



RURAL FARMERS' ATTITUDE TO INDIGENOUS KNOWLEDGE SHARING FOR SELECTED LIVELIHOOD ACTIVITIES IN SOUTH-SOUTH NIGERIA

*Ominikari, Abraham G. and Wasini, Dobie A.

Department of Agricultural Economics, Extension and Rural Development,
Niger Delta University Wilberforce Island, Bayelsa State, Nigeria

*Corresponding authors' email: ominikari@gmail.com Phone: +2347030447472

ABSTRACT

The study assessed rural farmers' attitude to indigenous knowledge sharing for selected livelihood activities in South-South Nigeria. In conducting the study, multi-stage sampling technique was used to select 360 farmers. Data collection was through structured questionnaire and analyzed using both descriptive and inferential statistics such as mean and Analysis of variance (ANOVA). The result reveals that sharing between two or more farmers ($\bar{x} = 3.9$), parents/guardian/friends ($\bar{x} = 3.8$), participation ($\bar{x} = 3.8$), observation ($\bar{x} = 3.7$), farmer's groups ($\bar{x} = 3.7$), demonstration ($\bar{x} = 3.4$), social group gathering ($\bar{x} = 3.4$), village groups/age grades ($\bar{x} = 3.4$), village meetings ($\bar{x} = 3.4$), women meetings ($\bar{x} = 3.3$) and apprenticeship ($\bar{x} = 3.0$) were the major ways farmers share knowledge in South-South Nigeria. The study also revealed that being cost intensive to undertake ($\bar{x} = 2.56$), time consuming to undertake ($\bar{x} = 2.52$), not valued by farmers ($\bar{x} = 2.07$) and very labourious to undertake ($\bar{x} = 1.78$) were the some of the mean responses of farmers on their attitude to knowledge sharing in the study area. The ANOVA result showed no significant difference in the mean ratings of the respondents on their attitude to indigenous knowledge sharing for selected livelihood activities in South-South Nigeria at 5% level of significance. From the findings, it was concluded that farmers generally had unfavourable attitude towards indigenous knowledge sharing for selected livelihood activities in South-South Nigeria. The study recommended that the State Ministries of Agriculture and Extension Agencies should assist the rural farmers by organizing demonstrations and coordinating farmer groups which would enable them share their indigenous knowledge for better livelihood activities in the study area.

Keywords: Attitude, Indigenous, Knowledge, Sharing, Livelihood Activities

INTRODUCTION

For centuries, a lot of farmers in local communities have used their indigenous knowledge in areas such as ecosystem and landscape management, soil conservation, biological control of pests and diseases, ecological agriculture and livestock practices, and plant and animal breeding in enhancing food and livelihood security (Aluko, 2018). Similarly, Ugboma (2014) notes that indigenous knowledge has contributed in many areas of rural life, notably in the areas of provision of good health care, food production, food processing and preservation, empowerment and resources management, poverty reduction and economic growth. Indigenous knowledge is conceptualized as the collaborative body of practices, values, beliefs and norms of the local people. This knowledge is acquired through the local peoples' informal experiences and understanding of the environment in a particular culture (Adeniyi, 2021). This traditional knowledge has been handed down in words from generation to generation, and it is directly intermingling with the people's edifying values (Makinde, 2016). According to Ugboma (2014), it is basically natural in the community, furthermore it is not allied with any form of formal learning; rather, it is transmitted orally or taught through the use of taboos, folk tales, and periodic celebration of traditional festivals which are deeply rooted in the African culture. This implies, that indigenous knowledge can be acquired, documented, shared and can be adopted in different locations. The explicit nature of exogenous knowledge has made its storage and sharing extremely easy, and its popularization overwhelming. However, indigenous knowledge is predominantly tacit and, therefore, highly personal and difficult to codify and diffuse (Nwakwasi, 2013). Attitudes, knowledge, culture and

personal characteristics (age, gender, status, wealth, political influence and so on) of local people also affect creation, sharing and use of knowledge in the local communities (Adeniyi, 2021). It is in this regard, that the study sought to assess rural farmers' attitude to indigenous knowledge sharing for selected livelihood activities in South-South Nigeria. The study also hypothesized that the respondents do not generally differ in their attitude to indigenous knowledge sharing for selected livelihood activities in South-South Nigeria.

METHODOLOGY

The study was carried out in South-South geo-political zone of Nigeria, lies between latitude 4° 14'N and 4° 21'N of the equator and longitude 3° 14' E of the Greenwich Meridian with a population of about 21, 034, 081 people (National Bureau of Statistics, 2014). The region been the core oil producing area provides the economic mainstay of the country's oil and gas. In addition to the oil and gas, the region also produces other key resources with potential huge opportunities in tourism and agriculture as well as urban commerce and transport business.

The region is situated in the Southern part of Nigeria, and bordered to the South by the Atlantic Ocean, and to the East by Cameroon, occupies a surface area of about 112,110 square kilometres. This represents about 12% of Nigeria's total surface area. The very rich cultural heritage of the Region is based on the presence of over 40 different ethnic groups speaking 250 languages and dialects. The ethnic group are numerous and include Ijaws, Ogonis, Ikwerres, Etches, Ekpeyas, Ogbas, and Engennes. Others are Obolos, Isokos, Okrikans, Kalabaris, Nembes, Urhobos, Itsekiris and the rest

are, Ndoni, Oron, Ibeno, and Ibibios, Annangs and Efiks, Bekwarras, Binis, etc. The heritage of the people is reflected in their modes of dressing, marriages, traditions and festivals. The predominant settlement type in the South-South region is small and scattered hamlets. The vast majority of settlements comprise largely rural communities in circulated village settlements. The typical community consists of compounds, which are closely spaced groups of small buildings housing 50 to 500 people, most of whom are farmers or fisher folks. There are also larger settlements which are usually separated from other clusters of rural residences by their outer rotational farm lands, oil palm or rubber plantations, bushes or stretches of secondary forests (Niger Delta Development Commission, 2010).

South-South region stretches from the hot equatorial forest type in the southern lowlands, to the humid tropical in the northern highlands, and the cool montane type in the Obudu Plateau area. The wet season is relatively long, lasting between seven and eight months of the year, from the months of March to October. In the northern and north western parts of the South-South region, the rains may be delayed by as much as four to five weeks, thereby extending the dry season which, in recent times tends to last some four to five months. There is usually a short break around August otherwise termed the "August break". The dry season begins in late November and extends to February or early March of the following year, a period of approximately three months. During the dry season, the north-east trade wind blowing over the Saharan desert extends its dehydrating influence progressively towards the equator, reaching the southern coast of Nigeria in late December or early January. It has an average annual rainfall of 1200 to 2500 mm (NIMET, 2013).

Temperatures are generally high in the region and fairly constant throughout the year. Average monthly maximum and minimum temperatures vary from 28°C to 33°C and 21°C to 23°C respectively, increasing northward and westward. The warmest months are February, March, and April in most parts of the South-South region. The coolest months are June through September during the pick of the wet season.

Soil fertility in the South-South region varies considerably for the top soil (≤ 30 cm) and the sub soil (30-100 cm) from location to location with implications for the quantity and type of fertilizers needed for optimal production. Over 60% of top soils of the mangrove forests and coastal vegetation zones are of low fertility compared to about 90% of medium fertility top soil for the derived savannah and the rain forest zones. The montane zone has the highest proportions are (87.8%) of high fertility top soils. For the sub-soils, the highest proportions of the land with relatively high fertility are found in the derived savannah and the rain forest zones (roughly 70%) highlighting their suitability for tree crop.

The climate of the area allows for favourable cultivation and extraction of agricultural and forest products such as palm produce, rubber, cocoa, cassava, yam, plantain, maize, vegetables, timber and others (National Bureau of Statistics, 2014). The region comprises six (6) States namely Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers States (National Bureau of Statistics, 2014). The South-South also comprises the major oil producing areas which is the economic mainstay of the country's oil and gas.

Multistage random sampling procedure was adopted for the study. Three (3) States were randomly selected out of the six (6) States that make-up South-South Nigeria for the study; the States were Akwa Ibom, Bayelsa and Delta States respectively. In the first stage, one agricultural zone was selected from each of the sampled three States; furthermore, two (2) Local Government Areas were selected to represent

each of the sampled Agricultural Zones from the three (3) States for the second stage. In the third stage, six (6) communities were selected to represent each of the sampled Local Government Areas from the various Agricultural Zones selected for the study. This gave a total of thirty-six (36) communities from the sampled Agricultural Zones in the three (3) States respectively. In the fourth stage, ten (10) farmers were selected from each of the sampled communities which gave the study three-hundred and sixty (360) respondents as the sample size.

Data collection was through structured questionnaire and analyzed using both descriptive and inferential statistics such as mean and Analysis of variance (ANOVA).

Ways by which indigenous knowledge is shared for selected livelihood activities among rural farmers and attitude to indigenous knowledge sharing for selected livelihood activities among rural farmers were realized using a 5-point rating scale. A mean of 3.0 and above was regarded as a favourable attitude to indigenous knowledge sharing for selected livelihood activities, while a mean less than 3.0 was regarded otherwise. The study used ANOVA to determine differences between the means among States under investigation. ANOVA was modeled by Ifeanyichukwu (2017) and is given by the formula:

$$F\text{-Statistic} = \frac{MS_{\text{Between}}}{MS_{\text{Within}}} \quad (1.0)$$

But,

$$MS_{\text{Between}} = \frac{SS_{\text{Between}}}{Df_{\text{Between}}} \quad (1.1)$$

$$\text{and } MS_{\text{Within}} = \frac{SS_{\text{Within}}}{Df_{\text{Within}}} \quad (1.2)$$

Where,

MS_{Between} = mean sum of squares between the groups

MS_{Within} = Mean sum of square within the groups

SS_{Between} = Sum of squares between the groups

SS_{Within} = sum of Squares within the groups

Df_{Between} = Degree of freedom between groups given as (k-1);

Df_{Within} = Degree of freedom within groups given as (k-1);

The overall null hypothesis for one-way ANOVA with k groups is expressed mathematically as:

$$H_0: \mu_1 = \dots = \mu_k \quad (1.3)$$

The alternative hypothesis is that "the population means are not all equal" and is mathematically expressed as:

$$H_A: \exists i, j : \mu_i \neq \mu_j \quad (1.4)$$

The F-statistic tends to be larger if the alternative hypothesis is true than if the null hypothesis is true.

Ways by which farmers share indigenous knowledge for selected livelihood activities in the study

The result in Table 1 shows that sharing between two or more farmers ($\bar{x} = 3.9$), parents/guardian/friends ($\bar{x} = 3.8$), participation ($\bar{x} = 3.8$), observation ($\bar{x} = 3.7$), farmer's groups ($\bar{x} = 3.7$), demonstration ($\bar{x} = 3.4$), social group gathering ($\bar{x} = 3.4$), village groups/age grades ($\bar{x} = 3.4$), village meetings ($\bar{x} = 3.4$), women meetings ($\bar{x} = 3.3$) and apprenticeship ($\bar{x} = 3.0$) were the major ways farmers share knowledge in South-South Nigeria. This finding is in tandem with Nwachukwu (2014) which posited that indigenous knowledge was shared in various local communities through stories, folklores, songs, proverbs and local languages. This finding is also in consonance with those of Obinyan and Asiegbe (2018) who noted that numerous indigenous languages in Nigeria were used to support economic and scientific development through knowledge formation, preservation and distribution in various locations.

Table 1: Mean score responses on the ways farmers share knowledge for selected livelihood activities

Knowledge Sharing	Akwa-Ibom (n=120)	Bayelsa (n=120)	Delta (n=120)	South-South (n=360)
	\bar{x}	\bar{x}	\bar{x}	\bar{x}
Interpersonal (between two or more farmers)	3.9	4.1	3.8	3.9
Parents/guardian/friends	3.9	3.9	3.7	3.8
Women meetings	3.4	3.3	3.2	3.3
Demonstration	3.6	3.5	3.2	3.4
Observation	3.8	3.6	3.6	3.7
Participation	3.9	3.8	3.7	3.8
Social group gathering	3.5	3.4	3.2	3.4
Village groups/age grades	3.3	3.6	3.2	3.4
Farmer's groups	3.7	3.9	3.4	3.7
Village meetings	3.5	3.5	3.1	3.4
Songs	2.6	2.4	2.6	2.5
Dance	2.4	2.3	2.5	2.4
Story telling	2.4	2.4	2.8	2.5
Drama shows	2.4	2.4	2.5	2.4
Plays	2.3	2.4	2.6	2.4
Debates	2.1	2.5	2.7	2.4
Poetry	2.4	2.1	2.7	2.4
Reciting proverbs	2.4	2.3	2.9	2.5
Initiation rites	2.9	2.6	3.1	2.8
Apprenticeship	3.0	3.2	2.9	3.0
Grand mean	3.1	3.0	3.1	3.1

Source: Field survey data, 2019

Farmers' attitude to indigenous knowledge sharing for selected livelihood activities in the study

The result in Table 2 shows that being cost intensive to undertake ($\bar{x} = 2.56$), time consuming to undertake ($\bar{x} = 2.52$), not valued by farmers ($\bar{x} = 2.07$) and very labourious to undertake ($\bar{x} = 1.78$) were the some of the mean responses of farmers on their attitude to knowledge sharing in South-

South Nigeria. These mean ratings were below the benchmark mean score of 3.0. This further implies that farmers generally had unfavourable attitude towards knowledge sharing in South-South Nigeria. This finding is in line with Makinde and Shorunke (2013) who noted that the tacit and idiosyncratic manner of indigenous knowledge influenced the attitudes of local people to its sharing and use for livelihood activities in rural areas in Nigeria.

Table 2: Mean responses of farmers on their attitude to knowledge sharing

S/N	Attitude to knowledge sharing	Akwa Ibom State		Bayelsa State		Delta State		South-South Region	
		\bar{x}	Rm	\bar{x}	Rm	\bar{x}	Rm	\bar{x}	Rm
I	It is time consuming to undertake	2.32	R	2.67	R	2.58	R	2.52	R
Ii	It is very laborious to undertake	1.65	R	1.85	R	1.83	R	1.78	R
Iii	It is cost intensive to undertake	2.48	R	2.58	R	2.61	R	2.56	R
Iv	I feel committed towards undertaking the task	3.15	A	3.55	A	3.44	A	3.38	A
V	I can commit my resources towards sharing knowledge to better my farming activities.	3.27	A	3.91	A	3.67	A	3.62	A
Vi	I detest engaging in it since it is not valued by farmers	1.87	R	2.10	R	2.07	R	2.01	R
Vii	Asking a farmer (s) repeatedly to explain severally to enable other farmers to understand better is always difficult	2.37	R	2.58	R	2.56	R	2.50	R
viii	To explain an innovation technically using acceptable language to other farmers is difficult	1.88	R	2.26	R	2.15	R	2.10	R
Ix	Sharing knowledge gotten from parents/guardian is more acceptable to us	3.29	A	3.69	A	3.58	A	3.52	A
	Grand Mean	2.48	R	2.80	R	2.72	R	2.66	R

Source: Field Survey, 2019

Note: \bar{x} = Mean score; Rm = Remark; A = Accepted; R = Rejected**Hypothesis**

The result of the Analysis of Variance (ANOVA) f-test used to test for significant difference in the mean ratings of the respondents on their attitude to indigenous knowledge sharing

for selected livelihood activities in South-South Nigeria is presented in Table 3.

The result in Table 3 shows that the calculated Anova f-value of 1.203 was significantly lower than the tabulated Anova f-

value of 3.04 at $P \leq 0.05$, suggesting that there is homogeneity in farmers' attitude to indigenous knowledge sharing for selected livelihood activities in Akwa Ibom, Bayelsa and Delta States. The homogeneity in farmers' attitude to indigenous knowledge sharing could be attributed to the similarities in indigenous knowledge practices and the sharing

patterns of indigenous knowledge that are peculiar to rural areas. This further implies that the respondents do not generally differ in their attitude to indigenous knowledge sharing for selected livelihood activities in South-South Nigeria.

Table 3: Analysis of Variance results showing difference in the mean ratings of the respondents on their attitude to indigenous knowledge sharing for selected livelihood activities in South-South Nigeria

Variable		Sum of Squares	Df	Mean Square	F-cal	F-tab
Sharing	Between Groups	.003	2	.003	1.203	3.04
	Within Groups	229.718	357	.817		
	Total	229.721	359			

Source: Computed by the researcher from field survey data, 2019

CONCLUSION

The study concluded that participation, social group gathering, sharing between two or more farmers, parents/guardian/friends, observation, farmer's groups, demonstration, village groups/age grades, village meetings, women meetings and apprenticeship were the major ways farmers shared knowledge in South-South Nigeria. The study further concluded that farmers generally had unfavourable attitude towards indigenous knowledge sharing for selected livelihood activities in South-South Nigeria.

RECOMMENDATION

The State Ministries of Agriculture and Non-government organizations (NGOs) should sensitize farmers on better and more effective ways of sharing their indigenous knowledge for enhanced livelihood activities through active collaboration with local farmers who are experienced in the use of indigenous knowledge practices as the study discovered that farmers generally had unfavourable attitude towards indigenous knowledge sharing in the study area. Also, the State Agricultural Development Programmes (ADPs) should also organize demonstrations and farmer trainings which would provide viable opportunities for farmers to share indigenous knowledge for achieving sustainable livelihoods.

REFERENCES

Adeniyi, D. T. (2021). The use of Indigenous Knowledge in Forest Management by the Aboriginal People in Ogun State, Nigeria. MSc Thesis, Forest and Nature Conservation, Wageningen University and Research, p. 85.

Aluko, Y. A. (2018). Women's Use of Indigenous Knowledge for Environmental Security and Sustainable Development in Southwest Nigeria. *The International Indigenous Policy Journal*, Vol:9(3): pp 1-25.

Ifeanyichukwu, K. I. (2017). A Comparative Assessment of the Impact of Crude Oil Production Operations on the Sustainable Livelihoods of Households in the Oil-bearing Communities of Abia State, Nigeria. *Imperial Journal Interdisciplinary Research*, Vol:3(9): pp 932-945.

Makinde, O. O. and Shorunke, O. A. (2013). "Exploiting the Values of Indigenous Knowledge in Attaining Sustainable Development in Nigeria: The Place of the Library". *Library Philosophy and Practice*, pp. 908-925.

Makinde, O. O. (2016). Evaluating Indigenous Environmental Consciousness with Residents of Ogbomoso in Nigeria. *Journal of Geography and Regional Planning*, Vol.9(5): pp.87-103.

National Bureau of Statistics (NBS) (2014). Report of the National Bureau of Statistics Harmonized National Living Standard Survey.

Niger Delta Development Commission (NDDC) (2010). "The Capitol" Nigeria @ 50; 10 Years of NDDC (2010). The New Face of the Niger Delta. Special Edition, 4(5). Nigerian Meteorological Agency (NIMET) (2013). Nigeria Climate Review Bulletin, Abuja, Nigeria.

Nwachukwu, I. (2014). From Drumbeats to Gigabytes: Communicating Agricultural Technologies Effectively to Farmers in Nigeria. 20th Inaugural Lecture, Michael Okpara University of Agriculture, Umudike, Abia State. p 56.

Nwakwasi R. (2013). Indigenous Knowledge in Extension Services in Nigeria. In: Nwachukwu, I. (Ed). *Agricultural Extension and Rural Development: Promoting Indigenous Knowledge*. Lamb House Publications, Umuahia, Nigeria, pp. 13-25.

Obinyan, G. A. and Aziegbe, M. E. (2018). A reflection on Development of Indigenous Languages for Knowledge Creation and Sharing in a Globalizing World: A Case of Esan language, Nigeria. *Preprints*, pp 1-15.

Ugboma, M. U. (2014). Availability and Use of Indigenous Knowledge amongst Rural Women in Nigeria. *Chinese Librarianship Electronic Journal*, 38: pp 60-67



©2022 This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International license viewed via <https://creativecommons.org/licenses/by/4.0/> which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is cited appropriately.