

AGRICULTURAL EXTENSION STRATEGIES ADOPTED BY EXTENSION WORKERS IN DELTA STATE: IMPLICATIONS FOR EFFECTIVE COMMUNICATION.

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ABSTRACT

The study identified strategies and constraints faced among researchers in dissemination of extension strategies to extension works among urban farmers in Delta State. About 120 extension workers were purposively selected from the two research institutes in the State with the use of structured questionnaire. Data collected were analyzed with Pearson Moment Correlation. Results showed that about 60.0% of the extension workers had their background in extension discipline while the remaining 40% were in other disciplines. Among the numerous strategies available for information dissemination, frequent result demonstration on the farmers farm was regularly used (Mean =3.07) and improve level of information dissemination (Mean=3.62) and improved teaching skills of extension agents (Mean = 3.45) were commonly practiced. , education ($t=2.133;p\leq 0.05$) significantly determined frequency of dissemination of information with the aid of extension strategies in the study area. It was concluded that extension workers in the State demonstrated professionalism in the discharge of their duties considering the adoption of the two basic strategies of information dissemination and Improved teaching skills of the extension agents. It is recommended that government improve physical and social infrastructure like roads, electricity and water supply to boost agricultural production..

Keywords: Information, strategies, agricultural extension

INTRODUCTION

Agricultural extension is recognized as an information and knowledge sharing where farmers in their villages are provided with innovations and improved methods and techniques for planting and rearing crops by providing advice and support to farmers to improve their production methods, marketing and processing activities (Okeke, 2015). Ultimately, rural population growth and the improvement to the living standards of farmer by rising farm production and income continue to have the goal of agricultural extension services. Extension workers provide useful and relevant information in order to affect improvements in rural communities' awareness, behaviors, activities and skills so that they can actively participate. Agricultural extension is a contact, learning and change

management system. The communication method followed by extension staff and their communication skills are therefore widely known to have a major influence on the capacity (Akinnabe, 2017). Agricultural extension workers are Trained personnel responsible for the transmission of information and technology to farmers in rural and urban areas are agro-extension workers and perform other roles such as aiding farmers and providing practical application of research information to farmers and families with effective strategies (Oladele, 2016). Therefore, strategies and resources for enhancing local access to high quality agricultural information are a prerequisite for improving livelihoods and increasing vulnerability. The inadequacy can be explained by a poor awareness of farmers' needs and local conditions in which they operate (Umeh, Aghale, and Anyim, (2018) . According to (Ayesha and Mohammad, 2012) , The farm extension worker must improve its skills and knowledge as agriculture evolves and intensifies. Village extension agents represent a large proportion of those who have lower education qualifications and are responsible for training farmers and distribution of agricultural messages. As most extension agents still have a low level of education, farmers in Nigeria continue to have a poor quality of extension services. Therefore, extension should be based on constant assessment and extension job performance should be evaluated with the improvements in information, abilities, attitudes and the acceptance of changing people's behavior (Oladele, 2016). Throughout the developing world, it is a known fact, that farmers already have a lot of knowledge about their environment and their farming system (Owolabi, 2014). Extension can bring them other knowledge and information which they do not have example. Cause of damage to particular crops, general principles of pest control, or the way manure and compost are broken down to provide plant nutrient . The application of such knowledge often means that the farmer has to acquire new skills of various kind, the transfer of this knowledge and skills to farmers and their families is an important extension activities and the extension agents must prepare himself thoroughly (Odoemelam, 2015).

He must find out which skills or areas of knowledge are lacking among the farmers in his areas. Unfortunately, the low output in the developing

world shows clearly that there is a minimal rate of developments for farmers. This has to do with issues with insufficient or poorly trained extension staff and with inadequacies in interpersonal communication. This lack of interpersonal communication strategies is seen as a result of the use of mass media support for the dissemination of agricultural information (Nwachukwu and Apu, 2008); Hence, the specific objective of the study is to examine socio economic characteristics; respondents sources of information on agricultural extension strategies; ascertain respondents perceived improvement strategies for agricultural information dissemination; and identify the constraints in the use of agricultural extension strategies by the respondents in the study area.

METHODOLOGY

Delta state has a total population of 4,098,291 with a total land area of 17,698 square kilometer which has about 60% land. The State has a population density of 232 inhabitants per square kilometer with an annual growth rate of 3.28% (National Population Census, 2006). The State lies approximately between latitude 50 and 60 , 30 North and longitude 50 and 60 , 45! East. The State is made up of 25 local government areas. Delta State is made up of three agricultural Zones, which corresponds to senatorial Zones- Delta Northern Zone, with 9 extension Blocks, Delta central with 10 extension blocks and Delta South Zone with 6 extension blocks. A simple random sampling technique was used to select five (5) extension workers from each of the blocks from the Agricultural Development Programme (ADPs) in the agricultural zones in Delta North, Delta South and Delta Central making a total of one hundred and twenty five (125) extension workers. Thus, 120 respondents were used for the study. Data were collected with the use of structured questionnaire and analyzed using frequency counts, percentage, mean and Pearson Moment Correlation was used to examine frequency of application of strategies of agricultural extension by extension workers among farmers. A null hypothesis formulated for the study is; there is no significant relationship between extension workers personal characteristics and the extent extension workers apply extension strategies in dissemination of information to end users

RESULTS AND DISCUSSION

Results in Table 1 showed that higher proportion (42.5%) of the respondents were between the age of 40 and 49 years old with a mean age of 38 years. This is an indication that respondents in the study area were relatively young. This result reflects the findings of

Adeola and Ayoade (2011) who documented that the mean age of extension workers as 38 years in a study on extension agents' perception of the information needs of women farmers in Oyo State, Nigeria.

The result in Table 1 also showed that majority (87.5%) in the study area were males. This indicates that males dominate extension organization in the study area. This finding agrees with that of Ozor (2004) that the success and weakness of extension work depends on man power and knowledge, the implication of this is that male farmers are likely to be reached by male extension agents using extension strategies and principles. Majority (51.7%) of the respondents were married and indication that marriage is an honourable institution in the study area. This factor can attract the role of interest and good responsibilities which enable individual to take extension job as a source of livelihood Enwere (2004). The result in Table 1 also showed that majority (91.7%) of the respondent in the study area were Christians. The result also showed that respondents in the study area were educated with higher proportion (35.0%) of the respondents having B.Sc degree as the highest educational qualification, followed by (31.7%) of the respondents who possesses OND and M.Sc degrees as their highest qualification. This is an indication that respondents in the study area were literate and will be able to understand extension strategies in dissemination of agricultural information effectively to end users. The result in Table 1 also showed that majority (70.0%) of the respondents in the study area had a household size of between 4-6 persons with a mean household size of 5 persons. This average household size indicates that respondents may not be too faced or have family responsibilities that may act as distractions from the core responsibilities of extension service which is the dissemination of agricultural information to farmers through the various extension strategies and principles in the study area.

The result in the Table also showed that majority (56.7%) of the respondents in the study area had 6-10 years working experience with a mean working experience 8 years. This implies that respondents may have vast knowledge of extension teaching strategies that are of positive effects on farmers in the study area. The result in the Table also showed that higher proportion (46.7%) of respondents in the study area had less than 15 years of training in extension work.

Majority (60.0%) of the respondents in the study area were extension agents. This is an indication that there were more extension agents than other related field or position which implies that farmers may have direct contact with extension agents in the study area.

Table 1: Socio-economic Characteristics of Respondents in the study area

Variables	Frequency	Percentage (%)	Mean
Age			
21-29	24	20.0	38
30-39	26	21.7	
40-49	51	42.5	
50 and above	19	15.8	
Sex			
Male	15	12.5	
Female	105	87.5	
Marital status			
Married	62	51.7	
Single	56	46.7	
Divorced	2	1.7	
Widowed	0	0	
Separated	0	0	
Religion			
Islam	9	7.5	
Christianity	110	91.7	
Traditional	1	0.8	
Others	0	0	
Education			
Primary	2	1.7	
Secondary	0	0	
OND	38	31.7	
B.Sc	42	35.0	
M.Sc	38	31.7	
PhD	0	0	
Household size			
1-3	1	0.8	5
4-6	84	70.0	
7-9	27	22.5	
>9	8	6.7	
Work experience			
5 & below	8	6.7	8
6-10years	68	56.7	
11-15years	26	21.7	
> 15years	18	15.0	
Years of Training (extension work)			
5 & below	56	46.7	6
6-10years	46	38.3	
11-15years	18	15.0	
> 15years	0	0	
Rank			
Extension agents	72	60.0	
BEA	47	39.2	
ZEO	1	0.8	
CEO	0	0	

Source: Field Survey, 2019

Sources of Information on Agricultural Strategies

The result in Table 2 below showed that respondents frequently receives information on extension principles from four (4) major sources, these are farm visit (Mean=3.69), home visit (Mean= 2.86), monthly review meetings (Mean= 2.26) and group discussion (Mean=2.52) respectively. The mean variables shows that farm visit is the major source of information to

respondents, this implies that respondents learn about farmers problems and developed strategies in handling farm related issues by visiting farmers. This findings agrees with that of Agbamu (2005) that extension is a comprehensive programme of service deliberately put in place for expanding prospective farmers and farm families.

Table 2: Sources of Information on Agricultural Strategies

Information Sources	Mean	Standard Deviation
Farm visit	3.69*	0.67
Home visit	2.86*	1.23
Monthly review meetings	2.26	1.44
Group discussion	2.52*	1.40
Agricultural programmes	2.52*	1.40
Forth night training	2.32	1.36
Seminars	2.27	1.31
Workshops	2.10	1.21
Posters	1.80	1.18
Journals	1.82	1.19
Conference	1.87	1.16
Interview	1.88	1.33
Computer	1.78	1.22
Printed media	1.82	1.32
Television	1.86	1.02
Radio	1.76	0.88
Extension films	1.77	2.23
Magazines	1.61	0.88
Newspaper	1.64	0.92
Circular letter	1.58	0.85
Recorded video	1.45	0.73
Audio cassette	1.38	0.62

Source: field survey 2019

Mean \geq 2.50**Perceived strategies for improving the practice of agriculture extension strategies**

Table shows the results on the perceived strategies for improving practice of agricultural extension strategies adopted by extension workers. Eight strategies of strategies were listed and respondents had significant interest in only six of these areas. However, there was

much preference for frequent result demonstration on the farmers' farm among the strategies.

(Mean =3.10), for improving the practice of agricultural extension strategies. This is an indication that respondent effectively work with the farmers using extension strategies.

Table 3: Perceived Strategies for Improving Communication between Agricultural Extension agents to Farmers

Variables	Mean	SD
Consistent home and farm visitation of the farmer	2.95*	.62
Frequent result demonstration on the farmers farm	3.10*	.53
Frequent methods demonstration on the farmers farm	3.07*	.74
Working with different target group	2.98*	.72
Cooperating with other rural development organization	2.79*	.90
Frequent application of grouping method demonstration	2.60*	.88
Regular on line updating of farmers	2.40	.64
Frequent application of mass method demonstration	2.29	.78

Source: Survey Field, 2019

*Agreed (mean \geq 2.50)**Perceived importance of the practice of Agricultural extension strategies**

Result in Table 4 shows that improved level of information dissemination with a mean of (Mean = 3.62). help assist farmers to help themselves with a mean of (Mean= 3.02) and making their job effective and efficient in their daily twelve (12) ways, with a respective of, Help farmers improve their productivities (Mean=3.44, SD= 0.70), Help assist farmers improve in their living standard (Mean= 3.33, SD= 0.66), Improves teaching skills of extension

agents (Mean= 3.45, SD= 0.72), Improve or advance their knowledge of extension teaching (Mean=3.38, SD= 0.54), Timely adoption of technologies and practice by farmers (Mean = 3.02, SD= 0.95) followed by all other frequency agreed upon by respondents. From the mean differences, it appears that respondents in the study area frequently disseminate information with the aid of extension strategies .This is an indication that respondents in the study area frequently apply extension strategies in the discharge of their jobs which implies that farmers are taught with

the aid of extension strategies, this argues with the findings of (2015) that activities that define Agricultural Extension workers in are inadequate and

ineffective in carry out their roles for effective communication.

Table 4 : Perceived Importance of the Practice of Agricultural Extension Strategies

Variables	Mean	SD
Improve their level of information dissemination	3.62	.54
Improves teaching skills of extension agents	3.45	.72
Help farmers improve their productivities	3.44	.70
Improve or advance their knowledge of extension teaching	3.38	.54
Help assist farmers improve in their living standard	3.33	.66
Make farmers to be alert in sourcing for information for new method of farming	3.33	.57
Help assist farmers to help themselves	3.23	.66
Be able to encourage young farmers	3.22	.65
Help farmers upgrade their farming limitation i.e from small farming to a larger scale farming	3.20	.88
Help farmers learn faster	3.18	.56
Make their job effective efficient in their daily activities	3.02	.95
Timely adoption of technologies and practice by farmers	3.03	.88
Be able to strategize plans and organize extension programmes	2.85	.89
Have personal confidence to withstand audience	2.77	1.23
Be able to solve existing problems among rural farmers	2.73	1.11
Help farmers to be diversify in their level of adopting method	2.77	.83
Case coaching of extension agents themselves	2.78	1.01

* *Agreed (mean > 2.50)*

Source: Survey Field, 2019

Constraints faced by respondents in the practice of extension strategies

Result in Table 5 showed that, location/ distance problem (Mean = 2.01) was the only identified constraint frequently faced by respondent in the practice of extension strategies on their job. This is in consonance with (Akinagbe ,2017) who attributed long distance as problem of the extension agents to disseminate relevant information to the farmers .

Table 5: Constraints faced by respondents in the practice of extension strategies for information dissemination in the study area.

Constraints	Mean	SD
Lack of motivation by agricultural development programme management	1.75	.70
Location/distance problem	2.01	1.02
Mostly faced with leadership problem	1.58	.54
Farmers illiteracy or poor educational background pose a problem	1.71	.79
Mostly faced with financial problem	1.66	.91
Transportation problems	1.62	.80
Problem due to farmers culture	1.48	.80
Farmers do not share problems with extension agent	1.61	.52
Religious belief problem	1.38	.52

Farmers do not co-operate	1.43	.51
Problem of framing system	1.40	.60
Problems due to scatter farmland	1.54	.80
Farmers are not interested in extension agent	1.38	.52
Shortage to time to teach farmers properly	1.43	.59
Do not understand the farmers dialect	1.42	.53
Civilization/development problem	1.28	.62
Constraints due to marital status	1.23	.42

Source: Survey Field, 2019*frequency (mean>2.0)

Relationship between extension workers characteristics and frequency of disseminating information on extension strategies.

Ho: There is no significant relationship between extension workers personal characteristics and the extent extension workers apply extension strategies in dissemination of information to end users.

The result in Table 6 showed that extension workers age, sex, education, years of training, as well as rank were significantly related with the frequency of dissemination of information on extension strategies. The result for age ($r = -0.370, p < 0.05$) is negative, which implies that younger extension agents disseminate information on extension work using extension strategies more than older extension agents, reason is because younger extension agents still have the energy to demonstrate information to farmers on their farms. The result for sex ($r = 0.241, p < 0.05$) is positive, which means that male extension agents disseminate information more using extension

strategies than their female counterpart, reason is because more male extension agents are employed into public extension institute, therefore majority of respondents are field workers who have direct contacts with the farmers. The result on years of training ($r = -0.383, p < 0.05$) is negative which implies that extension agents with fewer years of training disseminate information on extension work more than those with higher years of training, reason is because, they have a higher enthusiasm to perform on the job. The result of the rank ($r = 0.338, p < 0.05$) is positive which implies that, extension agents with higher rank disseminate information more using extension strategies than extension agents with lower rank. The result on education ($r = 0.308, p < 0.05$) is positive, which implies that extension agents with higher education disseminate information more using extension strategies than extension agents with lower educational qualification reason is because, higher education extension agents are more knowledgeable and vast in extension principles.

Table 6: Relationship between extension workers characteristics and frequency of disseminating information on extension strategies.

Independent Variable	Coefficient
Age	-0.370*
Sex	0.241*
Education	0.308*
Working experience	-0.040
Years of training	-0.383*
Rank	0.338*

Likelihood ratio Chi-square= 92.56; df= 6; $p \leq 0.005$ Goodness of fit Chisquare= 73.02; df= 67; $p \leq 0.050$ Pseudo R-square = 0.700 Source: Compiled from Field survey data, 2019.

Conclusion and Recommendation

The importance of agricultural extension strategies cannot be overemphasized in information dissemination among farmers and the practice of urban farming in developing country like Nigeria may require effective and efficient agricultural extension system where professionalism is demonstrated in carrying out extension works. Therefore, agricultural extension strategies will have to be imbibed by those

carrying out extension works. The study however, found that a weak extension system existed between urban farmers and an extension worker in the study area was only due to long distance in accessing the farmers. Therefore, it is recommended that government improve physical and social infrastructure like roads, electricity and water supply to boost agricultural production.

Beyond this, extension workers demonstrated some level of professionalism from the strategies of Improve their level of information dissemination and Improves teaching skills of extension agents that had high frequencies among the others strategies identified.

The findings also established that education and extension workers' ranks were very crucial to the dissemination of relevant information on extension strategies in the discharge of their responsibilities as extension workers. It is therefore concluded that positive relationships existed between these variables and extension workers' skills in discharging their duties as change agents.

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