

Full Length Research Paper

Factors influencing rural youths involvement in cassava production in Oyo State

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This study attempted to determine the factors influencing rural youths' involvement in cassava production in Oyo State. Multi-stage sampling procedures were used in selecting the respondents. The first stage involved the stratification of Oyo State local governments into rural and urban. The second stage involved the selection of 20% of 21 rural local governments using simple random sampling technique which consists of 4 rural local governments. The third stage involved the selection of 20% of wards out of eleven wards using simple random technique which consists of eight wards in total in selected four rural local governments. The fourth stage involved the simple random selection of 2 communities from each ward which consists of sixteen communities in total in the selected wards. The fifth stage involved the simple random selection of 9 rural youths that were involved in cassava production from the selected communities which give a total sample size of 144 rural youths. However, the sampling rate was 97.2%. Primary data were collected from the respondents through the use of structured questionnaires. Data collected were subjected to both descriptive (mean, frequency and percentage) and inferential statistics such as Chi-square and correlation. Result revealed that majority (72.9%) of the respondents were male, married (89.3%), and the level of involvement on cassava production among the rural youth was high (61.4%) as inadequate fund for crop expansion was indicated as highest constraint among the respondents (97.8%). Chi-square analysis of the result shows that there was significant relationship between level of education of the respondents ($\chi^2=29.034$, $p=0.000$) and their involvement in cassava production. Further results of correlation analysis revealed that there exist a correlation between farm size ($r=0.487$, $p=0.000$); farming experience ($r=0.299$, $p=0.000$), constraints ($r=-0.379$, $p=0.000$) and rural youth involvement in cassava production. Based on these findings, the study recommended that credit facilities should not be made difficult for rural youth to obtain and adequate fund should be made available to rural youth by the financial institutions at single digit rate with less application bottle neck.

Key words: Rural youth, involvement, cassava production.

INTRODUCTION

Cassava (*Manihot esculenta*) is one of the world's most important food crops. In Nigeria, as in most developing countries, it is one of the most important carbohydrate sources. Cassava is an important source of dietary carbohydrate, and provides food for over 60 million people in Nigeria (Abdulahi, 2003). According to Nweke et al. (2002), eighty percent of Nigerians in the rural areas eat a cassava meal at least once a day; hence it plays a major role in the country's food security. Apart from its use as a staple food to human beings, other uses

include animal feed formulation, agro-industrial uses (for example, starch, ethanol, adhesive, fructose/glucose syrup), and the peels in organo-mineral fertilizers formulation (Iyagba, 2010).

Cassava ranks very high among crops that convert the

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greatest amount of solar energy into soluble carbohydrates per unit of area and it gives a carbohydrate production which is about 40% higher than rice and 25% more than maize, with the result that cassava is the cheapest source of calories for both human nutrition and animal feeding (Tonukari, 2004). A recent study on cassava shows that it accounts for about 70% of the total calories intake of more than half of the population (Nneyoi et al., 2008). Cassava is propagated by stem cuttings and thrives in fairly bad weather and poor soils with little or no fertilizer application. According to Tonukari (2004), cassava is a crop that outstrips all others in its potential areas of cultivation and survival on marginal lands. It produces acceptable yields on poor depleted soils where other crops yield virtually nothing; therefore it can be used to take advantage of marginal soils (Alabi and Alabi, 2002). Henceforth, cassava crop lends itself to cultivation by the vast majority of Nigerians with high potentials for wealth creation (Oyewole and Philip, 2006).

Youth-in-Agriculture programme has been described as a very important structure for land and agrarian reform which will go a long way towards promoting the interest of youth in the agricultural sector of the economy (Gwanya, 2008). Since agricultural development is the basic tool for economic development, there is the need for more emphasis to be placed on the role youth can play in agriculture (Fatunla, 1996). In Nigeria, agricultural production is still carried out using physical strength, which declines with age. This has therefore been observed as one of the major constraints to agricultural production in Nigeria (Okeowo et al., 1999). Though youths have desirable qualities that can promote agriculture, most of them have strong apathy toward it (Adewale et al., 2005). With fewer youths into agriculture, the long-term future of the agricultural sector is in question. The development of the agricultural sector of the Nigerian economy therefore depends on the young people, more especially the rural youths. This is because a larger population of youths represents the link between the present and the future as well as a reservoir of labour (Okeowo et al., 1999).

Youths are a formidable force in the agricultural production process, constituting a sizeable proportion of future progressive farmers and better citizens, especially in rural areas (Aphunu and Atoma, 2010). They possess unique capabilities (dynamism, strength, adventure, ambition), and these are assets for agriculture (Nnadi and Akwivu, 2008). Youth have been noted to play a vital role in the production of cassava especially in developing countries Nigeria inclusive, where their contribution is paramount. In order to boost cassava production in Nigeria, the Federal Government and International Fund for Agricultural Development (IFAD) jointly initiated the cassava multiplication programme with the aim of promoting cassava utilization as a commodity-based approach against food insecurity (Adeniji, 2000). Rural

youths play a central role in cassava production, processing and marketing, they are responsible for cassava production which provides additional income earning opportunities, and enhances their ability to contribute to household food security (Ojuekaiye, 2001). Despite the benefits accrued from cassava production, there are factors limiting rural youth involvement in its activities which are economic, social and environmental. Social factors include: public perception about farming and parental influence to move out of agriculture; environmental issues include inadequate land, continuous poor harvests, and soil degradation; and economic factors include non-lucrative, lack of initial capital, poor returns to investment, lack of basic farming knowledge, no incentives for farmer, no agricultural insurance, lack of access to tractors and other farm inputs, transport problem, inadequate credit facility, it is energy-sapping, no storage facilities, no ready market, and farmers are not respected (Adekunle et al., 2009). In Nigeria, data on rural youth participation in agriculture are scarce and in particular on food crops production, the few studies available on food crops production have focused mainly on the parents of the youths, while the youths who constituted a large proportion of the production force are neglected (Ekong, 2003). Study has shown that children and youth contributed significantly in agricultural activities, such as in cassava production (Ugwoke et al., 2005). In view of this, the study seeks to determine factors influencing rural youths' involvement in cassava production in Oyo State. The general objective of this study was to assess the determinants of rural youth's involvement in cassava production in Oyo State; specifically, the study sought to describe the personal characteristics of the respondents in the study; ascertain and determine the factors that influence rural youth involvement in cassava production; as well as identify the constraints of rural youth involvement in cassava production.

METHODOLOGY

This study was carried out in Oyo State of Nigeria. Multi-stage sampling procedures were used in selecting the respondents. The first stage involved the stratification of Oyo State local governments into rural and urban. The second stage involved the selection of 20% of 21 rural local governments using simple random sampling technique which consists of 4 rural local governments which are Ido, Egbeda, Afijio and Akinyele local government. The third stage involved the selection of 20% of wards out of eleven wards that consists of Egbeda local government, ten wards in Ido local government, twelve wards in Akinyele local government, and ten wards in Afijio local government using simple random technique which consists of eight wards in total in selected four rural local governments. The fourth stage involved the simple random selection of 2 communities

from each ward which consists of sixteen communities in total in selected wards. The fifth stage involved the simple random selection of 9 rural youths that were involved in cassava production from the selected communities which gave a total sample size of 144 rural youths; however, the sampling rate was 97.2%.

RESULTS AND DISCUSSION

Respondents' personal characteristics

Age distribution as shown in Table 1 reveals that 2.8% of the respondents were between the ages of 18 to 22 years, 19.3% were between ages of 23 to 27 years, 22.9% were between ages of 28 to 32 years, while 55.0% were between the ages of 33 to 37 years. The implication is that majority of the respondents (80.7%) falls within the age range of 18 to 32 years since the mean age of the respondents was 27.92 which indicated that they are in their youthful ages and very productive. Also majority of the respondents (72.9%) were male, while 27.1% were female; this implies that males were more involved in cassava production activities than females which may be as a result of the fact that women were more involved in off farm activities than men especially feeding of household members and reproductive functions. This finding is similar to that of Oladeji et al. (2003) that males are often more energetic and could readily be available for energy demanding jobs like cassava farming. As shown in Table 1, 89.3% were married, 6.4% of the respondents were single, 2.9% were divorced, while 1.4% of the respondents were widowed. This means that majority of the respondents were married and therefore had families to cater for. Available data in Table 1 further show that 60.0% of the respondents were Christians, 35.0% were Muslims and 5.0% were traditional worshippers. The implication of this is that Christianity is a popular religion in the study area. Also 46.4% of the respondents had no formal education, 27.1% had primary education while 25.0% had secondary education. This implies that respondents (46.4%) had education but it was not formal. Acquisition of education is a measure of skill which enhances the recipient's chances of success in any chosen field (Iyagba and Anyanwu, 2012). It was also revealed that 90.7% of the respondents had between 1 to 6 persons in their families, 7.1% had between 6 to 8 persons in their families while 2.2% of them had between 1 to 3 persons in their families. This implies that majority of the respondents had large family size since mean household size is 5.15 which could be of help to respondents in terms of labour used for cultural operation on cassava production. It was also observed that 78.5% of the respondents took farming as their major occupation, 8.6% engaged in trading, 5.7% engaged in both artisanship and teaching respectively, while 1.5% engaged in civil service. This implies that farming is the most prevalent activity in the study area.

Respondents' farm related characteristics

Table 2 shows that 35.7% of the respondents had between 1 and 5 acres, 20.0% of them had between 6 and 10 acres, 19.3% of them had between 11 and 20 acres, 13.6% had between 21 and 25 acres, 10.7% had between 26 and 29 acres while 0.7% of the respondents had between 30 and 39 acres of farmland. The implication of this is that most of the respondents (55.7%) depend on small areas of land for the cultivation or production of cassava crops which may likely be as a result of income level of the respondents, hence mean farm size is 10.57. Also, it was observed that 29.3% of the respondents had between 11 to 15 years of cassava production experience, 24.3% of the respondents had between 1 to 5 years and 6 to 10 years of experience respectively, while 17.1% of the respondents had years of farming experience between 16 and 20. This implies that most of the respondents (51.4%) had good experience in cassava production since mean years of experience was 10.71. Available data in Table 2 further show that 89.3% of the respondents planted improved variety of cassava and 9.3% of the respondents planted both improved and local varieties. It can be deduced from this finding that majority of the respondents rely on an improved variety in order to obtain good yield that will increase their income. In terms of the major source of land, result of the study in Table 2 reveals that 72.9% of the respondents rent the land for cassava production, 17.8% of the respondents used their personal land for cassava production, 8.6% used their family land while 0.7% of the respondents made use of government land for cassava. Also, result of the finding presented in the Table 2 shows that 50.0% of the respondents depend on self labor for cassava production, 28.6% used family members as their source of labour, 17.1% made use of their association as their source of labour, 2.9% hired labour and 1.4% used friends as their source of labour. The implication of this is that most of the respondents (50.0%) used self labour in their cassava production activities. It was also observed that cassava production activities as an enterprise was financed by cooperatives among the respondents (47.1%), 24.3% of the respondents were self financed, 14.3% of the respondents depend on their family members, 11.4% depend on thrift and 2.9% depend on banks as their sources of finance. This means that majority of the respondents were financed by cooperatives and as such it will affect their level of involvement.

Involvement of respondents on cassava production

Table 3 shows that majority of the respondents (85.7%) were always involved in control of diseases and pests, marketing of cassava, control of weeds respectively. Also 78.6% of the respondents always involved in application of manure, 74.3% always involved in harvesting of

Table 1. Distribution of respondents according to their personal characteristics (n=140).

Variable	Frequency	Percentage	
Age			
18-22	4	2.8	Mean = 27.92
23-27	77	55.0	
28-32	32	22.9	
33-37	27	19.3	
Sex			
Male	102	72.9	
Female	38	27.1	
Marital status			
Divorced	4	2.9	
Single	9	6.4	
Married	125	89.3	
Widowed	2	1.4	
Religion			
Traditional	7	5.0	
Islam	49	35.0	
Christian	84	60.0	
Educational attainment			
No formal education	65	46.4	
Primary education	38	27.1	
Secondary education	35	25.0	
Post secondary	2	1.5	
Household size			
1-3	3	2.2	Mean = 27.92
4-6	127	90.7	
6-8	10	7.1	
Major occupation			
Teaching	8	5.7	
Trading	12	8.6	
Farming	110	78.5	
Artisan	2	1.5	
Civil service	8	5.7	

cassava, 70.0% always involved in planting of cassava stem, 64.3% always involved in land preparation, while 27.1% of the respondents always involved in processing and storage of cassava respectively.

Respondents level of involvement on cassava production

Level of involvement of respondents on cassava production were measured by presenting the respondents the list of activities involved in cassava

production and they were asked to indicate the activities they were involved in on a 3 point scale of: always (2), occasionally (1) and not at all (0). Result of analysis shows a minimum score of 7.0 and maximum score of 18.0 with mean score of 11.41. Respondents with score below the mean of 11.41 were categorized as having low level of involvement, while respondents with mean score and above were categorized as having high level of involvement. Therefore, majority of the respondents (61.4%) have a high level of involvement and 38.6% of the respondents have a low level of involvement.

Table 2. Distribution of respondents according to their farm-related characteristics.

Variable	Frequency	Percentage	
Farm size (Acres)			
1-5	50	35.7	Mean = 10.57
6-10	28	20.0	
11-15	19	13.6	
16-20	27	19.3	
21-25	16	11.4	
Farming experience			
1-5	34	24.3	Mean = 10.71
6-10	34	24.3	
11-15	41	29.3	
16-20	24	17.1	
21-25	7	5.0	
Cassava variety planted			
Improved variety	125	89.3	
Thrift	2	1.4	
Both varieties	13	9.3	
Major source of land			
Personal	25	17.8	
Family land	12	8.6	
Rent	102	72.9	
Government	1	0.7	
Major source of labour			
Family members	40	28.6	
Hired labour	4	2.9	
Friends	2	1.4	
Association	24	17.1	
Self	70	50.0	
Major source of finance			
Self	34	24.3	
Family members	20	14.3	
Bank	4	2.9	
Cooperatives	66	47.1	
Local variety	16	11.4	

Respondents according to the factors that influence their involvement in cassava production

Table 5 shows the factors that influenced the rural youths' involvement in cassava production with the overall mean value of 2.86. Factors influencing their involvement were ranked in descending order from the

Table 3. Respondents' involvement on cassava production.

Activities	Always	Occasionally	Not at all
*Land preparation	90 (64.3)	30 (21.4)	20 (14.3)
*Planting of cassava	98 (70.0)	42 (30.0)	-
*Control of weeds	120 (85.7)	18 (12.9)	2 (1.4)
*Application of manure	110 (78.6)	29 (20.7)	1 (0.7)
*Control of diseases and pests	120 (85.7)	18 (12.9)	2 (1.4)
*Processing of cassava	38 (27.1)	98 (70.0)	4 (2.9)
*Marketing of cassava	120 (85.7)	15 (10.7)	5 (3.6)
*Harvesting of cassava	104 (74.3)	20 (14.3)	16 (11.4)
Storage of cassava	38 (27.1)	98 (70.0)	4 (2.9)

Table 4. Level of involvement of respondents on cassava production.

Level of involvement	Frequency	Percent	Minimum	Maximum
High (11.41 and above)	86	61.4	7.00	18.00
Low (< 11.41)	54	38.6		

highest to the lowest according to the mean values. Availability of improved varieties and good demand of cassava tubers were ranked 1st respectively (2.98) followed by availability of farm machineries, supply of fertilizers at subsidized rate and quick action of herbicides used ranked 3rd with mean value of 2.97 respectively. Increase in income and availability of processing facilities was ranked 6th with the mean value of 2.96.

Constraints to respondents' involvement in cassava production

The result in the Table 6 shows that 97.9% of the respondents were constrained by inadequate fund for crop expansion, 95.7% of the respondents indicated difficulty in obtaining credit facilities as their major constraint, and 90.7% indicated inadequate supply of agrochemicals as their major constraint. Also, a good proportion of rural youth (91.4%), (87.9%), (87.8%), (86.4%), (83.6%) and (82.2%) indicated that instability in government policy, high cost of improved varieties, lack of collateral to obtain loan, poor infrastructural development, lateness of extension agents, and high

Table 5. Distribution of respondents according to the factors that influence their involvement in cassava production.

Factors	Very important	Moderately important	Not important	Weighted score	Mean	Rank
	F (%)	F (%)	F (%)			
ECONOMIC						
*Access to credit facilities	122 (87.1)	14 (10.0)	4 (2.9)	368	2.63	18th
*Lucrativeness	126 (90.0)	11 (7.9)	3 (2.1)	403	2.88	12th
*Demand for cassava is high	137 (97.9)	3 (2.1)	0.00 (0.00)	417	2.98	1st
*Increase in income	135 (96.4)	5 (3.6)	0.00 (0.00)	415	2.96	6th
*Improve assets possession	116 (82.9)	23 (16.4)	1 (0.7)	395	2.82	14th
*Self employment	122 (87.1)	14 (10.0)	4 (2.9)	368	2.63	18th
*Encourage livelihood diversification	115 (82.1)	21 (15.0)	4 (2.9)	391	2.79	15th
PHYSICAL						
*Hardy	107 (76.4)	28 (20.0)	5 (3.6)	382	2.73	16th
*Low soil facility required	91 (65.0)	48 (34.3)	1 (0.7)	370	2.64	17th
*Favourable climate	123 (87.9)	17 (12.1)	0.00 (0.00)	403	2.88	12th
*Availability of transport facilities	132 (94.3)	8 (5.7)	0.00 (0.00)	412	2.94	9th
*Availability of land	134 (95.7)	4 (2.8)	2 (1.5)	412	2.94	9th
*Availability of farm machineries	135 (96.3)	3 (2.2)	2 (1.5)	416	2.97	3rd
*Availability of processing facilities	135 (96.5)	4 (2.8)	1 (0.7)	414	2.96	6th
INSTITUTIONAL						
*Access to government extension agents	129 (92.1)	8 (5.7)	3 (2.2)	406	2.90	11th
*Availability of Improved varieties	137 (97.8)	3 (2.2)	0.00 (0.00)	416	2.98	1st
*Supply of fertilizer at subsidized rate	136 (97.2)	4 (2.8)	0.00 (0.00)	416	2.97	3rd
*Quick action of pesticides used	134 (95.7)	5 (3.6)	1 (0.7)	413	2.95	8th
*Quick action of herbicides used	136 (97.1)	4 (2.9)	0.00 (0.00)	417	2.97	3rd
Overall mean=2.86						

interest rate are their major constraints, respectively.

Relationship between respondents' personal characteristics and their involvement in cassava production

The result of chi-square analysis as revealed in Table 7 shows that level of education ($\chi^2=29.034$, $p=0.000$) was significant to rural youth involvement in cassava production. This means that the higher the level of education the better the respondents will perform the activities involved in cassava production that would affect their productivity since education determine the knowledge level and adoption of improved practices that are usually associated with cassava production.

Similarly, the result of correlation analysis as revealed in Table 8 shows that farm size ($r=0.487$, $p=0.000$), farming experience ($r=0.299$, $p=0.000$) were significant to rural youth involvement in cassava production. The implication of this is that as the farm size is increasing, the involvement of rural youth in cassava production activities is also increasing. Also, years of farming of the respondents determine their involvement as such that it

stimulates their interest and even aroused their mind for any season as the majority took farming as their major occupation and even energetic in carrying out activities that are associated with cassava production. It is expected that respondents will be able to make sound decisions as regards resource allocation and management of their farm.

Result in Table 9 indicates that there is correlation between the constraints facing rural youth in cassava production and rural youth involvement in cassava production ($r= -0.379$, $p=0.000$). This means that rural youth involvement in cassava production was not affected as a result of their constraints which could be attributed to gains or benefits associated with cassava production.

Conclusion

Based on the empirical findings of the study, it can be concluded that majority of the respondents were male, married, had no formal education and their level of involvement in cassava production is very high due to inadequate fund for crop expansion. However, difficulty in

Table 6. Distribution of respondents according to constraints to involvement in cassava production.

Constraints	Major constraints	Minor constraints	Not A constraint	Weighted score	Mean
	F (%)	F (%)	F (%)		
*Inadequate fund for crop expansion	137 (97.8)	2 (1.5)	1 (0.7)	416	2.97
*Long distance in getting planting material	122 (87.1)	11 (7.9)	7 (5.0)	395	2.82
*Difficulty in obtaining credit facilities	134 (95.7)	2 (1.4)	4 (2.9)	410	2.92
*Difficulty in getting farmland	36 (25.8)	10 (7.1)	94 (67.1)	222	1.59
*Lack of technical knowledge in the use of improved technology	95 (67.9)	43 (30.6)	2 (1.5)	373	2.66
* High cost of improved varieties	123 (87.9)	10 (7.1)	7 (5.0)	396	2.83
*Lateness of extension agents	117 (83.6)	19 (13.6)	4 (2.8)	393	2.81
*Lack of collateral to obtain loan	123 (87.8)	15 (10.7)	2 (1.5)	401	2.86
*High interest rate	115 (82.2)	24 (17.1)	1 (0.7)	394	2.81
*High cost of renting farm machineries	38 (27.1)	39 (27.9)	63 (45.0)	255	1.82
*Inadequate supply of agrochemicals	127 (90.7)	11 (7.8)	2 (1.5)	405	2.89
*Instability in government policies	128 (91.4)	5 (3.6)	7 (5.0)	401	2.86
*Poor storage of cassava tubers	46 (32.9)	7 (5.0)	87 (62.1)	239	1.71
*Poor infrastructural development	121 (86.4)	17 (12.1)	2 (1.5)	399	2.85

Table 7. Chi-square result of personal characteristics and rural youth involvement in cassava production.

Variable	χ^2 values	df	p-value	Decision
Sex	0.419	1	0.518	NS
Marital status	1.389	3	0.499	NS
Religion	0.020	2	0.887	NS
Level of education	29.034	3	0.000	S

Table 8. Result of correlation analysis of the relationship between personal characteristics and rural youth involvement in cassava production.

Variable	r-value	p-value	Decision
Age	-0.031	0.716	NS
Household size	-0.081	0.829	NS
Farm size	0.487	0.000	S
Farming experience	0.299	0.000	S

Table 9. Result of correlation analysis of constraints and rural youth involvement in cassava production.

Variable	r-value	p-value	Decision
Constraints	-0.379	0.000	S

obtaining credit facilities, inadequate supply of agrochemicals and instability in government policies were major constraints rural youths were facing in cassava

production. Factors influencing their involvement include availability of improved varieties and good demand of cassava tubers, availability of farm machineries, supply of fertilizers at subsidized rate and quick action of herbicides used. Significant relationships exist between the level of education, farm size, farming experience, constraints and rural youth involvement in cassava production.

RECOMMENDATIONS

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

- Credit facilities should not be made difficult for rural youth to obtain and adequate fund should be made available to rural youth by the financial institutions at single digit rate with less application bottle neck.
- Attitude of extension agents should be friendly with rural youth in their extension delivery services.
- Supply of agrochemicals to rural youth for their activities should be adequate.
- Government policies toward cassava production among the rural youth should be consistent, stable and encouraging.

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