

Perceived Benefits Derived from Extension Agents Training Programme by Farmers Participation in Community Based Organizations in Delta State, Nigeria

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Abstract

This study investigated the perceived benefits derived from extension agents training programme by farmers participation in community based organizations in Delta State, Nigeria. It described the socio-economic characteristics of the farmers trained through participating in CBO Delta State, examined level of satisfaction derived by the Community Based Organizations farmers from the extension agents training programmes in the area and ascertain the perceived benefits derived by the CBO farmers from participating in extension agents training programmes. Through multi-stage sampling technique, a sample size of 111 was got and used for the study. Descriptive statistics and inferential statistics were respectively used to analyze the objectives and hypotheses of the study. Results revealed that respondents mean age, household size, farm size, farm experience and farm income was 45.27 years, 6 persons, 2.75 ha. 10.26 years and N328,378.38 respectively. Majority (82.88%) of the respondents were satisfied with the extension agents training programme and this was attributed to the numerous benefits obtained from the training programme and this was in spite of the different challenges plaguing CBO farmers participation in the training programmes. Results also revealed that respondents' socio-economic characteristics like sex, age, educational level, farm size, farm experience and farm income were significantly related to CBO farmers level of satisfaction derived from participation in extension agents training programmes. Based on results the study suggest that, government should try to employ more extension agents into the Agricultural Institutions and Ministries so that the number of extension agents to farmers' ratio can be reduced and that there is also the need for the extension agents to be provided with training equipment and materials to be used for demonstration during training programmes.

Keywords: training, farmers, extension agents, perceived benefits, programme, community based organizations, satisfaction.

Introduction

Every organization is being run or operated by human beings. They actually form the building blocks of any business venture, activity and determine the extent of productivity that could be attained by any organization (Onuka et al., 2012). In where farming activities are concerned, the farmers need to be well and sustainably trained by extension agents if reasonable level of success is to be achieved. The effect of training on farmers cannot be overemphasized as Onuka (2012) reiterated that it helps to guide against accidents in work place (farm), wastage of farm resources and attainment of full potential in production capacity. This accounts for why Salihu (2011) postulated that an organization level of productivity is directly dependent on the level of training its workers have received. Going by the aforementioned, Salihu (2011) advocated the need for steady manpower training in order to

ensure good level of productivity. Singh and Mohanty (2012) while supporting the need for farmers to be trained, stated that training is central and a powerful instrument for effective achievement of organizational objectives and goals that is likely to result to greater farm productivity and consequently income.

The extension agents are the personnels of the various agricultural institutions that are saddled with the responsibility of training the farmers (Erie, 2009). Erie (2009) opined that extension agents carry out the training of farmers in order to equip the rural farmers with educational procedures to improve farming methods techniques, increase production efficiency and income which consequently would earn them better livelihoods and educational standards. The skills and knowledge supposedly assumed to be earned by the rural farmers farm training are jeopardized by a myriad of challenges plagued them (Adebayo and Okuneye, 2005). Adebayo and Okuneye, (2005) opined that the farmers need to be organized through collective efforts so that they can overcome the myriads of problems limiting them. Such an organized style or system would lead to farmers participating in community based organizations (CBOs). In confirming the aforementioned assertion, Okwuokenye and Akintoye (2016) concluded that farmers participating in groups are a sure means of improving farm practices and consequently their farm income.

Community based organization has been defined by Okwuokenye and Akintoye (2016) as a voluntary, non-profit, non-governmental and highly localized institutions whose membership is placed on equal level and has a main goal to uphold the improvement of the social and economic wellbeing of every member. Okwuokenye and Akintoye (2016) stated that most of the important objectives of participating in community based organization include to: increase the productive efficiency of members, to institute innovations in terms of making new and improved farm inputs available to farmers and the provision and improvement of access of the rural people to information that would help to better their lives, just to mention a few. In line with the foregoing, Ekong (2003) advanced that it is through farmers participating in community based organization that a good number of them (farmers) can be reached and trained by the extension agents. In addition, it is through the local groups that government rural development programmes can be transmitted to the people.

In line with these lofty benefits or advantages of farmers participating in CBOs, the study seeks to find out the level of farmers participation in CBOs and the level of training being received by the farmers in order to foster their development. Against this background, the study seeks to proffer answers to the following research questions:

- i. What are the socio-economic characteristics of the farmers trained through participating in Community Based Organizations in Delta State?
- ii. What is the level of satisfaction derived by the Community Based Organizations farmers from the extension agents training programmes in the area?
- iii. What are the perceived benefits derived by the Community Based Organization farmers from participating in extension agents training programmes?
- iv. What are the challenges faced by CBO farmers that are preventing their effective participation in extension agents training programmes?

Objectives of the Study

The main objective of the study was to examine the perceived benefits derived from extension agents training programme by farmers' participation in community based organizations in Delta State, Nigeria. On a specific note the objectives include:

- i. Describe the socio-economic characteristics of the farmers trained through participating in Community Based Organizations in Delta State.
- ii. Determine the level of satisfaction derived by the Community Based Organizations farmers from the extension agents training programmes in the area.
- iii. Ascertain the perceived benefits derived by the Community Based Organization farmers from participating in extension agents training programmes.
- iv. Identify the challenges faced by CBO farmers that are preventing their effective participation in extension agents training programmes.

Hypotheses of the Study

The hypotheses of the study were stated in their null forms. They are;

HO_i: Farmers socio-economic characteristics have no significant relationship with level of satisfaction derived from extension agents training programme.

HO_{ii}: There is no significant relationship between Community Based Organization farmers that are satisfied and those that are not satisfied with the extension agents training programme in the State.

Methodology

Area of study

Delta State was the area of study. The state comprised of so many ethnic groups. These are mainly the Delta Igbos which comprised of mainly the Anioma people, Urhobo, Isoko, Ijaw and Itsekiri ethnic groups (Delta State Wikipedia). Delta State has 25 local government areas with her capital being Asaba. The state is known to have more of her population concentrated in Warri, and that automatically, makes the town to be the economic nerve centre of the state (NAEC, 2008). On agricultural zone consideration, the state is divided into Delta North, Delta South and Delta Central. The land area of the state is 17,698Km² and for this size, it ranks 23rd amongst other states of the federation. (Delta State, Wikipedia).

National Population Commission (NPC) (2016) has it that the estimated population of Delta State is 2,754, 993 males and 2,720,147 females making a total of 5,475,139. Though the people of the state engage in different jobs but the mainstay of the people is agriculture. The major crops grown are yam, cassava, plantain, oil palm produce, rice, and corn while the animals reared include goat, sheep and fishes (Delta State, Wikipedia). In addition to agriculture, the state is a major producer of petroleum oil and this accounts for why some of the people are into oil prospecting. Many are also into civil service job amongst others. The state is characterized by two distinct seasons. These are the dry and the rainy seasons which respectively ranged between November – March or April, March or April – October, and an average rainfall range of between 252 – 254mm together with an average temperature range of 24°C (minimum) to a maximum of 33°C. (Federal Office of Statistics, 2004).

Sampling technique and sampling size

The study was carried out in Delta State and it adopted a four-stage multi-sampling technique. The first stage as shown in Table 1, started with a random selection of two agricultural zones (Delta North and Delta South). This is followed by the random selection of two (2) local government areas (LGAs) per agricultural zone and this led to the use of four (4) LGAs been used for the study. The third stage involved the random selection of three (3) communities / towns per LGA, and in all twelve (12) communities / towns were selected and used. The fourth and final stage has to do with the random

selection of ten (10) farmers per community / town and this brought the total number of farmers contacted for the study to one hundred and twenty (120). Fig 1 shows the agricultural zones, LGAs and communities used for the study. The researcher ensured that the selected farmers are those in contact with and being served by the extension agent of the area. The 120 farmers were served with the question instrument through the assistance of trained enumerators. Out of the returned instruments, one hundred and eleven (111) (92.5%) of them that were suitable for analysis were selected and used for the study.

Table 1: Distribution of Local Government Areas and Communities Used for the Study

State	Agricultural Zone	LGAs	Communities	No. of Farmers
Delta	Delta North	Ika North East	Owa-Agbor	10
			Mbiri	10
			Umunede	10
		Ndokwa West	Utagba Ogbe	10
			Utagba Uno	10
			Ogume	10
	Delta South	Isoko South	Oleh	10
			Olomoro	10
			Emede	10
		Patani	Patani	10
			Agoloma	10
			Odoruba	10
Total = 1	2	4	12	120

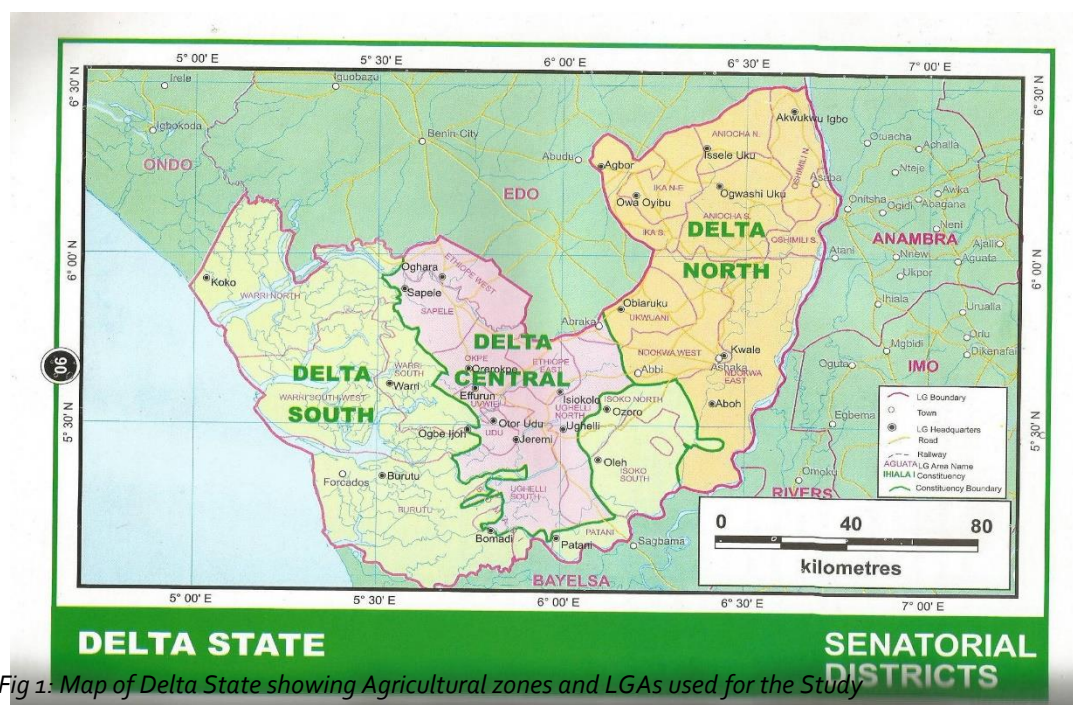


Fig 1: Map of Delta State showing Agricultural zones and LGAs used for the Study
Source: NAEC, 2008

Analytical Techniques of Data

Descriptive and inferential statistics were used for the analysis of data. While descriptive statistics (was used to analyze the objectives of the study) involved the use of frequency tables, percentages and means, the inferential statistics involved the use of multiple regression (for analyzing hypothesis one) and Binomial test (used to analyzing hypothesis two). A five-point Likert scale was used to analyze the perceived benefits derived by CBO farmers from extension agents training programmes and challenges faced by the farmers in their participation in groups activities. The scale ranges from, Strongly Agree: (coded 5), Agree: (coded 4), Neutral: (coded 3), Disagree: (coded 2) and Strongly Disagree: (coded 1). The weighted mean score of 3.00 and above was agreed as perceived benefits derived by the farmers as well as agreed challenges faced by them which limit their participation in the extension agents training programmes. The weighted mean score (3.00) was obtained as follows: $(5 + 4 + 3 + 2 + 1) / 5 = 3.00$. In the case of hypothesis one, socio-economic variables of the respondents were analyzed as it relates to the level of satisfaction derived by the farmers from extension agents training programmes. This is represented as:

Y = Level of satisfaction derived by the farmers from training

X₁ = Gender: male =1; female =0

X₂ = Age: measured in years

X₃ = Marital Status: married =1; single =2; divorced/separated =3; widow/widower =4

X₄ = Education status: primary educ. = 1; secondary educ. = 2; post-secondary = 3

X₅ = Household size: number of people living and feeding together

X₆ = Farm size: measured in hectares

X₇ = Farming experience: measured in years

X₈ = Farm income: measured in naira (N)

Binomial test was used to determine if there was any significant difference between the proportion of CBO farmers that were satisfied and those not satisfied with the training received from the extension agents training programme (hypothesis 2). The formula for binomial distribution is given as follows:

$$b(x;n,p) = nCx \cdot p^x \cdot (1-p)^{n-x}$$

Where b = binomial probability

x = total number of successes (satisfied or not satisfied)

p = probability of success on an individual trial

n = number of trials

In making a decision, the possible values of the test statistics are divided into two ranges. The critical region of the sample distribution is the area or areas of the sampling distribution of a statistics that will lead to the rejection of the hypothesis tested when that hypothesis is true (Okwuokenye, 2020)

Results and Discussion

Socio-economic characteristics of respondents

The socio-economic characteristics of the respondents is shown in Table 2. It revealed that most (64.86%) of the Community Based Organization (CBO) farmers were males while females constituted the minority (35.14%). The result suggests a poor response of females to participating in CBOs and this can be adduced to the demands of the people's tradition that sometimes forbids women participation in public groups. This result is in line with that of Mgbada (2006) who reported low women participation in social groups. The mean age of the respondents was 45.27 years with most (36.94%) of them between the age bracket of 40 – 49 years. This implies that they are young

and active. Similar result regarding young farmers participating in groups was reported by Okwuokenye and Akintoye (2016).

The respondents' marital status showed that majority (73.87%) were married. This is an indication that they are responsible and possible have people to cater for. Results of Akinbile *et al.* (2008) supported these findings as the authors noted that more of married farmers participate in organizations with a view to improve their economic livelihood. The respondents educational level showed that most (66.67%) of them schooled up to secondary educational level. This implies that they are literate and so can learn through training and then, practice what they have been trained on in their farming activities. This result agrees with findings of Okwuokenye and Urhibo (2019) who found that farmers who participate in groups are mostly literate and that this ability enables the farmers to apply farm instructions with little assistance.

Table 2: Socio-economic characteristics of respondents. n = 111

Characteristics	Categories	Frequency	Percentage	Mean
Sex	Male	72	64.86	
	Female	39	35.14	
Age	< 30	14	12.61	
	30 – 39	19	17.12	
	40 – 49	41	36.94	
	50 – 59	24	21.62	
	≥ 60	13	11.71	45.27
Marital status	Single	11	9.91	
	Married	82	73.87	
	Divorced	14	12.61	
	Widow(er)	4	3.60	
Educational level	Pri. Educ.	6	5.41	
	Secondary educ.	74	66.67	
	Post-secondary educ.	31	27.93	
Household size	1 – 3	12	10.81	
	4 – 6	63	56.76	
	7 – 9	26	23.42	
	10 – 12	7	6.31	
	≥ 13	3	2.70	6
Farm size (ha.)	≤ 2	31	27.93	
	2.1 – 4.0	68	61.26	
	4.1 – 6.0	7	6.31	
	> 6	5	4.50	2.75
Farm experience (years)	< 5	16	14.41	
	5 – 9	33	29.73	

		10 – 14	45	40.54	
		15 – 19	12	10.81	
		≥ 20	5	4.51	10.06
Farm income (N)	100,001 – 200,000	21	19.92		
	200,001 – 300,000	27	24.32		
	300,001 – 400,000	35	31.53		
	400,001 – 500,000	15	13.51		
	500,001 – 600,000	9	8.11		
	> 600,000	4	3.60		328,378.38

Source: Field survey, 2021

The average household size of the respondents was 6 persons with the modal (56.76%) having between 4 – 6 persons in their households. This indicates that they have people who depend on them for their economic livelihood. Similar results on CBO farmers household size range (4 – 6 persons) was reported by Okwukenye and Akintoye (2016).

Respondents average farm size was reported to be 2.75 ha. and most (61.26%) of their farm size was between the range of 2.1 – 4.0 ha. This indicates that they are small-scale farmers. Results of Ovharhe (2014) revealed similar farm size of farmers in Delta State and therefore described the farmers (based on their farm size) as small-scale farmers. Results on farm experience revealed that the average was 10.06 years with most (40.54%) of them having between 10 – 14 years of farming experience. This indicates that the respondents are experienced in farming operations and such experience is capable of making them to know the needs and problems of their farms. These results agree with that of Okwukenye and Ibi-Kunle (2021) which expressed a similar farm experience and noted that such experience was good and sufficient for farmers to handle farm challenges. The average farm income of the respondents was N328,378.38 and most (31.53%) of them earned between N300,001 – N400,000. Making such amount from farming activity is an indication of a positive impact of training via participation in CBO on their productivity and farm income. The findings of Okwukenye and Urhibo (2019) strengthens this result as they noted that services of extension agents disseminated through training do well in helping to boost farmers output and income.

Level of satisfaction derived by CBO farmers from extension agents training programmes

The level of satisfaction by Community Based Organization farmers and categorization of the respondents based on satisfaction derived from participating in extension agents training programmes are shown in Table 3 and 4 respectively. Table 2 revealed that most (49.55%) of the CBO farmers indicated that respondents are just satisfied with extension agents training programmes. Close to this category is about 21.62% of the respondents which indicated that they are averagely satisfied the training programmes.

On a dichotomous categorization (see Table 3), about 82.88% of the respondents rated extension training on CBO farmers as being high, while the other fraction (17.12%) had low rating to the training programmes. The result generally implies that the level of farmers satisfaction with extension agents training was high and encouraging to the extension agents. The result agrees with reports of Okwukenye and Urhibo (2019) which noted that majority of extension agents operating in Delta State are performing above average in their task and reach-out to farmers.

Table 3: Level of satisfaction derived by CBO farmers from extension agents training programmes (n = 111)

Level of Satisfaction	Frequency	Percentage
- Very High	19	17.12
- Just High	55	49.55
- Averagely High	24	21.62
- Fairly High	8	7.21
- Not High	5	4.50

Source: Field survey, 2021

Table 4: Categorization of CBO farmers based on level of satisfaction with extension agents training programmes (n = 111)

Categorization	Frequency	Percentage
- High	92	82.88
- Low	19	17.12

Source: Field survey, 2021

Perceived benefits derived by CBO farmers from participating in extension agents training programmes

The perceived benefits Community Based Organization (CBO) farmers derived from participating in extension agents training programmes are shown in Table 5. The weighted mean score of 3.00 and above was adopted and ranked as the weighted mean that indicates an agreed perceived benefits was derived from participating in extension agents training programme. Amongst the perceived benefits, training of farmers on input use (mean = 3.68), advisory role of extension agents (mean = 3.43) and demonstrating on input use (mean = 3.16) respectively ranked 1st, 5th and 10th perceived benefits CBO farmers derived from participating in extension agents training programmes. These findings are in line with the results of Okwuokenye and Urhibo (2019) which identified these aforementioned functions as regular roles of extension agents in groups.

Table 5: Perceived benefits derived by CBO farmers from participating in extension agents training programmes

Perceived benefits derived from extension agents training	Mean	Standard Dev.	Ranking
- Training of farmers on farming activities	3.68*	0.73	1 st
- Increase in yield of produce	3.65*	0.75	2 nd
- Provision / access to farm inputs	3.60*	0.78	3 rd
- Information on crop protection	3.52*	0.81	4 th
- Advisory role of extension agents to farmers	3.43*	0.81	5 th
- Access to financial services	3.36*	0.85	6 th
- Ability to control pest and diseases	3.36*	0.83	6 th
- Production of services that can improve produce	3.27*	0.76	8 th
- Increased farm income and therefore enhanced farmers welfare	3.21*	0.85	9 th
- Demonstrating on input use	3.16*	0.79	10 th

- Improvement in quality of produce	3.08*	0.86	11 th
- Help farmers avoid harvest losses	2.41	0.88	12 th
- Information on processing / packaging	2.37	0.86	13 th
- Increased cost of production	1.96	0.87	14 th

*Agreed (Mean ≥ 3.00);

Source: Field survey, 2021

Information on crop protection (mean = 3.52) and access to financial services (mean = 3.36) respectively ranked 4th and 6th perceived benefits derived by CBO farmers from participating in extension agents training programmes. These functions were confirmed by results of Anyoha *et al.* (2018) which stated that the mentioned functions are amongst other functions carried out by extension agents in farmers groups through the use of Information Communication Technologies (ICTs). In addition, access to farm input (mean = 3.60) ranked 3rd and production of services that can improve produce (mean = 3.27) ranked 8th of the CBO farmers perceived benefits derived from their participation in extension training programme. Other perceived benefits were increased yield of produce (mean = 3.65), ability to control pest and diseases (mean = 3.36), increased farm income therefore enhanced farmers welfare (mean = 3.21) and improvement of quality of produce (mean = 3.08). These later factors ranked 2nd, 6th, 9th and 11th most perceived benefits respondents derived from training received from extension agents training programmes. These results are in consonance with findings of Madukwe (2005) who opined that training of farmers through participation in CBO will help to provide latest on agricultural information resulting to update that would help improve on their farm production and income.

Challenges faced by CBO farmers in participating in extension agents training programmes

Community Based Organizations (CBOs) farmers have been known to be facing numerous challenges which have been effectively limiting their participation in extension agents training programmes and these challenges are shown in Table 6. The challenges with weighted means of 3.00 and above are agreed to limit CBO farmers effective participation in extension agents training programmes. These included low extension agents to farmers ratio (mean = 4.15), lack of training equipment (mean = 4.05), unfavourable attitude of the extension agents to the farmers (mean = 4.04) and insufficient demonstration materials / resources (mean = 4.01). These constraints respectively ranked 1st, 2nd, 3rd and 4th agreed challenges limiting CBO farmers participation in extension agents training programmes. Through personal communication, the respondents indicated the very low ratio of the extension agents to farmers number and that this scenario has made it impossible for the effective or easy reach-out of the extension agents to the farmers. Unfavourable attitudes of the extension agents to the farmers was linked to some level of bribery, corruption and nepotism displayed by some of the extension agents, and this have a limiting effect to their participation in training sessions.

Other challenges were those problems related to the management of the system, it ranked 5th with a mean of 3.87. Through personal communication, the respondents indicated that this problem is related to poor leadership style, failure of the extension agents to address CBO farmers' needs and the lack of assistance by the government. Low technical competency / lack of subject matter have a mean of 3.79 and ranked 6th agreed challenge plaguing the effective participation of farmers in extension agents training programmes. Going further, lack of monitoring and evaluation / teaching methods, illiteracy amongst the farmers, lack of up-to-date information to farmers / poor access to

information, lack of linkage between extension agents and CBO farmers, and lack of communication skills respectively had means of 3.78, 3.71, 3.68, 3.06 and 3.04 and they orderly ranked 7th, 8th, 9th, 10th and 11th constraints limiting the effective participation of the farmers in extension training programmes.

From the foregoing, constraints like lack of training equipment, lack of linkage between extension agents and farmers, illiteracy amongst the farmers and lack of up-to-date information to farmers are in line and agreed by Arshad *et al.* (2010) as factors that constitute some level of difficulties to the extension agents in providing technical services to farmers in the groups they belong. Other factors like low extension agents to farmers ratio, unfavourable attitudes of the extension agents to farmers, lack of communication skills, lack of monitoring and evaluation and problems related to the management of the system were found to be in concurrence with the findings of Akinlagbe *et al.* (2017). The authors identified the factors as challenges of extension agents in the training of farmers in Enugu State.

Table 6: Challenges faced by CBO farmers in participating in extension agents training programmes

Constraints / Challenges	Mean	Standard Dev.	Ranking
- Low extension agents to farmers ratio	4.15*	0.67	1 st
- Lack of training equipment	4.05*	0.64	2 nd
- Unfavourable attitudes of the extension agents to the farmers	4.04*	0.71	3 rd
- Insufficient demonstration materials / resources	4.01*	0.57	4 th
- Problems related to the management of the system	3.87*	0.73	5 th
- Low technical competency of the extension agents / lack of subject matter	3.79*	0.53	6 th
- Lack of monitoring and evaluation / faulty teaching method	3.78*	0.65	7 th
- Literacy amongst the farmers	3.71*	0.51	8 th
- Lack of up-to-date information to farmers / poor access to information	3.68*	0.68	9 th
- Lack of linkage between extension agents & CBO farmers	3.06*	0.66	10 th
- Lack of communication skills of the extension agents	3.04*	0.52	11 th
- Dispersion amongst farmers	2.83	0.49	12 th
- Insufficient time / lack of appropriate time	2.71	0.42	13 th
- Difference in culture amongst the farmers	1.93	0.36	14 th
- Lack of agricultural literatures	2.11	0.31	15 th
- Lack of cooperation between the extension agents & Farmers	1.03	0.39	16 th

Agreed (Mean ≥ 3.00)

Source: Field survey, 2021

Relationship of CBO farmers' socio-economic characteristics and their level of satisfaction from extension agents training programme

The relationship of Community Based Organization farmers socio-economic and level of satisfaction derived from extension agents training programmes was analyzed with the use of multiple regression. Table 7 shows the linear regression model which was adopted as the lead equation. This was based on the criteria that it has the highest number of significant variables, highest coefficient of determination (R^2) and the conformity of the variables to apriori expectations (Iyoha and Ekanem, 2002). The adjusted R^2 was about 0.618 which indicates that the explanatory variables were able to explain 61.8% variation in the dependent variable (level of satisfaction derived in the extension agents training programme). Six independent variables (namely: sex, age, educational level, farm size, farm experience and farm income) out of the eight of them analyzed were significant at the 5% level. The variables are further described thus:

The beta coefficient and t – value for sex of respondents is positively correlated ($b = 17605.451$; $t = 1.502$) and significantly related to level of satisfaction derived in the extension agents training programme. Since males constituted the majority (64.86%), it implies that the participation of more male farmers in CBOs would result to more level of satisfaction that could be derived in the extension agents training programme. Findings of Akinbile *et al.* (2008) is in line with this result as the authors asserted that male CBO farmers earned higher farm income from their farming activities and that this may be attributed to the level of satisfaction derived from training received in their group. Age of the respondents have a negative and significant relationship with level of satisfaction derived in the extension agents training programme. It has a beta coefficient and t–value of -581.155 and -1.742 respectively. The implication is that younger CBO farmers will receive more satisfaction than their older counterparts from their participation in extension training programmes. The results of Sinkaiye (2005) agreed with these findings as the author stated that farmers level of participation, along line with satisfaction from training received from extension agents is inversely related with the farmers age.

Educational level of the respondents ($b = 3386.417$; $t = 0.865$) was positively signed and significant to the level of satisfaction derived from the extension agents training programme. The result implies that the highly educated farmers will derive more level of satisfaction from extension agents training programme. This finding is supported by that of Sinkaiye (2005) who noted that higher level of education of farmers encourages more of their participation in group's activities as well as training and that such participation brings about more satisfaction in them. Farm size ($b = 14415.175$; $t = 2.132$) of the respondents was positively related and significant to the level of satisfaction derived from the extension agents training programme. By implication, farmers with larger farm sizes are bound to derive more satisfaction from extension agents training programme. The findings of Danso-Abbeain *et al.* (2018) agreed with this result. The authors asserted that farm size / size of plots positively influence the participation of farmers in training programmes where certain benefits could be obtained from. The relationship of farming experience and level of satisfaction derived from extension agents training programme was positively signed as well significant with a beta coefficient of 4244.416 and t – value of 2.326 . The positive relationship is an indication that CBO farmers with more farming experience are likely to enjoy more level of satisfaction from extension agents training programmes. The result is in concurrence with findings of Danso-Abbeain *et al.* (2018) which opined that farmers with longer years in farming business have a higher likelihood of participating in similar extension programmes / training and that this category of farmers do this with the intention of

optimizing their farm productivity and income. A positive and significant relationship ($b = 1832.121$; $t = 2.026$) exist between respondents farm income and level of satisfaction derived from extension agents training programme. This means that farmers who derive more farm income from their farming activities are bound to have a higher level of satisfaction from extension agents training. Findings of Taiye *et al.* (2006) is in line with this result as their studies confirmed the positive role of participation in CBOs activities (which includes training) on farm income.

Table 7: Relationship of CBO farmers socio-economic characteristics and their level of satisfaction from extension agents training programme

Socio-economic variables	Beta – Coefficient	t - value	Significant
Constant	11865.833	0.473	0.448
Sex	17605.451*	1.502	0.008
Age	- 581.155*	- 1.742	0.053
Marital status	112.161	0.214	0.718
Educational level	3386.417*	0.865	0.021
Household size	1006.257	0.324	0.147
Farm size	1415.175*	2.132	0.002
Farm experience	4244.416*	2.326	0.005
Income	1832.121*	2.026	0.001

$F = 92.76$ ($p < 0.050$) (Critical $F = 2.62$); Adjusted $R^2 = 0.618$

*Significant at the 5% level (Critical t – value = 1.645)

Test of difference in CBO farmers satisfaction with extension agents training programme

The test of significant relationship between Communication of Based Organizations (CBOs) farmers that are satisfied and those that are not satisfied with extension agents training programmes (hypothesis 2) was carried out with the use of Binomial test and this is shown in Table 8. The result revealed that a larger proportion (78%) of the CBO farmers was noted to be satisfied with the extension agents training programmes. The other fraction (22%) of the CBO farmers was found to be less satisfied with the extension agents training programmes. On a statistical consideration, the result was significant at the 1% level of probability. On this note, the null hypothesis was rejected while the alternative was accepted and it states that: there is a significant relationship between CBO farmers that are satisfied and those that are not satisfied with the extension agents training programme.

In line with the proportion of CBO farmers that are satisfied (78%), it indicated that the CBO farmers that are satisfied with extension agents training programmes is significantly high. It therefore implies that the extension agents have performed creditably well in spite of the constraints confronting their training sessions as indicated in Table 5. This result is in conformity with that of Okwukenye and Okoedo-Okojie (2014) which indicated that the extension agents serving in the Delta State Agricultural Development Programme (ADP) are meeting up with their assigned task and therefore helping to boost farmers output and income.

Table 8: Test of difference in CBO farmers satisfaction with extension agents farming programme

Satisfaction Status	Frequency	Percentage	Prob. Level
Satisfied	87	0.78	0.001
Less satisfied	24	0.22	
Total	111	1.00	

Source: Field survey, 2021

Conclusion

From finding, it was concluded that most of the farmers who participate in extension agents training through belonging to CBOs are males who are strong and active, responsible because they are married and have people to cater for. They are also literate, small-scale farmers in nature and are experienced in farming.

Most of the farmers were satisfied with the extension agents training programmes carried out on them and this is not unconnected to the numerous benefits they agreed to be benefiting from their participation in the CBO groups and training programmes. Beyond that, the farmers noted that they are highly constraint by many factors and if not which, the perceived benefits would have been more.

Recommendations

Based on findings, the following recommendations were advanced:

- The issue of low extension agents to farmer ratio was a major problem confronting the farmers in their training programmes. To this end in view, government should try to employ and engage more extension agents into the Agricultural Institutions and Ministries so that the number of extension agents to farmers ratio can be reduced. This will go a long way to ensure a more reach-out to the farmers, improve their skills and abilities and then have their productivity increased.
- There is also the need for the extension agents to be provided with training equipment and materials to be used for demonstration during training programmes. Such provision would ensure quick and easy understanding by the farmers on what they are being trained on.
- Good human relation, sincerity and straight forwardness are virtues that must be inculcated into the extension agents. This will help to increase farmers interest, commitment and participation in the training programme. This has become necessary since unfavourable attitude of the extension agents was identified as a challenge faced by CBO farmers in the course of training.

References

- Adebayo, K. and Okuneye, P. A. (2005). Economics of agricultural extension. In: F. Adebayo (Ed.) *Agricultural Extension in Nigeria*. Agricultural Extension Society of Nigeria, Ilorin. P. 79.
- Akinbile, L. A., Hussain, L. A., and Yekinni, O. T. (2008). CDAs/CBOs participation in community based poverty reduction projects in selected communities in Ekiti State, Nigeria. *Nigeria Journal of Rural Sociology*. 8(1): 41 – 47.
- Akinagbe O. M., Ezeuzo, O. P. and Onwubuya, E. A. (2017). Challenges of Extension Workers in Reaching Rural Women Farmers in Enugu State Nigeria. *Journal of Agricultural Extension* Vol. 21 (3): 1 – 15.
- Anyoha N, Chikare J, Godson Ibeji C, Ogueri E. and Utazi C. (2018). Information and Communication Technology Roles in Improving Women Farmers Access to Agricultural/Agribusiness Services in Orlu Agricultural Zone of Imo State, Nigeria. *Current Investigations in Agriculture and Current Research* 3(4): 424 - 429.

- Arshad, F., Muhammad, I., Nisar, A. S. and Robina, K. (2010). Agricultural extension agents and challenges for sustainable development (A case study of Peshawar Valley). *Sarhad Journal of Agriculture*. 26(3):1 – 8.
- Danso-Abbeain, G., Ehiakpor, S.D. and Aidoo, R. (2018). Agricultural extension and its effects on farm productivity and income: Insight from Northern Ghana. Retrieved at: <https://agricultureandfoodsecurity.biomedcentral.com> >. On 20th August, 2021.
- Delta State Wikipedia. Retrieved at: https://en.m.wikipedia.org/wiki/Delta_State_Wikipedia. On 23rd June, 2021.
- Ekong, E.E. (2003). *Introduction to Rural Sociology* (Second Edition) Dove Educational Publishers, Uyo, Nigeria. PP. 3, 127, 233, 234, 289 – 304
- Erie, A.P. (2009). *A Conceptual Framework for the Privatisation and Commercialisation of Agricultural Extension Services: A Case Study of Edo State, Nigeria*. Rudel printers and publishers, Benin City, Edo State, Nigeria. PP. 11 - 14
- FOS (2004). Poverty and Agricultural Sector in Nigeria Federal Office of Statistic, Abuja, Nigeria. P. 133
- Iyoha, M. A. and Ekanem, O. T. (2002). *Introduction to Econometrics*, Mareh publishers, Benin City, Nigeria. PP. 51 – 55, 77 - 83
- Madukwe, M. C. (2005). Agricultural extension administration. In: S. F. Adedoyin (Ed.) *Agricultural Extension in Nigeria*. Agricultural Extension Society of Nigeria. PP. 182 – 185.
- Mgbada, J. U. (2006). Effectiveness of information sources on improved farming practices to women in Enugu State, Nigeria. *Global Approaches to Extension Practice*. 2(1): 69-78
- NAEC (2008). *Nigeria Atlas of Electoral Constituencies*. Publication of Independent National Electoral Commission, Abuja, Nigeria. PP. 52, 89 – 107.
- NPC (2016). National Population Commission of Nigeria. Population by sex and LGA. Pdf-Delta State Government. Retrieved at: <https://www.deltastate.gov.ng>. On 23rd July, 2021
- Okwuokenye, G.F. (2020). Farmers perception of farming cucumber in greenhouse for increased productivity in NOUN farms, Kaduna, Nigeria: an extension approach. *International Journal of Agriculture and Rural Development*. Volume 23(2): 5265-5273,
- Okwuokenye, G.F. and Akintoye, E.O. (2016). Farmers' participation in community based organizations: Implications for increased productivity in Edo, Delta and Bayelsa States in Niger Delta Area, Nigeria. *British Journal of Applied Science and Technology*. 13(1): 1 - 17
- Okwuokenye, G.F. and Ibi-Kunle, A.M. (2021). Assessment of adoption of agrochemicals by cucumber farmers in selected local government areas in Kaduna State, Nigeria. *ADAN Journal of Agriculture* 2(1):59 - 69
- Okwuokenye, G.F. and Okoedo-Okojie, D.O. (2014). Evaluation of extension agents commitment to the agricultural loans and input supply programme on special rice production in Delta State, Nigeria. *Journal of Applied Sciences and Environmental Management*. 18(2): 327 - 335
- Okwuokenye, G.F. and Urhibo, F.A. (2019) Performance of the agricultural extension sub-unit of agricultural development programme in Delta South Agricultural Zone, Delta State, Nigeria. *Taraba Journal of Agricultural Research*. 7(1): 18 - 27
- Onuka, A.O.U., Ajayi, O. and Kassim, O. (2012). Effects of manpower development on workers job performance. *European Journal of Educational Studies*. Vol.4 No. 3
- Ovharhe, O.J. (2014). Factors affecting technologies adoption among Fadama III farmers in Delta State, Nigeria. *The Nigerian Journal of Agriculture and Forestry*. 4(1): 52 – 57
- Salihu, A.N. (2011). Manpower training and development as a veritable tool of improving employees' performance. *Advances in Management*. 9(1)
- Singh, A. and Mohanty, P. (2012). Impact of training practices on employee productivity: A comparative study. *Interscience Management Review*. 2(2): 87 – 92
- Sinkaiye, T. (2005). Agricultural extension participatory methodologies and approaches. In: F. Adedoyin (Ed.). *Agricultural Extension in Nigeria*. Agricultural Extension Society of Nigeria, Illorin. PP. 220-226.
- Taiye, O.F., Adebola, O.A. and Adebayo, E.K. (2006). Social activities and socio –economic state of rural farmers cultivating improved maize in kaduna State, Nigeria. *Global Approaches to Extension Practice*. 2(1): 29-36.