

Information Needs and Seeking Behaviours of Rural Farmers in Mangu Local Government Area of Plateau State, Nigeria

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Abstract

The purpose of this study was to investigate the information needs and seeking behaviours of rural farmers in Plateau State's Mangu Local Government Area. There were three main objectives for the study. The study took a descriptive survey technique, with the questionnaire playing the role of data collector. Ninety (90) farmers were used as participants in the study. To evaluate the data, descriptive statistics were applied. The results showed that rural farmers in Mangu Local Government need access to agricultural information resources; their information needs were never met by agricultural extension officers; farmers in the past relied on their peers, cooperatives, families, and friends for agricultural knowledge; and farmers' collective knowledge and first-hand experience were the most trusted sources of agricultural knowledge. It was found that the agricultural information resources available to farmers in the Mangu LGA of Plateau State are discouraging. Farmers in the Mangu LGA of Plateau State face language barriers, a lack of extension worker services, a lack of funds, a lack of awareness, and an absence of up-to-date information. For better agricultural products, the government was urged to implement the following measures: ensuring that politicians at all three levels of government keep their word; establishing rural adult education programs; hiring and deploying extension workers to rural areas; and encouraging the management of television and broadcasting houses to create agricultural programming.

Key words: Agriculture, farmers, information needs, information seeking behaviours, Mangu, Rural farmers

1. Introduction

Agriculture in developing nations relies more on knowledge. Researchers discover new things globally, regionally, locally, and nationally. Farmers need accurate, current, and usable information to compete as agriculture systems become increasingly complex. Farmers need helpful information in a format they prefer (Babu et al., 2012).

Many emerging nations depend on agriculture. The agricultural sector must address poverty, hunger, and income to remain viable (Kabir et al., 2014). For environmental, economic, and social sustainability, farmers must use chemicals judiciously, control pests, water plants and animals, and take care of their health (Kabir, et al., 2014).

Farmers must be competent at finding knowledge to improve production technology and boost crop yields (Ali-Olubandwa et al., 2010). Agricultural knowledge can help farmers learn basic farming practices. Technical, marketing, social, and legal information are examples. It often involves face-to-face communication and passively absorbing information from print and electronic media adverts (Yahaya, 2003).

Information is profound. Today's contests require accurate, valuable, and current knowledge about new goods, methods, patents, standards, and research. Information aids work. Modern life is impossible without information (Bankapur & Bhavanishankar, 2018). Kumari et al. (2017) suggests living with knowledge. Good

information can save lives. Information has shaped society. It altered behaviour and thought. Bankapur and Bhavanishankar (2018) argue everyone needs information to make smart daily judgments and attain good results. Thus, one of Ranganathan's laws states that timely knowledge is crucial. All people do is make and use information. In emerging fields like communications, television, telemetry, computers, publishing, radio, satellite communication, etc., information is everything. Agriculture, industry, research and development, government, journalism, and entertainment professionals need knowledge (Bankapur & Bhavanishankar, 2018). They sort, store, exchange, and use information differently. Society improves only because of information. Information impacts society in every way.

Farming and selling farm products require information for production. Information is the collection, storage, processing, and sharing of fresh data, photographs, facts, messages, ideas, and comments to understand and react correctly to personal, environmental, national, and international conditions and make the right decisions (Owolade & Kayode, 2012). Correctness, timeliness, and importance determine information quality. Accurate, timely, bias-free information is available when needed. Everyone, even government officials and experts, needs information (Bentley et al., 2007).

Information is employed in practically everything humans do and progress. Information needs begins with the premise that individuals need to know things and be informed. Without knowing how individuals request, find, assess, pick, and use information, this process would not operate 'Information-seeking behaviour' (Idiako-Ochei et al., 2016).

According to Idiako-Ochei et al. (2016), understanding the information demands and information-seeking behaviours of different professional groups helps plan, implement, and administer information systems and services in work settings. For better crops and more food, farmers need information. Information-seeking behaviour involves why someone wants to know something, what they want to know, and how and where they obtain it (Idiako-Ochei et al., 2016).

The 'agricultural cycle' (Babu et al., 2012) or 'agricultural value chain' might aggregate information needs (de Silva & Ratnadiwakara, 2008; Ali & Kumar, 2011). A farmer must decide on inputs, production, planting, harvesting, packaging, storing, transporting, and selling during a cropping season. Both methods work at each stage. Babu et al. (2012) adds that education on how to make money outside of farming and policy changes are also vital. In information requirements assessment, a farmer may identify an important information need based on their needs and interests. It cannot address 'unfelt' or 'unrecognized' demands (Lamprey et al., 2016).

Understanding how people and organizations search for information also requires understanding barriers. How someone learns depends on what they need for farming or homemaking. To compete in a changing world, farmers must manage and change their farms. Small adjustments to present techniques and technologies or adopting new items, technology, or methods achieve this. When there are multiple options, the farmer must choose which innovation or collection of innovations will best serve his or her farm business (Kavithaa et al., 2014). This process affects the farm business, according to Kaine (2004). To avoid 'doing it wrong,' farmers spend time and energy obtaining information, considering their options, and choosing the best one. Making a difficult choice (Kavithaa et al., 2014). This study is crucial since these farmers meet these needs so well.

2. Statement of the Problem

Information minimizes uncertainty and boosts problem-solving inventiveness, making it crucial for long-term social growth. When people know where to get help, they usually can. Unaware persons may not be able to utilize government programs or international aid. Sharing knowledge can end hunger and poverty. Rural farmers must know what and how other developed nations do. This can improve their farming methods and equipment, increasing output and farm product production. Farmers in remote places will be uninformed of new agricultural sector advances without enough information. Low output could make it hard for the country to get enough food, risking its existence. If farmers in remote places cannot obtain information, they may not be able to raise enough food, and the nation may be hungry.

The researcher's initial findings show that most rural farmers lack the information they need to make informed decisions and embrace novel farming practices, even though knowledge is vital to rural farmers and nations. Farmers may have been poor at acquiring information. Due to these variables, the researcher wants to know what Plateau State Nigerian farmers in Mangu want and how they get information.

3. Objectives of the Study

The main purpose of the present study was to ascertain the information needs and seeking behaviour of the farmers with the view of improving the access to information that will help to improve crop production. The objectives of the study are,

- To find out the information needs of the farmers in Mangu LGA.
- To discover the information seeking behaviours of farmers in Mangu L.G.A
- To examine the challenges the farmers in Mangu LGA faced in meeting their information need.

4. Empirical Review

Idiake-Ochei et al. (2016) carried out a study on information seeking behaviour of extension personnel in Edo State, Nigeria. The study examined the type and source of information needed by the extension personnel. The study was made up of 137 respondents drawn from three agricultural zones in the state. Data collected were subjected to analysis using frequency distribution, mean and multiple Pearson correlation. Results showed that the information type largely sought by the respondents included animal production technology (mean=3.61), while the least sought was agricultural credit (3.39) and value chain (3.39). Institutional information sources were the major sources of information on the different information type for the respondents. The multiple pooled correlation results showed that the demographic characteristics of the extension personnel do not significantly ($P>0.050$) influence their information seeking behaviour. However, with respect to information seeking behaviour for specific information type, the extension personnel educational level ($r = 0.208$) had a positive and significant influence on their information seeking for crop production. Also, their educational level had significant but negative influence on their information seeking for agricultural inputs. The study concludes that the extension personnel were actively involved in information seeking and the institutional sources of information were their major sources of information for agricultural extension work in the study area. The former study was also conducted in a different state (Imo) and based itself on information seeking behaviour of extension personnel in the area of agricultural programme zone while the current study is in Plateau state which based on farmers information needs and seeking behaviours.

In a similar way, Brhane et al. (2017) carried out a study on sources of information and information seeking behaviour of smallholder farmers of Tanqa Abergelle Wereda, central zone of Tigray, Ethiopia. However, as far as the authors' knowledge is concerned, there is no research carried out to identify it in the study area. For the research design, from the 19 rural Kebeles of the Woreda, 5 Kebele were randomly selected and 152 household head were selected by using simple random sampling technique proportion to their population size from the sampled Kebeles. The study adopts both primary (household survey and focus group discussions); and secondary data sources (relevant published and unpublished materials). To analyse sources of information and information seeking behaviour of the smallholder farmers, frequency and ranking were employed. The findings revealed that smallholder farmers prefer to seek information from farmers, agricultural professionals, health extension workers, radio and mobile-phone. The main challenges for seeking information, among others are shortage of infrastructure, lack of ICT and service fee, lack of interest and inadequate users' skill and knowledge. It is concluded that smallholder farmers' use multiple sources of information as no one source is sufficient in itself.

This study has similarity with the current study in the area of information seeking behaviour but in a different country.

Akweta et al. (2018) carried out a study on information needs of farmers in Song Local Government Area, Adamawa State, Nigeria. The study sought to explore the information needs of farmers in Song Local Government Area. Specifically, the study identified respondents' socio-economic characteristics, information needs, sources of information and the challenges experienced in accessing the needed information. The sampling technique used was multistage, the sample size is 150, primary and secondary source of data collection was employed. Descriptive statistic was used. Result reveals that majority (64%) of the respondents were within the age of 28-37 years and were in their active age range. Almost one third (30.7%) of the respondents had no formal education, (48.7%) had primary education. Majority (60.7%) of the respondents were male, 56.7% were married, 26.0% were widows/widowers and 17.3% were single. All the respondents (150) reported that they need information on agricultural input regularly, 125 said they need information on agricultural credit regularly, 130 said they needed information on health regularly while 93 reported that they need information on agricultural marketing regularly. Information to be disseminated to rural farmers should be timely and those that will be relevant and pertinent to their agricultural activities. They concluded that, the development of environmental messages to create public awareness campaigns through the use of radio messages and posters should be enhanced. This study has similarity with the current study in the aspect information needs of farmers, multistage sample techniques and descriptive statistics but in a different state.

5. Methodology

Descriptive survey was used. Mangu Local Government Area in Plateau State, Nigeria's North Central geopolitical zone, hosted the study. The LGA has nine districts: Mangu, Panyam, Gindiri, Langai, Mangun, Kerang, Ampang, Kombum, and Pushit. The National Population Commission (2006) reported that Mangu LGA had a population of 176,647. Mangu has autonomous communities. Multi-stage sampling was used for the study. The survey included nine settlements. The second stage entailed purposively selecting 10 farmers from each hamlet to provide 90 responses. Data was collected by questionnaire. Some of the questionnaires were interpreted in Mwaghavul, Pyem and Hausa for those respondents that cannot read and write. The questionnaire was structured close-ended questionnaire and titled "Questionnaire on the Information Needs and Seeking Behaviours of Farmers (QINSBF) in Mangu LGA". Quantitative data was described and inferred. Frequency tables and percentages displayed data by the use of Statistical Package for Social Sciences (SPSS).

6. Data Analysis

6.1 *Do farmers need agricultural information in Mangu L.G.A.*

The analysis from the table 1 shows that 75 (85.2%) of the respondents agrees that they need agricultural information, while 13 (14.8%) says no to that. This implies that majority of the farmers in Mangu LGA need information on agriculture.

6.2 *Accountability of Information services*

The data analysis from the table 2 shows that 55 (62.5%) disagreed that the information about their farm activities were readily available, while only 33 (37.5%) agreed with that statement. From the result, it implies that majority disagrees that the information is readily made available for them.

6.3 *What are the Information needs of farmers in Mangu L.G.A.*

6.3.1 *Types of information needs for farmers in Mangu L.G.A*

Table 3 shows farmer information needs. Modern farming information technology were very relevant to 45 (51.1%) of respondents, relevant to 35 (39.8%), and not relevant to 5 (5.7%) and 3 (3.4%). This suggests that most respondents agree that modern farming information technologies are crucial to the information they require for their farming activities. Nutritional and reproductive management was not relevant to 35 (39.8%) of respondents, relevant to 34 (38.6%), extremely relevant to 10 (11.4%), and not very relevant to 9 (10.2%). 29 (33%) and 25 (28.4%) agreed that milking procedures and systems are relevant and highly relevant, respectively, whereas 24 (27.3%) and 10 (11.4%) disagreed. The majority of farmers thought that milking operations and systems information were relevant. 45 (51.1 percent) and 35 (39.8 percent) believe that information on diseases and pests' control is relevant and highly relevant, while 5 (5.7 percent) and 3 (3.4 percent) said it was not useful. This suggests that most people value disease and pest control information.

Weather conditions were relevant to 30 (34.1%) and 25 (28.5%) of respondents, while 20 (22.7%) and 13 (14.8%) were not relevant. This suggests that most respondents subscribed to weather information, which they indicated was crucial to their information needs. Business information was relevant 40 (45.5%) and very relevant 20 (22.7%), while 18 (20.5%) and 10 (11.4%) were not relevant and not very relevant, respectively. Farmers need business information. 35 (39.8%) and 25 (28.4%) said government programs and plans were relevant and not relevant, respectively, while 23 (26.1%) and 15 (17%) said not very relevant and very relevant. The majority of respondents agreed that is relevant for farming. Market trends were most relevant to 34 (38.6%) and 30 (34.1%) respondents, whereas 14 (15.9%) and 10 (11.4%) indicated not very relevant and not relevant to their information needs, respectively. This suggests most farmers think market developments are important. 40 (45.5%) and 38

(43.2%) said credit facility information is relevant and highly important to their information needs, while 8 (9.1%) and 2 (2.3%) said it is not. Farmers need credit information.

6.3.2 Search for agricultural information

The result from table 4 shows that 65 (73.9%) of the respondents agreed that they used to search for agricultural information while 23 (26.1%) disagreed. this implies that majority of the farmers do search for agricultural information for their farming activities.

6.4 What is the information seeking behaviours of farmers in Mangu L.G.A

6.4.1 Sources of information on agricultural information

Agriculture information sources are listed in table 5. The analysis shows that most farmers get their agricultural information from other farmers (96.6 percent), cooperative societies (88.6 percent), family members (73.9 percent), and personal experience (72.7 percent), while few get it from radio (39.8 percent), mobile phone calls/SMS (38.6 percent), others (26.1 percent), television (22.7 percent), extension officers (17 percent), library services (11.4 percent), 5.7 percent, 4.5 percent, and 3.4 percent. This means most farmers learn about agriculture from co-workers, agricultural cooperative societies, family, and personal experience.

6.4.2 Preferred source of information

Table 6 shows the top agricultural information source. The results showed that 65 (73.9 percent) and 15 (17 percent) preferred personal experience, while 5 (5.7 percent) and 3 (3.4 percent) chose least and not preferred. 35 (39.8%) and 10 (11.4%) preferred and most preferred family/parents, while 23 (26.1%) and 20 (22.8%) preferred least and not preferred. On neighbours/friends, 35 (39.8%) and 25 (28.4%) indicated preferred and most preferred, while 18 (20.5%) and 10 (11.4%) selected least preferred and not preferred. 45 (51.1%) and 34 (38.6%) agriculture extension officers indicated preferred and most preferred, whereas 5 (5.7%) and 4 (4.5%) chose least preferred and not preferred. Radio was the preferred source of agricultural information for 35 (39.8%) and 32 (36.4%), while 11 (12.5%) and 10 (11.4%) were least favoured and not preferred, respectively.

On brochure, 45 (51.1%) and 10 (11.4%) respondents indicated preferred and most preferred, whereas 23 (26.1%) and 10 (11.4%) selected least preferred and not preferred. However, 78 (88.6%) and 10 (11.4%) of respondents chose farmer groups for agricultural information. Farmers' group and other information is trusted by most. 51 (58%) and 20 (22.8%) of respondents indicated not preferred and least preferred on book form of agriculture information, whereas 12 (13.6%) and 5 (5.7%) indicated most preferred and preferred. Leaflets were least preferred by 33 (37.5%) and 20 (22.8%) of respondents, while 15 (17%) and 20 (22.8%) were favoured and

most preferred. Cell phones were 50 (56.8%) and 13 (14.8%) least desired and not preferred, respectively, whereas 15 (17%) and 10 (11.4%) were preferred and most preferred. For village elders, 40 (45.5%) and 30 (34%), respectively, said not preferred and least preferred, while 13 (14.8%) and 5 (5.7%) said preferred and most preferred. Farmers don't rely on community elders.

Television was favoured by 35 (39.8%) and 34 (38.6%) of respondents, whereas 19 (21.6%) and 10 (11.4%) were least and not preferred. 40 (45.5 percent) and 20 (22.8 percent) of respondents said they preferred and least preferred online information, whereas 8 (9.1 percent) said they preferred and most preferred. 34 (38.6%) and 23 (26.1%) indicated least preferred and not preferred for library and information centre information, whereas 13 (14.8%) and 10 (11.4%) answered most preferred and preferred. Most farmers don't use library and information centre information. Newspapers and magazines were least desired by 45 (51.1%) and 8 (9.1%), while 20 (22.8%) and 15 (17%) were preferred and most preferred.

6.4.3 *Frequency of Access to Information through Agricultural Extension Offices*

Table 7 solicited for information on how often farmer's access information through agricultural extension officers. The analysis shows that 56 (63.6%) of the respondents indicated never, 15 (17%) indicated yearly, 10 (11.4%) indicated weekly, while 5 (5.7%) and 2 (2.3%) indicated daily and monthly respectively. This means that farmers' information needs were never attended to by agricultural extension officers.

6.4.4 *Perception of Farmers on Information Searching Practices*

According to the table 8, 40 (45.5 percent) of respondents agreed, 30 (34 percent) strongly agreed, and 10 (11.4 percent) and 8 (9.1 percent) disagreed and strongly disagreed, respectively, that searching for information is valuable. The majority said that agricultural information is crucial. 45 (51.1%) and 20 (22.8%) of respondents agreed and strongly agreed that they need help finding agricultural information, whereas 13 (14.8%) and 10 (11.4%) disagreed and strongly disagreed. Most farmers require help finding agricultural information. 30 (34%) and 10 (11.4%) highly agreed and agreed that searching for information takes time, while 25 (28.4%) and 23 (26.1%) disagreed and strongly disagreed. 35 (39.8%) and 30 (34%) agreed and strongly agreed that great effort is needed to look for knowledge, while 13 (14.8%) and 10 (11.4%) disagreed and strongly disagreed. The majority agrees that agricultural knowledge requires great effort to find. However, 40 (45%) and 23 (26.1%) of respondents opposed and strongly disagreed to the statement that they get confused by the information available to them, whereas 15 (17%) and 10 (11.4%) highly agreed and agreed. Most people don't get confused by information.

For I don't know which information to trust, 45 (51.1%) and 10 (11.4%) of respondents disagreed and strongly disagreed, whereas 20 (22.8%) and 5 (5.7%) strongly agreed and agreed. They employ different sources

of information comparison: 35 (39.8%) and 15 (17%) of respondents agreed and strongly agreed, while 23 (26.1%) and 15 (17%) disagreed and strongly disagreed. 43 (48.9%) and 30 (34%) of respondents disagree and strongly disagree that they don't know the required information, whereas 10 (11.4%) and 5 (5.7%) agree and strongly agree. This suggests that most farmers have the information they need.

6.4.5 *Frequency of Use of Devices to Access and Use of Agricultural Information*

According to the data in table 9, 68 (77.3%) of respondents never use radio to get agricultural information, whereas 10 (11.4%) and 5 (5.7%) do so daily, weekly, and monthly. Television: 63 (71.6 percent) never, 15 (17 percent) weekly, and 10 (11.4 percent) monthly. Mobile phones: 63 (71.6 percent) never use them to get agricultural information, 20 (22.8 percent) and 5 (5.7 percent) weekly and monthly, respectively. Computers/laptops/tablets and CDs/DVDs/flash disks: all 88 (100 percent) never use them. This means most farmers never use any of the above technologies to access and use agricultural information.

6.5 *What challenges do farmers in Mangu L.G.A. Encounter in accessing information?*

Table 10 shows that majority of respondents (88 percent) agree that language barrier, 85 (96.6 percent) inadequate extension services, 80 (90.9 percent) inaccessibility of information, 79 (89.8 percent) inadequate funds, 78 (88.6 percent) lack of relevant information materials and lack of awareness of the available information sources, 76 (86.4 percent) lack of up-to-date information, 69 (78.4 percent) poor knowledge sharing culture, 6 (6 percent) lack of funds. This suggests that most farmers view the following difficulties as a substantial barrier to agricultural information access.

7. **Discussion of Findings**

The findings discussion only covered the key research objective and questions that guided the investigation. 85.2 percent of respondents need agriculture information. Thuo (2018) found that all groups need information to make daily decisions. Mohammed (2018) found that information helps farmers decide on production, management, marketing, and crop varieties.

Most farmers disagreed that information services are readily available. Thuo (2018) found that farmers had limited access to agricultural information services. Most respondents disagreed to never receive information from agricultural extension officers. This conclusion supports Akeweta et al. (2018), who claimed that extension officers are unavailable, and Anugwa and Agwu (2018).

Farmer information needs, modern farming technologies, milking operation & systems, animal waste management, diseases and pests' control, business information, government policies & plans, market trends, and

credit facilities have the highest frequency/percentage, with most falling within relevant and very relevant. The information is important to farmers save one. Mbagwu et al. (2017) stated that giving farmers knowledge will boost their productivity and efficiency.

Most (65 of 88) look for agriculture information. Thuo (2018) found that this helps farmers find information from relatives and neighbours due to a dearth of agricultural extension personnel. Idiako-Ochei et al. (2016) proposed that farmers seek information on crop types, production technology, fertilizers, chemicals, marketing, and enhanced varieties.

Most Mangu L.G.A. farmers learned about agriculture via other farmers, cooperative societies, family, and personal experience. Thuo (2018) mentions other dairy farmers, farmers associations, utilised family members, and cooperative societies.

Most people chose personal experience and farmers groups, followed by family/parents, neighbours/friends, agricultural extension officers, radio, brochures, and television. Leaflets, cell phones, library and information centres, newspapers/magazines, books, village leaders, and internet were least favoured. Farmers prefer radio, friends/family, and TV, according to Akeweta et al. (2018).

Most respondents said agricultural extension officers never met their information needs. According to Thuo (2018), farmers rarely have access to agricultural extension services, making information access difficult. Gakuru et al. (2009) in Thuo (2018) found that while farmers are rising, agricultural extension workers are declining, highlighting the need to close the gap.

Most farmers said seeking for information is crucial, they need help, it takes a lot of time, and they compare different sources. While they disagreed that searching for information takes time, they are confused by the available information and don't know the needed information. Farming experience, age, and education affect farmers' information seeking tendencies, according to the research. Mbagwu et al. (2018) suggests that farmers' information demands can boost their professional productivity and motivation.

Most farmers never use radio, TV, or cell phones for agricultural information. According to Emmanuel (2012), radios are rarely utilized for agricultural programs and farmers never use computers, laptops, tablets, CDs, DVDs, or flash drives to obtain information. The study contradicts Mburu (2013) in Thuo (2018), who found that 95% of respondents chose radio over other ICT media. Thuo (2018) found that most respondents never utilized computers, laptops, tablets, CDs, DVDs, or flash drives to obtain agricultural information.

Farmers in Mangu Local Government Area face language barriers, inadequate extension services/workers, inaccessibility of information, inadequate funds, lack of relevant information materials, lack of

awareness of available information sources, lack of information services, lack of up-to-date information, poor knowledge sharing culture, and time constraints. This supports Patrick (2016)'s conclusions that rural libraries lack standards.

8. Conclusion and Recommendations

From the study, it can be concluded that the fact that agricultural information resources are not provided to farmers in Mangu LGA of Plateau State is not encouraging, as it has a negative impact on the information seeking behaviour of farmers, who rely solely on their own experiences, friends, families, cooperatives, and other means for agricultural production information. As long as language difficulties, lack of extension worker services, lack of money, lack of awareness, and lack of up-to-date information are not addressed, farmers in Mangu LGA of Plateau State will continue to experience low yields on their farms due to a lack of access to accurate information. The following recommendations are consequently recommended based on the findings:

1. Ministry of Education should offer classes for adults in rural regions so that rural farmers have access to information on agricultural methods in digital, electronic, and printed formats.
2. The government should engage and send extension workers to rural regions so that farmers can be educated on optimum agricultural techniques and gain access to information about facilities such as loans and support from NGOs.
3. At least once every week, the management of television and radio stations should produce agricultural programming in local languages for transmission.
4. Farmers should have access to relevant and up-to-date information on agricultural best practices, especially in their native language, through public libraries.
5. The Ministry of Agriculture should translate agricultural programs into farmers' native tongues.

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