

ENHANCING AGRICULTURAL EXTENSION SERVICE DELIVERY FOR AGRICULTURAL SUCCESS IN DELTA STATE

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Abstract

This study focused on the ideas for enhancing the delivery of Agricultural Extension services in Delta State. The study sample consists of 100 extension agents and ten farmers from the three senatorial districts of Delta State. The data for this study is obtained through the administration of a survey questionnaire. The mean, standard deviation and the student t-test is the main statistical tool used to analyse the research questions. According to the study's findings, training programs, the supply of needed amenities in rural regions, and incentives to extension

agents improve the delivery of agricultural extension services. The hypotheses were accepted at a ($p < 0.05$) significance level. The researchers proposed that the Delta State government always conduct training programs, provide basic facilities in remote areas, and provide incentives to EXTENSION AGENTS. Rural farmers' low agricultural commodity production is caused by insufficient extension education services, which can be remedied by proactive measures to ensure enough extension education services that can successfully boost agricultural growth and productivity.

Keywords: Agricultural Extension, service delivery and Agricultural Success

Introduction

Extension education is an out-of-school voluntary adult education program, using teaching and learning principles concerning people's livelihood, carried out systematically in an atmosphere of mutual trust and respect. Also, agricultural extension remains the most significant means of reaching farming households in rural areas and globally. There are changing trends and challenges facing Agricultural Extension delivery in Nigeria which have necessitated the growing campaign for an increase in private participation and funding (Oladoja in Adejo et al., 2011).

The concept of Agricultural Extension varies between countries and from one agricultural agency to another. For instance, in Australia and New Zealand, it refers to as agricultural advisory work, while in the USA, it is a cooperative extension service. Consequently, its definition depends on the objective of the organisation providing the services. Agricultural Extension is a type of service or system that supports farmers in improving farming methods and techniques, boosting production efficiency, income and raising their standard of living through educational procedures and uplifting the social and educational standard of rural life (Hamisu, Ardo, Makinta, Garba & Musa, 2017). Furthermore, extension service is defined as extending services or system which extends the educational advantages of an institution to persons unable to avail themselves in a normal manner (Hamisu et al., 2017). Extension's general duty is to share knowledge, support, and advise farmers to boost agricultural production and quality control methods. Bababe (2002).

Agricultural Extension involves the transfer of knowledge to end users; yet, at the most basic level, Agricultural Extension could be defined as a voluntary out-of-school educational program for clients that includes appropriate materials, principles, and methods. It also entails

disseminating information to clients about innovation or new technologies. Agricultural Extension is also defined as the body of knowledge that gathers experience and research discoveries related to the extension. It borrows concepts from other disciplines and fields of endeavour that appear relevant to extension. Therefore Agricultural Extension is the process through which farmers learn why they must change their attitudes and practice. It is also to note that it does not involve only farmers with production, i.e. cultivation practices only but those involved in processing and marketing agricultural products.

Agricultural extension often emphasises working with people rather than for them, selects for adjustment those problems which people themselves recognise as problems, conditions which they have previously felt little concern as well as possible solutions. Agricultural extension agents play a critical role in agricultural growth in Nigeria. It accomplishes this by promoting farmer education to increase their agricultural development skills, knowledge, and attitude. It disseminates research findings on how to solve agricultural problems to farmers and encourages farmers to apply these and other enhanced agricultural technical skills. It refers farmers' issues to research institutions for resolution.

Thus extension work teaches people to recognise what to want and how to work out ways of satisfying these desires Bababe (2002). The extension agents are carrying out the dissemination of the Agricultural Extension service. The entire Agricultural Extension process relies on the extension agent, who is a crucial component in all extension efforts. The Extension agent is a well-educated and well-trained individual who works with farmers. If an extension agent cannot respond to a specific circumstance and function successfully, no matter how creative the extension technique or spectacular the supply of inputs, the effectiveness of the Agricultural Extension service will be undermined. As a result, the effectiveness of Agricultural Extension agents determines the success or failure of an extension program. Extension agents help farmers in a variety of ways. It is frequently a close relationship that necessitates a great deal of subtlety and skill. The extension agent will surely work with farmers with different circumstances than his own. The extension agent generally intervenes in the lives of farmers in a certain area as part of his extension work. The extension agent is a catalyst for change. He steps in to effect change to better the lives of farmers and their families. (Oakley, 1985).

This is not a simple assignment, and a number of complications result from his intervention. The extension agent's core purpose is to bring change to a rural area, and what areas of knowledge and personal skills would be effective in completing this function must be addressed in this circumstance. Oakley (1985). Furthermore, a rural area is explained as an area characterised by widespread poverty, inadequate health care, poor communication facilities, poor nutrition, and high illiteracy rates.

The farm sizes of rural dwellers are generally small. The farmers use poor productive resources, and income per capital is low. There is a high level of poverty, and physical infrastructures such as roads, storage structures including health facilities, educational structures, electricity supply and water supply are generally less available in rural areas than in urban centres. Nigeria's rural areas are inhabited by the bulk of the nation's population (about 80 per cent). They serve as the base for the production of food and fibre. They are also the major capital formation sources for the country. The term rural can be defined and differentiated from urban in many ways. For instance, census figures have been used traditionally to distinguish rural from urban areas. However, the fact that there is no consensus

on the figures has made use of census definition rather problematic. For instance, in 1953, the then colonial government in Nigeria decided that an urban centre is any compact settlement with a population of at least 5,000 persons (Department of statistics, population census of the Eastern region of Nigeria, Lagos, 1953), while in 1963, an urban area was defined as one with a population of 20,000 or more people. Any place with a lower population in either instance is treated as a rural area by implication. (Bernadette, 2003). A casual observer often refers to any place where a large number of industries or any industry exists as urban while referring to an area without industries as a rural area (Cess, 2014).

Statement of the Problem

The rural sector of Nigeria's population can be distinguished from the urban sector in terms of the volume of non-agricultural activities within the two sectors. Economic activities in the rural sectors depend directly or indirectly on the exploitation of the land. It centres principally on agricultural Activities such as Animal husbandry, poultry, fishery, forestry and food processing. One of the features of rural areas is the absence of modern infrastructural facilities. Many rural areas are so palpable in poverty that the people are the embodiment of it. In most rural parts of Nigeria, basic infrastructure, if it exists at all, is insufficient for significant development. Physical infrastructure, such as motorable highways, is frequently inadequate. The residents and their cattle rely on shallow wells or guinea worm-infested ponds for water. Rural residents have fewer options for education, work, and a comfortable way of life. This, without a doubt, impacts the rural population's quality of life. The impact of this condition on the Nigerian people is obvious, as around 80% of the population lives in rural areas. This means that only twenty percent of the population enjoys the available social amenities. Doubtless enough, Agricultural education can be effectively utilised to substantially reduce the disparity between the rural and the urban population.

The rural farmers need the services of the extension agents, and the extension agents must disseminate the extension education services to the rural farmers. However, unfortunately, it has been observed that despite the presence of the extension agents in the three senatorial zones of Delta State, the rural farmers find it extremely difficult to enjoy the Agricultural Extension services. Agricultural extension education service delivery has not been effective. As a result, agricultural production in Delta State has been affected, resulting in low productivity, poor harvest and high cost of agricultural commodities.

Objective of the Study

The main purpose of this paper was to determine the agricultural extension service delivery improvement strategies for the rural farmers in Delta State. Specifically, the study sought to determine:

1. Training programmes for extension advisors to enhance the quality of agricultural extension services in Delta State.
2. Provision of basic facilities in remote rural areas to improve the delivery of extension services in Delta State.

Research Questions

The following questions guided the study:

1. What are the training needs for extension agents to enhance the quality of agricultural extension services in Delta State?

2. What are the basic facilities needed by extension agents in remote rural areas for improving agricultural services delivery in Delta State?

Research Hypotheses

The following hypotheses guided the study:

1. There is no significant difference between extension agents and rural farmers in the training needs for improving agricultural extension services in Delta State.
2. There is no significant difference between extension agents and rural farmers in their perception of the basic facilities needs in rural areas for improving agricultural services delivery in Delta State.

Methodology

This section describes the methodology used in the study. These include the study's design, study population, study sample, description of the instrument, validation and method of data analysis. The research design used in this study is the survey design. The study population consists of 100 extension agents and ten farmers in the three senatorial zones of Delta State. A well-structured questionnaire was used for data collection. The questionnaire used for the study was made up of (20) items in a cluster of (10) items for each of the two research questions earlier formulated. The instrument consists of a four-point Likert rating scale or strongly agreed (SD), agreed (A), disagreed (D) and strongly disagreed (SD). The questionnaire was validated by an expert from the Department of Agricultural Extension, Delta State University, Abraka and was subjected to a reliability test with a reliability coefficient of 0.83. Mean and standard deviation was used for the purpose of decision making; a mean of 2.50 was used as the cut-off point. Thereby any (x) scoring rating of 2.50 and above indicates the respondents' agreement with which the statement was accepted, while any score below 2.50 is regarded as rejected. T-test was the main statistics used for data analysis, and the hypothesis was tested at a 0.05 level of significance.

Data Analysis and Interpretation

This section contains the analysis and interpretation of the data collected.

Research Question I

What are the extension agents' training needs for improving the Provision of Agricultural Extension Services in Delta State?

Table 1: The mean response rating on the extension agents' training needs for improving the Delivery of Agricultural Extension services.

S/N	ITEMS	EXTENSION AGENTS (100)						FARMERS (10)					
		SA	A	D	SD	X	SD	SA	A	D	SD	X	SD
1	Organising workshops for the extension agents may help enhance the Delivery of Agricultural Extension services	52	31	10	7	3.22	0.95	3	4	2	1	2.9	0.99
2.	Organising seminars for the extension agents may help enhance the Delivery of Agricultural Extension services	45	34	21	-	3.24	0.93	6	3	1	-	3.5	0.71
3	Organising conferences for the extension agents may help enhance the Delivery of Agricultural Extension services	49	32	10	9	3.0	1.00	5	3	1	1	3.21	1.03
4	Induction training for the extension agents may help enhance the Delivery of Agricultural Extension services	51	41	8	-	3.22	0.95	4	2	3	1	2.9	1.10
5	In-service training for the extension agents may help enhance the Delivery of Agricultural Extension services	44	42	9	5	3.11	0.99	3	3	2	2	2.7	1.16
6	On-the-job training for the extension agents may help improve the Delivery of Agricultural Extension services	54	34	-	12	3.30	0.90	6	2	1	1	3.3	1.06
7	The establishment of a skill acquisition centre in the rural area may help the delivery of Agricultural Extension Services	46	35	12	7	3.0	1.05	7	3	-	-	3.7	0.46
8	Granting a loan to the extension agents may help improve the delivery of Agricultural Extension services	56	43	-	1	3.3	0.95	8	1	-	1	3.6	0.96
9	Lease of agricultural equipment without payment may help improve the delivery of Agricultural Extension services	71	21	8	-	3.33	1.12	3	4	2	1	3.1	0.99
10	Distribution of fertilisers to the rural farmers at a subsidised rate may help improve the delivery of Agricultural Extension services	57	33	-	10	3.30	0.90	6	2	1	1	3.33	1.06
Grand mean		SD		3.17 0.97				3.23 0.92					

The data presented and analysed above reveals that the responses from extension agents and farmers on items 1 to 10 are accepted because their mean is above 2.50. Their grand standard deviation is 0.97 and 0.92, respectively.

Hypothesis I

There is no significant difference between extension agents and rural farmers in the training needs for improving agricultural extension services in Delta State.

TABLE 2: T-test analysis on hypothesis 1

Variables	N	\bar{X}	SA	Df	Level of Significant	T. Cal Values	T. Crit. Value
EXTENSION AGENTS	100	3.17	0.97	108	0.05	0.21	1.96
Farmers	10	3.23	0.93				

Table 2 above reveals that the t- calculated is lower than the t- crit—the value of 1.96 at a 0.05 level of significance. So the hypothesis stated earlier is accepted.

Research Question II

What are the basic facilities in the remote rural areas for improving agricultural services delivery in Delta State?

TABLE 3: The mean rating of response on the basic facilities in the remote rural areas for improving agricultural services delivery

S/N	Item	EXTENSION AGENTS (100)						FARMERS (10)					
		SA	A	D	SD	\bar{X}	SD	SA	A	D	SD	\bar{X}	SD
11.	Improved health care services may help the delivery of Agricultural Extension Services	67	22	11	-	3.53	1.12	5	4	1	-	3.24	0.93
12.	The provision of potable water may help the delivery of Agricultural Extension Services	57	31	12	-	3.5	1.17	4	2	3	1	3.1	1.10
13.	The provision of the civic centre in the remote rural areas may help the delivery of Agricultural Extension Services	55	24	-	21	3.4	1.01	6	2	1	1	3.3	1.06
14.	The provision of an appropriate communication system in the rural area may help the delivery of Agricultural Extension Services	46	32	11	11	3.2	1.05	5	2	2	1	3.1	1.10
15.	Improved security networks in the rural area may help the delivery of Agricultural Extension Services	56	23	-	21	3.4	1.02	4	4	1	1	3.10	0.99
16.	Modern markets in the rural area may help the delivery of Agricultural Extension Services	67	32	1	-	3.53	1.12	3	4	2	1	3.1	0.99
17.	Construction of good roads network in the remote rural areas may help the delivery of Agricultural Extension Services	65	22	21	2	3.1	1.02	6	1	3	-	3.05	1.05
18.	Provision of rural electrification may help the delivery of Agricultural Extension Services	67	21	11	1	3.14	1.03	6	2	-	2	3.33	1.07
19.	The provision of Microfinance banks in remote rural areas may help the delivery of Agricultural Extension Services	45	44	-	11	3.40	1.01	6	2	1	1	3.33	1.09
20.	Provision of the post office in the remote rural areas may help the delivery of Agricultural Extension Services	49	41	9	1	3.11	0.99	3	3	2	2	2.9	1.16
	Grand Mean/Standard Deviation					3.35	1.07					3.09	0.91

The data presented and analysed above reveals that the responses from both extension agents and farmers on items 11-20 are accepted answers because their mean is above 2.50. The grand mean for both extension agents and farmers is 3.35 and 3.09, respectively, while their grand standard deviation is 1.07 and 0.91 respectively.

Hypothesis II: There is no significant difference between extension agents and rural farmers in their perception of the basic facilities needs in rural areas for improving agricultural services delivery in Delta State.

TABLE 4: T-test analysis on hypothesis 2

Variables	N	X	SD	Df	Level of Significant	T. Cal Values	T. Crit. Value
EXTENSION AGENTS	100	3.35	1.07	108	0.05	0.51	1.96
Farmers	10	3.09	0.91				

From Table 4 above, the result of the t-calculated is lower than the t-critical of 1.96 at a 0.05 level of significance. So the hypothesis stated earlier is accepted.

Discussion of the Findings

The results of the findings in this study were discussed in this section based on the research question used in guiding the study.

It was found that training needs such as seminars, conferences, symposia, workshops and short-term training improve the Delivery of Agricultural Extension services. This work supports Bababe (2002), who reported that attendance at conferences, workshops and seminars helps to update the knowledge of the EXTENSION AGENTS who are committed to the training of the rural farmers. He further stated that the extension education delivery could be effectively carried out when the extension agents and the farmers attend seminars and workshops where issues related to agricultural production are discussed.

Secondly, the research reveals that providing basic facilities in remote rural areas helps improve the Delivery of Agricultural Extension services. This finding is in agreement with Nwachukwu & Gideon (2005). He reported that agricultural production in remote rural areas would be boosted when the small-scale farmers in the rural areas are provided with basic facilities such as pipe-borne water, rural electrification, a good road network, health clinics and effective communication systems. They further explained that the success of the Delivery of Agricultural Extension services depends on the availability of basic facilities in the remote rural areas for the extension agents and the farmers.

The study also found that providing incentives to the extension agents helps improve the Delivery of Agricultural Extension services. This finding supports the research of (Ndem & Ogbonna, 2015), who reported that incentives motivate the extension agents to carry out effective Agricultural Extension education dissemination to the rural farmers. He further explained that lack of incentives discourages extension agents in their duties in remote rural areas.

Conclusion

The provision of Agricultural Extension Services significantly affects the farmer's adoption of innovations which enhance the high-quality yield of agricultural produce. To achieve this, the extension agents need to be effective in their duties. Therefore, for the

extension agents to be effective, they need to be given re-training always and provided with the basic incentives to make them function effectively as well as providing the basic amenities in the remote rural areas where the extension agents reside. These will help to improve extension service delivery to the farmers.

Recommendation

- The government of Delta state and stakeholders in agriculture should always provide incentives to the extension agents for effective Delivery of Agricultural Extension services
- The government of Delta state should provide good roads and electricity, among others, in the remote rural areas for the use of the extension agents and the rural farmers.
- Delta state government should always train the extension Agents to update their knowledge in the Delivery of Agricultural Extension services

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