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**Assessment of Small Scale Women Farmers' Information Needs and Accessibility in Kontagora
Local Government Area, Niger State, Nigeria**

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ABSTRACT

The study accessed the various information needs of small scale women farmers' and their access to the needed agricultural information in Kontagora Local Government Area, Niger State, Nigeria. To achieve the study objectives, 3-stage sampling technique was used to randomly select 150 respondents for the study using validated interview schedule with reliability coefficient of 0.76. Data collected were analyzed using descriptive statistics and Logit regression model. The respondents were predominantly married (81.3%), while 66.7% are within their active and productive stage between 21 – 40 years. Findings further indicated that improved varieties of seeds (mean = 2.50), land management (mean = 2.45), and pest management (mean = 2.44) were the most needed information by women farmers' in the study area. Logistic regression result on factors affecting women farmers' accessibility to agricultural information revealed that educational level, cooperative membership and extension contact were statistically significant at 10%, 1% and 5% probability level, respectively. The study concludes that access to relevant information and knowledge is essential for expansion of the agricultural sector performance and increase livelihoods especially among small scale women farmers'. Therefore, it was recommended that there should be more gender sensitivity in planning and organizing extension activities thus allowing women farmers participate fully and have access to the needed agricultural information.

Keywords: Small scale, women farmers', information, accessibility.

INTRODUCTION

Women have been making famous and significant contribution to agriculture development since inception of farming, and they really make up the bulk of the world's food producers. The 2006 national census puts women at 52% out of which about 45% exist in the rural areas of Nigeria. They supply about 60% of labour force, produce 80% of food, receive 10% of financial earnings, and however possess just 1% of the farm property (Banji and Okunade, 2005). In the pre-colonial era, women in Africa cultivate food crops whereas men hunted and fought wars. Meanwhile, women constituted an imperative live wire of peasant farming household scattered all over Nigeria. Women from farming background remain very busy throughout the two farming seasons in planting and harvesting. According to Hellandedu (2005), Nigeria women participate in diverse farming activities such as sowing, weeding, harvesting, processing, storage, threshing, winnowing and marketing, of agricultural products. Most of the women farmers' in Nigeria are directly involved in the production of several crops such as groundnut, yams, cassava, and maize among others. Likewise numerous numbers of women living in rural areas carry out a lot of household tasks relating to management and care of farm animals such as goats, sheep and poultry. Women can be considered as driving force for agricultural productivity. In agriculture, novel

information on advanced technology increase adoption of innovations by the farmers thus boosts production competitiveness. It is then essential for women farmers to access information on improved technology as this will add to both food security and economic development in Nigeria.

Agricultural information is essential in farming decisions with regards to expansion of agricultural activities. Diffusion of information and its adoption in the process of agricultural production play an important role in the growth of farm settlements (Mudukuti and Miller, 2002). Presently, in Nigeria, Agricultural Development Program (ADP) is the main channel used to ensure the accessibility of agricultural information by farmers living in rural or urban areas; usually referred to as extension service. Since establishment, the ADP has follow through a lot of developmental phases one of which is the formation of Women in Agriculture (WIA) aimed at meeting information needs of women farmers. However, for this approach to work in Nigeria, government need to understand what are the information needs of the women farmers first and how the small-scale women farmers will access the needed information.

Maceviciute (2006) defined information need as an expression of the shortfall of concrete information by an individual (collective or technical) user solving a certain scientific or technical problem. Agricultural information needs of women

farmers' are closely connected with their farming activities, this is because information needs can be diverse in nature but many times linked with individual's work activities. Accessibility to information refers to the ability of a farmer or group of farmers to get the desired information needed on a subject within a given period in a manner that they will understand and apply the information. Information accessibility can be affected by lack of an effective mechanism for information gathering, cost of access, educational level and health of the information user and also language barriers. Information accessibility is improved if the required information is packaged in form that is accessible to the user in terms of cost, language, and source of the information (Webster and Collins, 2005).

It is against this backdrop that the study was carried out to assess small scale women farmers' information needs and the accessibility of the needed information in the study area. The specific objectives of the study are to assess the agricultural information needs of small-scale women farmers and the factors affecting small-scale women farmers' access to agricultural information in the study area.

MATERIALS AND METHODS

Study Area

The study was conducted in Kontagora Local Government Area (L.G.A.) of Niger State, which lies within the Guinea Savannah agro-ecological zone of Nigeria,

and has a population of 151,944 as of 2006, of which 87% of them are farmers (National Population Commission, 2006). The study area lies between Latitudes $10^{\circ} 24' 13'' 32' N$ and Longitudes $5^{\circ} 47'$ and $7^{\circ} 20' E$, with annual rainfall of 1,100mm in the northern parts to 1,600mm in the southern parts. The average temperature is around $32^{\circ}C$. Some of the crops grown include sorghum, tobacco, cotton, maize, millet groundnuts, cowpea, melon, bambara-nut, sesame, while livestock reared include goats, sheep, cattle, chicken, donkeys and camels (Niger State Geographical Information System (NSGIS), 2007).

Sampling and Instrumentation

A 3-stage sampling technique was used to select respondents for the study. The first stage was random selection of five (5) wards from the 13 wards in the L.G.A. The selected wards are; Tunga Wawa, Yamma, Madara, Masuga, and Nagwamaste, wards. The second stage was the random selection of two villages from each of the selected wards. In the third stage, 10% of women farmers were selected from sample frame of 1500, making the sample size of the study to 150 women farmers. Content validity of the instrument for data collection (interview schedule) was ensured through experts' consultation.

Data Collection and Analysis

Primary data was used for the study and it was collected via questionnaire complemented with interview schedule.

Data collected were analyzed using descriptive statistics (such as frequency count, percentage and mean) and inferential statistics (such as Logistic regression model). However, 3-point Likert rating type scale of mostly needed (3), somehow needed (2) and not needed (1) was used to measure agricultural information needed responses. The decision mean value of 2.0 was obtained by adding the points (3 + 2 + 1 = 6) divided by 3. Thus, mean score value of 2.0 and above implies needed, while less than 2.0 implies not needed.

Model Specification Logistic regression model

The logistic regression model was used to estimate the factors affecting small-scale women farmers' access to agricultural information in the study area. The model is mostly used in estimating probability of events in which the dependent variable is dichotomous. A dichotomous dependent variable assumes only two values of zero or one. Thus, the implicit form of the Logistic regression model is specified as:

$$Y = f(X_1, X_2, X_3, X_4, X_5) \quad (1)$$

The Logistic regression model in its explicit form is expressed as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e \quad (2)$$

Where;

Y = Access to agricultural information by the women farmers measured as 1 if access, 0 if otherwise.

X₁ = Age (years)

X₂ = Marital status (1 if married; 0 if otherwise)

X₃ = Education (years of formal schooling)

X₄ = Cooperative membership (1 if member; 0 if otherwise)

X₅ = Extension contact (1 if contacted; 0 if otherwise)

e = Error term

β₀ = Intercept

β₁ – β₅ = Coefficients of the independent variables

X₁ – X₅ = Independent variables

RESULTS

Socio-economic characteristics of the respondents

The results in Table 1 revealed that most (66.7%) of the respondents were between the ages of 21 – 40 years implying that the women farmers were within their mid-age. Majority (81.3%) of the respondents were married which is a sign of responsibility, 57.3% of the respondents acquired Qur'anic education and 24.7% acquired formal education such as primary and secondary. More so, majority (76.0%) of the respondents were fully engaged in farming activities implying that farming is the primary occupation. Most (68.7%) of the respondents had farm size ranging from 0.5 – 1 hectare which they cultivate each cropping season, while majority (80.0%) of the respondents had farming experience between 1–10 years, implying that the women farmers have been relatively into farming.

Table 1: Distribution of Respondents Based on Socio-Economic Characteristics (n = 150)

Variables	Frequency	Percentage (%)
Age (years)		
21 – 40	100	66.7
41 – 60	47	31.3
Above 60	3	2.0
Marital status		
Single	3	2.0
Married	122	81.3
Divorced	5	3.3
Separated	2	1.3
Widow	18	12.0
Educational Level		
Quranic	86	57.3
Primary	27	18.0
Secondary	10	6.7
Non-formal	23	15.3
Adult	4	2.7
Major Occupation		
Farming	114	76.0
Trading	12	8.0
Civil servant	1	0.7
Artisan	23	15.3
Farm Size (ha)		
0.5 – 1	103	68.7
1.5 – 2	45	30.0
2.5 – 3	2	1.3
Farming Experience (years)		
1 – 10	120	80.0
11 – 20	27	18.0
21 – 30	3	2.0

Source: Field Survey, 2019

More so, Table 2 revealed that majority (92.2%) of the respondents had no access to credit, while only 7.8% had access implying lack of access to credit by the women farmers. Also, about (43.3%) of the respondents were member of cooperative society, while more than half (56.7%) of the

women farmers were not member of any cooperative society. Furthermore, majority (70.7%) of the respondents had contact with an extension agent, while 36.7% of them had no contact. This implies that majority of the respondents in the study area had contact with the extension agents.

Table 2: Distribution of Respondents Based on Institutional variables (n = 150)

Variables	Frequency	Percentage (%)
Access to Credit		
Yes	11	7.8
No	139	92.2
Cooperative Society		
Yes	65	43.3
No	85	56.7
Extension contact		
Yes	106	70.6
No	44	29.3

Source: Field Survey, 2019

Agricultural information needs of the respondents

Result in Table 3 indicated that improved varieties of seeds (mean = 2.50); land management (mean = 2.45), pest management (mean = 2.44) and modern processing methods (mean = 2.44) were the major information needs of the respondents

in the study area. Others include loan/credit facilities (mean = 2.38), modern farming implements (mean = 2.31), modern storage method (mean = 2.22) and price/marketing system (mean = 2.02). This implies that the women farmers were in need of various agricultural information that could enhance their productivity.

Table 3: Distribution of Respondents According to Information Needs (n = 150)

Variables	MN(3)	SN (2)	NN (1)	Sum	Mean	Decision
1. Land management	22 (14.7)	38 (25.3)	90 (60.0)	368	2.45	Needed
2. Modern farming implements	12 (8.0)	80 (53.3)	58 (38.7)	347	2.31	Needed
3. Pest management	18 (12.0)	48 (32.0)	84 (56.0)	366	2.44	Needed
4. Improved livestock breeds	59 (39.3)	55 (36.7)	36 (24.0)	276	1.84	Not Needed
5. Improved varieties of seeds	6 (4.0)	63 (42.0)	81 (54.0)	375	2.50	Needed
6. Modern processing methods	9 (6.0)	67 (44.7)	74 (49.3)	365	2.43	Needed
7. Price/marketing system	42 (28.0)	62 (41.3)	46 (30.7)	303	2.02	Needed
8. Modern storage methods	15 (10.0)	86 (57.3)	49 (32.7)	333	2.22	Needed
9. Loan/credit facilities	21 (14.0)	51 (34.0)	78 (52.0)	357	2.38	Needed

Source: Field Survey, 2019

Note: MN = Mostly Needed, SN = Somehow Needed and NN = Not Needed. Bench Mean Score = 2.0. Figures in parentheses are percentages.

Sources of agricultural information needs of the respondents

Table 4 revealed that 32.5% of the respondents source their information from mass media ranked 1st. This is followed by

extension agents (31.0%) and their husband (22.4%) ranked 2nd and 3rd, respectively. This implies the women farmers mostly source their information from mass media.

Table 4: Distribution of Respondents According to Sources of Information (n = 150)

Sources of Information	Frequency	Percentage (%)	Ranking
Mass media	109	32.5	1 st
Extension agents	104	31.0	2 nd
Husband	75	22.4	3 rd
Fellow women	34	10.1	4 th
Family and friends	13	4.0	5 th

Source: Field Survey, 2019

Preferred source of agricultural information by the respondents

As revealed in Table 5, the most preferred information source of the respondents was from extension agents (56.6%), while 24.0% of them preferred information

source is from their husbands because they have frequent contact with extension agents. This implies that the women farmers preferred information source is from extension agents and their husband.

Table 5: Distribution of Respondents Based on Preferred Information Source (n = 150)

Variables	Frequency	Percentage (%)	Ranking
Extension agents	84	56.0	1 st
Husband	36	24.0	2 nd
Mass media	22	14.7	3 rd
Fellow women	5	3.3	4 th
Family and friends	3	2.0	5 th

Source: Field Survey, 2019

Factors affecting access to agricultural information by the respondents

Table 6 revealed the result of Logistic regression analysis used to determine the factors affecting access to agricultural information. From the analysis, out of the five socio-economic variables that were regressed, only educational level (1.804),

cooperative membership (3.026) and extension contact (2.066) were found to be statistically significant. Educational level is significant at 10% level of probability; cooperative member was significant at 1% level of probability and extension contact was significant at 5% level of probability.

Table 6: Result of Logit Regression Analysis

Parameters	Coefficient	Standard Error	t-value	Significant
Constant	-7.645	0.746	-10.004***	0.000
Age (X ₁)	0.018	0.014	1.273	0.610
Marital status (X ₂)	-0.091	0.178	-0.510	0.630
Educational level (X ₃)	0.433	0.240	1.804*	0.039
Cooperative member (X ₄)	0.988	0.326	3.026***	0.000
Extension contact (X ₅)	0.656	0.317	2.066**	0.002

Source: Field Survey, 2019

*** implies significant at 1%, ** implies significant at 5% and * implies significant at 10% level of probability

DISCUSSIONS

The study revealed that most of the women farmers are still agile, strong and in their productive stage of lives. This result corresponds with the findings of Adeogun *et al.* (2010) who found that younger women within the age of less than 40 years are most willing to spend their time in getting information on new innovation in order to increase household farm productivity. Majority of the women farmers were married and need to support by their family by acquiring agricultural information that will help them improve their farm productivity and living standard. This agrees with the findings of Katikpo (2003) who revealed that married people have the benefit of employing family labour to assist in the farming activities. The educational qualification of the respondents shows that more than half of the women farmers lack formal education which could make it difficult for them to access agricultural information. This disagrees with the findings of Adepoju *et al.* (2007) who reported that women farmers in their study area acquired formal education which helps them to access information gain more skills and better understanding. Farming experience is very crucial in farm level decision especially as regards to seeking agricultural information that will enhance production. This agrees with the findings of Yahaya (2007) who reported that the level of participation and implementation of new innovation by farmers is determined their major

occupation which is majorly farming. Most of the respondents in the study area are small scale farmers which could lead to low income thereby limiting their ability to seek information on new innovation. This agrees with the findings of Onyeneka (2017) who reported that most of his respondents were small scale farmers with low income and decreased access to agricultural information. Majority of the women farmers in the study area have no access to credit. The reasons for none access to credit could be as a result of not being member of cooperative society, lack of formal education and lack of access to formal financial institution. Also, more than half of the women farmers were not member in any cooperative society which could affect their level of access to credit facilities and information on new innovation. This result is in line with Central Bank of Nigeria (CBN) (2000) who reported that a higher percentage of male are in agricultural cooperative society than female. However, majority of the respondents in the study area had contact with the extension agents which could facilitate access to agricultural information. Lack adequate information on how to improve level of productivity by the study women farmers, inadequate supply of information on land and pest management among others make them resulted to using local methods of production hence poor yield. This result agrees with the findings of Okwu and Umoru, (2009); Zaid and Popoola, (2010); Saleh and Lasisi (2011)

who reported modern farming system, price/marketing system, pest management, modern processing and storage methods as the areas where women farmers *need information* in order to improve their productivity. Mass media such as radio is the easiest source of agricultural information and legal authorities on how to improve agricultural practices by the respondents. It is usually portable for users, particularly farmers in rural Nigeria who take it to their farms and listen to agricultural extension programs that could benefit them while farming. However, the preferred information source by the women farmers is from extension agents and their husband because they believe the information are from formal sources like Agricultural Development Project (ADP) and research institutions which are reliable and correct. This agrees with the finding of Ajayi *et al.* (2016) who reported that extension agents are responsible for reputable extension service delivery among women farmers.

This result on factors affecting access to agricultural information shows that the higher the respondents' level of education, the more they are likely to have access to agricultural information. Similarly, joining cooperative society by the women farmers may make them have access to agricultural information, while increase in the women farmers' contact with extension agents the higher the likelihood of access to information. This result is in line with the findings of Idrisa *et al.* (2006) who reported

that education influences access to agricultural information. Thus, a unit increment in educational level of farmers leads to an increase in the farmers' accessibility to agricultural information.

CONCLUSION

In conclusion, this study revealed that most of the women farmers were still in their productive stage of life and married but with low level of education and small farm size. They have poor access to credit, not very much involved in cooperative societies but had much contact with extension agents. They are mostly in needs of agricultural information such as improved varieties of seed, land and pest management. However, the source of information by the women farmers is through mass media and their husband, but the most preferred source of information is through the extension agents. Education, cooperative membership and extension contact were found to affects access to agricultural information by the women farmers.

RECOMMENDATIONS

Base on the findings of the study the following recommendations were made:

1. The study therefore recommended that, NGOs and relevant financial institutions should assist the women farmers with credit facilities at subsidized rate or grant to enable them access needed agricultural information for improve

- productivity.
2. Small scale women farmers should be encouraged to join women cooperative society by extension agency in order to increase their access to needed information and agricultural productivity.
 3. Government should provide extension platforms for effective sensitization and training of women farmers to access needed agricultural information relevant for production.
 4. Policy makers should provide enabling environment that will motivate and assist small-scale women farmers to have adequate access to agricultural information that will enhance their productivity and living standard.

REFERENCES

- Adeogun, S. O., Olawoye, J. E. and Akinbile, L.A. (2010). Information sources to cocoa farmers on cocoa rehabilitation techniques (CRTs) in selected states of Nigeria. *Journal Media and communication studies*, 2(1), 009–015.
- Adepoju S. O., Umar, A. G. and Agun, J. O. (2007). An appraisal of women in Kano Agricultural and Rural Development Authority (KNARDA) Extension Delivery programmes. *Journal of Agricultural Extension*, 10, 11–22.
- Ajayi, O. J., Sanusi, O., Muhammed, Y. and Tsado, J. H. (2016). Livelihood diversification of rural households in Niger State, Nigeria. *Nigerian Journal of Agriculture Food and Environment*, 12 (2), 156–161.
- Banji, O. A. and Okunade, E. S. (2005). Women in agriculture and rural development. In: Agricultural Extension in Nigeria. In: Fola Adedoyin (ed.), ARMTI Press, Ilorin pp 69–77.
- Central Bank of Nigeria (2000). Microfinance Policy, Regulatory and Supervisory Framework for Nigeria. CBN Headquater, Abuja.
- Daudu, S., Chado, S. S. and Igbashal, A. A. (2009). Agricultural Information Sources Utilized by Farmers in Benue State, Nigeria.
- Hellandedu, J. (2005). The joys and pains of tomato cultivation and marketing in Zuntu village and its environs, Kubau Local Government Area of Kaduna State. Proceedings of the National Conference on Prospects and Problems of Agricultural Development in Northern Nigeria, Zaria, Nigeria, 29 June-2 July 2005.
- Idrisa, U. L., Gwary M. M. and Ibrahim, A. (2006). Determinants of Adoption of Cassava Farming Technologies in Mubi North Local Government Area of Adamawa State, Nigeria. *Journal of Agricultural Research*, 2 (2), 2–6.
- Katikpo, I. (2003). Yam production among small scale farmers. *Journal of Rural Economy and Society*, 3: 34–36
- Kamba, A. M. (2009). An Overview of the Provision of Information for Rural Development in Nigeria. *Samaru Journal of Information Studies*, 9 (1), 1–8.
- Maceviciute, E. (2006). Information needs research in Russia Lithuania (1965 – 2003). *Information Research*, 11 (3), 23–30.
- Mudukuti, A. E. and Miller, L. (2002). Factors related to Zimbabwe women's educational needs in agriculture. *Journal of International Agricultural and Extension Education*, 9 (2), 14–19.
- National Population Commission (NPC.) (2006). Breakdown of Niger State Provisional Census Results by Local Government Area. Abuja, Nigeria.

Niger State Geographical Information System (NSGIS) (2007). Background information. Retrieved in April 4th, 2013. From www.nigeris.com/about-nigerstate

Okwu, J. and Umoru, B. (2009). A study of women farmers' agricultural information need and accessibility: A case study of Apa Local Government Area of Benue State, Nigeria. *African Journal of Agricultural Research*, 4 (12), 1404 – 1409.

Onyeneke, R. U. (2017) Determinants of adoption of improved technologies in rice production in Imo state, Nigeria. *African Journal of Agriculture Research*, 12 (11), 888 – 896.

Saleh, A. G. and Lasisi, F. I. (2011). Information Needs and Information Seeking Behavior of Rural Women in Borno State, Nigeria. *Library Philosophy and Practice*. Available: <http://www.webpages.uidaho.edu/~mbolin/saleh-lasisi2.htm>

- Umaru et al, 2021*
accessed on April 24, 2014.
- Webster, J. G. and Collins, J. (2005). Fisheries Information in Developing Countries: Support to the Implementation of the 1995 FAO Code of Conduct for Responsible Fisheries. FAO, Rome, Retrieved from: <http://www4.fao.org> accessed on May 16th, 2009.
- Yahaya, M. K. (2007). Gender and communication variable in agricultural information dissemination in two agro-ecological zones of Nigeria. Research Monograph University of Ibadan, Nigeria 68.
- Zaid, Y. A. and Popoola, S. O. (2010). Quality of Life among rural Nigerian women: The role of Information. *Library Philosophy and Practice*. Available: <http://periodicals.fao.org/201011/2249165641.html> and accessed on April 20, 2014.