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Influence of Awareness and Utilisation of Agricultural Information on the Livelihood of Plantain Farmers in Ikenne Local Government Area, Ogun State, Nigeria.

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Abstract

The influence of awareness and utilisation of agricultural information on livelihoods was investigated among 250 plantain farmers who were purposively selected in three communities in Ikenne Local Government Area of Ogun State, Nigeria. It was found that the plantain farmers had a high level of awareness of many of the listed information sources. The utilisation of agricultural information improved their livelihood. There was a significant combined influence of awareness and utilisation of agricultural information on the livelihood of the plantain farmers. It was suggested that efforts should be made to increase the plantain farmers' awareness of agricultural information through the listed information sources so as to improve their livelihoods.

Key Words: Awareness, Utilisation, Agricultural Information, Plantain Farmers, Livelihoods

Introduction

Literature reveals how several aspects of the farmer's life like their productivity and livelihood have been improved by being exposed to agricultural information (Aminu, Falola, Ayinde and Sanusi, 2017; Mgbenka and Mbah, 2016; Kamau, Margret and Hilary, 2018). Agricultural information is required to bring about a change in the way people do farming as well as in other dimensions of farm production. It refers to all forms of data that meets the needs of farmers and keeps them well informed about issues that affect their productivity. It encompasses innovations, advice, techniques, skills, technologies and regulations on environmentally safe practices. Key stakeholders like the government, non-government organisations, agricultural institutions and mass media play significant roles in disseminating agricultural information to farmers. The dissemination of agricultural information through various media has made technical know-how accessible to farmers as well as increased their knowledge about production, processing, transportation and other marketing dimensions of agriculture (Ayawale, Fatunobi and Ojo, 2016; 2018). But without the awareness, agricultural information cannot be accessed when needed by farmers in the rural communities.

Awareness of agricultural information reveals that farmers know about something by showing their understanding of the subject or situation at the present time based on information or experience. This is expressed in their views, interpretation of factual information or technical knowledge and skills required to do something. Efforts are made to create awareness of agricultural information among farmers through the provision of extension services (Ayawale, Fatunbi and Ojo, 2016). The overall objective of any awareness process is the hope that any information shared will be utilised to solve problems and make life easier for the user. Although awareness of agricultural information keeps farmers abreast of the resources they can access, information utilisation is needed to bring about a change in the way people do farming as well as in other dimensions of farm production. Information utilisation refers to the proper

application of acquired information to farming activity. It involves interactions such as reading, viewing and touching to extract relevant information in order to meet a perceived need or accomplish a particular task. It begins when the farmer becomes aware of a need to gather information and analyses the relevance of such information to the problem at hand before attempting to utilise it. Thus, awareness of and subsequent utilisation of agricultural information are fundamental factors for improving farming in rural communities in Nigeria. Looking at the critical role that agricultural information plays in productivity, it is important to have a good understanding of the impact of awareness and utilisation on the livelihood of farmers in rural communities.

Problem Statement

Over the years, plantain farmers have been continuously threatened by challenges like climatic changes, pests and diseases, bureaucracy, exploitation by middlemen, and a lack of financial capacity that limits them to a subsistence level of production (Ayawale, Fatunbi and Ojo, 2016; 2018; Ojo and Ayanwale, 2019). These obvious challenges are devastating to the productivity of plantain farmers as well as their livelihood. These challenges may be attributed to the level of awareness and utilisation of agricultural information by plantain farmers. Research on the influence of awareness and utilisation of agricultural information has focused more on productivity. But there has been little work exploring the influence of awareness and utilisation of agricultural information on the livelihood of plantain farmers in the rural communities in Nigeria. Addressing this research gap will have practical benefits as well as inform future policy objectives in the provision of extension services to plantain farmers in the rural communities. It would contribute empirical evidence on the impact of awareness and utilisation of agricultural information on the livelihood of plantain farmers in Nigerian rural communities.

Scope of Study

The study was carried out in Ikenne Local Government Area of Ogun State in the South-West of Nigeria. This local government area is located between 6p 52N and 3p 43E. It has an average annual temperature of 28 degrees centigrade with rainfalls from March to October. Its land area covers about 179km^2 with a density of 923.8/km^2. The projected population of the inhabitants is approximately 165,700 (NBS, 2016: NPC, 2016). Ikenne local government area was selected in this study because it falls within one of the four agricultural zones listed in the Ogun State Agricultural Development Programme (OGADEP). Farming is a key economic activity of the inhabitants. Plantain is one of the major crops produced in Ikenne local government area. Other crops include cocoa, cassava, pepper and among others. Aside farming, the inhabitants are also known for trading, artisan and craft.

Purpose and Objectives of the Study

The purpose of this study was to find out if the awareness and utilisation of agricultural information could improve the livelihood of plantain farmers in Ilishan, Irolu and Ijesha communities in Ikenne Local Government Area of Ogun State, Nigeria. The specific objectives of this study were to find out the level of:

- awareness of agricultural information among these plantain farmers
- utilisation of agricultural information among these plantain farmers
- income from various sources among these plantain farmers
- Three hypothetical statements tested in this study include:
- the awareness of agricultural information has no significant influence on the livelihood of these plantain farmers
- the utilisation of agricultural information has no significant influence on the livelihood of these plantain farmers
- the awareness and utilisation of agricultural information has no significant influence on the livelihood of these plantain farmers

Literature Review

Unlike other studies that have investigated the awareness and utilisation of agricultural information, this study followed the line of thought of the information utilisation capacity theory (IUCT) due

to its novel aspect of technology in contributing to literature. The information utilisation capacity theory developed by Curras in 1984 informed the basis for explaining how the awareness and utilisation of agricultural information could directly or indirectly influence the farmer's livelihood. Curras explained information utilisation in terms of access which largely depends on awareness. Farmers' awareness of agricultural information can be seen in their ability to identify a range of information sources that exist as well as their understanding of the information presented at the time based on experience. This includes the relevance of the information to solve the problem at hand, the appropriateness of the information source used for dissemination, and the characteristics of the information provider. Information utilisation is determined by the capacity of the user to physically and intellectually access information from various sources (Curras, 1984). Thus, awareness and utilisation of agricultural information would be seen in their understanding, and appropriately applying information extracted or acquired from information sources like extension agents, books, radio, banks, cooperative societies, internet, libraries and online databases, as well as others for the purpose of farming. The utilisation of the right agricultural information at the right time gives farmers the capacity to make informed decisions that could have significant influence on their livelihoods (Yearbook, 2013).

Nigerian economy has its base in agriculture which provides the main source of livelihood for most of her citizens. Livelihood is the particular job and others source of income that provides the money to buy the things an individual needs. The livelihood of a people expresses how they perceive their lives and living conditions. It is an indication of how persons perceive their living conditions pertaining to their income. Income is a source of livelihood (Ikudayisi, Babatunde and Yusuf, 2019). Sustainable income sources translate to better a livelihood which is fundamental to the socio-economic development of a Nation (Khatiwada, et al, 2017). Socioeconomic changes have greater impact on poorer persons, because these persons sustain their livelihoods through subsistence socioeconomic practices. These persons do not have a sustainable source of income and rely on a number of different activities or sources to provide income. It follows that each source of income is important to them because it contributes to the total amount of income obtainable. Farming is one remarkable source of livelihood. It involves the cultivation of plants and rearing of animals for food, shelter and other products to sustain and enhance life. If farmers are to earn a fair return for their hard work, the farming occupation has to be improved so as to enrich the livelihood of everyone involved.

In countries across the world, especially in Africa, plantain farming is the notable form of livelihood among people living in rural communities. In Nigeria, plantain is produced in large quantities in Edo, Delta, Ogun and Ondo states. Other producing states are Rivers State, Cross River, Imo, Anambra, Lagos, Kwara, Benue, Plateau, Kogi, Abia and Enugu (Yearbook, 2013; Map of world, 2016). Plantain farming is a significant economic activity for income generation for both large scale and small scale farmers (Idumah, Owombo, Ighodaro and Mangodo, 2016). Studies put the current annual production in Nigeria above 2.4 million metric tons (Yearbook, 2013; Ayanwale, Fatunbi and Ojo, 2018). About 94% of plantains produced by Nigerian farmers are for market consumption (Ayanwale, Fatunbi and Ojo, 2018) and this accounts for more than 30% of total farm income (Okoroafor, Achike and Mkpado, 2013). The crop offers lucrative farm products that provide a viable prospect for the socioeconomic development of rural communities. Plantain farming holds prospects for wealth creation and improved livelihood of everyone involved. Unfortunately, the livelihoods of these plantain farmers are ceaselessly threatened.

Farmers all over the world want to enjoy good livelihoods. Like other farmers, the plantain farmers in rural communities in Nigeria appear not to be enjoying this because they still face challenges like unfavourable weather conditions, technological advancement, infrastructure and market conditions that are beyond their control. These challenges are devastating to the productivity of farmers as well as their livelihood. Across rural communities in Nigeria, the farmers barely enjoy the good livelihood needed to raise a healthy family. These farmers have no option but to continue working even in ill-health because for them, farming is their means of livelihood. Their productivity is ceaselessly challenged by climatic conditions, pests and diseases, bureaucracy, exploitation by middlemen and a lack of financial capacity that limits these farmers to a subsistence

level (Ayawale, Fatunbi and Ojo, 2016; 2018; Ojo and Ayanwale, 2019). These challenges have been attributed to the level of awareness and utilisation of agricultural information which in turn contributes to the productivity of the farmers. Several efforts have been made by government and development partners to promote a commercial scale of plantain production in Nigeria. For instance, the International Institute for Tropical Agriculture launched large scale awareness on improved agronomic practices, sucker multiplication and post-harvest techniques to smallholder plantain famers through a network of agricultural development programmes across eleven states in the year 2000. To achieve its objectives, this agricultural development programme (ADP) used both farmer participatory and community based technology delivery approaches (Coxhead and Buenvista, 2001) believing these approaches would lead to the spread of information on these technologies to other plantain farms in subsequent years. ADP has since been adapted in many states following the withdrawal of funding by the World Bank in Nigeria (Adebayo and Idowu, 2001).

The agricultural development programme (ADP) still plays significant roles in disseminating agricultural information to farmers with the aim of improving productivity and livelihoods. Improving the productivity as well as the livelihood of plantain farmers would be impossible without creating the necessary conditions for improving agriculture. Among the identified conditions for improving agriculture are creating awareness and utilisation of information on modern practices. Creating awareness is a necessary because many farmers lack knowledge of the existence of relevant information. For instance, various financing opportunities provided by the federal government through the central bank of Nigeria (CBN) are not fully utilised by farmers due to their lack of awareness (Ojo and Ayanwale, 2019). Plantain Farmers need to be aware of all relevant agricultural information so as to benefit from the access to funds, the changing techniques and innovations in farming as well as other dimensions of agricultural production.

Creating awareness involves communicating ideas, innovations and techniques to farmers through an appropriate medium to improve productivity and livelihoods (Ayawale, Fatunbi and Ojo, 2016). Agricultural information encompasses innovations, advice, techniques, skills, technologies and regulations on environmentally safe practices. Access to content specific agricultural information are often made available through various sources like books, posters, Internet, TV and radio programmes. Despite this, many farmers in Nigeria lack awareness and are not personally able to use information these sources because of their level of literacy (Mgbenka and Mbah, 2016). Although the utilisation of agricultural information is often hindered by the farmers' education status and level, acquisition of formal education by many rural farmers is an indication that they will quickly understand and make appropriate use of agricultural information on new farming techniques (Sanusi, Oyedeji and Akerele, 2017).

Farmers also need to be aware and utilise relevant agricultural information on funding to improve production. Studies show that the range of productivity of small scale farmers in Nigeria is between 1-10 hectares and this may be because many of these farmers have limited access to credit facilities to expand (Mgbenka and Mbah, 2016). Aminu, Falola, Ayinde and Sanusi (2017) found that income was significantly determined by a large farm ownership. However, scholars like Idumah, Owombo, Ighodaro and Mangodo (2016) believe that farmers in Nigeria are poor not because of growing small scale, but because they lack capacity to utilise valuable information to enhance their productivity. Their awareness and utilisation of agricultural information can be improved through extension programmes.

Large volumes of agricultural information are disseminated through agriculture extension services in form of informal education or training that introduces farmers to new knowledge and technology that can boost their crop yield when properly utilised. Although social networks appear to be a persuasive source of information about new products and resources, governments in developing countries continue to rely on extension officers to communicate with farmers about new technologies (Kamau, Margret and Hilary, 2018). Scholars like Soyemi and Haliso (2015) argued that the provision of agricultural extension services by various governments enhanced the use of information by farmers to increase their farm size, access credit and inputs; increase production and revenue as well as reduce the rigors of farm work.

Since farmers out number available extension workers, a trickle-down effect had been adopted to share information to farmers in rural communities. It was assumed that through the training of a group of model contact-farmers, the agricultural information would be further shared with other farmers (Mgbenka and Mbah, 2016). Agricultural information was often shared through the training of a group of farmers whom are members of cooperative societies. Literature shows that the use of agricultural information by members of cooperative societies has contributed to improved productivity and livelihoods. Aminu, Falola, Ayinde and Sanusi (2017) indicated that income was significantly determined by membership of cooperative societies.

Today, agricultural information is widely disseminated with the aid of information and communication technology (Ayanwale, Fatunbi and Ojo, 2016). Extension services now reach many rural farmers as agricultural information is now shared using technology across various media platforms. Since, most of the farmers are residing in rural communities in different regions, agricultural information is made available in form of audio and video messages in their local languages. The acquisition of formal education by rural farmers is an indication that they will quickly understand and make appropriate use of agricultural information on new farming techniques (Sanusi, Oyedeji and Akerele, 2017) in areas such as fertilizer application, pest management and disease control that might be introduced to them.

Studies have shown that the use of agricultural information relating to improved technologies and management practices has contributed to improved productivity and livelihoods. For instance, agricultural information on improved technologies and management practices like plantain processing contributed to improved productivity and livelihoods (Aminu, Falola, Ayinde and Sanusi 2017; Ayanwale, Fatunbi and Ojo, 2016). Aminu, Falola, Ayinde and Sanusi (2017) examined the determinants of income from plantain value addition. It revealed that a decrease in cost of input of processing will increase income and vice versa. The study also revealed that frying to chips, slicing and sun-drying, frying to flour, roasting and frying to dodo were forms of plantain processing.

Methodology

The study used a cross-sectional survey research design. The population surveyed was drawn from the OGADEP list of farmers in Ikenne local government area of Ogun State. A four-stage sampling was used to select the study sample. At the first stage, cluster sampling was used to group the farmers according to the major crops cultivated. Purposive sampling was used in the second stage to select plantain because it was a common cultivated crop among the farmers. Plantain farming appeared attractive to the farmers because it can be cultivated along with other crops, requires relatively low inputs like fertilizer and labour. At the third stage, three rural communities; Ilishan, Irolu and Ijesha were purposely selected because these were notable plantain producing communities. At the fourth stage, a purposive sample of 250 plantain farmers were selected from OGADEP list of farmers in these communities. These plantain farmers were identified with the assistance of extension agents and key informant members. These farmers received informal training, and regular context specific information from extension agents. A questionnaire was used to collect data from the entire sample. The return rate was 99.2%. Data collected was coded and analysed with the aid of the IBM Statistical Product and Service Solution Version 21 to generate descriptive and inferential statistics. Descriptive statistics such as such as frequency count and percentage were used for demographics. Mean was used to test the level of income, level of awareness and level of utilisation of agricultural information. Inferential statistics from the linear regression model was used to test the influence of awareness of agricultural information on livelihood, the influence of utilisation of agricultural information on livelihood and the combined influence of awareness and utilisation of agricultural information on livelihood.

Results

Table 1 presents the demographic data of the responding plantain farmers in Ilishan, Irolu and Ijesha communities in Ikenne Local Government Area of Ogun State, Nigeria. It shows that 52.4% of the respondents were male and 47.6% were female. About 51% of the respondents were below the age of 45years. This implies that majority of these

respondents were within the youthful age. Also, majority of the respondents had formal education. The education spread of the respondents shows that 60.8% of them had educational level below the tertiary education. The table also shows that many plantain farmers in the communities operated at a small scale. Only 5.6% of the plantain farmers cultivated above nine hectares of farmland.

Table 1: Demographic data of respondents

Classification		Frequency	Percentage
Gender	Male	131	52.4
	Female	119	47.6
Age	25-34	69	27.6
	35-44	60	24
	45-54	57	22.8
	55+	64	25.6
Educational Level	Primary School	52	20.8
	Secondary School	60	24
	Technical Education	42	16.8
	Tertiary Education	66	26.4
	No Education	30	12
Size of farm (hectares)	Less than one	72	28.8
	One to three	68	27.2
	Three to six	55	22
	Six to nine	41	16.4
	Above nine	14	5.6

Research objective one: To find out the level of awareness of agricultural information from various sources among these plantain farmers

Table 2 shows the plantain farmers' level of awareness of agricultural information from various sources. From the table, the plantain farmers indicated a high level of awareness of agricultural information from important sources like schools, extension services, other farmers, newspaper, Banks, radio, friends, among others since these were above the criteria weighted mean score set for low level of awareness. On a rank order, the plantain farmers indicated a high level of awareness of agricultural information from extension services; extension posters; farmers and newspaper/magazines with equal mean scores of 2.60. Their next indication was schools with a mean score of 2.58. This was followed by banks, online/internet and family members with equal mean score of 2.52. The table also shows that other agricultural information sources like agricultural institutions, library, farmer cooperatives societies, Non-governmental organisations (NGOs), television, film show, extension posters, bulletin/newsletters and customers were above the criteria weighted mean score set for low level of awareness. This implies that the plantain farmers had some awareness of agricultural information from all the listed information sources.

Table 2: Plantain farmers' level of awareness of the listed sources of agricultural information

Sources of agricultural information		HL	ML	LL	Mean
Extension services		150	100	0	2.60
Agricultural institutions		135	8	107	2.11
Library		100	45	105	1.98
Farmer cooperative societies		137	12	101	2.14
Banks		150	80	20	2.52
Schools		172	50	28	2.58
Non-governmental organisations (NGOs)		114	45	91	2.09
Electronic sources	Radio	114	100	0	2.60
	Television	135	8	107	2.11
	Mobile phone	130	65	55	2.30
	Film shows	137	12	101	2.14
	Online/internet	150	80	20	2.52
Print sources	Newspapers or magazines	172	50	28	2.58
	Extension manuals	114	45	91	2.09
	Extension posters	150	100	0	2.60
	Bulletin/newsletters	135	8	107	2.11
	Government circulars	80	65	105	1.90
Other farmers		150	100	0	2.60
Village heads		135	8	107	2.11
Customers		100	65	85	2.06
Friends		147	32	71	2.30
Family members		150	80	20	2.52

Key: HL= High level; ML= Moderate level; LL= Low level.
Criteria weighted mean score for low level of awareness is 1.00 on a scale of 3.0.

Research objective two: To find out the level of utilisation of agricultural information among these plantain farmers

Table 3 shows the level of utilisation of agricultural information by the plantain farmers. From the table, the level of utilisation of agricultural information for choosing good soil for planting, selecting good sucker for planting, treating sucker, measuring planting space and depth, fertilizer application, diseases and pest control, harvesting, storage and buying suckers as well as selling bunches/suckers/other products were high since these were above the criteria weighted mean score set for low level of utilisation. On a rank order, the plantain farmers indicated the highest level of utilisation of agricultural information for both choosing good soil and selling bunches/sucker/other products with a mean value of 2.60. These farmers indicated controlling diseases and pest next with a mean value of 2.58. On the other hand, the plantain farmers indicated a moderate level of utilisation of agricultural information for buying suckers with mean value of 1.98. This implies that the plantain farmers utilise less agricultural information for buying suckers compared to other uses.

Table 3: Plantain farmers' level of utilisation of agricultural information

Utilisation of agricultural information for	HL	ML	LL	Mean
choosing good soil for planting	150	100	0	2.60
selecting good sucker for planting	155	14	81	2.30
treating plantain suckers	120	45	85	2.14
measuring planting depth and spacing	137	12	101	2.14
applying fertilizer and manure	150	80	20	2.52
controlling diseases and pests	172	50	28	2.58
harvesting bunches	114	45	91	2.09
storing of bunches	135	8	107	2.11
buying suckers	100	45	105	1.98
selling bunches/suckers/other products	150	99	1	2.60

Key: HL= High level; ML= Moderate level; LL= Low level.
Criteria weighted mean score for low level of utilisation is 1.00 on a scale of 3.0.

Research objective three: To find out the level of income from various sources among the plantain farmers

Table 4 shows the level of income from various sources among the plantain farmers. From the table, the plantain farmers indicated that they earned high level of income from wages/salary/pensions/other income, the sale of bunches, the sale of suckers/ other products and lease of farmland since these were above the criteria weighted mean score set for low level of income. The plantain farmers earned the highest level of income from the sale of suckers/ other products ranked with a mean value of 2.49. They also earn high level of income from the lease of farmland with a mean value of 2.44 and wages/ salary/pension/other income with a mean value of 2.23. However, the least level of income came from the sale of plantain bunches with a mean value of 2.14 which is above the criteria weighted mean score set for low level of income. This implies that the plantain farmers make less income from the sale of plantain bunches compared to other incomes sources.

Table 4: Plantain farmers' livelihood from various income sources

Source of income	HL	ML	LL	Mean
Wages/salary/pension/other income	135	38	77	2.23
sale of plantain bunches	120	45	85	2.14
sale of suckers/other products	150	87	27	2.49
lease of farmland	136	73	27	2.44

Key: HL= High level; ML= Moderate level; LL= Low level.
Criteria weighted mean score for low level of income source is 1.00 on a scale of 3.0.

Research hypothesis one: The awareness of agricultural information has no significant influence on the livelihood of these plantain farmers

Table 5 shows that the livelihood of plantain farmers is significantly predicted by their awareness of agricultural information sources ($F_{(1, 248)}$ =8172.176, p<0.05). The linear regression model demonstrates that the awareness of agricultural information sources could explain 97.1 % (R^2=0.971) variation in the livelihood of plantain farmers. In addition, their awareness of various agricultural information sources has a strong positive correlation coefficient (r=0.985) which suggests that when their awareness of various agricultural information sources were considered, the plantain farmers' livelihood significantly improved. This implies that any increase in the plantain farmers' awareness of various agricultural information sources will lead to a relative improvement of their livelihood. Therefore, the hypothesis stating that the awareness of agricultural information had no significant influence on the livelihood of these plantain farmers is rejected.

Table 5: Influence of the awareness of agricultural information on the livelihood of plantain farmers

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	2223.038	1	2223.038	8172.176	**0.000[b]**
	Residual	67.462	248	0.272		
	Total	2290.500	249			

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.016	.108		.145	0.885
	Awareness	.184	0.002	0.985	90.400	**0.000**

a. Dependent Variable: **Livelihood**
b. Independent variable: **Awareness**

R = 0.985, R Square = 0.971, Adjusted R Square = 0.970

Research hypothesis two: The utilisation of agricultural information has no significant influence on the livelihood of these plantain farmers

Table 6 shows that the livelihood of plantain farmers is significantly predicted by their utilisation of agricultural information ($F_{(1, 248)}$ =8622.914, p<0.05). The linear regression model demonstrates that the utilisation of agricultural information could explain 97.2 % (R^2=0.972) variation in the livelihood of farmers. In addition, the independent variable has a strong positive correlation coefficient (r=0.986) which suggests that when the utilisation of agricultural information is considered, the plantain farmers' livelihood would be significantly improved. This implies that an increase in the plantain farmers' utilisation of agricultural information will lead to a relative improvement of their livelihood. Therefore, the hypothesis stating that the utilisation of agricultural information has no significant influence on the livelihood of these plantain farmers is rejected.

Table 6: Influence of utilisation of agricultural information on the livelihood of plantain farmers

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	2226.466	1	2226.466	8622.914	**0.000**[b]
	Residual	64.034	248	0.258		
	Total	2290.500	249			

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.068	.104		0.653	0.514
	Utilisation	.400	0.004	0.986	92.860	**0.000**

a. Dependent Variable: **Livelihood**
b. Independent variable: **Utilisation**

R= 0.986, R Square = 0.972, Adjusted R Square = 0.972

Research hypothesis three: The awareness and utilisation of agricultural information has no combined significant influence on the livelihood of these plantain farmers

Table 7 shows that the linear regression model could only explain 97.2 % (R^2=0.972) variation in the livelihood of plantain farmers. It predicted the dependent variable with F-ratio of 4365.519 indicating that together, awareness (0.319) and utilisation (0.667) of agricultural information significantly influenced the livelihood of plantain farmers. The joint contribution of both independent variables to the dependent variable is expressed ($F_{(2, 249)}$ = 4365.519, *Adj* R^2 = 0.972, p<0.05) which suggests that when the awareness and utilisation of agricultural information are considered, plantain farmers' livelihood would be significantly improved. This implies that an increase in the plantain farmers' awareness and utilisation of agricultural information will lead to a relative improvement of their livelihood. Therefore, the hypothesis stating that the awareness and utilisation of agricultural information has no combined significant influence on the livelihood of these plantain farmers is rejected.

Table 7: Combined influence of awareness and utilisation of agricultural information on the livelihood of plantain farmers

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	2227.485	2	1113.742	4365.519	**0.000**[b]
	Residual	63.015	247	0.255		
	Total	2290.500	249			

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.042	.105		0.405	0.686
	Awareness	0.60	0.030	0.319	1.999	0.047
	Utilisation	0.271	0.065	0.667	4.175	**0.000**

a. Dependent variable: **Livelihood**
b. Independent variables: **Awareness and Utilisation**

R= 0.986; R Square = 0.972; Adjusted R Square = 0.972.

Discussion

Results of the demographic data revealed that there were more male respondents than female. Many of the respondents were below the age of 45years. Also, it showed that more than half of the total number of the respondents had the attended formal education ranging from secondary school and below. This corroborates with the finding of Ashaye et al (2017) on the education status of farmers. Many plantain farmers in the communities operated at a small scale. Only few plantain farmers cultivated nine and above hectares of farm because many of the farmers had limited access to credit facilities to expand corroborating the view of Mgbenka and Mbah (2016).

The first research objective was to find out the level of awareness of agricultural information from various sources among these plantain farmers. Among the various sources of agricultural information indicated by the plantain farmers, extension services; extension posters; farmers and newspaper/magazines were indicated as having the highest level of awareness with equal mean scores of 2.60. This was followed by schools with a mean score of 2.58 and banks, online/internet and family members with equal mean score of 2.52. The plantain farmers also indicated they had high level of awareness of agricultural information from agricultural institutions, library, farmer cooperatives societies, non-governmental organisations (NGOs), television, film show, extension posters, bulletin/ newsletters and customers were above the criteria weighted mean score set for low level of awareness. Studies have reported these as important agricultural information sources (Kamau, Margret and Hilary (2018); Soyemi and Haliso, 2015). The fact that they were conversant with technology based sources like television, radio, mobile phones and internet upholds the assumptions of Curras (1984). These plantain farmers indicated that their level of awareness of agricultural information from libraries and government circulars was moderate. This implies that there was some level of awareness of all the listed information sources. Thus, there is need to improve the awareness of these and other agricultural information sources among farmers in these rural communities so as to relatively improve their productivity.

The second research objective was to find out the level of utilisation of agricultural information by the plantain farmers. Choosing good soil for planting and selling bunches/suckers/other products ranked first, controlling diseases and pests second and applying fertilizer and manure ranked third among the plantain farmers' level of utilisation of agricultural information. The plantain farmers also indicated a high level of utilisation of agricultural information for selecting good sucker plants, measuring planting depth and spacing, harvesting and storing bunches as well as buying sucker/other products since the mean scores were above the criteria weighted mean score set for low level of utilisation. This implies that plantain farmers no longer see digging for planting new suckers and mulching of new planted suckers as well as harvesting bunches as energy demanding (Ashaye et al, 2017). This level of utilisation of agricultural information could be responsible for the reduction in diseases, erosion and storage issues faced by these plantain farmers.

The third research objective was to find out the level of income from various sources among these plantain farmers. The findings show that the level of income from the sale of suckers/other products was the highest as indicated by the mean score. This implies that these plantain farmers earned highest incomes from the sale of suckers and other plantain products. Aside the sale of suckers, plantain farmers now earn income from processing plantain to products such as frying to chips, slicing and sun-drying, frying to flour, roasting and frying to dodo (Aminu, Falola, Ayinde and Sanusi, 2017; Ayanwale, Fatunbi and Ojo, 2016). It can also be seen in the findings that the plantain farmers earned a high level of income from the lease of farmland and wages/salary/pension/other income than from the sale of plantain bunches. The level of income earned by the plantain farmers from the sale of plantain bunches was above the criteria weighted mean score set for low level of income. This implies that the plantain farmers earned the highest income from the sale of suckers/other products and the least income from the sale of plantain bunches.

The first research hypothesis states that the awareness of agricultural information has no significant influence on the livelihood of the plantain farmers. The findings show that awareness of agricultural information had a significant influence

on the livelihood of the plantain farmers (r=0.985). Among the known conditions for improving agriculture is creating awareness of the existence of relevant agricultural information on modern practices. The result shows that the plantain farmers relied on extension services, extension posters, banks, schools, radio, newspapers, fellow farmers, friends and other listed sources for information. Studies show that the provision of agricultural information through extension services could enhance farmers' understanding and application of agricultural innovations acquired from various sources for the purpose of farming (Kamau, Margret and Hillary, 2018: Soyemi and Haliso, 2015). This could be because many farmers face difficulty in personally understanding and applying agricultural information on modern practices from other listed sources due to their level of education. Ayanwale, Fatunobi and Ojo, (2016) point out that communicating ideas, innovations and techniques to farmers through any appropriate medium could improve their productivity as well as livelihoods. Thus, an increase in the plantain farmers' awareness of agricultural information sources will lead to relative improvements in their livelihoods.

The second research hypothesis states that the awareness of agricultural information has no significant influence on the livelihood of the plantain farmers. The finding showed that the utilisation of agricultural information had a significant influence on the livelihood of plantain farmers (r=0.986). This implies that an increase in the plantain farmers' utilisation of agricultural information will lead to a relative improvement of their livelihood. Unfortunately, some farmers still lack the capacity to personally utilise valuable information to enhance productivity (Idumah, Owombo, Ighodaro and Mangodo, 2016). A farmer's inability to personally utilise agricultural information is a major hindrance that is attributable to low education level. However, the findings corroborated studies like Sanusi, Oyedeji and Akerele (2017) that the farmers have an opportunity to understand and utilise some of the agricultural information that might be introduced to them with the formal education acquired. Studies also pointed out that the utilisation of agricultural information provided by extension services encourages farmers to increase their farm size, access credit, inputs for production and revenue as well as reduce the rigors of farm work (Soyemi and Haliso, 2015: Mgbenka and Mbah, 2016).

The third research hypothesis states that the awareness and utilisation of agricultural information has no combined significant influence on the livelihood of the plantain farmers. The finding showed that the awareness and utilisation of agricultural information had a significant influence on the livelihood of the plantain farmers ($F_{(2,249)} = 4365.519$, $Adj\ R^2 = 0.972$, $p<0.05$). This implies that an increase in the plantain farmers' awareness and utilisation of agricultural information will lead to a relative improvement of their livelihood. The plantain farmers' awareness and utilisation of agricultural information depends on their understanding, extracting as well as appropriately applying information acquired from various information resources. The awareness of agricultural information gives farmers the capacity to make informed decisions to increase their farm size, access credit and inputs or production and revenue as well as reduce the rigors of farm work. It also provides knowledge about production, processing, transportation and other marketing dimensions of agriculture (Ayawale, Fatunobi and Ojo, 2016; 2018). Thus, it can be stated that awareness and utilisation of agricultural information had a combined significant influence on the livelihoods of these plantain farmers.

Conclusion and recommendations

Awareness and utilisation of agricultural information are necessary to not only to improve the productivity alone but also the livelihood of plantain farmers in Ilishan, Irolu and Ijesha communities in Ikenne Local Government Area of Ogun State, Nigeria. The plantain farmers had good understanding of agricultural information acquired from the listed sources like schools, extension services, other farmers and newspapers/magazines among others. This was as a result of the improved level of awareness of agricultural information from the listed sources by the plantain farmers. The utilisation of agricultural information in controlling diseases and pests, choosing good soil for planting and selling bunches/suckers/other products was high. Furthermore, awareness and utilisation of agricultural information jointly influenced the livelihood of plantain farmers. Based on these findings, efforts should be made to take into cognisance the peculiarity of each

farmer when providing extension services to improve the understanding and utilisation of agricultural information as this will lead to a relative improvement of their livelihood.

Implications of the Study

Findings from this study imply that the livelihood of plantain farmers improves when they are aware and utilise agricultural information. Plantain farmers' awareness and utilisation of agricultural information depend on their ability to identify, access, understand and extract as well as appropriately apply information acquired from information sources like books, posters, internet, TV and radio programmes, and several other sources for the purpose of farming. Utilisation of the right agricultural information at the right time would give the plantain farmers the capacity to make informed decisions that would improve their livelihoods.

References

Adebayo, K. and Idowu, I. A. (2001) The Aftermath of the Withdrawal of the World Bank Counterpart Funding for the Ogun State Agricultural Development Programme (ADP) in Nigeria. *Journal of Sustainable Agriculture*, *17* (2-3), 79-98.

Aminu, F. O., Falola, A. O., Ayinde, L. A. And Sanusi, R. A. (2017) *Agribusiness and Value Addition to Plantain by Small Scale Entrepreneurs in Lagos State, Nigeria* (No. 2223-2019-1692).

Ashaye, W. O., Abdulqadri, A. F., Daramola, R. B., Mwajei, E. I., and Ayodele, O. D. (2017). *Economics of Plantain Production In Ogun State* (No. 223-2019-1821).

Ayanwale, A. B., Fatunobi, A. O., and Ojo, M. P. (2016) Innovation Opportunities in Plantain Production in Nigeria. In *Guide Book 1. Forum for Agricultural Research in Africa (FARA) Accra, Ghana.*

Ayanwale, A. B., Fatunobi, A. O., and Ojo, M. P. (2018) *Baseline Analysis of Plantain (Musa Sp.) Value Chain in South-West of Nigerian.* FARA Research Report, (Vol. 3, No. 1, 84).

Coxhead, I. And Buenavista, G. (2001) Seeking Sustainability: A Synthesis of Research in Phase I of SANREM CRSP-South Asia, 1993-98". In *I. Coxhead and G. Buenavista, (Eds.). Seeking Sustainability: Challenges of Agricultural Development and Environmental Management in a Philippine Watershed.* Los Banos: Philippine Council on Agricultural Research, Natural Resources and Development, 1-31.

Curras, E. (1984) Moral and Social Implication of the New Technologies in Information Science. In *FID Congress. 42*: 417-432.

Idumah, F. O., Owombo, P. T., Igbadaro, U. B. and Managodo, C. (2016) Economic Analysis of Plantain Production under Agro-Forestry System in Edo State, Nigeria. *Applied Tropical Agriculture*, *21*(1): 138-144.

Ikudayisi, A. A., Babatunde, A. A. and Yusuf, S. A. (2019) Distributional Effect of Income on Rural Farm Households in Nigeria: Identifying Knowledge Gaps and Policy Options. *IOSR Journal Agriculture and Veterinary Science, 12* (1): 52-58

Kamau, N. J, Margret W. N, and Hillary, B. K. (2018) Structural Analysis of Social Networks Revealed by Small Holder Banana Farmers in Muranga County, Kenya. *Journal of Agricultural Science and Food Research*. 9: (2), Pp. 1-6.

Khatiwada, S. P., Deng, W., Paudel, B., Khatiwada, J. R., Zhang, J. and Su, Y. (2017) Household Livelihood Strategies and Implications for Poverty Reduction in Rural Areas of Central Nepal. *Sustainability*, 9, 612-632.

Maps of World. (2016) Top 10 Plantain Producing Countries.

Mgbenka, R. N. and Mbah, E. N. (2016) A Review of Smallholder Farming in Nigeria: Need for Transformation. *International Journal of Agricultural Extension and Rural Development Studies,* 3 (2), 43-54.

National Bureau of Statistics (2016) Demographic Statistics Bulletin. Available at http://www.nigerianstat.gov.ng/elibrary? queries (search)= demographicstatisticsbulletin National Population

Commission (2016) Nigeria Population Projection by State and Local Government from 2006 to 2017. Available at http://www.population.gov.ng/index.php/state-population

Ojo, M. P. and Ayanwale, A. B. (2019) Value Chain Financing and Plantain Production in Nigeria: An Ex-Ante Approach. *Financial Innovation*. 5: 18.

Okoroafor, U. U., Achike, A. I., And Mkpado, M. (2012) Community Empowerment with the Musaspp Enterprise Expansion Programme, Nigeria. *Field Actions Science*, *6*, 1-7.

Opeke, R. O. And Odunlade, R. O. (2011) Awareness and Utilisation of Information Resources among Polytechnic Lecturers in Nigeria. *Samaru Journal of Information Studies*, *11*(1 and 2), 59-66.

Sanusi, M. M. Oyedeji, O. O. And Akerele, D. (2017) Perception on Climate Variability and Adaptation Strategies among Plantain Producing Farmers in Omi-Adio Area, Oyo State, Nigeria. In: *18th Annual Conference of the Nigerian Association of Agricultural Economists*, Abeokuta, and (650-657) Federal University of Agriculture.

Soyemi, O. D. and Haliso, Y. (2015). Agricultural Information Use as Determinant of Farm Income of Women in Benue State, Nigeria. *Research on Humanities and Social Sciences*, *5*(18) 1-6.

Yearbook, F. P. (2013). Food and Agriculture Organisation. Rome, Italy.

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