

Competency Assessments of Agricultural Extension Workers in Edo State, South-South Nigeria

Iyekekpolor M. N.¹, Alakpa S. O. E.², Anegbah P. O.³, Otene F. G.³ and Nwachukwu S.N.³

¹Faculty of Agriculture, Department of Agricultural Extension, University of, Benin, Benin City, Edo State, Nigeria.

²Faculty of Agriculture, Department of Agricultural Economics and Extension, Benson Idahosa, University, Benin City, Edo State, Nigeria.

³Research Outreach Department, Rubber Research Institute of Nigeria, P. M. B 1049, Iyanomo, Benin City, Edo State, Nigeria.

Corresponding Author email: iyekekpolormoses@gmail.com; Tel: +2348056583711

Direct Research Journal of Social Science and Educational Studies



Vol. 13(3), Pp. 151-160, December 2025,

Author(s) retain the copyright of this article

This article is published under the terms of the Creative Commons Attribution License 4.0.

<https://journals.directresearchpublisher.org/index.php/drjsses>; <https://www.ajol.info/index.php/drjsses>

Research Article
ISSN: 2449-0806

Received 5 October 2025, Accepted 5 December 2025 Published 17 December 2025;

ABSTRACT

The persistent decline in the required competencies for the dissemination of improved agricultural technologies by agricultural extension workers gave rise for need of the study. This study was carried out to assess the extension workers' competence in Edo State, Nigeria. This was achieved by addressing the socioeconomic characteristics of extension agents, job responsibilities of extension workers, level of competence of extension agents and factors affecting level of competence among extension agents in the study area. A two-stage sampling procedure was used for the sampling of 68 respondents. Data were collected from both primary and secondary sources. Primary data were collected using structured questionnaire and were analysed using descriptive and inferential statistics such as frequency, mean, percentage, standard deviation and Spearman correlation statistics. Results showed that a high proportion (57%) of extension agents was males and 50% of them were 41 – 50 years old. Majority (91.2%) of extension agents were responsible for raising farmers' awareness level in problem situation, while 89.7% of extension agents were involved in arousing farmers' interest in recognizing their problems. Results on access to training showed that majority (88.2%) of extension agents had various trainings to improve their competency level. Factors affecting competency development were inadequate funding (mean = 3.18), poor road network (mean = 3.09), poor exposure to training opportunities (mean = 2.94) and delay in supply of materials (mean = 2.75). Results also showed a significant relationship between educational qualification ($r = 0.288$; $p = 0.017$), years of experience ($r = 0.550$; $p = 0.000$), grade level ($r = 0.461$; $p = 0.000$) and competency needs of extension agents. Based on the results of the study, it was concluded that extension agents were mostly involved in raising farmers' awareness level in problem situation as their job responsibility. It was recommended that extension agents should be given regular and adequate training on improve and modern information and technologies dissemination strategies in order to enhance their level of competence for improved job performance.

Keywords: Agricultural Extension; Assessment; Competency; Workers



Citation: Iyekekpolor, M. N., Alakpa. S. O. E., Anegbah, P. O., Otene, F. G., and Nwachukwu, S.N. (2025). Competency Assessments of Agricultural Extension Workers in Edo State, South-South Nigeria. *Direct Research Journal of Social Science and Educational Studies*, 13(3), 151-160. <https://doi.org/10.26765/DRJSSSES89095868>

INTRODUCTION

Nigeria is endowed with great potentials for a highly productive and profitable agricultural sector. According to Central Bank of Nigeria (CBN 2000), this enormous resource base, if well managed could support a vibrant growth in the agricultural sector and is also capable of ensuring self-sufficiency in food and raw materials for the industrial sector as well as providing gainful employment for the teeming youths of about 70% of the nation's active labour force (Oloruntuba, 2000).

Extension workers are the most important agents of transmitting information that has to do with researched technologies to the primary users. Oladele *et al.*, (2004) affirmed that agricultural extension workers do not only introduce, but equally encourage farmers to adopt new technologies which leads to increase in their productivity and income. However, in order to accomplish this task, agricultural extension workers must be given the right resources to perform the duty of exchanging and sharing information, imparting knowledge and developing skills of farmers who are mostly rural people. They must be efficient in the delivery of information on relevant farming techniques to the farmers by promoting adequate use of farm inputs such as fertilizers, pesticides, improved seeds, water, storage facilities and marketing of agricultural produce. Competency assessment of extension workers is of paramount importance in extension delivery. Extension workers require high level of competence and communication effort in transmitting research technologies through useful tools to farmers and also encouraging adoption, aimed at improving agricultural production; increase yield and farmers' income which can translate into growth of National economy when given the right institutional and policy support.

Nigeria has abundant natural resources and favourable climate for agriculture (Daniel, 2009). The country is expected to be self-reliant in food production but it is yet to achieve this goal as food demand outstrips the domestic supply (Adeoti, 2001). However, advancement in science and technology have made available, large stock of useful knowledge and information which will enhance increasing productivity and improve the general living standard of farmers, but this rarely reach farmers. The America Society of Agricultural and Biological Engineers (ASABE, 2005) also noted that there is no dearth of knowledge and new technologies in agriculture. But these rarely reach farmers, especially those in developing countries, Nigeria inclusive.

Traditionally, knowledge and technologies are expected to flow from knowledge centers to farmers. In practice however, very little of this has happened. This is partly because the competency required by extension workers in disseminating these knowledge and technologies seems to be lacking. The situation has led to a questioning of the capabilities, abilities, proficiencies and competency of agricultural & extension workers to effect agricultural

development (Harder and Dooley, 2007). Such questions have focused on the appropriate skills and competency package essential for extension workers to perform their roles.

Generally, because extension work entails working with people, its effective performance requires competency in diverse areas of human knowledge. These competences include among others, knowledge of the following: specific subject matter; Social and behavioral science; extension education; communication; programme/project planning; execution or implementation; organizing; administration; research; and evaluation. The competency level of extension workers will continue to reflect on their performances in delivering the technologies that should be adopted by the farmers, if not properly checked. It is against this background that the study seeks to address the following questions.

- i. What are the socioeconomic characteristics of extension workers in Edo State?
- ii. What are the job descriptions of the respondents in the study area?
- iii. What are the extension workers' levels of competences in their assigned responsibilities in the study area?

Objective of the Study: The broad objective of the study was to assess the extension workers' competence in Edo State, Nigeria.

The specific Objectives are:

- i. To describe the socioeconomic characteristics of extension workers in the study area;
- ii. To examine job responsibilities of the extension workers in the study area;
- iii. To assess respondents' level of competence in their assigned responsibilities in the study area;

Hypothesis of the Study

H₁: There is no significant relationship between respondents' personal characteristics and the level of competency in their job responsibilities in the study area.

METHODOLOGY

Area and Scope of Study

The study was conducted in Edo State Nigeria. Edo State is located in the South-South geo-political zone of Nigeria. The State lies within the geo-graphical co-ordinates of longitude 05°04' and 06° 43' East Greenwich Meridian and latitude 05° and 07° 34' North of the equator, its capital

Benin City (Edo State ADP, 2010). The climate is typically tropical with two major seasons; the wet (rainy) and the dry seasons. The wet season lasts from April to November and the dry season from December to March each year. The annual precipitation is between 1,000 mm and 1,500 mm (Akingba *et al.*, 2022). Edo State has an ambient temperature ranging from a minimum of 24°C to a maximum of 33°C. It occupies a total land area of 17,902 km² with a population of 4,235, 595 people (NBS, 2017).

Sampling Procedures and Data Collection

A two stage sampling procedure was used for sample selection in this study as follows:

Stage I: This involved the purposive sampling of four (4) research institutes in Edo State, comprising the following: Agricultural Development Programme (ADP); Nigerian Institute for Oil Palm Research (NIFOR); Rubber Research Institute of Nigeria (RRIN); and Cocoa Research Institute of Nigeria (CRIN).

Stage II: This involved the purposive sampling of all extension workers in various extension delivery establishments in the State so as to obtain a fairly sizeable sample for the study giving the total sample size of 68 extension workers as follows:

- i. Agricultural Development Programme (ADP) = 32 Extension workers
- ii. Nigerian Institute for Oil palm Research (NIFOR) = 15 Extension workers.
- iii. Cocoa Research Institute of Nigeria Substation (CRIN) = 11 Extension workers
- iv. Rubber Research Institute of Nigeria (RRIN) = 10 Extension Workers.

Data Collection Instrument

A structured questionnaire was constructed for eliciting information from the study area. This had four (4) Sections. Section A solicited responses on extension workers socio-economic characteristics; section B obtained responses on the respondents' competence in their job responsibilities; Section C looked at respondents' competency needs; and section D investigated access to trainings.

Data Analysis

This was achieved using both descriptive and inferential statistics. The descriptive tools used include: frequency counts, percentages, standard deviation and mean scores while the inferential tools used were: the Pearson Product Moment Correlation (PPMC) statistics to determine the relationship that exist between variables.

Analytical Techniques

Objective One: To describe the personal characteristics of the extension agents in Edo State; Descriptive statistical tools such as frequency counts and percentages were used.

Objective Two: To examine job responsibilities of extension agents in Edo State. This was also achieved using descriptive statistical tools such as frequency counts and percentages.

Objective Three: To assess respondents' level of competence in their job responsibilities. This was analyzed using a four point rating scale scored as follows: Highly competent = 4, moderately competent = 3, low competence = 2, Not competent = 1. Then any variable with a competence mean score equal to or greater than

$$x \geq$$

2.5 (2.5) was regarded that respondents are competent in that area of job responsibilities and otherwise not competent

$$\frac{4+3+2+1}{4} = \frac{10}{4}$$

(i.e = 2.5).

Objective Four: Respondents' competence needs were achieved via a four (4) point rating scale as: Highly needed = 4, Needed = 3, moderately needed, = 2, not needed = 1. Any variable with a competence mean score of 2.5 and above was regarded as needed by respondents, otherwise, not needed.

Test of Hypothesis

Hypothesis 1

States that there is no significant relationship between respondents' personal characteristics and the level of competence in their job responsibilities in the study area. This was achieved by testing the relationship between each of the t-ratios generated from the Logit regression analysis of the respondents' personal characteristics ($X_1 - X_7$) and the dependent variable (Level of competence). The logit regression analysis is a form of regression used when the dependent variable is dichotomous or a dummy variable. The independent variables can be binary or continuous variables. According to Agresti and Finlay (2009), the model estimates the odd or likelihood of an event occurring.

The logit regression is given as:

$$\Pr(Y = 1/X_i) = \text{Ln} \left[\frac{Y_i}{1-Y_i} \right] = a + b_1X_1 + \dots + b_nX_n + U$$

Where:

Ln = Natural log
 $\Pr(Y = 1/X_i)$ = Probability of Y occurring, given that X_1 - X_n have occurred.
 a = The coefficient of the constant term
 b_1 - b_n = The coefficients of the independent variables
 X_1 - X_n = The independent variables
 U = Error term

The mathematical expression of the model is explicitly specified as:

$$Y_i = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + U$$

Where:

Y_i = Level of competence (Competent = 1; Otherwise = 0)
 X_1 = Age (Number of Years)
 X_2 = Working Experience (Years)
 X_3 = Years of formal education attainment
 X_4 = Household Size (Number of persons living and feeding from same pot)
 X_5 = Present Level/Rank of Extension Worker (Number or promotion step)
 X_6 = Membership of Association (Yes = 2, No = 1)
 X_7 = Frequency of annual visit to farmers (Number of visits to a farming household)
 U = Error Term

RESULTS AND DISCUSSION

Socioeconomic characteristics of extension workers

Sex of Extension Workers

Results in Figure 1 show that more than half of the extension agents were males (57%), and 43% were females. This implies that extension services activities in the study area were carried out by both males and females extension agents though mostly dominated by males. The dominance of males reflects the predominance of male Extension field staff in the State. Similar results have been obtained by Agumagu and Nwaogwugwu (2006), who noted that male Extension agents formed the bulk of the workforce in the agricultural extension service in the Niger Delta of Nigeria.

Age of Extension Workers

As shown in Figure 2, the age distribution of extension agents show that most (50.0%) of extension agents were

between the ages of 41 – 50 years, 42.6% were between the ages of 31-40 years, 4.4% were less than 30 years of ages and 2.9% were above 50 years of age with a mean age of 42 years. This implies that majority of extension agents in the study area are in their active age group and hence can carry out extension service activities effectively. This result agrees with findings of Man *et al.*, (2016), who reported that majority of extension agents in their study area were between the age brackets of 41 to 50 years.

Educational qualification of Extension Workers

Figure 3 shows the educational qualifications of Agricultural extension agents. Results revealed that most (60%) extension workers obtained SSCE as their highest educational qualifications, 38% had B.Sc as their highest educational qualifications while 2% had JSS as their educational qualification. This implies that extension workers in the study area are educated but only few have obtained post-secondary education which can enhance job performance and competency of extension workers in order to meet up with modern challenges in agricultural extension service delivery. This result contradicts findings of Ezech (2013) and Umar *et al.*, (2015), who reported that majority of extension agents had post-secondary education.

Household Size of Extension Workers

Figure 4 shows the household distribution of extension workers. It was observed that most (64.7%) extension agents had household size of 3 – 4 persons, 5.9% of extension workers reported that they have household size of above 5 persons while 29% had household size of less than 2 persons with an average household size of 3 persons. This implies that majority of extension workers have relatively small household size and this can be attributed to young age of extension agents in the study area. A similar result was reported by Omoregbee and Ajayi (2009), who reported that the mean household size of Edo State ADP extension agents was 4 persons.

Training Background of Extension Workers

Results in Figure 5 showed that majority (78%) of the extension workers had their training background in general agriculture, 10% had training background in veterinary services, 9% had training in forestry while 3% had training in farm mechanization. This implies that extension agents would have had one form of agricultural training or the other that can help in enhancing their performance and competency level. This result is in line with findings of Okoedo-Okojie and Edeghon (2017), who reported that majority of extension agents in Delta State had training background in general agriculture and that extension agents are well educated on information and agricultural practices.

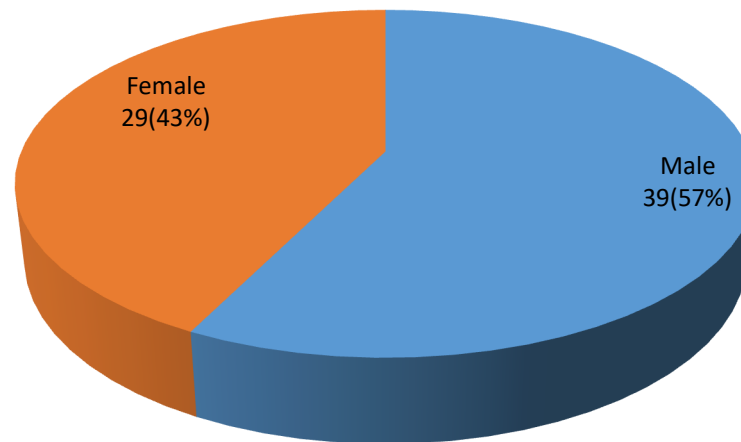


Figure 1. Sex of Extension Workers Source: Field Survey, 2024

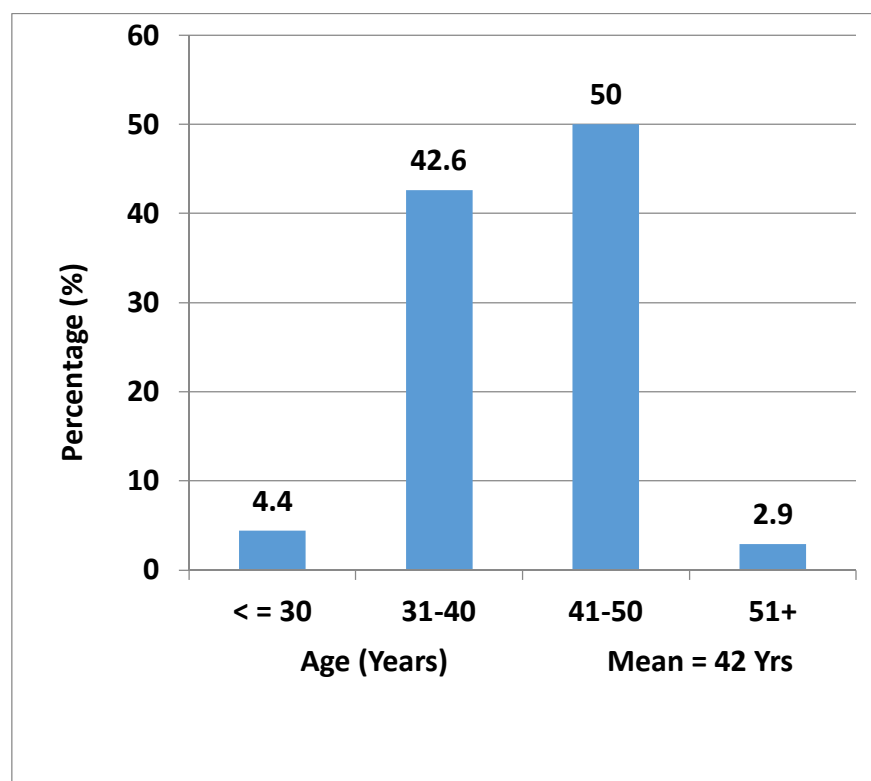


Figure 2: Age of Extension Workers: Source: Field Survey, 2024

Job Descriptions of Extension Workers

Results in Figure 6 show the job description of extension workers. It was observed that a high proportion (44%) of extension agents were farm officers, 24% were Farm superintendents, 21% were senior researchers, 7% were

chief supervisors while 4% were subject matter specialists. This implies that the extension agents had job descriptions and hence carried out extension activities related to their job descriptions. This has been reported to enhance job performance as extension agents can function properly in areas where they are qualified.

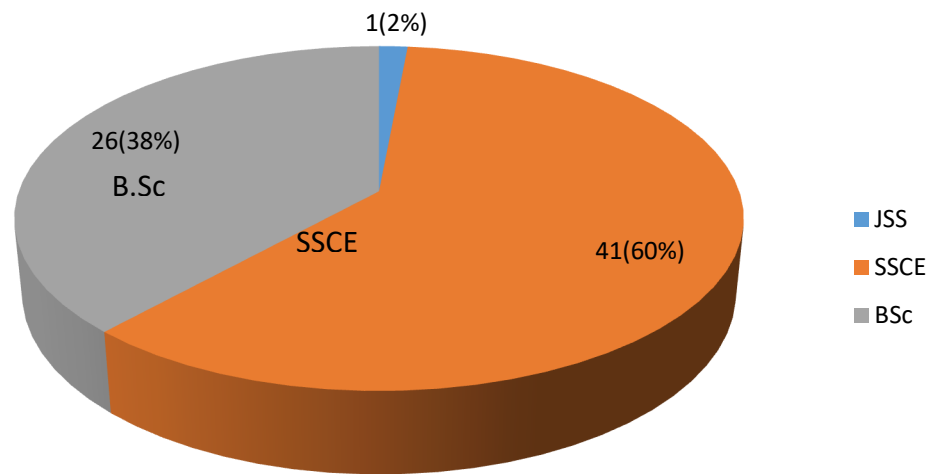


Figure 3. Educational qualifications of Extension Workers: **Source:** Field Survey, 2024

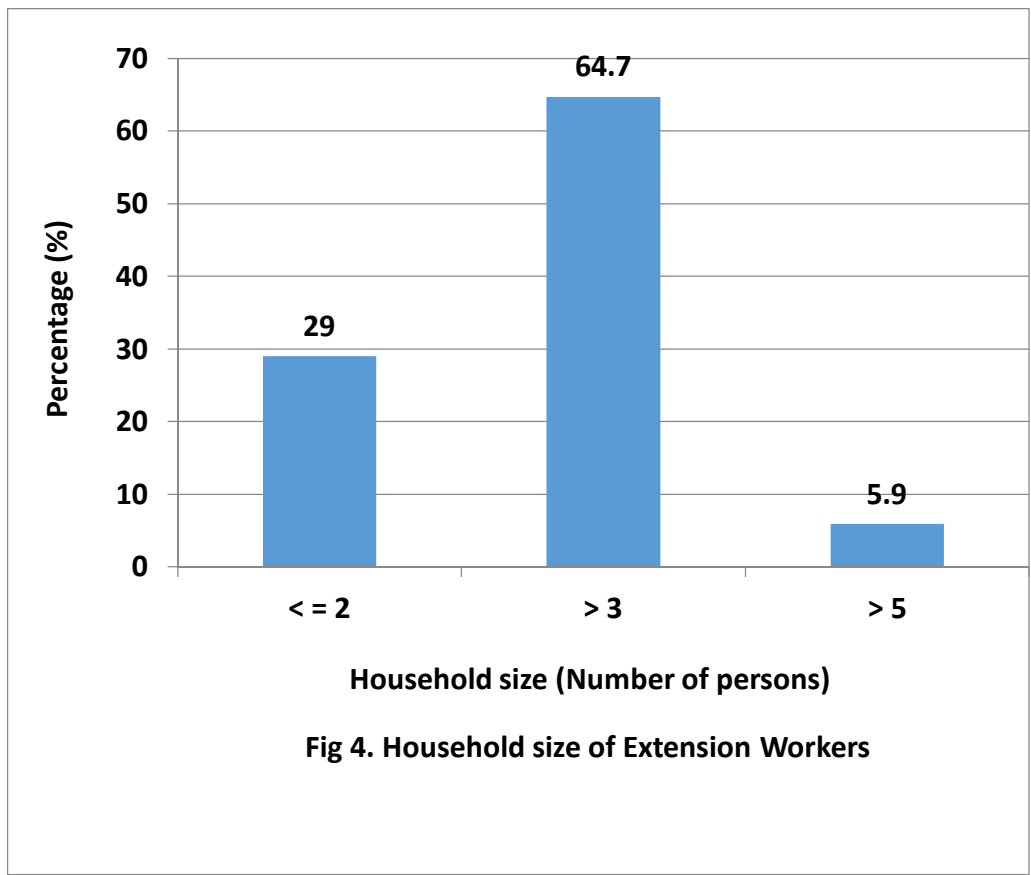


Fig 4. Household size of Extension Workers

Figure 4: Household size of Extension Workers: **Source:** Field Survey, 2024

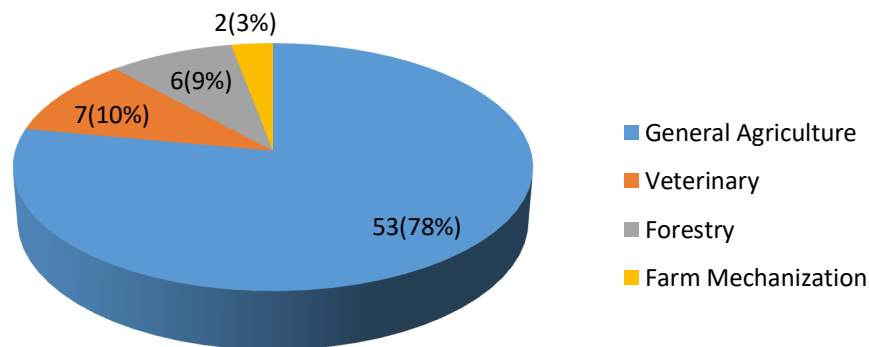


Figure 5: Training background of Extension Workers: Source: Field Survey, 2024

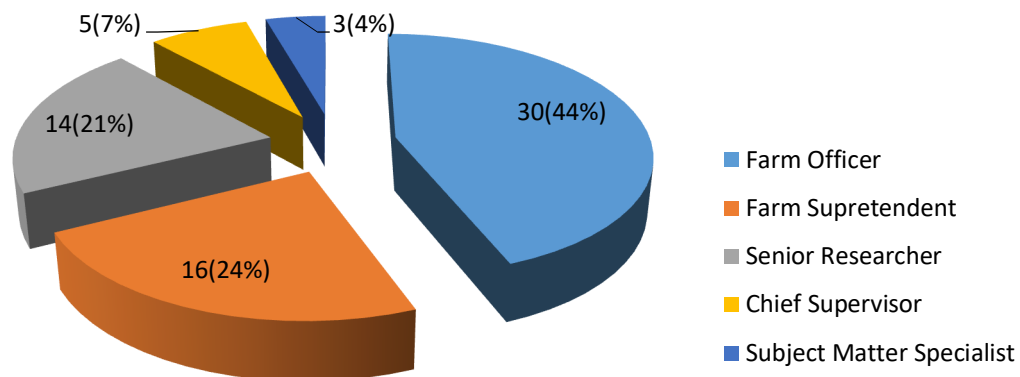


Figure 6: Job responsibility of Extension Workers: Source: Field Survey, 2024

Job Responsibility

Results in Table 1 show that majority (91.2%) of the extension agents are responsible for raising farmers awareness level in problem situation, 89.7% of extension agents were involved in arousing farmers interest in recognizing their problems. Extension agents were also responsible in assisting farmers to overcome these problems, 67.6% of respondents were responsible in facilitating conducive conditions for basic research. This implies that extension agents are highly responsible in

various activities that enhances farmers' productivity and raising awareness among farmers.

Level of Competence

In Table 2, results show a composite rating of competency level of extension workers in different areas of job responsibility. It was observed that extension workers were highly competent in arousing farmers

Table 1: Job Responsibility.

Job Responsibility	Yes		No	
	Freq.	%	Freq.	%
Raising Farmers awareness level in problems situation	62	91.2	6	8.8
Arousing farmers interest in recognizing their problems	61	89.7	7	10.3
Assist Farmers to overcome these problems.	60	88.2	8	11.8
Organized extension delivery operations to identify their needs and assist to proffer solutions	47	69.1	21	30.9
Facilitate conducive conditions for basic researcher	46	67.6	22	32.4
Provision of Relevant information to Farmers	46	67.6	22	32.4
Linking farmers with market	44	64.7	24	35.3
Work with Farmers to develop extension packages to meet and identify their needs	44	64.7	24	35.3
Transform the attitudinal behavior of Farmers	43	63.2	25	36.8
Organized Training for farmers	43	63.2	25	36.8
Develop farmers training programme	43	63.2	25	36.8
Attend Training	42	61.8	26	38.2
Linking Farmer and Research Institution	40	58.8	28	41.2

Source: Field Survey, 2024

Table 2: Level of Competence.

	No Competency		Average		High		Very High		Mean
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
Level of competency in job responsibility									
Arousing farmers interest in recognizing their problems (challenges)	9	13.2	19	27.9	31	45.6	9	13.2%	2.59
Transform the attitudinal behaviour of Farmers	12	17.6	19	27.9	24	35.3	13	19.1%	2.56
Raising Farmers awareness level in problems situation	9	13.2	20	29.4	33	48.5	6	8.8%	2.53
Provision of Relevant information to Farmers	5	7.4	25	36.8	35	51.5	3	4.4%	2.53
Assist Farmers to overcome these problems.	6	8.8	30	44.1	27	39.7	5	7.4%	2.46
Develop farmers training programme	11	16.2	24	35.3	24	35.3	9	13.2%	2.46
Facilitate conducive conditions for basic researcher	6	8.8	32	47.1	25	36.8	5	7.4%	2.43
Linking Farmer and Research Institution	11	16.2	25	36.8	26	38.2	6	8.8%	2.40
Attend Training	11	16.2	28	41.2	20	29.4	9	13.2%	2.40
Organized Training for farmers	15	22.1	19	27.9	28	41.2	6	8.8%	2.37
Work with Farmers to develop extension packages to meet and identify their needs	13	19.1	26	38.2	22	32.4	7	10.3%	2.34
Linking farmers with market	16	23.5	25	36.8	22	32.4	5	7.4%	2.24
Raising Farmers awareness level in problems situation	16	23.5	26	38.2	20	29.4	6	8.8%	2.24

Source: Field Survey, 2019 * Competent: Mean ≥ 2.5 **Table 3:** Relationship between respondents' personal characteristics and the level of competency in their job responsibilities.

	Coefficient (B)	S.E.	Waldx ²	Prob. Level Sig.	Odd Ratio
Age	3.03	0.82	13.62	0.000**	20.697
Sex	1.028	0.581	3.15	0.050**	2.795
Education	-4.299	0.969	19.71	0.000**	0.014
Household size	-0.328	0.295	1.19	0.470	0.720
Training	-3.265	0.69	22.37	0.000**	0.038
Job Experience	2.027	0.85	5.95	0.000**	7.591
Grade	3.62	2.92	1.54	0.281	37.338
Constant	40.596	5.62	52.13	0.000	42.319

Source: Field survey, 2024

Log likelihood= 78.719, R = 0.101, R² = 0.136, ** significant at 0.05 level of significance.

interest in recognizing their problems (challenges) (mean = 2.59), transform the attitudinal behaviour of farmers (mean = 2.56), raising farmers awareness level in problems situation (mean = 2.53), provision of relevant information to farmers (mean = 2.53) and assist farmers to overcome these problems (mean = 2.46). The lowest level of competency among extension agents were organized training for farmers (mean = 2.37), work with farmers to develop extension packages to meet and

identify their needs (mean = 2.34) and linking farmers to market (mean = 2.24). This implies that extension workers have some level of competence in their job responsibilities but still require some training in order to be more competent in other areas of their responsibilities. This result is in line with findings of Ayansina and Adeogun (2017), who stated that extension agents are highly competent in raising farmers' awareness level in problems and arousing farmers' interest.

Relationship between respondents' personal characteristics and the level of competency in their job responsibilities

The result of the regression on (Table 3) showed an R square value of 0.136 which indicates that 13% of the variables were explained by the model and the remaining 77% could not be accounted for. Result showed a significant relationship between age and competency level ($r = 0.000$; $p < 0.05$). This implies that as age of respondent increase there is a corresponding improvement in competency level of extension agents. Result also showed a significant between relationship sex and competency level ($r = 0.05$; $p < 0.05$). This implies that males have higher level of competency than females. Result further showed a significant relationship between level of education and competency level ($r = -4.30$; $p < 0.05$). The negative correlation implies that as extension agents level of education improve, there is a corresponding increase in the level of competency. Training frequency also showed a negative significant relationship with competency level ($r = 0.000$; $p > 0.05$). This implies that as training frequency increase there is a decrease in competency level. Job experience also showed a significant relationship with competency level ($r = 0.000$; $p = < 0.05$).

Conclusion

This study assessed the personal characteristics, job responsibilities, and competency levels of extension workers, as well as the factors influencing their effectiveness in the study area. The results show that males (57%) and females (43%) actively participate in extension activities, and most workers fall within the productive age range of 30–50 years, with a mean age of 42 years. Although a large proportion (60%) possessed only SSCE qualifications, many served as farm officers and had accumulated substantial practical experience. Household size averaged three persons, reflecting the relatively young age of the workforce. The findings further reveal that extension workers were highly involved in key job responsibilities such as raising farmers' awareness of problem situations, arousing farmers' interest in identifying challenges, providing relevant information, and assisting farmers in resolving agricultural problems. Competency ratings indicate that workers performed best in arousing farmers' interest (mean = 2.59), transforming farmers' attitudes (mean = 2.56), and raising awareness (mean = 2.53), while lower levels of competency were observed in linking farmers to markets and developing extension packages. Logistic regression analysis identified age, sex, education level, training background, and job experience as significant predictors of competency, while household size and job grade showed no significant influence. In summary, the study demonstrates that extension workers

are actively engaged and largely competent in their core responsibilities, particularly those related to farmer motivation, awareness creation, and problem identification. However, competency in more technical or logistics-oriented roles appears relatively weaker. The results also highlight systemic constraints such as limited funding, inadequate continuous training, and delays in accessing training materials, which collectively affect overall performance. The study concludes that while the extension workforce shows considerable potential, strengthening the conditions that support their professional development remains essential for enhancing the quality of extension service delivery.

REFERENCES

- Adeofi. A. I. (2001), Economic Analysis of irrigated and rain fed production system in Kwara State, Nigeria. *Journal of Central European Agriculture* 2(10).
- Agresti, Alan and Finlay, Barbara (2009). Page 2. Key Formulas for Statistical Methods In: *Statistical Methods for the Social Sciences* (4th Edition). 624 p.
- Agumagu.A.C. and Nwaogwugwu.O.N.(2006).Extension agents Commitment to extension work in Abia and Rivers State, Nigeria. *A Journal of Agricultural Extension* 2(1): 51-59.
- Akingba, O.O., O.O. Olubanjo., C.N. Emeribe, O.A. Ibanga and A.E. Alade (2022). Perceived Evidences of Climate Change and Effects on Smallholders Farming Practices in Edo North, Edo State, Nigeria. *American Journal of Water Resources* 10(2): 35-45. <https://pubs.sciepub.com/ajwr/10/2/1/index.html>
- ASABE 2005. American Society of Agricultural and Biological Engineering. The last mile problem in information high way improving the reach of farmers in developing countries. *Proceedings of the World Congress of Computer in Agriculture and Natural Resources*. 13-15 March 2002. Isuacafalls Brazil pp. 701-785.
- Ayansina, S. O. and Adeogun, S. O. (2017). Professional competency needs of agricultural extension agents of Ogun state agricultural development programme (ogadep). *Ifa Journal of Agriculture*, 29(2): 28-38..
- CBN (2000). Central Bank of Nigeria (CBN). Central Bank Bulletin, 3(4): 2.
- Daniel, S. Ugwu. (2009). Effects of Agriculture reforms on agricultural sector in Nigeria.
- Edo State ADP (2010). Project completion Report: Roots and Tubers Expansion Programme (RTEP). Edo State Agricultural Development Programme.
- Ezeh A.N. (2013). Extension Agents' access and Utilization of Information and communication technology (ICT) in extension services delivery in South East Nigeria, *Journal of Agricultural Extension and Rural Development* 5(11): 266-276
- Harden.A. and Dooley, K.E. (2007). Perception of important competencies for early- career and established 4-4 Agent, *Journal of southern agricultural education research*, 57(1): 43-52. Retrieved from Identification. Performance Improvement (on-line) 16-23.
- Man, Horsida Binti; Salehh, Jasim Mohammed; Hassan, Salim; Zidane, falah Hasan; Nawi, Nolila Moha and Umar, Sulaiman (2016). Training Needs of Agricultural Extension Agents Using Borich Needs Assessment Mode. *Asian Journal of Agricultural Extension, Economics & Sociology* 13(1): 1-13. <https://ageconsearch.umn.edu/record/357203/?v=pdf>.
- National Bureau of Statistics (2017) , Demographic statistics of bulletin.
- Okedo-Okojie, D.U. and Edeoghon.C.O. (2017), Application of Agricultural Extension principles to information Dissemination among extension workers in Delta State, Nigeria: Implication for Urban Agriculture. *Journal of Biology Agriculture and Healthcare*. 7(12): 223-231

- Okwuokenye, G.F. and Okoedo-Okojie, D.U. (2014). Evaluation of Extension Agents Commitments to the Agricultural loans and inputs supply: Programme on special rice production in Delta State, Nigeria J Applied Scie. Environ. Management 18(2): 327-335.
- Oladele. I.O. Koyoma. O. and Sakagami, J. (2004). Africa in search of extension system: experience from Nigeria. Japan International Research Centre for Agricultural Science Development Research Division. Food, Agricultural and Environment 2(7); 276-279.
- Oloruntoba. A. (2000), Evaluation of management training programme on job behavior of senior Agricultural Extension and Rural Development, University of Ibadan, Nigeria.
- Omogbe, F.E. and Ajayi M.T. (2009), Assessment of Training needs of Extension staff of Agricultural Development programme (ADP), Edo State, Nigeria. Agro-Science journal of Tropical Agriculture, Food, Environment and Extension 8(2): 97-103.
- Umar S., Musa, M. M., Oluyemi Y. T. and Suleiman, R. (2015). Awareness and use of Information and Communication Technologies among Extension Agents in Kaduna State of Nigeria. Journal of Agricultural Extension 19(1): 66-85.