

## ASSESSMENT OF AGRICULTURAL EXTENSION SERVICE DELIVERY IN ORASHI REGION, RIVERS STATE, NIGERIA

George, S. C, Elenwa, C.O. and Isife, B.I.

Department of Agricultural Economics and Extension, University of Port Harcourt, Nigeria

Email: [carobinedo@yahoo.com](mailto:carobinedo@yahoo.com)

### ABSTRACT

*The study examined extension services delivery in Orashi region of Rivers State, Nigeria. Specifically, the study identified agricultural extension services/activities; ascertained the extension methods used by extension agents to disseminate services to their clientele and determined the effectiveness of extension methods in disseminating agriculture extension services to farmers. A survey design was adopted and questionnaire was used to elicit information. Simple random sampling and proportional sampling procedures were used to select a sample size of two hundred and five respondents made up of one hundred and eighty (180) farmers and twenty-five (25) extension workers. Data were analyzed using percentage, mean and analysis of variance. The results showed that extension services delivery in the study areas were carried out by Nigeria Agip Oil Company, Total E & P and Agricultural Development Programme extension agents. The extension activities rendered in the study area are; provision of fertilizer (81.5%), teaching farmers (88.3%), training farmers assisting farmers to get loan (95.1%), among others. The common extension methods used were demonstration group individual (65.8%) and mass media method (68.3%). The farmers differ in level of effectiveness in the methods of extension services provided among the extension agencies. The extension agents and farmers differ on their mean opinion on extension services delivery and the extension delivery methods used among the extension agencies also differ  $p < 0.05$ . Therefore, it was recommended that agricultural extension delivery should not be left for government agency alone, non-governmental agencies involve in agricultural extension delivery should show greater commitment in the areas of needs assessment and good framework policy.*

**Keywords:** Agricultural Extension, Service Delivery, Orashi Region

### Introduction

Extension is the activity that disseminates research findings and advice to farmers on agricultural practices and improve farmers their capability and communication so as to help them in their decision making related to farming (Bruin, GAC and Meerman, 2001). According to Akinbode (1985), extension is concerned with conscious effort to help people develop sound and rational attitudes and behaviours. In order words, extension is concerned with influencing behaviours.

In essence, agricultural extension is the transfer of appropriate technologies and production recommendations to the clientele (end users) taking into cognizance the interest of the farmer. Extension therefore informs, advises, teaches farmers about new improved research results and new agricultural techniques and brings feedback to research and input agencies. Agricultural extension assists the farmers to identify and analyze their production problems and become aware of the opportunities for improvement. Agricultural extension service is one of the agencies transforming subsistence farmers into modern and commercial agriculture which promote household food security (Ojeka et al, 2016). Exposure to such activities as provided by extension service is

intended to increase farmers ability to optimize the use of their resources both human and materials resources. Agricultural extension service otherwise referred to as advisory service according to Agbamu (2005), is the application of scientific research work and new knowledge by individuals or researchers to agricultural practices through farmer education. It could also be referred to as a series of embedded communicative interventions that are meant among other goals to develop and induce innovations to the people or farmers which helps them to resolve problematic situations (McGill, 2016). More so, it could be viewed as the process of enabling changes in individuals (farmers) communication and industries which are involved in the primary industrial sector and in the national resources management.

The extension services have a vital role to play in increasing agricultural production through their linkage role between researchers and end users (farmers). Without extension, most research endeavor will be futile exercise. The agricultural extension services need to communicate research results to farmers and other rural dwellers in order to move the agriculture and rural sector forward. The farmers' problems also need to be communicated to

the research institutions as these are very crucial and consequently, the agricultural sector of the economy (Isife and Ofuoku, 2008). The roles of extension today go beyond technology transfer and training of farmers but include assisting farmers to form groups, dealing with marketing issues, addressing public interest issues. In rural areas extension services have been disseminated on soil conservation, health, nutrition, family, education and youth development and partnering with a broad range of services providers and other agencies (Zwane, 2012).

The success of these extension services delivered to the rural areas depend on the expertise and technical know-how of the extension personnel; that is providing adequate and relevant extension information to these farmers to improve their farming practices by adopting new technology or improved farming practice using different extension methods to communication to them. Extension communication methods are effective means of communication meant to transmit knowledge and skills that target farmers may easily see, hear, and learn the things conveyed by extension worker. There are various extension teaching methods used as tools by the extension workers to effect desirable changes in the behavior of farmers, arrange the best learning situations and provide opportunities in which useful communication and interaction takes place between extension workers and farmer.

Agricultural extension delivery involves a lot of activities such as teaching, training, demonstration, planning among others. However, our country rural farmers rely upon indigenous or traditional forms of information for improve cultivating framework/animal farming. Such information (indigenous or neighborhood information) alludes to abilities and experience increased through oral convention and practice over numerous ages. According to Isife, Nnodim and Ochomma (2009) rural people/farmers are endowed with traditional skills and knowledge but they are at the primitive levels which need to be improved upon to fit in properly with modern skills and development technology. The improvement could be done through capacity building by extension agents delivering extension services to them. Extension agents are not only concerned with educating and making sure about selection of a specific practice yet additionally convey mediations that are intended to improve, create and instigate advancements that are intended to fathom hazardous circumstances among farmers.

Based on this, therefore, this study is designed to assess extension service delivery in Orashi Region of Rivers State. The linkage among the agencies that are involved in the agricultural extension delivery services means the evolution of clearly defined institutions to solve problems faced by farmers and to develop a package of recommendations that will enhance agricultural production as a way of giving an insight of the activities carried out among the

agencies involved in the development of agriculture and rural communities of the study area.

### **Objectives of the Study**

The specific objectives of the study were to:

- i) identify agricultural extension services/activities in the study area;
- ii) ascertain the extension methods used by extension agents to disseminate services to their clientele;
- iii) determine the effectiveness of extension methods in disseminating agriculture extension services to the farmers; and
- iv) ascertain the constraints associated with agricultural extension service delivery in the study area

### **Methodology**

The study was carried out in Orashi region of Rivers State. Orashi region is comprise 4 neighborhood government regions which are Abua-Odua, Ogba/Egbema/Ndoni, Ahoada East and Ahoada West. These 4 Local Government Areas has the seberio river flowing through them giving it that name orashi. Abua-Odua has its headquarters located in Ayama/Abua central, Ahoada West Local Government Area has its in the town of Akinima. Ogba/Egbema/Ndoni Local Government Area has its headquarter located in Omoku Town and Ahoada East has its seat in the city of Ahoada. The population of the study consists of extension workers and farmers in Orashi region of Rivers State.

### **Sampling Technique**

Extension workers were purposively selected, there are 25 extension workers. They were pruposively selected because they not many. The multi stage sampling procedure was adopted, to select the farmers. First, the Orashi region was clustered into 3 LGA's (Onelga, Ahoada East and Ahoada West). Secondly, proportionate sampling was used to select 25 communities (10 from Onelga, 8 from Ahoada east and 7 from Ahoada west). Thirdly, from the selected communities, proportionate sampling was used to select a total of 180 farmers. The total respondents sampled were 205 (25 extension workers and 180 farmers). The main source of data was the primary data. They were collected using structured interview schedule. The data collected were analyzed using percentages, frequency, standard deviation, mean, t-test and Analysis of Variance (ANOVA).

### **Results and Discussion**

The extension service providers; Nigeria Agip Oil Company NAOC, Total-Elf and Agricultural Development Programme ADP have provided some extension services to famers such as assistance in loan provision to farmers, organization of workshop and training programmes for the farmers, teaching farmers new agricultural techniques, provision of improved planting, materials, fish fingerings,

provision of agro-processing equipment, organization of farmers into co-operatives, giving guides to farmers, assistance in marketing linkage, provision of fertilizers to farmers, helping farmers in decision making, use of improved crop varieties, how to market products, training farmers (Table 1). The results imply that the agencies provided extension services and activities to the farmers in the study area. They are provision of improved planting materials, fish fingerings, provision of agro-processing equipment, organization of farmers into co-operatives, giving guides to farmers, assistance in marketing linkage, provision of fertilizers to farmers, helping farmers in decision making, use of improved crop varieties, how to market products, training farmers. Albert-Elenwa and Ile (2017) in their study observed that Nigeria Agip Oil Company NAOC and Total-Elf perform some extension services like training of farmers, provision of planting materials etc as some of their memorandum of understanding MOU to their host communities. The finding is also in line with the study of Ajala *et al.* (2013) that extension services offered to farmers include procurement of fertilizers, agro-chemical, credit facilities, improved planting materials and marketing services.

**Table 1: Extension Agents and Farmers Perceptions on extension services and activities provided by Extension agents in the study area**

Respondents/ Activities	Extension agents					Farmers					Pooled Total	Pooled %
	NAOC	Total	ADP	Total	%	NAOC	Total	ADP	Total	%		
Provision of fertilizers to farmers	4	2	1	7	28	80	30	50	160	88.8	167	81.5
Provision of improved planting materials/fish fingerlings	5	2	0	7	28	90	25	60	175	97.2	182	88.8
Organization of farmers into co-operatives	6	4	10	20	80	71	20	80	171	95	19	81.8
Assistance in loan provisions to farmers	7	2	13	22	88	63	10	100	173	96.11	195	95.1
Organization of workshops and training programmes for the farmers	15	4	6	25	100	70	30	65	165	91.7	190	92.7
Assistance in marketing linkage (Agric products)	12	4	8	24	90	64	17	70	151	859	175	84.4
Giving funds to farmers	16	5	2	23	92	60	30	63	153	85	176	85.9
Teachers farmers new agricultural techniques	9	3	9	21	84	100	10	54	164	91.1	185	90.2
Documentation of farmers demonstration	12	1	12	25	100	70	50	50	170	94.4	195	95.1
Help farmers in decision making	6	4	13	23	92	30	7	104	141	78.3	164	80
Provision of Agro processing equipment	11	2	11	24	96	72	18	67	157	81.2	181	88.3
Used of improved crop varieties	8	6	9	23	92	48	22	70	140	71.8	163	79.5
Training of farmers	10	5	7	23	92	83	16	35	134	74.4	156	76.6
How to market products	7	4	10	21	84	105	21	15	141	78.3	162	79
How to improved storage facilities	9	3	5	17	68	98	10	24	132	73.3	149	72.7

Source: Field survey, 2020

The result on extension services delivery methods used by extension agents in disseminating extension services to the farmers or clientele shows that the major disseminating method was group method (68.3%). It was closely followed by the demonstration method (63.9%). Other methods used were individual methods (55.6%) and mass media (44.9%). The result indicates that extension agents used group method because large number of farmers could be reached at a time, and therefore very appropriate for teaching skills to farmers. Jibowo and Ajayi (2011)

confirmed the finding that group and demonstration methods are very effective methods of propagating improved practice to farmers. The farmers were shown how to do something step by step that, in sequence for instance how to spray insecticide or apply fertilizers. Group method encourages fast understanding in extension teaching to farmers within the neighbourhood. However, broadcast, posters/leaflets, mobile phones which are mass methods were also used in the dissemination of information to farmers by extension workers though at a very low level or rate.

**Table 2: Extension services delivery method used**

S/N	ITEM	ONELGA Extension Agents		Farmers		AELGAE Extension Agents		Farmers		AWLGA Extension Agents		Farmers		Pooled Total	Pooled %
		F	%	F	%	F	%	F	%	F	%	F	%		
1	Mass media	4	16	32	18	3	12	28	16	2	8	23	13	92	44.9
2	Individual method	8	32	36	20	7	28	31	17.22	6	24	14	28	114	55.6
3	Group method	9	36	46	25.56	7	28	39	21.67	7	28	17	34	140	68.3
4	Demonstration method	10	40	42	23.33	8	32	35	19.44	6	24	16	30	131	63.9

Field survey 2020

Information in Table 3 shows the mean of disseminating agricultural extension services delivery in Ogba/Egbema/Ndoni (ONELGA), Ahoada East (AELGA) and Ahoada West (AWLGA) Local Government Area. The information on mass media (2.36), individual method (2.53), group method (2.54) and demonstration (2.91) for ONELGA respectively. In Ahoada East Local Government Area (AELGA), data indicated mass media (2.60), individual (2.65), group method (2.82) and demonstration (2.48) respectively. Also, in Ahoada West Local Government Area (AWLGA), mass media (2.48), individual method (2.48), group method (2.32) and demonstration (3.16) respectively. The pooled mean indicated 2.47 for mass media,

2.36 for individual method, 2.57 for group method and 2.89 for demonstration method respectively. It could be deduced that the effectiveness of extension delivery methods varies from one location to another. Mass media effectiveness is low in ONELGA but relatively better numerically in AELGA and AWLGA. On the other hand, group method is numerically better in ONELGA than AWLGA but low. The demonstration method indicates relatively higher effectiveness in AWLGA compared to ONELGA and AELGA. Numerically ONELGA is better than —AELGA.

**Table 3: Effectiveness of extension methods used in delivery of Agricultural Extension Services Information**

Activities	ONELGA						AELGA						AWLGA						Pooled Total	Pooled Mean	Remark
	VH	H	L	VL	Total Score	Mean	VH	H	L	VL	Total Score	Mean	VH	H	L	VL	Total Score	Mean			
Mass media	52	60	52	21	165	2.36	56	60	28	12	156	2.6	48	42	20	14	124	2.48	445	2.47	Low
Individual method	56	72	34	15	177	2.53	68	42	40	9	159	2.65	52	33	26	13	124	2.48	460	2.56	Low
Group method	72	52	40	14	178	2.54	80	51	30	8	169	2.82	42	36	28	10	116	2.32	463	2.57	Low
Demonstration method	96	63	40	5	204	2.91	63	48	30	8	149	2.48	14	72	20	2	158	3.76	511	2.84	Low

*Source: Field survey, 2020. VH, H, L & VL means Very High, High, Low and Very Low*

H<sub>01</sub>: Extension agents and farmers do not differ in their level of opinions on the extension services delivered to farmers by extension agents in the study area. The information in table 4 shows the summarized t-test of extension agents and farmers opinions on extension services delivered in the study area. The calculated t value (3.29) was greater than tabula t value (1.98). The null hypothesis that extension agents and farmers do not differ in their opinions on the extension services delivered to the farmers by the extension agents was rejected and the alternative accepted. Extension agents and farmers do differ in their opinions on the extension services delivered to the farmers by the extension agencies in the study area. These

differences may be due to certain factors which include lack of information, inadequate popular participation, and lack of commitment to extension activities, corruption and wrong attitude of people. The result agrees with Echeme and Nwachukwu (2010) who reported in their work that the views of farmers on challenges to arable crop production was lack of extension services on crop production while the extension workers stated that they provided extension services to farmers. The finding also agrees with Anaeto et al (2012) who observed that farmers and extension workers gave different opinions on extension services given to famers on poultry production.

**Table 4: Summarized t-test of extension agents and farmers opinions on extension agencies services delivered to farmers by extension agents in the study area**

Variables	N	$\bar{x}$	SD	SE	df	t-cal	t-tab	Decision
Extension agents	25	1.80	0.746					
Farmers	180	2.5	0.82	0.15	203	3.29	1.98	sig.

Field survey 2020

**Ho<sub>2</sub>:** There is no significant difference in the extension delivery methods used among the extension agents in the study areas. The result on the Analysis of variance on extension delivery methods used among the extension agents in the study areas as shown in table 5 shows that at ( $p \leq 0.05$ ) the  $f$  calculated (6.17) is greater than the  $f$  tabular (3.00). The null hypothesis was rejected and the alternative was accepted indicating that there was a significant difference in the extension delivery methods used among the extension workers/agents in the study area. The result shows that different agency may

adopt a delivery method that best suit their policies, facilities, finance, man power, number of farmers to be reached and area of coverage. The finding agrees with Kassem et al (2014) who reported that extension services can be organized and delivered in methods best suitable to extension agents. It also confirms the study of Ajayi (2005) and Albert and Isife, (2009) who stressed that different extension agencies use extension delivery methods that would be assessed by activities of the extension personnel, available technologies, supply of inputs, research and training.

**Table 5: Analysis of variance on the extension methods used in extension services delivery among the extension agencies**

Source of variance	SS	df	Ms	Feal	Ftab	Decision
Between group	6.504	2	3.252	6.117	3.00	Sign.
Within group	107.398	202	0.532			
<b>Total</b>	<b>113.902</b>	<b>204</b>				

Field survey 2020

### CONCLUSION AND RECOMMENDATIONS

There are extension agencies in the study areas. These agencies have delivered agricultural extension services to farmers in the area. Extension services delivered are: provision of improved planting materials, fish fingerings, provision of agro-processing equipment, organization of farmers into co-operatives, giving guides to farmers, assistance in marketing linkage, provision of fertilizers to farmers, helping farmers in decision making, use of improved crop varieties, how to market products and training farmers. Though, extension agents and farmers do differ in their opinions on the extension services delivered to the farmers by the extension agencies in the study area. These extension services were delivered to the farmers using mostly demonstration and group methods. However, there was a significant difference in the extension delivery methods used among the extension workers/agents in the study area. From the findings it was recommended that the methods of disseminating information should be adopted based on the major farmers' level of education to avoid leaving others behind and agricultural extension services delivery should not be left for government agency alone because the private agencies are also committed to extension service delivery in the study area.

### REFERENCES

Adegboye, M. A. (2010). Evaluation of Farmers' Response to Extension Services on Ginger Production in Kagarko Local Government Area of Kaduna State. *Agricultural Extension: A Review*, *Economic Development and Cultural Change*, 39:607 – 650.

Agbamu, J. U. (2005). Problems and prospects of agricultural extension services in developing countries. In: *Agricultural Extension in*

*Nigeria*, S. F. Afolayan (ed). Ilorin AESON, P. 159 – 169.

Ajala, A.O. Ogtunjimi, S.I & Faminde, A.J (2013). Assessment of Extension Service delivery on improved cassava technologies among cassava farmers in Osun State. Nigeria. *International Journal Of Applied Agricultural Research* 9(1&2).

Ajayi, A. R. (2005). An appraisal of young farmers' club in secondary schools as a strategy for agricultural development in Ekiti zonal area of Ondo State, Rural Development, University of Ibadan, Oyo State. 1-62.

Akinbode, I. A. (1985) Extension for the emancipation of the silent majority. OAU Press 39pp.

Albert-Elenwa, C.O & Ile, C.P (2017). Rural and Infrastructural Development on Extension Services To Farmers in Ogba Egbema Ndoni Local Government Area, Rivers State. *International Journal Of Agriculture And Earth Science* (41-46)

Albert, C.O. & Isife, B.I. (2009). Issues in developing a national policy on agricultural extension services in Nigeria: The perception of extension professionals. *Medwell Agricultural Journal*, 4(1), 22-26.

Anaeto, F.C., Asiabaka, C.C., Nnadi, F.N., Ajaero, J.O. Ajo, O.O., Ugwoke, F.O., Ukpongons, M.U. & Onweagba, A.E. (2012). The Role of Extension officers and extension services in the development of agriculture in Nigeria. *Woodpecker Journal of Agricultural Research* 1(6).

Bruin, GCA and Meerman, F. (2001) New ways of developing agricultural technologies. Wageningen University/CTA Pp 16.

Echeme, I. I. & Nwachukwu, C. C. (2010). An investigation of the impact of Fadama ii

- project implementation in Imo State. American Journal of Scientific and Industrial Research, 23 (6): 14-24.
- Isife, B. I & Ofuoku, A. U. (2008) Communication on in Agricultural Extension and Rural Development Owerri: Springfield publishers Ltd.
- Iwueke, C. C., (1990). Variables influencing technology transfer, adoption and monitoring. A paper presented at the 3<sup>rd</sup> National Farming Systems Research Network workshop, 14-16, August, University of Calabar.
- Jibowo, A. A & Ajayi, A.O. (2011). History of Agricultural Extension in Nigeria. *Agricultural Extension Society of Nigeria*.
- Kareem, R.O., Idowu, E.O., Williams, S.B., Ayinda, I.A. and Bashir, N.O. (2014). Comparative analysis of motorized and manually propelled technologies of artisanal fisheries in Ijebu waterside of Ogun State. *Sustainable agriculture Research*; 2(1). E-ISSN 1927-0518.
- McGill, R. (2016). Institutional development: A third world city management perspective. Springer.
- Ojeka, G. O. Effiong, C. E. & Eko, E. O. (2016). Constraints to agricultural development in Nigeria. *International Journal of Development and Economic Sustainability*, Vol. 4(2); pp.19-33.
- Zwane, E. M, (2012). Does extension have a role to play in rural development? *South African Journal of Agricultural Extension*. 40(1).