

## Farmers' Perception on The Value of Commercialized Agricultural Extension System in Delta State, Nigeria

Onyemekihian, F., Onemolease, E.A., Idiako-Ochei, .O.

<sup>1</sup>College of Education, Agbor, Delta State, Nigeria

<sup>2</sup>Department of Agricultural Economics & Extension, Ambrose Alli University, Ekpoma, Edo State, Nigeria.

*\*Corresponding Author:* Idiako-Ochei, .O, Department of Agricultural Economics & Extension, Ambrose Alli University, Ekpoma, Edo State, Nigeria.

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### ABSTRACT

This study examined farmers' perception on the value of commercialized agricultural extension system in Delta State, Nigeria. Specifically, the study examined the demographic characteristics of farmers in the study area, and also analyzed their value for commercialized extension system. Data were collected from 240 respondents, randomly selected from five local government areas in two agricultural zones of the state. Data collected were analyzed using descriptive statistical tools of frequency count, percentage, mean, while multiple regression was used to analyze the hypothesis. The results of the analysis reveal that farmers showed a positive value for commercialized extension system, agreeing that the system will enhance farmers productivity (mean = 3.74), provide quicker attention or response from extension agencies to farmers (mean = 3.71), and ensure that farmers challenges are taken by staff of the extension system (mean = 3.70). The result of multiple regression reveal that age ( $b=0.006$ ), educational level ( $b=0.010$ ) and farming experience ( $b=0.010$ ) were significant characteristics that affect the farmers value for commercialized extension system. It is recommended that government should seriously consider the implementation of commercialized extension services in the state in order to help farmers boost their production.

**Keywords:** farmers' perception. Commercialized agricultural extension system, Delta State.

### INTRODUCTION

The role of the farmers in agricultural extension system is currently undergoing a process of change. Agricultural development implies a shift from traditional methods of production to new technological components (such as new varieties, cultural practices, chemical fertilizers and pesticides), crops and new farming systems (Madukwe and Erie, 1999). But agricultural transformation and increased productivity depend to a large extent on the effectiveness of agricultural extension services. According to Njoku (2003), institutional inefficiencies in the development and delivery of relevant information and assistance from national extension systems are often the major reasons why farmers do not adopt farming innovations, Recently, public sector extension has come under severe attack for not being relevant, insufficient, ineffective, and sometimes, not pursuing programmes that foster equity

(Williams and Qamar, 2003). A commercialized agricultural extension system is being conceived and practiced. Not only did the agricultural extension system come under public scrutiny and political attack, but was confronted by heightened competitive interests from the private sector. Commercialized system means operating without government subventions and without treasury support for future capital development. In a partially commercialized agricultural extension system, the enterprise has to generate a fair portion of the financial requirements for their operations but might continue to need some government support towards the operating cost of future capital programmes.

Public extension is described as the extension activities provided by government under the authority of such agencies as the Agricultural Development Programme (ADP) in all states of Nigeria, to cater for the needs of farmers. Agricultural extension is expected to foster a

sustainable and dynamic approach to agricultural development, which has remained of great concern to the government and priority for discourse in policy arena (Agwu et al 2008). It is the realization of this fact that has made successive Nigerian governments to make efforts towards raising the productivity level of rural people.

There is widespread agreement that agriculture is central to economic growth in the countries of sub-Saharan Africa, since it is thought to account for 70 percent of total employment, 40 percent of total merchandize exports, and one-third of Gross Domestic Product (GDP), with these propositions being much higher in many countries of the region (DFID, 2002; Rahman and Manprasert, 2006). Economic growth, urbanization and the withdrawal of labor from the agricultural sector lead to the increasing need for commercialization of agriculture. Agricultural commercialization means more than the marketing of agricultural outputs. It means the product choice and input use decisions are based on the principle of profit maximization (Pingali and Rosegrant, 1995; Yoon-Donn and Yoon, 2009). Commercial reorientation of agricultural production occurs for primary staple cereals as well as for the so-called high value cash crops. On the input side, commercialization implies that both traded and non-traded inputs are valued in terms of their market value. Commercialization of agricultural systems leads to greater market orientation of farm production; progressive substitution of non-traded inputs in favour of purchased inputs; and the gradual decline of integrated farming systems (Ayansina, 2011)

In Nigeria, despite government efforts to diversify the economy, the economy does not rely on agricultural output, and agriculture's role in the economy has declined. Besides, high percentage of the labor force in agriculture, food insecurity at the household level has become a major developmental challenge. The country has over the years, tried many agricultural extension systems, which include Agricultural Development Project (ADP). Agricultural Development Project was initiated in 1975 at the pilot project level. The success of the project resulted into many designs which led to its state wide adoption. The nationwide ADPs are extension of the enclave projects to other states. Presently, all the States in the country are implementing the state wide ADP. Agricultural Development Programme (ADP) focuses on

rural integrated development strategy for agricultural and rural development. The establishment of these ADPs raised the hope of farmers in government's genuine commitment to the elimination of the social, political and economic problems that kept them in a cycle of poverty (Akinbode, 1989).

This study therefore attempts to examine the perceptions of Delta State farmers on the value of commercialized agricultural extension system.

### **Objectives of the Study**

The overall aim of this study is to examine farmers' perception on the value of commercialized agricultural extension services in Delta State. The specific objectives are to:

- a. examine the demographic characteristics of farmers' in the study area.
- b. assess farmers' perception on the value of commercialized extension system.

### **Hypothesis of the Study**

**H<sub>01</sub>:** There is no significant relationship between the farmers' socio-economic characteristics and their perception of the value for commercialized extension system.

### **METHODOLOGY**

This study was carried out in Delta State, Nigeria. Delta State is Located in southern Nigeria and it is one of the six states in the south – south geopolitical zone of the country, the others being Edo, Bayelsa ,Cross River, Akwa Ibom and Rivers State. It lies roughly between latitude 5<sup>0</sup>. 00" and 6<sup>0</sup>. 30"N of the equator and longitude 5<sup>0</sup>. 00" and 6<sup>0</sup>. 45"E of the Greenwich Meridian, and shares common boundaries with Edo to the South West, Ondo, to the North West, Imo and Anambra, to the East, Bayelsa to the South and Rivers to the South East respectively (Delta state Agric policy, 2007). Delta State has a population of 4,098,391 (NPC, 2006). The state is generally low-lying and has a deep coastal belt inter-laced with rivulets and streams which forms the Niger Delta. The Atlantic Ocean forms its southern boundaries with coast line of 160 kilometers.

The research was carried out using survey method and the population was limited to crop farmers which are registered farmers of the Delta State Agricultural Development Programme (DSAP). Data were collected from 240 respondents, randomly selected from five local government areas in two agricultural zones of the state. Data collected were analyzed using

descriptive statistical tools of frequency count, percentage, mean, while multiple regression was used to analyze the hypothesis.

## **RESULTS AND DISCUSSION**

### **Socio-Economic Characteristics**

The socio economic characteristics of the respondents examined include Age, Sex, Martial Status, Educational Level, Farming Experience, Household Size and Annual Income. The results are presented in table 1.

#### **Age Distribution**

Table 1 shows the age distribution of the farmers sampled. It shows that 8.8% of the respondents were 25-29 years, 1.7% were 30-34 years old, 15.8% were 35-39 years old, 25.8% were 40-44 year, 0.8% were 45-49 years old, 22.9% were 50-54 years, while 24.2% were above 55 years of age, with a mean age of 46 years, suggests that young and active individuals were engaged in arable crop farming in the study area. This finding is in line with Belowun (2011), who reported a mean age of about 47years for farmers in Delta State.

#### **Sex of Respondents**

The sex of the respondents, as shown in Table 1, shows that 32.1% of the respondents were female while 67.9% were male. This result suggests that male dominate arable crop farming, and this could attribute to the fact that male are head of their households, and as such assume the ownership of their various farm enterprises. Similar result was obtained by Ovrage (2014), who reported 96.1% and 3.9% for male and female respectively.

#### **Marital Status of Respondents**

Table 1 showed the marital status of the respondents. It reveal that 68.3% were married, 10% were single, 20% were widow(er) while 1.7% were separated. Similar result have been reported by Edokpa (2014) and Akinwumi(2006), who noted that majority of farmers were married. The fact that majority of the respondents were married, suggest a sense of responsibility. This may serve as motivation to the farmers to seek and be willing to pay for extension services in order to promote their farming activities, income, and be able to cater for their families.

#### **Education Level of Respondents**

The respondents of the study possessed different educational background as shown in Table 1. The result revealed that 64.2% of the respondents had secondary education, 30.8%

had incomplete secondary education, 3.3% had post-secondary education, while 0.8% percent had primary education and no formal education respectively. The result suggests that Erie (2009) found out similar result which shows that majority of the farmers were literate. This has significant implication, as higher level of education had been found to increase agricultural production. According to Aghanenu (2008), being educated speed up the rate of adoption of farm innovations and this could be because such farmers are better able to appreciate extension services and even be willing to pay for it.

#### **Farming Experience**

Farming experience of the respondents as shown in Table 1, shows that 11.7% had been in farming for less than 5years, 16.7% had been farming for 5-9 years, 23.8% had been farming for 10-14yrs, 2.1% have been farming for 20-24 years and 35-39years respectively, while a higher percentage (43.8%) had been farming for 30-34yrs. The average farming experience was about 20years which shows that majority of the farmers were not novice when it comes to arable crop farming. Similar finding has been reported by Belowun (2011), who reported 22years as average year of experience for farmers in Delta State. The fact that the respondents were experienced farmers could make them better appreciate the need for commercialized extension service.

#### **Household Size of Respondents**

The household size of respondents as presented in Table 1, reveal that 38.3% of the respondents had a household size of 1-4, 34.2% had a household size of 5-8 while 27.5% had a household size of 9-12 person. The average household size was 6. This suggests that family labour can be utilized by the farmers. Similarly household size was reported by Edokpa (2014), for Fadama farmers. Having large households to cater for, can also serve as an impetus for the farmers to seek commercialize extension service in order to enhance their productivity and income.

#### **Income Range of Respondents**

Table 1 showed that 25% of the respondents realized a monthly income of below N20,000 and this constitutes the highest, 0.8% realized N20,000-N30,000 and N30,001-N40, 000 respectively, 11.3% earned N40,001-N50,000, 13.8% earned N50,001-N60,000, 22.9% realized ₦60,001-N70,000, 2.5% had N80,000-N90,000-

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N100 000, while 1.3% realized above 100, 000 per annual. The average monthly income was N54, 604.17, which suggests that farmer income was very reasonable and this may encourage

future production. However, annual average income of N65, 000 was reported by Erie (2009), among arable crop famers in Edo State. (N5, 416 per month).

**Table1.** Socio-Economic Characteristics of Respondents

Characteristics	Categories	Delta Central		Delta North		Pooled	
		Freq	%	Freq	%	Freq	%
Age (years)	<25						
	25-29	10	9.5	11	8.1	21	8.8
	30-34	2	1.9	2	1.5	4	1.7
	35-39	16	15.2	22	16.3	38	15.8
	40-44	27	25.7	35	25.9	62	25.8
	45-49	1	1.0	1	7	2	0.8
	50-54	23	21.9	32	23.7	58	22.9
	55 & above	26	24.8	32	23.7	58	24.2
	<b>Total</b>	<b>105</b>	<b>100.0</b>	<b>135</b>	<b>100.0</b>	<b>240</b>	<b>100.0</b>
Sex	Female	35	33.3	42	31.1	77	32.1
	Male	70	66.7	93	68.9	163	67.9
	<b>Total</b>	<b>105</b>	<b>100.0</b>	<b>135</b>	<b>100.0</b>	<b>240</b>	<b>100.0</b>
Marital status	Married	71	67.6	93	68.9	163	67.9
	Single	11	10.5	13	9.6	24	10.0
	Widow(er)	21	20.0	27	20.0	48	20.0
	Separated	2	1.9	2	1.5	4	1.7
	<b>Total</b>	<b>105</b>	<b>100.0</b>	<b>135</b>	<b>100.0</b>	<b>240</b>	<b>100.0</b>
Educational level	No formal education	1	1.0	1	.7	2	0.8
	Primary education	1	1.0	1	.7	2	0.8
	Incomplete secondary education	33	31.4	41	30.4	74	30.8
	Secondary education	66	62.9	88	65.2	154	64.2
	Post-secondary education	4	3.8	4	3.0	8	3.3
	<b>Total</b>	<b>105</b>	<b>100.0</b>	<b>135</b>	<b>100.0</b>	<b>240</b>	<b>100.0</b>
Farming experience (years)	<5	13	12.4	15	11.1	28	11.7
	5-9	16	15.2	24	17.8	40	16.7
	10-14	26	24.8	31	23.0	57	23.8
	20-24	2	1.9	3	2.2	5	2.1
	30-34	46	43.8	59	43.7	105	43.8
	35-39	2	1.9	3	2.2	5	2.1
	<b>Total</b>	<b>105</b>	<b>100.0</b>	<b>135</b>	<b>100.0</b>	<b>240</b>	<b>100.0</b>
Household size	1-4	40	38.1	52	38.5	92	38.3
	5-8	36	34.3	46	34.1	82	34.2
	9-12	29	27.6	37	27.4	66	27.5
	<b>Total</b>	<b>105</b>	<b>100.0</b>	<b>135</b>	<b>100.0</b>	<b>240</b>	<b>100.0</b>
Income monthly (M)	<20,000	26	24.8	34	25.2	60	25.0
	20,000-30,000	1	1.0	1	7	2	0.8
	30,000-40,000	1	1.0	1	.7	2	0.8
	40,001-50,000	12	11.4	15	11.1	27	11.3
	50,001-60,000	15	14.3	18	13.3	33	13.8
	60,001-70,000	24	22.9	31	23.0	55	22.9
	80,001-90,000	3	2.9	3	2.2	6	2.5
	90,001-100,000	22	21.0	30	22.2	52	21.7
	>100,000	1	1.0	2	1.5	3	1.3
	<b>Total</b>	<b>105</b>	<b>100.0</b>	<b>135</b>	<b>100.0</b>	<b>240</b>	<b>100.0</b>

Source: Field data, 2015

### Farmers Perception of the Value of Commercialized Extension

Table 2 shows the farmers' perception of the value of commercialized extension system. It

revealed that the farmers agreed to the following: that commercialized extension system enhances farmers productivity (mean=3.74), that farmers will receive quicker

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attention under commercialized system (mean=3.71), the farmers problem will be taken more seriously under this system (mean=3.70), farmers income will increase under this system (mean=3.65), the value of extension agents will be better appreciated under this system (mean=3.53) and that extension workers will take their job more seriously under this extension system (mean=3.23). This result implies that the farmers generally have a positive value about commercialized extension

system. This might probably be as a result of the problems they encountered in the current extension system and this will enhance the rate at which they will embrace the commercialized extension system. This is in line with Bawa *et al.* (2009) who found that 64.8% of respondent strongly agree that commercialization of extension services delivery can help farmers have greater access to farm inputs while 35.2% of respondent did not agree.

**Table2.** Farmers Perception of the Value of Commercialized Extension Services

Perception	Delta Central		Delta North		Pooled	
	Mean*	SD	Mean*	SD	Mean*	SD
Commercialized extension will enhance farmers' productivity	3.75	0.50	3.73	0.51	3.74	0.50
Farmers' will receive quicker attention from extension workers in a commercialized extension system	3.71	0.45	3.70	0.46	3.71	0.46
Farmers' problem will be taken more seriously in a commercialized extension system	3.70	0.48	3.70	0.48	3.70	0.48
Farmers' income will increase under commercialized extension services	3.64	0.57	3.65	0.56	3.65	0.57
The value of extension will be better appreciated under commercialized extension services	3.55	0.62	3.52	0.64	3.53	0.63
Extension workers will take their job more seriously in commercialized extension system	3.23	0.68	3.23	0.66	3.23	0.67

\*Agreed (mean > 2.50), Source: Field data, 2015

### Test of Hypothesis

#### Relationship between Farmers' Characteristics and their Value for Commercialized Extension System

Multiple regression was used to test the relationship between the farmer socio-economic characteristics and their perceived value for commercialized extension system. The calculated F value (F=29.03) was significant (p < 0.050). This means that the independent variables have significant influence on the

farmers' perception of the value of commercialized extension system. The adjusted R<sup>2</sup> (0.713) implies that the independent variables explain or account for 71.3% of the farmers perception of the value of commercialized extension system. The t-value shows that age, farming experience, sex and income were significant factors affecting farmers' value for a commercialized extension system since the computed t values are greater than the critical t- value (1.96). The results are discussed below.

**Table4.9.** Relationship between Farmers Socio-Economic Characteristics and their Perceived Value for Commercialized Extension System.

Independent variables	Coefficient (B)	t-value	Prob. Level
Constant	0.661	9.268	0.000
Age	0.006*	3.604	0.000
Sex	-0.068*	2.678	0.008
Educational level	0.010	0.895	0.372
Farming experience	0.010*	5.093	0.000
Household size	-0.010	1.634	0.104
Income range	-0.044*	9.765	0.000

F value = 29.03 (p < 0.050), Adjusted R square = 0.713, \*Significant at 5% (critical t=1.96), Field data, 2015

#### Age

The coefficient for age was positive (b=0.006), which means that older farmers have a more

positive perception towards commercialized extension system. This result implies that the older farmers become, the more they develop positive perception towards commercialized

extension system. This result is in line with Ugboh and Izah (2003) who explained that older farmers are more committed to their farming activities as young ones usually see farming as a tedious and dirty job. It is possibly that younger farmers may not want to continue with farming and as such do not develop positive perception towards commercialized extension system.

#### **Educational Level**

The coefficient for education level was positive and not significant ( $b=0.010$ ). This implies that as farmers acquire more education, they tend to development positive perception of the value of a commercialized extension system. It is possible that farmers with higher education have a better appreciation of treating farming as a business, and would therefore want to pay for commercialized extension system in order to enhance their production, and income.

#### **Farming Experience**

The coefficient for farming experience was positive ( $b=0.010$ ). This shows that the more experience farmers have a more positive perception of the value of commercialized extension system. It is possible that farmers with higher experience are more committed to their farming operations and therefore they hold a more positive perception about the value of commercialized extension system.

#### **Income**

The coefficient of income was negative ( $b=-0.044$ ). This shows that farmers with lower income have more positive perception towards commercialized extension system. This differ from Erie, (2009) findings, which revealed that farmers who earned higher income showed positive support for commercialized of extension services. This may be due to the fact that farmers with higher income will be more committed to their farming activities and as such have positive perception towards commercialized extension system. Also, those with higher income will want to pay for commercialized extension services, since they can more readily afford this.

#### **Sex**

The coefficient for sex was negative and significant ( $b=-0.068$ ), which means that sex was a determinant for farmers perception for commercialized extension services. This implies that whether male or female farmers played a run in their perception for commercialized

extension service. This however differ from past study, which indicate that female farmers are less reluctant toward improve technology compare to their male counterpart.

#### **Household Size**

The coefficient of household was negative and not significant ( $-0.010$ ). This implies that negative relationship exist between farmers household size and their perception for commercialized extension services. These suggest that farmers with low household size and desire to improve their standard of living, hence a small size of their family. In their quest for improving standard of living, they have a favourable perception for commercialized extension system as a way of boosting productivity and income for better standard of living.

#### **CONCLUSION**

Based on the findings of this study the following conclusion were made.

The global economic development trend which has prescribed liberalization of all sectors of the economy through commercialization for rapid economic and sustainable growth has posed new challenges to all economic institutions and agencies charged with the responsibility of either implementing or coordinating development in any aspect of the economy. The commercialization of extension services will enhance rapid agricultural development. The result revealed that farmers value commercialized agricultural extension system and that age, farming experience, sex and income were significant factors affecting farmers' value for a commercialized extension system

#### **RECOMMENDATIONS**

Based on the findings of this study, the following recommendations were made.

1. Government should seriously consider the implementation of commercialized extension services in the state in order to help farmers boost their production.
2. Farmers should be sensitized or educated by the relevant agencies on the value associated with commercialized extension system so as to enhance their attitude or value of this extension system.
3. Farmers should form themselves into cooperative societies to avail them the

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opportunity of assessing the services more easily with less financial implication.

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