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Cassava Farmers' Attitude Towards Participation in Root and Tuber Expansion Programme in Delta State, Nigeria

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Abstract: This study ascertained cassava farmers' attitude towards participation in Root and Tuber Expansion Programme (RTEP) in Delta State, Nigeria. Multistage sampling procedure was used to select 120 respondents from the 3 Agricultural Development Programmes (ADPs) zones in the study area. The study was conducted from June to November 2018. Data on respondents' socio-personal characteristics, income earned from cassava production and attitude towards participation in RTEP were generated using structured interview schedule. Frequency count, percentage, mean, Chi-square, Pearson Product Moment Correlation (PPMC) and multiple regressions were used to analysed data at $p \leq 0.05$. The mean age, years of formal education and household size were 46 years, 9 years and 6 persons, respectively. Majority (85.8%) of the respondents were married with formal education (73.3%) and using family labour (37.5%). Most (60.0%) of respondents were cosmopolitan with more than once a week visit to urban centres, while 79.2% earned an average annual income of ₦234,641.67 from cassava production. A little above average (51.7%) had unfavourable attitude towards participation in RTEP. Age ($\beta=-0.08$), household size ($\beta= 0.37$) and income earned from cassava production ($\beta= 5.47$) were significant contributors to attitude towards participation in RTEP. This study concluded that the attitude of cassava farmers towards participation in RTEP in Delta State is marginally unfavourable and determined by age, household size and income. Therefore, it is recommended that government, development organisations and other stakeholders implementing the RTEP should organize intervention to increase income earned from cassava production, this will enhance favourable attitude towards towards RTEP.

Nijerya Delta Eyaleti, Manyok Çiftçilerin Kök ve Yumru Genişletme Programına Katılım Yönündeki Tutumu

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Anahtar kelimeler

Manyok çiftçileri,
Genişletme Programı,

Öz: Bu çalışma manyok çiftçilerin Nijerya'daki Delta Eyaleti'nde Kök ve Yumru Genişletme Programına (KYGP) katılım konusundaki tutumunu tespit etmektedir. Çalışma alanındaki 3 Tarımsal Kalkınma Programı bölgesinden 120 katılımcı seçmek için çok aşamalı örnekleme prosedürü kullanılmıştır. Çalışma Haziran - Kasım 2018 tarihleri arasında gerçekleştirilmiştir. Katılımcıların sosyo-kişisel özellikleri, manyok üretiminden elde edilen gelir ve RTEP'e katılım konusundaki tutum, yapılandırılmış görüşme programı kullanılarak oluşturulmuştur. Verileri $p \leq 0.05$ 'te analiz etmek için frekans sayısı, yüzde, ortalama, Ki-kare, Pearson Ürün Moment Korelasyonu ve çoklu regresyonlar kullanılmıştır. Ortalama yaş, örgün eğitim ve hane halkı büyüklüğü sırasıyla 46 yaş, 9 yaş ve 6 kişidir. Anket

Gelir,
Kök ve yumru,
Katılım.

katılanların çoğunluğu (% 85.8) evli, örgün eğitilmiş (% 73.3) ve aile işçiliği (% 37.5) şeklindedir. Ankete katılanların çoğu (% 60.0) şehir merkezlerine haftada bir defadan fazla ziyaret ile kozmopolitken, % 79.2'si manyok üretiminden yıllık ortalama 234.641,67 ₦ gelir elde etmektedir. Ortalamanın biraz üzerinde (% 51.7) KYGP'e katılım konusunda olumsuz tutum bulunmaktadır. Yaş ($\beta = -0.08$), hane halkı büyüklüğü ($\beta = 0.37$) ve manyok üretiminden elde edilen gelir ($\beta = 5.47$) KYGP'e katılım tutumuna önemli katkıda bulunmuştur. Bu çalışma, manyok çiftçilerin Delta Eyaletinde KYGP'e katılım konusundaki tutumunun marjinal olarak elverişsiz olduğu ve yaş, hanehalkı büyüklüğü ve gelirine göre belirlendiği sonucuna varmıştır. Bu nedenle, KYGP'i uygulayan hükümet, kalkınma organizasyonları ve diğer paydaşların manyok üretiminden elde edilen geliri artırmak için müdahale düzenlemeleri yapması önerilmektedir; bu KYGP'e karşı olumlu tutumu geliştirecektir.

1. Introduction

Cassava (*Manihot esculenta*, Crantz) is among the most important sources of carbohydrate in the world (Akinpelu et al., 2011). It is also of major economic importance as food crop for approximately 200 million people in sub-Saharan Africa countries, including Nigeria (Afolami et al., 2015).

In Nigeria, cassava is a major staple food crop (Ajala et al., 2014). Its root and leaves are valuable and a major source of calories and income for rural households in the country (Afolami et al., 2015). Its cultivation by farmers has provided income to about 30 million low-income farmers as well as large numbers of processors and traders in the country (Abdoulaye et al., 2014). In the country, its economic benefits as well as ease of cultivation, low input cost, high adaptability to traditional farming systems and usefulness in ensuring food security has made it to resonate and towers highest among staple food and cash crops with respect to area cultivated and total production (Ajala et al., 2014; Okosun and Aihie-Ezomo, 2017).

In view of the usefulness of cassava in combating hunger, enhancing income generation and reducing poverty in the country, the Nigeria government has since independence, implemented diverse agricultural development projects and programmes in order to sustain increase in its productivity as well as total production. The Root and Tuber Expansion Programme (RTEP) initiated in 1999 is one among the several implemented projects and programmes that is still in existence in the country.

Root and Tuber Expansion Programme was designed by the Food and Agricultural Organization in conjunction with the Federal Government of Nigeria (FGN) and negotiated by the International Fund for Agricultural Development (IFAD), following the completion of cassava multiplication project (CMP). Its main thrust was to consolidate gains made under the CMP in order to improve income for poor farmers and national food security. Capitalising on lesson learnt from CMP, RTEP was conceived as a follow-up phase that extend support to other roots and tubers (such as yam, sweet potato, potatoes and cocoyam), placing additional emphasis on processing and marketing (IFAD, 2001). The programme used the existing extension service system of the Agricultural Development Programme (ADPs) to introduce improved varieties of roots and tubers and better cultivation techniques. The RTEP long term objective among others include commercialising root and tuber production to improve the income of the smallholder households in the programme through increase in the production of its mandate crops as well as processing and marketing of their end-products (Nasarawa Agricultural Development Programme, 2001). Other objectives of RTEP include multiplying improved planting material; development of improved root and tuber crops production technologies to increase productivity; stimulating the movement of farmers from small holders to medium holders with respect to hectareage; and collaborating with NGOs to provide training to farmers. To attain the objectives of RTEP, IFAD approved a credit of 23.05 million U.S. Dollars to the Nigeria government for RTEP Phase I, which spanned between 2000 and 2010 (Oyibo, 2014).

Presently, following the completion of Phase I, the Government of Nigeria (both Federal and State Governments) in partnership with donor agencies are implementing Phase II of the RTEP. However, despite RTEP implementation by government, cassava productivity is still quite low in Nigeria. According to Donkor et al. (2017), small- and medium-scale farmers who are responsible for

majority of the cassava output in the country, are still producing below the potential yield of 25 tons per hectare. Afolami et al. (2015) opined that farmers have only been able to achieve about 50 per cent of cassava potential yield at 12 tons per hectare. Empirical analysis has shown that average cassava yield in the country in 2013 was 14 tons per hectare in contrast to 16.7, 35 and 21 tons per hectare for Ghana, India and Thailand, respectively (FAO, 2013). These statistics suggest a need to investigate into the successes or otherwise of RTEP.

According to Ayoade (2012), the success of any agricultural programme depends largely on the attitude of the farmers. The author further opined that one major approach to determine the success of agricultural projects and programmes is to begin with the farmers' attitude toward the particular project and programme. Oyibo (2014) stated that farmers' attitude had tremendous effect on success and failure of various agricultural development programmes implemented by the Nigeria government and non-governmental organizations to enhance agricultural productivity, since the post-independence era. Ovwigho and Ifie (2009) stated that attitude could be described as a response to stimuli which is usually noticeable in the form of hatred and likeness. Like and hate could be viewed as positive and negative attitudes, respectively. Ayoade (2012) viewed attitude as the degree of positive or negative effects associated with psychological objects. The author further stated that for agricultural programme to be more successful and effective, effort should be made at creating the right attitude within and/or among the programme beneficiaries or participants.

Several studies have been carried out on farmers' attitude in Nigeria. For example, Ovwigho (2014) assessed effects of advisory services on attitude to innovations and fatalism among fadama III participants in Delta-Central Senatorial District of Delta State, Nigeria. Ayoade (2012) ascertained attitude of women farmers towards agricultural extension services in Ifelodun local government area, Osun State. Ovwigho and Ifie (2009) assessed the attitude of youth to agricultural development programmes in Ughelli South Local Government Area of Delta State. However, there is dearth of information on cassava farmers' attitude towards root and tuber expansion programme. Therefore, this study was carried out to investigate cassava farmers' attitude towards root and tuber expansion programme. The main objective of this study was to ascertain the attitude of cassava farmers towards participation in RTEP in Delta State, Nigeria. The specific objectives were to: describe the socio-demographic characteristics of the Programme Participants (PPs) in the study area; ascertain the income earned from cassava production by PPs in the study area; and determine the attitude of the PPs towards participation in RTEP in the study area. Based on the objectives of the study, the following hypotheses were tested: there is no significant relationship between the socio-demographic characteristics of PPs and their attitude towards participation in RTEP in the study area; there is no significant relationship between the income earned from cassava production by PPs and their attitude towards participation in RTEP in the study area; there is no significant contribution of income earned from cassava production, age, marital status, educational status, sex of household head, household size and source of labour to attitude towards participation in RTEP in the study area.

2. Material and Methods

2.1. Study area

The study area was Delta state of Nigeria. Delta state was carved from the defunct Bendel State on the 27th of August 1991. The area lies within latitude 5° 00' and 6° 30' North of the equator and longitude 5° 00' and 6° 45' East of the Greenish Meridian. The area covers a land mass of approximately 17,698km² and comprise of 25 Local Government Areas (LGAs) with the capital at Asaba. The major ethnic groups are Urhobo, Isoko, Aniocha, Ika, Ndokwa, Itsekiri and Ijaw. The study area is basically a tropical climate; rainy season starts from late March and end in October with a brief dry spell in August, known as "August break", while the dry season starts in November and end in early March and is characterized by hot, dry and dusty Eastern Harmathan inducing wind. The average annual rainfall in this area is approximately 266.5mm in the coastal areas and 190.5mm in the Northern fringes of the state, with the heaviest rainfall in the month of July. The temperature fluctuations are between 21°C - 35°C, with an average temperature of 30°C (80°F). The vegetation cover in this area varies from one ecological zone to the other; it is Mangrove Swamp Forest along the coast in the southern part of the area, to Fresh Water Swamp and Evergreen Rainforest in the central

part of the area and the Derived Savannah in the northern part of the area. The main livelihood of majority of the inhabitants of the study area is agriculture; farming and fishing. The important agricultural crops grown in the area include cassava, yam, maize, plantain, groundnut, cocoyam, pineapple, melon, sweet potato, rice, rubber, oil palm, okro, tomatoes, pepper, fruits and vegetables. Rearing of livestock such as cattle, goats, sheep, pigs and poultry is a common practice, while aquaculture and artisanal fisheries activities are also common practice in the study area.

2.2. Population and sampling procedure

The population of this study comprised of all cassava farmers participating in RTEP in DADPs of Delta State. Multistage sampling procedure was used to select respondents for the study. Delta state has 3 ADPs zones, namely: Delta-Central, Delta-North and Delta-South zones. Delta-Central, Delta-North and Delta-South zones have 10, nine and six extension blocks, respectively. Altogether, 20% (5) of the blocks in the zones were randomly selected using proportionate sampling technique. These were Ughelli-South and Ethiope-East from Delta-Central zone; Ika-North and Oshimili-North from Delta-North zone; and Patani from Delta-South zone. An average of 8 cells is in each block. Forty per cent (3) cells in each selected blocks were purposively sampled based on high predominance of cassava production, which were: Ewu, Egbourhe and Oginibo cells from Ughelli-South block; Oria Abraka, Okpara-Inland and Isiokolo cells from Ethiope-East block; Umunedede, Igbodo and Ute-okpu cells from Ika North-block; Ebu, Okpanam and Achalla cells from Oshimili-North block; and Abare, Koloware and Patani cells from Patani block. From the list of RTEP cassava registered farmers in the selected cells, 20% RTEP participants' cassava farmers were randomly selected from each of the selected cells for analysis using proportionate sampling technique, making a sample size of 120 respondents. The summary of sampling procedure is presented in Table 1.

Table 1. Summary of sampling procedure and sample size

ADPs zones in Delta state	Blocks in each zone	20% of blocks in the zones	Cells in selected blocks	Purposive selection of 40% cells per block	Number of cassava farmers	Number of RTEP registered farmers	20% of RTEP participant cassava farmers
Delta-Central	10	Ughelli-South	8	Ewu	40	8	8
				Egbourhe	40	8	8
				Oginibo	38	8	8
	Ethiope-East	8	8	Oria Abraka	42	8	8
				Okpara-Inland	42	8	8
				Isiokolo	40	8	8
Delta-South	6	Patani	8	Abare	38	8	8
				Koloware	39	8	8
				Patani	38	8	8
Delta-North	9	Ika-North	8	Umunedede	39	8	8
				Igbodo	39	8	8
				Ute-okpu	41	8	8
	Oshimili-North	8	8	Ebu	41	8	8
				Okpanam	42	8	8
				Achalla	41	8	8
Total	25	5	40	15	600	120	120

Source: Delta Agricultural Development Programme (2018).

2.3. Data collection

The study was conducted from June to November 2018. Data were collected using interview schedule. The interview schedule captured information on demographic characteristics, income earned from cassava production and attitude toward participation of respondents.

2.4. Measurement variables

Income earned from cassava production was measured by asking respondents to state the actual amount in Naira value earned from cassava production with respect to 2017/2018 farming

season. The highest income was ₦800,000.00, while the minimum was ₦50,000.00. Respondents' income earned from cassava production was categorised using the mean score (₦234,641.67) and standard deviation-SD (₦138,886.68) into: high income, scores between mean + 1 SD and maximum (₦373,528.36-₦800,000.00); average income, scores between mean - 1 SD and mean + 1 SD (₦95,755.00-₦373,528.35); and low income, score between minimum and mean - 1 SD (₦50,000.00-₦95,754.99). Respondents' cosmopolitanism was measured by asking them to indicate how frequently they visit urban centres from the options of more than once a week, weekly, more than once a month, once in a month, once in several months, annually/yearly and never. The ordinary frequency numbers of the list of options were standardised by mathematical procedures (using sigma scoring method) to obtain normalised standard scores (Table 2) before using them in parametric statistical analysis. This is based on a methodology similar to that of Agbamu (1995). Based on the normalisation of score in Table 2, the options of more than once a week, weekly, more than once a month, once in a month, once in several months, annually/yearly and never were assigned scores of 5, 3, 2, 1, 0, 0 and 0, respectively. The highest score was 5, while the minimum was 1. Respondents' cosmopolitanism was categorised into cosmopolitan and non-cosmopolitan, using the mean score (3.89) as the benchmark, cosmopolitan (3.90-5) and non-cosmopolitan (1-3.89). Attitude towards participation was measured by presenting ten (10) attitudinal statements, which consist of both positively and negatively worded statements. This was measured on a 4 Point rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with scores of 4, 3, 2 and 1 assigned respectively for positively worded attitude statements and the reverse for negatively worded statements. The highest score was 40, while the minimum was 24. Respondents' attitude toward participation was categorised using the mean (31.88) into favourable (31.88-40) and unfavourable (24-31.87).

Table 2. Normalised standard scores for cosmopolitanism options (N = 120)

Graduations	Freq.	Cum. Freq.	Cum. Freq. to midpoint	Cum. Proportion to midpoint	Z*	(Z+2) ²	Approx. Standard Score**
Never	0	0	0	0	0	0	0
Annually/yearly	0	0	0	0	0	0	0
Once in several month	0	0	0	0	0	0	0
Once in a month	11	11	5.5	0.046	-1.685	0.63	1
More than once a month	15	26	18.5	0.154	-1.019	1.962	2
Weekly	22	48	37	0.308	-0.502	2.996	3
More than once a week	72	120	84	0.7	0.524	5.048	5

* = values obtained from normal probability table, Z.; ** = Normalized Standard scores.

2.5. Data analysis

The data collected were entered into Statistical Package for Social Sciences (SPSS). Descriptive statistics carried out included frequencies, mean and standard deviation. Inferential statistics used to test the hypotheses were t-test, Chi-Square, Pearson Product Moment Correlation (PPMC) and multiple regression.

3. Results

3.1. Socio-demographic characteristics of respondents

Results in Table 3 reveals that a preponderance (44.2%) of the respondents were between 41 and 50 years, while over half (73.4%) were above 40 years. Furthermore, the mean age of respondents was 46.37±9.24 years. This implies that most of the respondents were middle aged and in their economically active age.

The marital status of respondents as shown in Table 3 reveals that majority (85.8%) of respondents were married, while more than half (94.9%) had engaged in marriage. The implication is that respondents had family responsibilities that needed financial commitment.

The sex of household head presented in Table 3 shows that majority (57.5%) of household heads were males compared to 9.2% who were female. The high number of male-headed households is consistent with Babatunde et al. (2011) who reported that over half (80%) of household heads were

males. This is in line with the findings of Eforuoku (2018) that 7.9% of households were headed by women. The educational status distribution of respondents as shown in Table 3 reveals that 73.3% of the respondents had formal education, while 26.7% had no formal education. Also, only 17.5% had tertiary education. The mean year of formal education was 8.98 ± 5.09 . The findings were suggestive of moderate level of education among the respondents. The average household size 6.2 ± 2.34 persons were obtained as shown in Table 3. Results reveals that majority (56.7%) of the respondents had a household sizes of between 6 and 10 persons. It could be inferred that the average household size is relatively high when compared to the average Nigeria household size of 4.6 persons as opined by Eforuoku (2018). The implication is that cassava farmers have a large household.

Table 3 shows that 37.5 of the respondents used family labour, while 22.5% and 29.2% used family plus hired and family plus communal labour, respectively. This implies that family labour was the predominant source of farm labour in the study area.

Table 3 indicates that 60.0% of the respondents visited urban centres more than once a week, while 18.3% visited once in a week. This is an indication that respondents' visit to urban centres was high. Table 4 reveals that a larger percent (60%) of the respondents were cosmopolitan in the study area, compared to non-cosmopolitan (40%). The implication is that majority of rural cassava farmers in the study area had exposure to urban areas. The exposure could influence their attitude towards participation in root and tuber crops extension sub-programme.

Table 3. Distribution of respondents according to socio-demographic characteristics (n = 120)

Characteristics	Frequency	Percentage (%)	Mean \pm SD / Mode
Age (years)			
≤ 20	1	0.8	
21-30	7	5.8	
31-40	24	20.0	46.37 \pm 9.24 years
41-50	53	44.2	
> 50	35	29.2	
Marital status			
Single	6	5.0	
Married	103	85.8	Married*
Divorced	4	3.3	
Widow/widower	7	5.8	
Sex of household head			
Male	69	57.5	Male*
Female	11	9.2	
Non-head of household	40	33.3	
Educational Status			
Formal education	88	73.3	Formal education*
No formal education	32	26.7	
Years of formal Education			
None	10	8.3	
1-6	37	30.8	8.98 \pm 5.09
7-12	52	43.3	
Above 12	21	17.5	
Household Size (persons)			
1 -5 persons	47	39.2	
6 – 10 persons	68	56.7	6.24 \pm 2.34 persons
11 – 15 persons	5	4.1	
Farm labour source			
Family	45	37.5	Family*
Communal	3	2.5	
Hired	10	8.3	
Family/hired	27	22.5	
Family/communal	35	29.2	
Frequency of visiting urban centres			
More than once a week	72	60.0	More than once a week*
Weekly/once in a week	22	18.3	
More than once a month	15	12.5	
Once in a month	11	9.2	
Once in several months	0	0.0	
Annually/yearly	0	0.0	
Never	0	0.0	

Note: Values in asterisks implies mode. Source: Field survey, 2018.

Table 4. Categorization of respondents by cosmopolitan behaviour

Cosmopolitan behaviour	Frequency	Percentage (%)	Minimum	Maximum	Mean
Cosmopolitan (3.90-5)	72	60	1.00	5.00	3.89
Non-cosmopolitan (1-3.89)	48	40			

Source: Field survey, 2018.

3.2. Income earned from cassava production

The results on yearly income realized from cassava production by respondents (Table 5) reveals that the mean income realized from cassava production was ₦234,641.67±138,886.68 yearly; furthermore, over half (75.7%) of the respondents realized more than ₦149,000.00 yearly. This is an indication that cassava production is profitable.

Table 5. Distribution of respondents by income earned from cassava production (n = 120)

Income categories (Naira)	Frequency	Percentage (%)	Mean±SD
50,000 – 149,000	29	24.2	
149,001 – 249,000	46	38.3	
249,001 – 349,000	24	20.0	₦ 234,641.67±138,886.68
349,001 – 449,000	10	8.3	
449,001 – 549,000	7	5.8	
>549,000	4	3.3	

Source: Field survey, 2018.

3.3. Categorizations of respondents by income earned from cassava production

Results in Table 6 shows that a larger percent (79.2%) of the respondents had average income, while 11.7% had high income. This implies that there was moderate income earned from cassava production in the study area.

Table 6. Categorization of respondents based on income earned from cassava production

Level of income	F	%	Minimum	Maximum	Mean	SD
Low (50,000.00-95,754.99)	11	9.2	50,000.00	800,000.00	234,641.67	138,886.68
Average (95,755.00-373,528.35)	95	79.2				
High (373,528.36-800,000.00)	14	11.7				

Source: Field survey, 2018.

3.4. Respondents' attitude towards participation in root and tuber crops extension sub-programme

Results in Table 7 reveals that a little above average of the respondents (51.7%) had negative attitude towards participation. This implies that respondents have unfavourable attitude toward participation in RTEP. The unfavourable attitude may be due to average income realized from cassava farming (Table 6).

Table 7. Categorization of respondents' attitude towards participation in RTEP

Attitude towards participation in RTEP	Frequency	Percentage (%)	Minimum	Maximum	Mean
Favourable (31.88-40)	58	48.3	24.00	40.00	31.88
Unfavourable (24-31.87)	62	51.7			

Source: Field survey, 2018.

3.5. Chi-square and correlation analyses between socio-demographic characteristics of cassava farmers and their attitude towards participation in RTEP

Results in Table 8 and 9 shows that age ($r=-0.04$, >0.05), years of education ($r=0.09$, >0.032), cosmopolitanness ($r= -0.08$, $p>0.05$), marital status ($X^2 =4.77$, $p>0.05$), educational status ($X^2 =1.03$, $p>0.05$), sex of household head ($X^2 = 4.74$, $p>0.05$) and main source of farm labour ($X^2 = 5.09$, $p>0.05$) were not significantly related to attitude towards participation in RTEP. The Table further reveals that household size ($r=0.26$, $p<0.05$) was significantly related to attitude towards participation in RTEP.

Table 8. Correlation analysis of socio-demographic characteristics and attitude towards participation in RTEP

Variable	r-value	p-value
Age	-0.038	0.68
Years of formal education	0.09	0.32
Household size	0.26*	0.00
Cosmopolitanness	-0.08	0.39

*Significant at $p\leq 0.05$.

Table 9. Chi-square analysis of socio-demographic characteristics and attitude towards participation in RTEP

Variable	df	X^2	P
Marital status	3	4.77	0.19
Educational status	1	1.03	0.31
Sex of household head	2	4.74	0.09
Source of labour	4	5.09	0.28

Significant at $p\leq 0.05$.

3.6. Correlation analyses between income earned from cassava production and attitude towards participation in RTEP

The result in Table 10 reveals a significant correlation between income realized from cassava production and attitude towards participation in RTEP ($r = 0.27$, $p<0.05$). It can be deduced that the income respondents earned from cassava production determined their attitude towards participation in RTEP. Hence, high income from cassava production will likely bring a change in attitude towards participation in RTEP.

Table 10. Correlation analysis of income realized from cassava production and attitude towards participation in RTEP

Variable	r-value	p-value
Income from cassava	0.27*	0.00

*Significant at $p\leq 0.05$.

3.7. Determinants of attitude towards participation in RTEP

Table 11 shows that the R^2 value was 0.16. This indicate that the independent variable explains 16% of the attitude towards participation in RTEP. The regression model was significantly good enough for predicting the attitude towards participation in RTEP ($F=3.10$, $p<0.05$). It further reveals that age of respondents ($\beta= -0.08$, $p<0.05$), household size ($\beta = 0.37$, $p<0.05$) and income from cassava ($\beta = 5.47$, $p < 0.05$) contributed significantly, to attitude towards participation in RTEP. This implies that age of respondents', household size and income from cassava were determinants of respondents' attitude towards participation in RTEP.

Table 11. Contribution of predictors to attitude towards participation in RTEP

Predictors	Beta	t-value	p-value
(Constant)	30.81	15.70	0.00
Age of respondents	-0.08*	-2.09	0.04
Marital status (Married)	1.47	1.67	0.10
Educational status (Formal education)	-0.07	-0.10	0.92
Sex of household head (Male headed)	0.20	0.27	0.79
Household size	0.37*	2.42	0.02
Source of labour (Family)	-0.03	-0.04	0.97
Income from cassava	5.47*	2.17	0.03
Summary			
R-value	0.40		
R ²	0.16		
Adjusted R	0.11		
Standard Error of the estimated	3.28		
ANOVA			
p-value	0.00		
Df	7		
F	3.10		

*Significant at $p \leq 0.05$.

4. Discussion and Conclusion

That most of the respondents were middle-aged and in their economically active age implies that they still have the energy to meet with the labour demands of agricultural production. This corroborates the assertion of Bawa et al. (2010) that agricultural production activities are mostly carried out by the middle-aged people. The middle and older aged people among the respondents could be due to the result of rural-urban migration of the younger aged and/or youth. This support the position of Ogunbanwo (2008) that most of the young people in the rural areas have migrated to urban centre. The age distribution of respondents is likely to affect attitude towards participation in RTEP, as middle and older aged people are more likely to be highly experienced, fatalistic and conscious of acquiring and/or accepting new agricultural practices and innovations, hence, lower likelihood to participate in agricultural programmes, and thus likely to have an unfavourable attitude towards participation in RTEP. This supports the findings of Ovwigho and Ifie (2009) that youth had favourable attitude to agricultural development programmes than middle and older aged.

That most of the respondents were married implies that respondents had family responsibilities that needed financial commitment. The result supports the finding of Ifejika et al. (2008) that a high proportion of rural farmers were married. The high proportion of married respondents could be due to the high value placed on marriage as is typical of any rural setting in sub-Saharan Africa. High presence of married people could also affect attitude towards participation in RTEP as married people are likely to have high participation because of more social and family responsibilities, hence, have favourable attitude towards participation in agricultural programme.

The sex of household head is likely to influence attitude towards participation in RTEP. Households with male heads are likely to have favourable attitude towards agricultural programme, as males are often breadwinners and might be motivated to effectively participation in agricultural programme due to inward drive to improve income earned from agricultural production in other to meet more social and family responsibilities. Furthermore, the sex of household head is likely to affect attitude towards participation, as female respondents in household with male heads are more likely to have lower or no participation in agricultural development programme because of less or no decision making power by women.

That most of the respondents had formal education with maximum of secondary education suggests that the respondent were moderately educated. The educational attainment of respondents is likely to affect attitude towards participation, as moderate level of education could likely enhance understanding and internalizing of extension guide, bulletins and technical paper, hence have favourable attitude towards participation. Also, the moderate level of education might enhance the adoption of ideal and innovation disseminated in RTEP programme. Studies as Caswell et al. (2001)

and Benor et al. (1997) found that education is important in creating favourable or positive mental attitude towards acceptance and utilization of new farming practices and innovations.

The household size of the respondent was large. This is likely due to early marriage because of the need for large family size, which served as sources of labour on the farms. This is consistent with Ntege-Nanyeenya et al. (1997) who submitted that large household size is germane in providing rural farmers with farm labour required for agricultural activities, especially in Sub-Saharan Africa. Household size has implications for rural farmers' attitude towards participation in RTEP. Households with large household size are likely to have favourable attitude towards participation in agricultural programme, as large household size are often used as farm labour during utilization of new technologies disseminated during RTEP programme.

The high use of family labour in the study area could be as a result of the large household size, which serves as a readily available labour source. This is in line with the findings of Igbaifua (2018), who posited that family labour enhances quick execution of farm work due to timely accessibility to labour.

That most of the respondents had high visit to urban centre imply that cassava farmers' in the study area had exposure to urban areas. The exposure could influence their attitude towards participation in RTEP. The importance of cosmopolitanism to agricultural development is established in its relationship with utilization of innovations *vis a vis* knowledge of agricultural practices. For instance, research by Agbamu (1995) found a positive relationship between farmers' knowledge of agricultural practices, adoption rate and cosmopolitanism.

Most of the respondents earned income from cassava production, which suggests that cassava production is profitable. This might be due to its value as the most important staple food crop in the study area. It could also be due to a wide range of forms of its utilization. This corroborates Yahaya and Aina (2007) assertion, that cassava is a profitable cash crop with over 200 different uses in the world. This is also consistent with Aerni (2006) who observed that cassava is a reliable source of food and has emerged to be a very vital staple food crop that is of industrial significance in the world economy.

The level of income earned from cassava production was average among the respondents. The average income is likely due to the moderate educational attainment, which might have affected the utilization of disseminated innovation. This is in line with Agbamu (2006), who asserted that level of education is a germane factor that affects utilization of new innovation. Average income will influence participation in RTEP and affect attitude towards participation in the programme.

The respondents have unfavourable attitude towards participation in RTEP. This result disagrees with Ovwigho (2014) that Fadama III (a similar programme) participants had favourable attitude toward Fadama III. The unfavourable attitude might be due to the average income earned from cassava production. Respondents' income realized from cassava enterprise will affect perception to participation in RTEP and ultimately influence attitude.

The positive correlation between respondents household size and attitude towards participation in RTEP implies that the larger the household size, the more favourable the attitude towards participation in RTEP. It is expected that with increased household size, there is likelihood of higher labour availability for innovation utilization and hence favourable attitude towards participation in RTEP. Increased household size implies increased in labour availability for utilization of innovation obtained during participation, which boost farmers' attitude towards participation in RTEP. According to Mignouna et al. (2011), household sizes determine a farming household capacity to relax the labour constraints encountered during utilization of new disseminated innovation.

The positive correlation between income from cassava production and attitude towards participation in RTEP implies that the higher the income from cassava production, the more favourable the attitude towards participation in RTEP. This suggests that higher income from cassava production translate into favourable attitude towards participation in RTEP. The fact that respondents realized high income from cassava production guarantee favourable attitude towards participation in RTEP.

Socioeconomic characteristic of the cassava farmers such as age, household size and income earned from cassava contributed to their attitude toward participation in RTEP. This implies that age, household size and income from cassava production were predictors of respondents' attitude towards participation in RTEP. The coefficient of age bore a negative sign. The negative but significant

contribution of age to attitude towards participation in RTEP, indicate the reverse likelihood of older farmers to have favourable attitude towards participation in RTEP. This can be explained by the fact that older farmers are reluctant to accept new information and improved innovation. Household size of farmers affect attitude towards participation in RTEP, with larger household size, attitude towards participation in RTEP will become favourable. Hence, larger household size will enhance favourable attitude towards participation in RTEP. The significant contribution of the income realized from cassava production suggests that with increase in income, there is significant increase in attitude towards participation in RTEP; income contribute to attitude to participation in RTEP either as a motivational factors or as means of buying inputs required to practice disseminated innovation.

Most of the cassava farmers were middle-aged who were mostly married and head of household. Most of them had moderate educational attainment with large household size. Majority of them were cosmopolitan and engaged their family as source of farm labour. Most of the respondents earned average income from cassava production. A little above average of the respondent had unfavourable attitude towards participation in RTEP which was influenced by their age, household size and income from cassava production.

Age, household size and income from cassava production were major predictors of attitude towards participation in RTEP. Conclusively, cassava farmers' attitude towards participation in RTEP was marginally unfavourable, meaning that the programme is marginally or slightly unsuccessful.

Based on the main findings and conclusion, it is recommended that government, development organisations and other relevant stakeholders implementing the RTEP should organize intervention to increase income earned from cassava production, this will enhance favourable attitude towards RTEP as well as ensure the success of the programme; farmers with large household size should be encouraged to actively participate in RTEP, this will enhance favourable attitude towards RTEP; and agricultural programmes, projects and policies targeted towards young adults and youth should be promoted to engender favourable attitude towards agricultural development programmes and projects.

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