
**PERCEPTION OF NATIONAL DIRECTORATE OF EMPLOYMENT'S GRADUATE
AGRICULTURAL TRAINING SCHEME ON CASSAVA FARMERS'
PRODUCTION IN IMO STATE, NIGERIA**

Nwaobiala, C.U. and Nnamdi, U. S

Department of Rural Sociology and Extension
Michael Okpara University of Agriculture, Umudike
Abia State, Nigeria
E-mail: cunwaobiala@gmail.com

Abstract

This study assessed the perception of Rural Agricultural Development and Graduate Training Scheme of National Directorate of Employment on cassava farmers' production in Imo State, Nigeria. Simple random sampling technique was used to select 180 respondents (90 NDE beneficiaries and 90 non - beneficiaries). Data were collected with a structured questionnaire and analyzed with descriptive statistics and inferential statistics (Z - test analysis). The result from the study showed that 57.78% and 63.33% of NDE and non-NDE cassava farmers were males respectively, with mean ages of 43.40 years (beneficiaries) and 39.50 years (non - beneficiaries) and the mean farming experience of 14 years (beneficiaries) and 14.50 years (non-beneficiaries). The NDE cassava farmers had a favourable perception.

Key Words: : Cassava Farmers, Graduates, Perception, Production, Training Scheme,

Introduction

Cassava (*Manihot esculenta* Crantz) is cultivated in over 90 countries and provides a livelihood for half a billion people in the developing world (Food and Agricultural Organization, 2013). It is Africa's second most important staple crop after maize in terms of per capita calories consumed (National Root Crops Research Institute, 2014). Farmers generally realize a higher income from cassava production of than most other staple food crops. Global production of cassava is 152 million tons per year. Half of the 16 million hectares devoted to cassava production is in Africa with 30 percent in Asia and 20 percent in Latin America. Nigeria is the world's producer of cassava (National Root Crops Research Institute, 2014; International Institute for Tropical Agriculture, 2013). Nigeria's agricultural potential is enormous, because more than 90% of its 91 million hectares of total land area is arable. Food and Agriculture Organization (2015) predicts medium to high yields across the country with optimal utilization of resources. The government established certain policy measures to reinvigorate various sectors of the economy and enhance employment generating potentials safety net support programmes, entrepreneurial training, enforcement and implementation of mandatory skills and agricultural- based technology transfer to the unemployed across the country. Notwithstanding these interventions, policies and programmes executed by different governments aimed at redirecting Nigerians to the farms and boosting food production, the food import bills of Nigeria keep soaring such that she imports approximately US\$3.5 billion in food products annually making food imports to grow at an unsustainable rate of 11% per annum (Federal Ministry of Agriculture & Rural Development, 2014). The implication of this is that Nigeria spends a large proportion of her foreign

reserves on importation of food commodities that it has the capacity to produce in commercial quantity. Unemployment has been on the increase among young leavers and graduates of the tertiary institutions. This has been a menace to the economic development of Nigeria, since the late 70s when Nigeria's population started to increase (National Bureau of Statistics, 2016). In spite of the increasing rate of unemployment among Nigerian graduates, majority of them seem not to be interested in agriculture as a means of livelihood. Available evidence from the literature suggests an ageing farming population in Nigeria, with an average age of 47 years and life expectancy at 47-50 years with a fewer numbers of youth involvement in agriculture affecting agricultural production (Agwu, **Nwankwo and Anyanwu**, 2013). Nigerian youths are disinterested in agriculture because the beauty, prosperity and dignity of the agricultural sector have been eroded by years of neglect. World Bank, (2014) posits that agriculturally driven growth generates a larger welfare effect in terms of increased agricultural income and output, thus reduction in poverty than non-agriculturally driven growth, especially for the poorest. Despite the potential of agriculture in the Nigerian economy, poverty and hunger have remained serious threats and obstacle to the development of the entire country (Mbam, Nwibo and Odom, 2010).

National Bureau of Statistics (2016) affirmed that poverty is multifaceted and its persistence is due to lack of productive resources, appropriate technology and increasing unemployment thereby substantially reducing the living standards of the people. In an attempt to reduce the rate of unemployment in Nigeria especially among youth, the Rural Agricultural Development and Training Scheme (RADTS) was established to train

unemployed youths in agricultural technological practices in the areas of crop production, livestock management, crop processing and preservation among others (National Directorate of Employment, 2012). According to NDE (2012), over 52,000 unemployed graduates and youths are undergoing training in various skills nationwide.

However, the effects of the scheme on the graduate farmers are not yet ascertained because of other

training mandates of the programme. It therefore becomes expedient to determine whether the scheme has achieved its agricultural training objectives, in addition, to having documented empirical evidence in the state. It is against this backdrop that the paper was undertaken to assess the effect of the scheme on cassava graduate farmers in Imo state, Nigeria. Specifically, the study.

The specific objectives were to

Describe the socio-economic characteristics of NDE and non – NDE farmers in the study area, Assess perception of NDE farmers about the scheme; and Identify problems encountered by NDE farmers during the training.

Hypotheses

Ho₁: There is no significant difference between farm

size of NDE and non – NDE cassava farmers in the study area

Ho₂: There is no significant difference between farm output of NDE and non – NDE cassava farmers in the study area

Ho₃: There is no significant difference between farm income of NDE and non – NDE cassava farmers in the study area.

1.0. Methodology

The study was carried out in Imo State. The state lies within latitudes 4° 45'N and 7° 15'N, and longitude 6° 50'E and 7° 25'E. It occupies the area between the lower River Niger and the upper and middle Imo River. The state is bounded on the east by Abia state, on the west by River Niger and Delta state; and on the north by Anambra State, while Rivers state lies to the south. The state is located within the rainforest belt of Nigeria, and the temperature ranges between 20° C and 30° C. Agriculture is the major occupation of the people. The major food produced includes cassava, yam, cocoyam, maize, and melon. Imo state is made up of 27 Local Government Areas (LGAs) and three Agricultural zones of Okigwe, Owerri and Orlu. The NDE beneficiaries and non-beneficiaries were chosen for the study. A list of trained beneficiaries of Rural Agricultural Development and Training Graduates of NDE was used in selecting the respondents. The multistage random sampling procedure was used to select the respondents. First, six (6) out of twelve (12) local Government Areas were randomly selected for the study. From the list of NDE beneficiaries fifteen (15) cassava graduate farmers were selected each from six (6) Local Government Areas giving a total of ninety (90) NDE farmers. Finally, ninety (90) non-NDE farmers were also randomly selected from the areas where the NDE farmers were chosen, giving a grand sample size of 180 cassava farmers. Data collected were obtained analyzed with descriptive statistics and inferential (Z – test analysis).

Measurement of variables

In order to assess perception of NDE agricultural beneficiaries on training received, ten (10) item statements were measured on 5 - point Likert-type

rating scale of strongly agree = 5, agree = 4, undecided = 3, disagree = 2, strongly disagree = 1. Respondents mean scores were computed for each of the perception statements by adding the weights of 5, 4, 3, 2, 1. A midpoint was obtained thus; $5+4+3+2+1 = 15/5 = 3.00$. Mean score greater than or equal to 3.00 implied favourable and otherwise, unfavourable perception. Constraints of respondents during training sessions were achieved on 7- item statements measured and rated on 4 point Likert type scale of very serious constraint = 4, serious constraint = 3, mild constraint = 2 and no constraint = 1. A midpoint was derived by adding; $4+3+2+1 = 10/4 = 2.5$. Based on the mid score decision rule, any mean score greater than or equal to 2.5 implied constraint and below 2.5 denotes no constraint.

2.0. Results and Discussion

2.1. Socio-economic Characteristics of Respondents

The socio-economic characteristics of respondents are shown in Figure 1. The result shows that 57.78% and 63.33% of NDE farmers and non NDE farmers were males respectively. This implies that cassava farming is mostly practiced by males. Etuk, Ukong and Okorie, (2016) reported that majority of participants in vocational skills acquisition initiative of National Directorate of Employment in Akwalbom state, Nigeria were females. The mean farming experience of NDE farmers was 14 years as against the non NDE cassava farmers (14.5 years), while the mean farm sizes of the respondents were 1.5 hectares (NDE farmers) and 1.4 hectares (non NDE farmers). Farming experience has been shown to enhance participation and adoption of technologies

by farmers especially in donor sponsored programmes in Nigeria (Nwaobiala, 2014). **This result corroborates** Osondu, Emerole and Anyiro (2014) that the majority of small holder Fadama II and Fadama III cassava farmers in Imo State, Nigeria cultivated between 1.4 – 1.5 hectares. The mean output from cassava cultivation among NDE cassava farmers and non - NDE cassava farmers was 28 tons/ha and 24 tons/ha respectively, while annual

farm income realized from cassava farming was N325, 500.00 (NDE cassava farmers) and N225,500.00 (non-NDE cassava farmers). National Root Crops Research Institute (2012) reports that a hectare of cassava managed farms produced between 18-30 tons of cassava roots. This supports the findings of Nwaobiala (2017) who affirmed that IFAD farmers realized between 27 – 28 tons of cassava in Abia state, Nigeria.

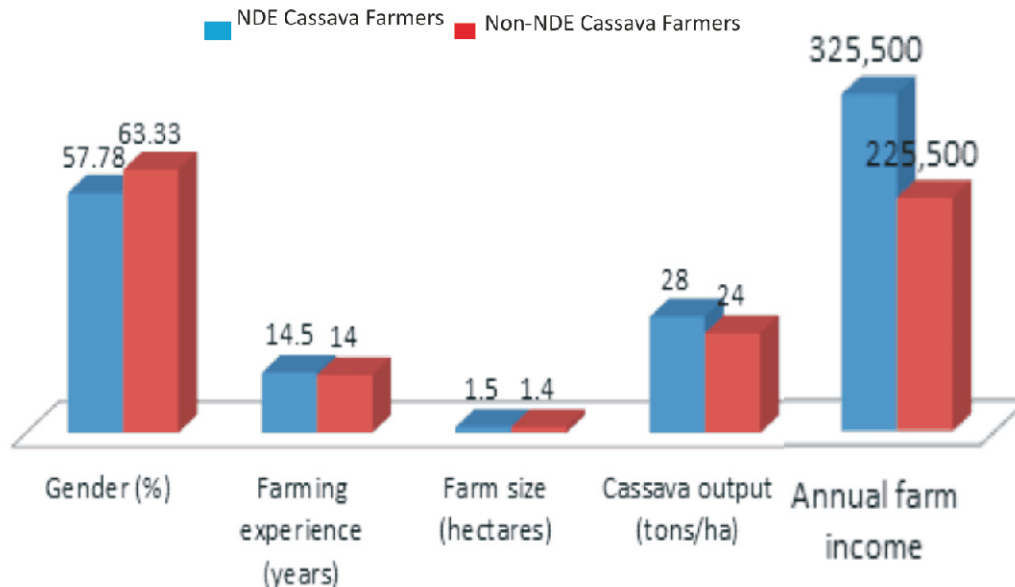


Figure 1: Socio-economic characteristics of NDE and Non-NDE cassava farmers in the study area

1.1. Perception of the scheme by NDE cassava farmers

Distribution of beneficiaries according to their perception of the scheme is shown in Table 1. The result reveals that the NDE cassava farmers affirmed that training received from the scheme increased their crop farming skills and were satisfied with the packages with mean ratings of 3.9 and 3.8 respectively. Also, the respondents ascribed that the grant disbursed was adequate and in turn increased their crop output ($\bar{X}$ = 3.5). They affirmed that the scheme was not discriminatory and has increased their farm output ($\bar{X}$ = 3.2) as against increasing their entrepreneurial skills ($\bar{X}$ = 3.0). The total mean response of perceived statements of the scheme by the beneficiaries was 3.2, indicating a favourable perception since the mean is less than 3.0. Akinbile, Hussain and Yekinni, (2008) in their study of rural development projects found that high perception of programme activities among beneficiaries facilitates and encourages unbiased execution of programme mandates.

Table 1: Perception of NDE beneficiaries about the scheme

Item statements	Mean score	Standard deviation
The grant given by NDE was adequate for establishing my arable crop farm enterprise	3.5*	2.2
The NDE agricultural scheme was gender sensitive	2.4	1.9
The scheme is not discriminatory in respect of class, race and culture	3.2*	2.1
The training has increased my entrepreneurial skills	3.0*	2.1
The training has increased my farming skills	3.9*	2.2
My output has increased as a result of the received training.	3.5*	2.4
The received training has increased my income from crop farming	3.2*	2.1
My crop processing ability has increased as a result of the received training.	2.8	2.0
My crop preservation ability has increased as a result of NDE training	2.8	2.0
I am satisfied with the whole NDE package.	3.8*	2.2
Grand Mean		32.1
Mean Score		3.2

Source: Field Survey, 2015

*Favourable Perception

1.2. Farm Sizes, Farm Output and Farm Income of NDE and Non-NDE Cassava Farmers in the Study Area

Farm size of NDE and non-NDE cassava farmers

The farm size of NDE cassava farmers and non-cassava farmers are presented in Table 2. It shows that the mean farm size of farmers was 0.088 hectares, while

the non-cassava farmers were 0.076 hectares. The difference in mean between the two groups of farmers is 0.012 hectares with mean standard deviation of 0.066 hectares and Z – value of 0.59. The result indicates a no significant difference between the farm sizes of the farmers. This result is not in consonance with the findings of Ogbonna (2014) as they found that farm sizes of Fadama III beneficiaries were relatively larger than the non-Fadama farmers.

Table 2: Difference in farm size of NDE and non NDE cassava farmers in Imo State, Nigeria

Variables	Group Mean	Standard Deviation	Z – value
NDEBFS	0.088	0.046	
NNDEBFS	0.076	0.112	0/59
Combined	0.012	- 0.066	

Source: STATA RA Result

Where,

NDEBFS = NDE cassava farmers farm size

NNDEBFS = Non-NDE cassava farmers farm size

1.2. Farm Output of NDE and Non-NDE Cassava Farmers

The output levels of the respondents showed that the mean farm output of NDE cassava farmers was 5,953.75kg, while their counterparts recorded a mean farm output of 3,267.48kg (Table 3). The mean differences between the two farmer groups were 2,686.27kg with mean standard deviation of 4,

298.60kg and a Z- value of 2.76. This implies that there was significant difference between farm output of NDE cassava farmers and non NDE cassava farmers at 5% levels of probability. This result is in agreement with the findings of Nwaobiala and Mbah (2016), where the output of IFAD arable crop farmers were significantly higher than the non-IFAD farmers in Abia and Cross Rivers States, Nigeria.

Table 3: Difference in farm output of NDE and non NDE cassava farmers in Imo State, Nigeria

Variables	Group Mean	Standard Deviation	Z – value
NDEFO	5,953.75	6,115.60	2.76**
NNDEBFO	3,257.48	1,817.00	
Combined	2,686.27	4,298.60	

Source: STATA RA Result

** $P \leq 0.05$

Where,

NDEBFO = NDE cassava farmers farm output

NNDEBFO= Non-NDE cassava farmers farm output

1.1. Farm Income of NDE and Non-NDE Cassava Farmers

The annual farm income of NDE beneficiaries and non-beneficiaries were reported in Table 4. It reveals that the mean annual farm income of NDE cassava farmers was N194, 115.90, as against the non NDE cassava farmers that had N120, 009.10. The mean difference between the two groups of farmers was N74106.80, while the standard deviation is N47,

426.00. The result shows that the calculated “t” is 3.25, which was greater than the tabulated “t” of 2.58 and is significant at 1% level of probability. The implication of this finding is that the NDE cassava farmers had more farm income than the non - NDE farmers in the study area. Ibitoye, Shaibu and Akwu(2014) obtained a similar result among farm income of Fadama and non Fadama user groups in Bassa LGA of Kogi State, Nigeria.

Table 4: Difference in farm income of NDE and non NDE cassava farmers in Imo State, Nigeria

Variables	Group Mean	Standard Deviation	Z – value
NDEFFI	194,115.90	123,607.00	3.25**
NNDEBFFI	120,009.10	76,181.00	
Combined	74,106.80	47,426.00	

Source: STATA RA Result

*** $P \leq 0.01$

Where,

NDEBFIN = NDE cassava farmers farm income

NNDEBFIN = Non-NDE cassava farmers farm income

1.1. Constraints of Farmers in NDE Agricultural Training Scheme

Distribution of NDE cassava farmers according to constraints encountered during training in the scheme promoted technologies is shown in Table 5. The Table reveals that among all the constraints listed, distance to training venue ($\bar{x}$ = 3.0) was the highest constraints encountered by the beneficiaries, followed by bureaucratic bottlenecks of the programme administration ($\bar{x}$ = 2.7) and time allotted for the training sessions ($\bar{x}$ = 2.6). This result is in consonance with Nwaobiala, Ndukwe and Ekumankama (2016) in a similar study of cocoa farmer training needs in Bende LGA of Abia state, Nigeria.

Table 5: Constraints encountered during training sessions

Constraints	mean scores	Standard deviation
Time of the training	2.62*	2.04
Distance to the training centre	3.02*	2.20
The inadequacy of training materials	2.02	1.80
Shortage of facilitators	1.21	0.5
Overcrowding during training sessions	2.11	1.92
The late arrival of NDE facilitators	1.17	0.4
Administrative Bureaucratic bottlenecks	2.70*	2.11

Source: Field Survey, 2015

*Constraint

CONCLUSION AND RECOMMENDATIONS

The study has revealed that the training received by NDE cassava farmers has increased their production when compared with non NDE cassava farmers. Distance to training venue, bureaucratic bottlenecks of the programme administration and time allotted for the training sessions were constraints encountered

by farmers in the scheme. Subsidy on farm inputs such as improved cassava cuttings and agrochemicals used in cassava production in the study area is advocated. This will reduce the costs incurred by farmers during production and in turn increase output. Proper funding of the scheme by government will help to train more unemployed youths in different agro-based entrepreneurial skills of the agency.

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