

ENHANCING FOOD SECURITY AMONG ORASHI PEOPLE OF RIVERS STATE: EFFECTIVE AGRICULTURAL EXTENSION SERVICE DELIVERY A PANACEA

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ABSTRACT: The study examined enhancing food security among Orashi people of Rivers *State using effective agricultural extension service delivery as a panacea. The study area was* Orashi region of Rivers State. The study employed a descriptive survey design. The population of the study consists of all farmers in Orashi region of Rivers State estimated at over 636,547 farmers. The sample size of was 1,200 respondents. Four research questions were posed to guide the study. Three hypotheses were formulated and tested at 0.05 level of significant. Cronbach alpha reliability coefficient were used to test the instrument and was found to have 0.81 reliability coefficient which was considered high enough to be used for the study. Data collected were analysed using mean statistics and standard deviation with an acceptance mean value of ≥ 2.50 whereas otherwise rejected. Result revealed that agricultural extension ensure that appropriate knowledge on innovation is implemented, help farmers in their decision-making, assess farmers properties and making technical recommendations, provide link between farmers and researchers; it also revealed that agricultural extension service delivery can enhance food security through radio and television programme, sending farmers text messages and personal letters, telephone contact; developing agricultural programme that will benefit farmers, encouraging farmers to embrace adult education programme, ensure that extension agents are qualified for the job, among others were some of the ways through which the government could help agricultural extension service delivery to achieve food security in the study are. Based on the findings, the study recommended that Government should encourage extension through on the in the job training for higher qualification and exposure; Increase funding of public extension system in order to revamp the extension system and mobilized extension agents for more effective extension work.

KEYWORDS: Food Security, Agricultural Extension, Agro-Based Service Delivery

INTRODUCTION

Agricultural extension service is one of the agencies transforming subsistence farming into modern and commercial agriculture which promotes household food security (Nwuzor, 2009). 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 material 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 (Ibrahim, 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 national resource management.

According to Akamobi (2014) agricultural extension is an out of school system of education which brings new knowledge and skills to farmers as well bring about techniques of doing things differently or innovatively in the field of agriculture. Mgbada (2010) expressed that agricultural extension services are an informal educational system which assist farmers especially at the rural area in improving their farming methods and techniques and other agro-based occupation, thereby increasing productivity and service efficiency, as well as causing an increase in their income which in turn will boost the farmers socio-economic, educational status and well-being in the society. According to Nwachukwu (2013) extension service plays a crucial role in promoting agricultural productivity, boosting food security, improving rural livelihood as they are also well informed with the latest agricultural practices, promoting agriculture in the rural areas as well leading to economic growth and national development of any society. Akamobi (2014) noted that for any nation to achieve food security and national development there is need to effectively utilize the agricultural extension services available within the country. Taking a swift look to what food security and National development is about.

Food security according to committee on Nwajiuba (2016) is the state when all people at all time have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. It was further stated that there are four pillars of food security which includes food availability, access to food, utilization of food and food stability. Akamobi (2014) stressed that food security is one of the most important elements for both individual and national development as well as poverty reduction. This has been the global goal of many countries including Nigeria to reach a state of food security where all her citizenry will have enough to eat at all times. World Health Organization (WHO, 2012) shaded more light to what food security is about, by stating that for there to be food security all people at all times will have enough to eat, there will be enough product and distribution among others. When food security is achieved this will in turn bring about national development as all energy will be channeled to improving the state of the nation.

Achor (2003) observed that food security is one of the major challenges facing the third world nations in the world today. This has been attributed to several factors through which notably are the inabilities of government to provide sufficient food for its ever-increasing population. This has led to hunger and poverty in the land. In an actual sense, when food security is achieved it turns around the fortunes of the citizens of any nation and will in return bring about national development as everyone will be involve in the process and contributing their quota to improve the nation.

In other to achieve these attributes described above, it is needful that agricultural extension service be recognized and effectively utilized in other to meet up with the food security and national development that the citizenry has been yarning for in the nation. Akamobi (2014) noted that with the use of agricultural extension service food security can be achieved and with food security as a tool it could also enhance national development. Therefore, for any



nation to enhance food security and national development there is need to improve on the available agricultural extension service delivery in the society.

Over the past decades, Nigeria was majorly known to be an agro-economy based nation. This is to the fact that the economy of the nation was basically sustained through agricultural produce such as groundnut, palm produce, cassava, cocoa, cotton and others (Modebelu & Nwakpadolu, 2013). This is probably as a result that majority of her populace were involve in one agricultural production or another before the oil boom in the late 60s, which drastically reduce farm practice in the nation thereby leading to food scarcity, hunger, increase in food demand and poverty to the people of the society due to increase in population and this is not different among the people of Orashi people of Rivers State, Nigeria. Oil which has almost destroyed the natural environment where crop grow, disrupting the ecosystem, destabilizing water body, disrupting the environment for soil organisms to carry out their metabolic processes and so on (Ojo, 2014). The arise need for the people to be reminded, taught and guided on how best to go back to the former ways and means of livelihood in the nation.

This singular need prompts a look at effective agricultural extension service which will help to teach farmers knowledge and skills needed for modern agricultural practices, innovative skills and the use of modern facilities in order to maximize productivity in agriculture in order to meet the high demand of food for the populace. This call today seems a little difficult in that, people are crying for white collar jobs, fast money, company works and so on. But with the current economic situation of the nation were food security is highly needed it will be a perfect scenario to find out methods through which agricultural extension service can be used to enhance food security, find out various ways through which the government can equally help to boost the activities of the extension services in the country, determine ways in which food security can equally boost national development among others. It is against this background that this research work is carried out a research to examine enhancing food security among Orashi people of Rivers State using effective agricultural extension service delivery as a panacea in the study area.

Purpose of the Study

The main purpose of the study was to examine ways of enhancing food security among Orashi people of Rivers State using effective agricultural extension service delivery as a panacea. Specifically, the study sought to:

- 1) examine the demographic characteristics of farmers in the study area.
- 2) identify agricultural extension service activities on food security among Orashi people of Rivers State.
- 3) determine various ways agricultural extension service delivery could enhance food security among Orashi people of Rivers State.
- 4) examine ways through which government could help agricultural extension service delivery to achieve food security in the study area.

Research Question

Based on the stated purpose of the study, the following research questions guided the study:

1) What are the demographic characteristics of farmers in the study area?



- 2) What are the agricultural extension service activities on food security among Orashi people of Rivers State?
- 3) What are the various ways agricultural extension service delivery could enhance food security among Orashi people of Rivers State?
- 4) What are the ways through which the government could help agricultural extension service delivery to achieve food security in the study area?

Hypothesis

To further verify the data gathered for the study, the following null hypotheses were formulated and tested at 0.05 level of significance to guide the study:

- **1.** There is no significant difference in the mean response of male and female farmers on agricultural extension service activities on food security among Orashi people of Rivers State.
- 2. There is no significant difference in the mean response of male and female farmers on various ways agricultural extension service delivery could enhance food security among Orashi people of Rivers State.
- **3.** There is no significant difference in the means response of male and female farmers on ways through which the government could help agricultural extension service delivery to achieve food security in the study area

METHODOLOGY

The study was carried out in Orashi region of Rivers State. The region in Rivers State is in the south- south zone of Nigeria with a projected population of 983,170 people (National Population Commission Office, 2016), and occupies an area of 21,850sg.km. The topography and environment of Orashi region is such that is favourable for agricultural activities as there is adequate distribution of rainfall within the year. Hence, Orashi indigenes were predominantly fishermen and farmers even in this present state of petroleum exploitation as evident in the region. The study adopted a descriptive survey design. The population of the study consists of all farmers in Orashi region of Rivers State with an estimated population of over 436,521 farmers. The population of farmers was chosen for this study because it is farmers at the rural areas that need the assistant of extension service as to meet the challenges of food production in the area. Using any other group may not definitely give the true picture of facts that extension service is being extended to the study area. A sample size of 1200 farmers was used for the study. Orashi region of Rivers State is comprised of four Local Government Areas including Abua/ Odual, Ahoada West, Ahoada East and Ogba-Egbema-Ndoni local government areas respectively. 20 rural communities from each LGA were balloted and used for the study. From each of the communities, 60 rural farmers were randomly sampled, giving the sample size of 1200 respondents used for the study. Four research questions were posed to guide the study. Three hypotheses were formulated and tested at 0.05 level of significant. Cronbach alpha reliability coefficient were used to test the instrument and was found to have 0.81 reliability coefficient which was considered high enough to be used for the study. Data collected were analysed using mean statistics and standard deviation with an acceptance mean value of ≥ 2.50 whereas otherwise rejected.



RESULTS AND DISCUSSION

Table 1: Demographic Characteristics of Respondents ($\Sigma N = 1, 200$)

S/N	/N Variables	Male Farmers (%)	Female Farmers (%)		
		(n=600)	(n=600)		
1.	Age Range (years)				
	18-24	190(31.7)	143(23.8)		
	25-31	339(56.5)	252(42.0)		
	32 - 38	71(11.8)	205(34.2)		
2.	Marital Status				
	Single	282(47.0)	301(50.2)		
	Married	189(31.5)	220(36.7)		
	Separated	43(7.2)	40(6.7)		
	Widowed	32(5.3)	20(3.3)		
	Divorced	54(9.0)	19(3.2)		
3.	Educational Attainment				
	MSc/MBA/M.Ed	32(5.3)	42(7)		
	B.Sc/B.Ed/HND	220(36.7)	243(40.5)		
	NCE/OND	50(8.3)	90(15)		
	SSCE	192(32.0)	52(8.7)		
	FSLC	10(1.7)	43(7.3)		
	No-formal education	96(16)	130(21.7)		
4.	*Livelihood activities				
	Crop farming	242(40.3)	202(33.7)		
	Livestock farming	158(26.3)	134(22.3)		
	Trading/marketing	115(19.2)	237(39.5)		
	Salaried work	242(40.3)	156(26.0)		
	Fishing	146(24.3)	129(21.5)		
	Fish processing	117(19.5)	115(19.2)		
	Gathering of non-timber	177(29.5)	134(22.3)		
	forest products				
	Hired labour	195(32.5)	130(21.7)		
	Pottery/ceramics	146(24.3)	186(31.0)		
	Barbing salon/hair-dressing	173(28.8)	111(18.5)		
	Local brewing/selling	129(21.5)	145(24.2)		
	Fuel wood collection	156(26.0)	193(32.2)		
	Traditional birth attendance	89(14.8)	66(11.0)		
	Transportation business	247(41.2)	112(18.7)		
	Nanny	23(3.8)	136(22.7)		
5.	Monthly income (#)				
	≤10,000	23(3.8)	30(5.0)		
	10,500 - 20,000	77(12.8)	102(17.0)		
	20,500 - 30,000	39(6.5)	66(11.0)		
	30,500 - 40,000	87(14.5)	89(14.8)		
	40,500 - 50,000	24(4.0)	237(39.0)		
	50,500 - 60,000	129(21.5)	57(59.5)		
	≥ 60,500	221(36.8)	19(3.2)		



6.	*Membership of organization									
	Religious	521(89.8)	530(88.3)							
	Social	359(59.8)	420(70.0)							
	Traditional	202(33.7)	401(66.8)							
	Political	497(82.8)	329(54.8)							
	Professional	208(34.7)	189(31.5)							
4										

Source: Field Survey, 2018;

N=*Total number of respondents;*

*Multiple responses recorded

The study in table 1 above show that one thousand two hundred (N=1,200) respondent were used for the study. Six hundred (n=600) of the respondent which is 50% were from male farmers while Six hundred (n=600) of the respondent which is 50% were from female farmer. Majority of the respondents male farmers were aged between 21-31, (56.5%), single (47.0%), educational attainment; no formal education (16.0%), FSLC (1.7%), SSCE (32.0%), NCE (8.3%), B.Sc (36.7%), M.Sc/MBA/M.Ed (5.3%) majority are crop farmers (40.3%), paid salary work (40.3%), and transportation business (41.2%) as well most earn monthly between #40,500 - #50,000 (36.8%) on monthly base. Whereas, majority of the female farmers were aged between 25-31(42.0%), married (36.7%); educational attainment: FSLC (7.3%), SSCE (8.7%), NCE (15.0%), B.Sc (40.5%) respectively, earn livelihood by crop farming (33.7%), trading and marketing (39.5%) and most earn monthly income between #40,500-50,000 (39.0%) and others. Majority of the respondents from the region belong to different religious organization (89.8% & 83.3%), whereas (34.7 % & 31.5%) were professionals. This is in conformity with the study carried out by Sinkave (2005) were it was reported that majority of farmers were male, married, with household size between 1-4, with varied educational qualifications but with a relative higher monthly income between #50,000 to #100,000. This infers that the demographic characteristics of farmers were relatively average and needs to improve which makes the services of extension officers necessary to the farmers.

			Female Farmers				
S/N	Variables	\overline{x}_{1}	S.D ₁	Decision	\overline{x}_{2}	S.D ₂	Decision
1.	Ensuring that appropriate knowledge is implemented	2.67	.91	Accepted	2.57	.87	Accepted
2.	Give guidance to farmers	2.60	1.01	Accepted	2.57	.96	Accepted
3.	Operate as communicators	2.59	.94	Accepted	2.56	.90	Accepted
4.	Operate as facilitators	2.59	.90	Accepted	2.49	.83	Accepted
5.	Propagates new farming methods	2.59	.95	Accepted	2.54	.90	Accepted
6.	Teaches farmers about new improved research results	2.54	.94	Accepted	2.47	.87	Rejected
7.	Teaches farmers new agricultural techniques	2.63	.95	Accepted	2.56	.93	Accepted

 Table 2: Mean Responses of Respondents on Agricultural Extension Service Activities

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8.	Brings feedback to	2.52	1.00	Accepted	2.59	1.01	Accepted
9.	Collaborates with primary producers in industry on development and research trial	2.36	1.01	Rejected	2.43	1.03	Rejected
10.	Participate in village drama and role play	2.63	.92	Accepted	2.65	.93	Accepted
11.	Documentation of farmers demonstration	2.58	.88	Accepted	2.51	.84	Accepted
12.	Provide link between farmers and researchers	2.58	.94	Accepted	2.54	.89	Accepted
13.	Plan and implement programmes	2.63	.90	Accepted	2.57	.86	Accepted
14.	Develop recovery programmes for eroded soil	2.54	.90	Accepted	2.44	.83	Rejected
15.	Organise study group for farmers	2.61	.90	Accepted	2.48	.84	Rejected
16.	Encourage farmers to adopt newly improved farming methods and varieties	2.51	.93	Accepted	2.40	.86	Rejected
17.	Assess farmers properties and making technical recommendations	2.58	.96	Accepted	2.58	.88	Accepted
18.	Identify and interpret current research needs for regional communities and enterprises	2.53	.99	Accepted	2.63	.94	Accepted
19.	Help farmers in their decision-making	2.66	.94	Accepted	2.76	.89	Accepted
20.	Suggest research priority to research communities	2.61	1.01	Accepted	2.64	1.02	Accepted
	Grand Mean & S.D	2.58	0.90		2.55	0.90	

Source: Field Survey, 2018;

 \overline{x} = Mean; \geq 2.50 accept, otherwise reject; SD= Standard deviation

Result in table 2 above show the mean response of farmers on the agricultural extension service activities on food security among Orashi people of Rivers State. Majority of the respondents (male & female farmers) accepted that agricultural extension ensure that appropriate knowledge on innovation is implemented (2.67 & 2.57), suggest research priority to research communities (2.61 & 2.64), Help farmers in their decision-making (2.66 & 2.76), assess farmers properties and making technical recommendations (2.58 & 2.58), identify and interpret current research needs for regional communities and enterprises (2.53 & 2.38), provide link between farmers and researchers (2.58 & 2.54), Participate in village drama and role play (2.63 & 2.65), e-mail software for communicating with peers (2.68 & 2.62), brings feedback to researcher (2.52 & 2.59), teaches farmers new agricultural techniques (2.63 & 2.56) respectively among others were some of the ICTs facilities used by agricultural teachers



in the delivery of agricultural contents in senior secondary schools in the study area. However, majority of the respondents (male & female farmers) disagreed that collaborates with primary producers in industry on development and research trial (2.36 & 2.43), among others were not among the functions of extension services in the study area. This is in conformity with Nwuzor (2009) who asserted that agricultural extension as a service or system which assists farm people through educational procedures in improving farming method and techniques, brings feedback to researchers, teaches farmers new agricultural techniques increasing production efficiency and income, bettering their levels of living and lifting social and educational lives of rural people. It ensures information obtained and assembled from research studies based on experience, trail and demonstration for the purpose of extending knowledge to the rural dwellers. The use of farm visit group method and discussion, mass media, posters and audio visual and are very effective means of extending knowledge to he rural populace.

Table 3: Z-test for Agricultural Extension Service Activities on Food Security among **Ogoni People in the Study Area**

Categories	$\frac{1}{x}$	SD	Ν	Level	Z-cal	Z-crit	Decision
				of			
				Sign			
Male farmers	2.58	0.90	600				
				0.05	0.58	1.96	Accepted
Female farmers	2.55	0.90	600				
Source: Field survey	2018						

Source: Field survey, 2018.

Result in table 3 show that male farmers have mean and standard deviation scores of 2.58 and 0.90, whereas female farmers have mean and standard deviation scores of 2.55 and 0.90 at 0.05 level of significance, with *z-cal* value of 0.58 and *z-crit* value of 1.96. The result shows that the *z-cal* value is less than *z-crit* value. Since the *z-cal* value of 0.58 is less than the *z-crit* value of 1.96, the null hypothesis is therefore accepted. This implies that there is no significant difference in the mean response of male & female farmers on agricultural extension services activities on food security among Orashi people. This is evident in the fact that the mean response of male farmers is 2.58 against 2.55 for female farmers.

Table 4: Mean Responses of Respondents on Ways Agricultural Extension Service **Delivery Could Enhance Food Security among Orashi People**

		Ma	le Farm	ers	Femal	e Farmers		
S/N	Variables	\overline{x}_{1}	S.D ₁	Decision $\frac{1}{x_2}$		S.D ₂	Decision	
1.	Through farm and home visit	2.73	.94	Accepted 2.59	.88		Accepted	
2.	Through office visit	2.59	.98	Accepted 2.70	.88		Accepted	
3.	Telephone contact	2.60	.97	Accepted 2.66	.90		Accepted	
4.	Through tours and field trips	2.61	.93	Accepted 2.67	.90		Accepted	
5.	Field days (demonstrations)	2.66	.90	Accepted 2.77	.87		Accepted	

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	programmes	263	0.06		268	0.03	
	television			1			1
10.	research Through radio and	2.67	.95	Accepted	2.70	.93	Accepted
9.	On the farm adaptive	2.54	1.05	Accepted	2.61	.99	Accepted
8.	Exhibition of produce	2.54	1.04	Accepted	2.50	1.07	Accepted
7.	Through agricultural	2.70	.94	Accepted	2.72	.95	Accepted
0.	messages and personal letters	2.05	., 1	riccepted	2.00	.07	riccepted
6	Sending farmers text	2 63	91	Accepted	2 88	89	Accepted

Source: Field Survey, 2018;

 \overline{x} = Mean; ≥ 2.50 accept, otherwise reject; SD= Standard deviation

Result in table 4 above show the mean response of Teachers and Students on ways agricultural extension service delivery enhance food security among Orashi people of Rivers State. Majority of the respondents (male & female farmers) accepted that agricultural extension service delivery can enhance food security through the following ways radio and television programmes (2.67 & 2.70), sending farmers text messages and personal letters (2.63 & 2.88), telephone contact (2.60 & 2.66), through office visit (2.59 & 2.70), exhibition of produce (2.54 & 2.50), on the farm adaptive research (2.54 & 2.61), field days (demonstrations) (2.66 & 2.77), respectively among others in the study area. This study is in conformity with John (2014) and Umeh, Chukwu & Oselebe (2014) who examined the contribution and benefits of agricultural extension services to food security of smallholder households in Nandi County, Kenya whose result revealed that households accessed information through the radio broadcast, exhibition, office visit, field demonstrations among others which are parts of agricultural extension service to reach out to farmers.

Categories	\overline{x}	SD	Ν	Level of Sign	Z-cal	Z-crit	Decision
male farmers	2.63	0.96	600				
				0.05	0.91	1.96	Accepted
female farmers	2.68	0.93	600				

 Table 5: Z-test for Various Ways Agricultural Extension Service Delivery Enhance

 Food Security Among Orashi People in the Study Area

Source: Field survey, 2018.

Result in table 5 show that male farmers have mean and standard deviation scores of 2.63 and 0.96, whereas female farmers respondents have mean and standard deviation scores of 2.68 and 0.93 at 0.05 level of significance, with *z-cal* value of 0.91 and *z-crit* value of 1.96. The result shows that the *z-cal* value is less than *z-crit* value. Since the *z-cal* value of 0.91 is less than the *z-crit* value of 1.96, the null hypothesis is therefore accepted. This implies that there is no significant difference in the mean response of male and female farmers on various ways



agricultural extension services delivery enhances food security among Orashi people. This is evident in the fact that the mean response of male farmers is 2.63 against 2.68 for female farmers.

Table 6: Mean Responses of Respondents on Ways Through Which the GovernmentCould Help Agricultural Extension Service Delivery to Achieve Food Security

		Male I	Farmers		Female Farmers			
S/N	Variables	\overline{x}_{1}	S.D ₁	Decision	\overline{x}_{2}	S.D ₂	Decision	
1.	Developing agricultural	2.65	.93	Accepted	2.72	.93	Accepted	
	programmes that will benefit farmers							
2.	Encouraging farmers to embrace adult education programmes	2.54	.98	Accepted	2.54	.96	Accepted	
3.	Increasing budgetary allocation to agricultural sector	2.52	.91	Accepted	2.64	.93	Accepted	
4.	Employing and posting many extension agents to the rural areas	2.43	.86	Rejected	2.54	.88	Accepted	
5.	Providing loans to farmers at low interest rate	2.54	.91	Accepted	2.62	.93	Accepted	
6.	Encouraging tertiary institutions to admit more candidates into agricultural department	2.46	.92	Accepted	2.54	.95	Accepted	
7.	Ensuring that extension agents are from the localities where they are posted	2.60	.94	Accepted	2.67	.95	Accepted	
8.	Ensure that extension agents are being given mobile	2.47	.99	Rejected	2.54	1.04	Accepted	
9.	Ensure that extension agents are well paid	2.44	1.03	Rejected	2.53	1.06	Accepted	
10.	Ensure that extension agents are qualified for the job	2.67	.94	Accepted	2.69	.96	Accepted	
11.	Ensure that all basic needs of officers are met (shelter)	2.52	.85	Accepted	2.57	.88	Accepted	
12.	Provide subsidies to farmers who are willing to invest	2.57	.91	Accepted	2.67	.91	Accepted	
	Grand mean & S.D	2.53	0.93		2.61	0.95		

Source: Field Survey, 2018;

 $\overline{x} = Mean; \ge 2.50$ accept, otherwise reject; SD= Standard deviation



Result in table 6 above show the mean response of Teachers and Students on the ways through which the government could help agricultural extension service delivery to achieve food security in the study area. Majority of the respondents (male & female farmers) accepted that the following variables such as: Provide subsidies to farmers who are willing to invest (2.57 & 2.67), ensuring that extension agents are from the localities where they are posted (2.60 & 2.67), providing loans to farmers at low interest rate (2.54 & 2.62), increasing budgetary allocation to agricultural sector (2.52 & 2.64), developing agricultural programmes that will benefit farmers (2.65 & 2.72), encouraging farmers to embrace adult education programmes (2.54 & 2.54), ensure that extension agents are qualified for the job (2.67 & 2.69), respectively among others were some of the ways through which the government could help agricultural extension service delivery to achieve food security in the study area. This result is in line with Oriola (2009) & Burchi and De-Muro (2012) were it was stressed that governments initiate the proposed policy/strategy process, keeping in view that food security requires long-term planning and commitment rather than ad hoc measures, food availability approach, income-based approach, basic-need approach, entitlement approach, sustainable livelihoods approach, consider decentralization options, plan system parameters, promote coordinated actions, create research/extension teams to respond to community-expressed needs, review extension/communication involvement in other programmes, monitor and evaluate, explore multiple methodologies, and promote extension communication. These guidelines are suggestive of how national government can begin to realize a nationwide extension /communication policy and strategy.

Table 7:	Z-test	for	Ways	Through	Which	the	Government	Could	Help	Agricultural
Extensior	n Servio	ce D	elivery	to Achiev	ve Food	Secu	ırity			

Categories	\overline{x}	SD	Ν	Level	Z-cal	Z-crit	Decision		
				of					
				Sign					
Male farmers	2.53	0.93	600						
				0.05	1.60	1.96	Accepted		
Female farmers	2.61	0.95	600				_		
C E 11 2010									

Source: Field survey, 2018.

Result in table 7 show that male farmers have mean and standard deviation scores of 2.53 and 0.93, whereas female farmers have mean and standard deviation scores of 2.61 and 0.95 at 0.05 level of significance, with *z-cal* value of 1.61 and *z-crit* value of 1.96. The result shows that the *z-cal* value is less than *z-crit* value. Since the *z-cal* value of 1.61 is less than the *z-crit* value of 1.96, the null hypothesis is therefore accepted. This implies that there is no significant difference in the mean response of male farmers and female farmers on ways through which the government could help agricultural extension service delivery to achieve food security among Orashi people. This is evident in the fact that the mean response of male farmers is 2.53 against 2.61 for female farmers.



CONCLUSION

Based on the findings of the study, it is deduced that agricultural extension service ensure that appropriate knowledge on innovation is implemented, suggest research priority to research communities, help farmers in their decision-making, assess farmers properties and making technical recommendations, identify and interpret current research needs for regional communities and enterprises, provide link between farmers and researchers, participate in village drama and role play; that agricultural extension service delivery can enhance food security through the following ways radio and television programmes, sending farmers text messages and personal letters, telephone contact; developing agricultural programmes, ensure that extension agents are qualified for the job, among others were some of the ways through which the government could help agricultural extension service delivery to achieve food security in the study area.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

- 1. Government should encourage extension through on the in the job training for higher qualification and exposure.
- 2. Increase funding of public extension system in order to revamp the extension system and mobilized extension agents for more effective extension work.
- 3. Streamlining the role of agricultural development project (ADP) to sharply focus on extension work.
- 4. Community partnership should be encouraged in extension activities in order to achieve food security and rural development.
- 5. Seminars, conferences, workshops should be organized for extension worker on regular basis so as to keep them a breast with development in their field of specialization.

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