

Information Behaviour of Maize Farmers in Billiri Local Government Area Gombe State Nigeria

Musa Yila Umar
National Open University of Nigeria
musayila@yahoo.com

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Bakare Olatunji Azeez
First Bank Nigeria Limited
papyze@yahoo.com

Abstract

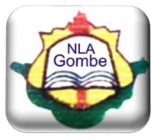
This article explores the information behaviour of maize farmers in Billiri local government of Gombe state, Nigeria. The study adopted a descriptive survey design. The population of the study consisted of 623 maize farmers in Billiri local government area of Gombe state. The article proceeds in five steps. First, it identified the information needs of maize farmers and found that majority of them seeks information on information on maize farming. Second, it examined the information seeking pattern of maize farmers and found that majority of them get information through electronic sources. Third, it identified the sources of information consulted by maize farmers and found that majority of them get information through electronic sources. Forth, it examined the maize farmers' information use and found that majority indicated that they use the information for agricultural decision making. Finally, it identified the challenges encountered while seeking information on maize farming and found that lack of knowledge of existing relevant materials as a greater challenge associated with the information-seeking behaviour of maize farmers in Billiri Local Government area of Gombe State. The study, therefore, recommended that government should provide e-libraries or information centres so that farmers so that they can be updating themselves in general agricultural knowledge instead of just focusing on maize farming to attain food sufficiency.

Keywords: Information behaviour, Maize farmers, Billiri local government area

Introduction

Everyone needs information for day-to-day activities in the present information age because the information has become the most central element for progress in society. Progress in Agriculture is linked to several keys and often interrelated factors such as research as well as agricultural information provision for modern scientific ways of farming for farmer's accessibility. The provision of these services should lead to self-sufficiency in food and Sustainable Agricultural Development. In the agricultural production environment, relevant and timely information helps farming communities to make the right decisions (Acheampong et al., 2017). The need for information becomes evident when people realize their lack of knowledge. To meet these needs, each individual will then see the need to seek and use the information required.

In the process of finding information, all individuals need access to the specific information they need or want. Information retrieval is a process of activities conducted to obtain the desired information and needs (Yusup and Subekti, 2010). According to Mtega and Benard (2013), in fulfilling information needs, a person will try to find information through various

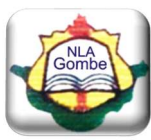


media, such as books, magazines, social media, television or radio, as well as obtaining it through relatives, family or work colleagues. Wilson (1995) stated that activities in information-seeking behaviour depend on the information needs of each individual. The differences in such needs affect the various processes of finding information performed by each individual. Information behaviour is a concept that refers to how an individual needs, seeks and uses information in different situations. Wilson (2000) defined information behaviour as the “totality of behaviour in respect to sources and channels of information, including both active and passive information seeking and information use. Information behaviour involves face-to-face interactions, as well as the passive receiving of information.” Examples of passive information behaviour may include information received from television or radio without having any intention of acting on the information provided. On the other hand, Kaske, (2020) further explained that information-seeking behaviour is “purposive seeking for information as a result of the need to satisfy set goals.”

Maize (*Zea mays*) is the third most important food in the world today and food of great socio-economic importance in Sub-Sahara Africa (Food and Agricultural Organization, 2003). It has been acknowledged to be one of the longest ever cultivated food crops. Maize is the most important crop grown in the hill of Nepal, where about 75% of the country’s 800,000ha of maize are located (Lughugh, 2020). Maize is also grown in several regions of the world and it is referred to as the world best-adapted crop. Maize does not only serve as the source of food for man and livestock but also as a source of income and foreign exchange over time. Ransom, Paudyal and Adhikari (2003) reported that maize dominates the agricultural sector of Terai, employing 60% of the workforce and 28% of the gross domestic product (GDP). In Nigeria, it is the most important cereal followed by sorghum and millet (Ojo, 2000). Faranti (2005) in a study reported that maize farming was profitable in Akoko North East and South West Local Government Areas of Ondo-State with gross margin and net returns of N2,637.80 and N2,141.00 respectively in the previous farming year. Grains produced in Nigeria are maize, rice, cowpea, soybean, sorghum, millet and groundnut.

The greater proportion of the grains produced in Nigeria is maize because of its ability to thrive under different ecological condition. Adekunle and Nabinta (2000) reported a sustained increase in the production of maize output. Maize is the most important staple food in Nigeria and it has grown to be a local ‘cash crop’ most especially in the northern part of Nigeria where at least 50% of the cropland has been devoted to small scale maize production under various cropping system (Ayeni, 1991). Ogunsumi (2005) established that growing maize by small scale farmers can overcome hunger in the households and the aggregated effect could double food production in Africa. According to FAO, about 4.7 million tonnes of maize were produced on average between 1980 and 2003 in Nigeria and the contribution of maize to total grains produced in Nigeria increased from 8.7% in 1980 to about 22% in 2003. About 561397.29 hectares of Nigerian land were planted with maize, which constitutes about 61% of total cultivable land in Nigeria. Economically, the price of maize increased from N2500 in 1980 to N36000/tones in 2003. This means the price increased more than 14times at the price of 1980. All these data emphasised the importance of maize in the diet and the economy of Nigeria.

The purpose of this study is to examine the information needs maize farmer in Billiri Local Government Area Gombe State Nigeria.



Statement of the problem

Gombe state is one of the six states in the North-east geo-political zone in Nigeria, where the inhabitant are predominantly maize farmers. Billiri local government is located at the southern part of the state and they produced the highest volume of maize in the state. Despite the level of maize cultivated in the area, Gombe State is yet to attain the level of food sufficiency Mustapha and Salihu (2015) in their study affirm that Gombe state has not reached its potentials in terms of maize and cowpea production considering the vast area of land in the state. It against this background that, this study is set to investigate the information behaviour of maize farmers in Billiri local government of Gombe state

The objective of the study

1. identify information needs of maize farmers in Billiri Local Government Area of Gombe State
2. find out the information-seeking pattern of maize farmers in Billiri Local Government area of Gombe State
3. find out the sources of information consulted by maize farmers in government in Billiri Local Government area of Gombe State
4. find out the maize farmers information use in Billiri Local Government area of Gombe State
5. find out the challenges encountered while seeking information on maize farming in Billiri Local Government area of Gombe State

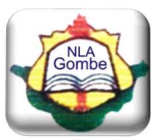
Research Questions

To achieve the objectives of this study, the following research questions are posed:

1. What are the information needs of maize farmers in Billiri Local Government Area of Gombe State?
2. What is the information-seeking patterns of maize farmers in Billiri Local Government Area of Gombe State?
3. What are the sources of information consulted by maize farmers in Billiri Local Government Area of Gombe State?
4. What do the farmers use the information for in Billiri Local Government Area of Gombe State?
5. What are the challenges encountered while seeking information on maize farming in the Billiri Local Government Area of Gombe State?

Methodology

The study adopted a descriptive survey research design. The study was conducted all the eleven(11) Wards of Billiri local government of Gombe State, Nigeria. The population of the study comprised of (623) maize farmers in Billiri local government. The instrument for the study was a self-structured questionnaire. The instrument for the study was rated using a four likert scale which ranges from strongly agree, agree, disagree and strongly disagree. The data collected was analysed using Statistical Package for Social Sciences Version 23.



Data analysis and Discussion of finding

Table 1: Farmers characteristics

Items		Frequency	Percentage %
Age	25-34	142	22.8
	35-44	317	50.9
	45 above	164	26.3
Gender	Male	458	73.5
	Female	165	26.5
Marital Status	Single	244	39.2
	Married	379	60.8
Level of education	Illiterate	0	0
	Can read and write	46	7.4
	Primary school certificate	102	16.4
	Secondary school certificate	119	19.1
	Tertiary	356	57.1
Total		623	

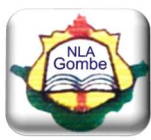
The demographic characteristics of the respondent show that majority of the farmers are between 35-44 years of age (50.9%). The results also revealed that the majority of the farmers are male (73.5%). On the marital status of the farmers', majority of them are married (60.8%). In terms of the level of education the majority of the farmers had tertiary institution certificate (57.1%).

Research Question One: What is the information need of maize farmers in Billiri?

Table 2: Agricultural Information Needs of Farmers

S/N	Agricultural Information Needs	4 SA (%)	3 A (%)	2 D (%)	1 SD (%)	\bar{x}	St.D
1.	Information on maize farming	253(49)	197(38.2)	49(9.5)	17(3.3)	3.46	.70
2.	Information about the maize diseases and pest	251(48.6)	197(38.2)	68(13.2)	0	3.36	.70
3.	Information on the type of fertilizer to be applied	210(40.7)	197(38.2)	66(12.8)	43(8.3)	3.36	.70
4.	Information on system of fertilizer application	253(49)	110(21.3)	66(12.8)	87(16.9)	3.26	.69
5.	Information on time of plant depending on NIMET yearly predictions	134(26)	197(38.2)	124(24)	61(11.8)	2.78	.96
6.	Information on general agricultural knowledge	13(2.5)	192(37.2)	234(47.5)	66(12.8)	2.63	.96
7.	Agricultural extension workers advice	4(0.8)	206(39.9)	245(47.5)	61(11.8)	2.30	.67
8.	Information about treatment of pest and diseases	134(26)	197(38.2)	124(24)	61(11.8)	2.29	.72
9.	Answers to farmers' questions	9(1.7)	192(37.2)	249(48.3)	66(12.8)	2.27	.70

The responses from Table 2 reveals the agricultural information needs, the analysis revealed the following: information on maize farming, 87.2% agreed while 12.8% disagreed ($\bar{x} = 3.46$; SD = 0.70); Information about the maize diseases and pest, 78.9% of the respondents agreed while 21.1% disagreed 6; SD ($\bar{x} = 3.3 = 0.70$); On information on system of fertilizer application, 86.8% of the respondents agreed while 12.8% disagreed ($\bar{x} = 3.36$; SD = 0.70); Information on system of fertilizer application, 70.3% of the respondents agreed while 29.7% disagreed ($\bar{x} = 3.26\%$; SD = 0.69%). On information on time of plant based on NIMET yearly predictions, 64.2% of the respondents agreed while 35.8% disagreed ($\bar{x} =$



2.78; SD = 0.96). On general agricultural knowledge, 39.7% agreed while 60.3% disagreed (\bar{x} = 2.63; SD = 0.96). On agricultural extension workers advice, 40.7% agreed while 59.3% disagreed (\bar{x} = 2.30; SD = 0.67). On information about treatment of pest and diseases, 64.2% agreed while 35.8% disagreed (\bar{x} = 2.29; SD = 0.72). On answers to farmers questions, 39.8% agreed while 61.1% disagreed (\bar{x} = 2.27; SD = 0.70). The analysis shows that the highest percentage of respondents seeks information on information on maize farming, while the lowest seek agricultural information to obtain answers to farmers' questions.

Research Question Two: What is the information seeking pattern of maize farmers in Billiri?

Table 3: Information seeking pattern of maize farmers

S/N	Information Seeking Behaviour	4	3	2	1	\bar{x}	St.D
		SA (%)	A (%)	D (%)	SD (%)		
1.	Through electronic sources	314(60.9)	202(39.1)	0	0	3.61	.49
2.	Through printed textbooks/ journals	264(51.2)	252(48.8)	0	0	3.49	.50
3.	Through extension workers	298(57.8)	189(36.6)	16(3.)	13(2.5)	3.61	.49
4.	Through radio programmes	299(57.9)	206(39.9)	11(2.)	0	3.60	.49
5.	Through consultations with other farmers in the field.	310(60.1)	202(39.1)	4(0.8)	0	3.59	.51
6.	Through forum, seminars / workshop	253(49)	203(39.3)	60(11.6)	0	3.37	.68

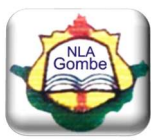
Table 3 reveals the respondent's information seeking pattern of maize farmers in Billiri L.G.A. The analysis shows that 100% of the respondents agreed that they seek information through electronic sources (\bar{x} = 3.61; SD = 0.49). Again, 100% agreed that they seek information from printed textbooks/journals (\bar{x} = .49; SD = 0.50). On through extension workers, 94.4% of the respondents agreed while 0.8% disagreed (\bar{x} = 3.61; SD = 0.49). On Through radio programmes, 97.8% of the respondents agreed while 2.2% disagreed (\bar{x} = 3.60; SD = 0.49). On consultations with other farmers in the field, 99.2% of the respondents agreed while 5.6% disagreed (\bar{x} = 3.59; SD = 0.51). On through forums, seminars/workshop, 88.3% of the respondents agreed while 11.7% disagreed (\bar{x} = 3.37; SD = 0.68). From the analysis the highest percentage of respondents get information through electronic sources while the lowest get information through forum, seminars / workshop.

Research Question Three: What are the sources of information consulted by the maize farmers in Billiri?

Table 4: Information sources consulted by farmers

S/N	Sources of Information	Yes	No
1.	Agricultural books are consulted	445(86.2)	71(13.8)
2.	Colleagues are consulted	501(97.1)	15(2.9)
3.	Internet sources are consulted	466(90.3)	50(9.7)
4.	I consult personal collections	449(87)	67(13)
5.	I consult e-resources	505(97.9)	11(2.1)
6.	I consult agricultural journals	445(86.2)	71(13.8)
7.	Oral sources are consulted	438(84.9)	78(15.1)
8.	Magazines are consulted	434(84.1)	82(15.9)
9.	Radio stations	434(84.1)	82(15.9)
10.	I consult newspapers	410(79.5)	106(20.)

Table 4 reveals the respondents' sources of information consulted by maize farmers. From the table, it is revealed that 97.9% of the respondents agreed that their sources of information were agricultural books, closely followed by colleagues (86.2%)and the Internet (90.3%).



Other sources, in the order of preference, were personal collections (87%); e-resources tied with agricultural journals (97.1%); oral sources (84.9%), magazines tied with Radio stations (84.1%) and lastly newspapers (79.5%). The analysis shows that the highest percentage of respondents agrees that e-resources tied with agricultural journals are the sources of information consulted while the lowest percentage consults newspapers.

Research Question Four: What maize farmer used information for in Billiri?

Table 5: Maize farmers' use of information

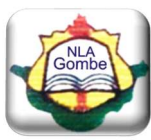
S/N	Used of information	4 SA (%)	3 A (%)	2 D (%)	1 SD (%)	\bar{x}	St.D
1.	I use agricultural information to make my farming decisions	65(12.6)	441(85.5)	10(1.9)	0	3.24	.45
2.	I use information to tackle farming challenges	131(25.4)	379(73.4)	6(1.2)	0	2.99	.86
3.	I use information to manage plant cares	123(23.8)	266(51.6)	65(12.6)	62(12)	2.87	.91
4.	I use information about new implement and technology	188(36.4)	122(23.6)	140(27.2)	66(12.8)	2.84	1.06
5.	I use information to up-date knowledge and support daily practices	65(12.6)	322(62.4)	62(12)	67(13)	2.76	.81
6.	I use the information to know when my farm need weed	123(23.6)	266(51.6)	66(12.8)	62(12)	2.75	.84

Table 5 reveals the respondents' view on what they use the information. The analysis indicates that 98.1% of the respondents agreed that they use the information for Farming decision making while 1.9% disagreed ($\bar{x} = 3.24$; $SD = 0.45$). On the use of information to tackle farming issues 98.8% of the respondents agreed while 1.2% disagreed ($\bar{x} = 2.99$; $SD = 0.86$). On the use of information to manage plant cares 75.4% of the respondents agreed while 24.6% disagreed ($\bar{x} = 2.87$; $SD = 0.91$). On the use of information about new implement and technology 60% of the respondents agreed while 40% disagreed ($\bar{x} = 2.84$; $SD = 0.06$). On the use of information to up-date knowledge and support daily practices, 75% of the respondents agreed while 25% disagreed ($\bar{x} = 2.76$; $SD = 0.81$). On the use of information to know when my farm needs weed, 75.2% of the respondents agreed while 24.8% disagreed 1.06 ($\bar{x} = 2.75$; $SD = .84$). The analysis shows that the highest percentage of respondents agreed that they use the information for agricultural decision making while the lowest use of information about new implement and technology.

Research Question Five: What are the Challenges encountered while seeking information on maize farming in Billiri L.G.A?

Table 6: Challenges encountered with information seeking for improved farming effectiveness by Maize farmers

S/N	Challenges encountered with Information Seeking	4 SA (%)	3 A (%)	2 D (%)	1 SD (%)	\bar{x}	St.D
1.	Financial constraints	187(36.)	313(60.7)	15(3.1)	0	3.33	.53
2.	Lack of support from the government	10(1.9)	5(1)	313(60.7)	188(36.4)	3.32	.56
3.	Lack of awareness of where to source information	122(23.)	375(72.7)	14(2.7)	5(1)	3.19	.52
4.	Lack of accessibility of sources	127(24.)	317(61.4)	72(14)	0	3.11	.61
5.	Difficulty in accessing foreign journals and materials	126(24.)	318(61.6)	72(14)	0	3.10	.61
6.	Inadequate current information materials	62(12)	383(74.2)	71(13.8)	0	2.98	.51
7.	Inadequate information retrieval skills	62(12)	383(74.2)	71(13.8)	0	2.98	.51



8. Insufficient computers	65(12.6)	374(72.5)	72(14)	5(1)	2.97	.55
9. Non-availability of relevant information	4(0.8)	440(85.3)	72(14)	0	2.87	.36
10. Lack of knowledge of existing relevant materials	133(25.)	383(74.2)	0	0	2.74	.44

Table 6 reveals the respondents' perception on the challenges associated with information seeking for farming effectiveness. On financial constraints, 96.9% of the respondents agreed while 3.1% disagreed ($\bar{x} = 3.32$, $SD = 0.52$). On lack of government support, 2.9% of the respondents agreed while 97.1% disagreed ($\bar{x} = 3.33$; $SD = 0.53$). On lack of awareness of where to source information, 96.3% of the respondents agreed while 8.7% disagreed ($\bar{x} = 3.19\%$; $SD = 0.52\%$). On lack of accessibility of sources, 86% of the respondents agreed while 14% disagreed ($\bar{x} = 3.11$; $SD = 0.61$). On difficulty in accessing foreign journals and materials, 85.8% of the respondents agreed while 14.2% disagreed ($\bar{x} = 3.10$; $SD = 0.61$). On inadequate current information materials and inadequate information retrieval skills, 86.2% of the respondents uniformly agreed while 13.8% disagreed ($\bar{x} = 2.98$; $SD = 0.51$). On non-availability of relevant information materials, 86.1% of the respondents agreed while 13.9% disagreed ($\bar{x} = 2.87$; $SD = 0.36$). On lack of knowledge of existing relevant materials as a challenge associated with information seeking, 100% of the respondents agreed while 0% disagreed ($\bar{x} = 2.74\%$; $SD = 0.44$). The analysis shows that the highest percentage of respondents agreed that the lack of knowledge of existing relevant materials as a challenge associated with information-seeking while the lowest percentage regarded lack of accessibility of sources as a challenge.

Conclusion

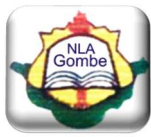
The importance of information behaviour of maize farmers to their farming effectiveness has been highlighted in this study. The knowledge revolution made possible through the internet is both a welcome development and a challenge, particularly for the maize farmers. Today it is much easier for maize farmers to access information on practically every area of farming and agricultural advancement than a few decades ago. But there is an aspect of this development that is not too pleasant: the difficulty often encountered in sorting out relevant information, from an apparently boundless information source, to meet the specific needs of farmers.

Therefore, the farmers would need to deploy their skills to navigate the information highways to access and harness the information needed. This would require a proper understanding of the farmers' information needs, information seeking pattern and the sources of information consulted. The farmers, particularly in developing countries like Nigeria, are usually faced with the perennial challenges of financial constraints which impede their farming effectiveness. The problem is compounded by the lack of modern implement and fertilizer that could lead to low farmers morale. All this negatively impacts on farmers' productivity.

Recommendations

Based on the study findings it was recommended that:

1. Maize farmers in Billiri local government need to be more pro-active in updating themselves in general agricultural knowledge instead of just focusing on maize farming
2. The management of Billirilocal government should provide e-libraries or information centres so that farmers would not need to depend on their resources or public cybercafés before they can access electronic resources.
3. There should be a deliberate effort by the farmers in Billiri local government to improve the quality of seedlings in terms of high breed for better yield.



4. The government should provide facilities targeted at providing loans and grant to farmers in the form of financial support to enhance farmers' commitment to higher farming productivity.

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