radio and TV broadcast in local dialect among others. The reviewed study employed survey research design while current study used descriptive research design. Also, the reviewed study used two instruments – questionnaire and focus group discussion for data collection while the present study uses questionnaire. The reviewed study focused on information of needs of rural farmers while the present study focused on the assessment of information needs of small-scale farmers and intends to investigate types of information resources used by small-scale farmers which are not part of the reviewed study.

In addition, Aniogbolu (2010) studied the Information Needs of Rural in Ika –North East L.G.A of Delta State with particular focus on Umunede kingdom. The research design used for the study was the survey design. The sample for the study consisted of 320 respondents randomly selected from the villages that made up the kingdom. The instrument for data collections were researcher developed questionnaire titled Information Needs identification, Oral interview, and a structured focus group interview schedule. The simple percentage and frequency count were used for data analysis. The study revealed that rural farmers need information on

multi-publicity of issues concerning their farming business such as fertilizer availability, pest control, and weeds control, improve varieties, credit facilities and many more. The study also, found that, rural farmers get information through sources such as radio programmes, churches, traditional rulers, peer groups, extension workers and co-farmers. The study identified illiteracy, absence of information sources such as libraries and extension workers were the major problems hindering the information needs of rural farmers. The reviewed study used survey research design while the present study uses descriptive research design. Also, the reviewed study used three instruments-questionnaire, interview and focus group while the present study use only questionnaire. The reviewed study focused on information of needs of rural farmers while the present study focused on the assessment of information needs of small-scale farmers and intends to investigate types of information resources used by small-scale farmers which are not part of the reviewed study.

Similarly, Okwu and Daudu (2011) carried out a study of Extension information sources usage and preference by farmers in Benue State, Nigeria. Survey research design was used by the study. The study was guided by five research question with two hypotheses. A sample of 316 farmers was selected through a stratified random sampling technique and interview schedule was used in eliciting information from them. Descriptive and inferential statistics were used for data analyses. Interpersonal information sources were generally found to be more available, accessible and used by the farmers than the mass media to obtain information on improved farm technologies. Relatives/friends/neighbours constituted the most regularly available, accessible and used interpersonal sources although extension agents and television were mentioned by the farmers as the most preferred interpersonal source and mass medium, respectively. The reviewed

study used survey research design while the present study uses descriptive research design. Also, the current study is guided by four research questions and does not use hypothesis while, the reviewed study was guided by five research questions and two hypotheses. The reviewed study focused on extension information sources usage and preference by farmers while, the current study focused on assessment of information needs of small-scale farmers.

Methodology

This study adopted the descriptive research design to obtain information concerning the current states of the phenomena and to describe what exists with respect to information needs of small-scale farmers. The study area was Dutsin-Ma local government area in Katsina State. Taro Yamane formulae was used for getting the sample size of 350 registered farmers under Indorama Eleme Fertilizer and Chemicals Limited in Dutsin-ma local government area. The Proportionate stratified random sampling technique was used to stratify the sample size of 350 small-scale farmers into four strata based on population which represent the four agricultural zones in Dutsin-ma local government area, where Turare/Mekera has 140, Darawa has 105, Garfi Sokoto Rima has 70 and Gago has 35 respectively (Indorama, 2022). The Simple random sampling technique was then used to select the actual sample in each stratum by selecting respondents at random without replacement from the population in each agricultural zone that equate the overall sample. The simple random sampling technique was chosen because it will give every member of the population an equal opportunity to be chosen.

A self-designed questionnaire was deployed as the instruments for data collection. The questionnaire was divided into two clusters; A, and B, with a total number of 16 items. Cluster A of the questionnaire sought to find out information needs of small-scale farmers, it comprises

of 11 items, with response option of yes and no, Cluster B sought to find out the problems affecting information needs of small-scale farmers, it comprises of 5 items, with response option of Strongly Agree (SA), Agree (A), Disagree, (D), and Strongly Disagree (SD). The instrument was subjected to face and content validation by two professionals of Library and Information Science Department of Federal University Dutsin-ma. The data collected was analysed using descriptive statistics.

DATA ANALYSIS AND DISCUSSION

Table 1: Mean and Standard deviation of responses of respondent on Types of Information Needs of Small Scale Farmers

(N = 230)				
S/N	Item Statement	\bar{x}	SD	Dec
1	Information on new farming techniques	3.56	0.59	A
2	Information on fertilizer availability	3.34	0.60	A
3	Information on fertilizer application	3.40	0.66	A
4	Information on disease and pest control	3.38	0.59	A
5	Information on government regulations	3.34	0.60	A
6	Information on supply of farm inputs	3.38	0.61	A
7	Information on weed control	3.38	0.61	A
8	Information on farming equipment	3.40	0.63	A
9	Information on improve species	3.45	0.59	A
10	Information on storage/preservation facility	3.36	0.59	A
	Grand Mean	3.40	0.44	A

Key: N = Number of respondents, \bar{x} = mean, SD = Standard Deviation, A = Agree, Dec. = Decision.

The respondents were asked to indicate types of information needs of small scale farmers. Adopting the criterion mean of 2.50 on a four point scale, Table 1 above indicates that all of the listed item statements are accepted by respondents. These include: Information on new farming techniques (\bar{x} =3.56,SD=.59); Information on improve species (\bar{x} =3.45,SD=.59); Information on

farming equipment (\bar{X} =3.40,SD=.63); and Information on fertilizer application (\bar{X} =3.40,SD=.66).

The grand mean of 3.40 with a standard deviation of 0.44 showed that small scale farmers need the above highlighted information to improve on their farming.

Table2: Mean and Standard deviation responses of respondents on Problems Affecting the Information Needs of Small Scale Farmers (N= 230)

S/N	Item Statement	\bar{X}	SD	Dec
1	High rate of illiteracy	3.39	0.67	A
2	Lack of information resources	3.39	0.77	A
3	Lack of adequate storage facilities	3.39	0.72	A
4	Poor information literacy	3.32	0.74	A
5	Ineffective communication strategies	3.62	0.72	A
6	Absence of radio programmes on agriculture in local language	3.47	0.58	A
7	Absence of television programmes on agriculture in local language	3.44	0.64	A
8	Inaccessibility of information resources	3.37	0.72	A
9	Slow adoption of information technology	3.43	0.63	A
10	Poor internet connectivity	3.48	0.70	A
11	Absence of libraries	3.41	0.68	A
Grand Mean		3.43	0.48	A

Key: N = Number of respondents, \bar{X} = mean, SD = Standard Deviation, A = Agree, Dec. = Decision.

Results in Table 2 shows that all the challenges mentioned affecting information needs of small scale farmers were accepted by the respondents. Also, the overall mean showed that Ineffective communication strategies (\bar{X} =3.62, SD=.72) is ranked highest, while Poor information literacy (\bar{X} =3.32, SD=.74) is ranked lowest as regard to challenges affecting information needs of small scale farmers. The grand mean of 3.43 with a standard deviation of 0.48 showed that there are challenges associated with information needs of small scale farmers

Conclusion

In conclusion, this study reveals that small-scale farmers in Dutsin-Ma Local Government have diverse and critical information needs spanning various aspects of agriculture. They utilize a wide range of information sources, both traditional and modern. However, challenges related to digital access and technological limitations persist. It is clear that tailored information programs, strengthened agricultural extension services, improved digital access, and collaboration with traditional leaders are vital for addressing these challenges. By implementing these recommendations, we can enhance the information landscape, empower farmers, and ultimately contribute to the sustainable development of agriculture in the region, benefiting both farmers and the community at large.

Recommendations

Based on the findings of this study, the following recommendations were made to the relevant authorities to improve on those areas:

- i. Government should help in strengthen Agricultural Extension Services to provide timely and relevant information to small-scale farmers.
- ii. There should be provision of access to the internet and digital technologies in rural areas, focusing on affordability and infrastructure development.
- iii. Government should develop and implement information programs customized to meet the specific needs and preferences of small-scale farmers.
- iv. There should be collaboration with traditional leaders to leverage their influence in disseminating agricultural information and fostering community participation.
- v. Government should organize and support agricultural shows and demonstrations to provide hands-on learning experiences for farmers.

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