REVAMPING NIGERIA'S ECONOMY THROUGH YELLOW CASSAVA PRODUCTION: CONTRIBUTIONS OF WOMEN FARMERS IN ANAMBRA STATE.

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Abstract

The study examined women contributions in yellow cassava production in revamping Nigeria's economy. Multi-stage sampling technique was used to select 132 yellow cassava women farmers for the study in Anambra State. Data were collected from them by the use of questionnaire, semi-questionnaire, group discuss and interview schedule. Descriptive statistics such as frequency counts, mean score, standard deviation and percentages were used to summarize data generated by the study. Results revealed that majority (78.03%) were married, their mean age was 47 years, 71.21% have farming as their major occupation. The results indicated that 48.48% source their inputs from the extension ADP, Majority (45.45%) had access to extension services. This implied that majority do not have necessary support from extension personnels. However, the results indicated that (M=2.85) produce to increase income, (M=2.82) for its nutritional value (Vitamin A) and free cyanide/sugar content while M=2.47 did to sale the improved cassava stems. Major constraints to yellow cassava production by the women in the study area include: inability to access loan (M=2.49), high cost of fertilizer (M=2.37), poor price of yellow cassava tubers (M=2.46), scarcity of yellow cassava stems (M=2.36), high cost of labour (M.2.35), pests and diseases (M=2.14) and transportation cost of tubers (M=2.16). These constraints could be responsible for the low contribution of women in yellow cassava production in the study area. Based on the findings, this study recommended that extension services should assist to create more awareness of the nutritional value of yellow cassava and usage to the public/consumers. Government should create export incentive opportunities for women to export their produce to other countries which would contribute in revamping Nigeria's economy.

Keywords: Yellow Cassava, Women, Contribution, Revamping, Nigeria's Economy.

Introduction

Cassava *(Manihot esculenta)* originated from tropical America, by Portuguese into central Africa in Congo basin. Cassava is a major staple food crop in Nigeria with some inherent characteristics which makes it attractive, especially to the small holder farmers in Nigeria cultivating less than 2 hacters of cassava (average) of 0.5 hacters) (Eze and Nwigbo, 2014). It is more commonly cultivated than other food crops because of its high tolerance of diseases and low soil fertility, hence its ability to grow and

be available all year round (Mbah, 2013). Among the major food crops, cassava has performed so well in the country that Nigeria, currently has become the world largest producer of cassava having overtaken Brazil and Thailand with annual production of over 34 million tones of tuberous roots (Food and Agricultural Organization (FAO) 2011, Ijigbade, *et al*, 2014).

A survey of National Agricultural Extension and Research Liaison Service (NAERLS), 2016 and 2017) showed that the total of cassava produced has increased from 52,537,850 metric tonnes in 2016 to 55,068,730 metric tonnes in 2017, which represent 4.8% increase in output. Cassava is cultivated in almost all agro-ecological zones of Nigeria. The North Central Zone with 15.35 million metric tonnes in 2016 and 16.03 million in 2017, followed by South-West zone 10.77 million tonnes in 2016 and 11.4 million tonnes in 2017, South-South 10.40 million tonnes in 2016 and 10.13 million tonnes in 2017 (NAERLS and Federal Department of Agricultural Extension (FDAE) (2016 and 2017).

In Anambra State, (35%) of cassava farmers has farm size of 1 to 2 hectares, that is about 63% of them belong to 1 to 2 farm organizations with absence of financial institution assistance in most rural areas which prevent cassava farmers farm having access to funds and resources (Mbah, 2013).
In Nigeria, various efforts had been made to boost cassava production and such programmes are: Root and Tuber Expansion Programme, aimed at increasing root and tuber crops production and also a Presidential Initiative on cassava production lunched in 2003 by then Federal Government. This brought cassava and its potential to the national limelight. The Presidential Initiative focused its intervention objective on the expansion of cassava production to satisfy domestic demand and also as foreign exchange through its product exports. The demand for cassava products since then has globally increased, making the cultivation to increase but not enough to curb demand (Nnadi, *et al*, 2011). Cassava has been regarded as a magic crop as a result of the presidential initiative on cassava in Nigeria. The Federal Government established a cassava Bread Development Fund (CBDF) to support research, training of baker and acquisition of equipment among others. The cassava flour inclusion policy aimed at ensuring that at least 20 percent of wheat flour is substituted with cassava flour (Adesina, 2014). In recent times, all flour sold in Nigeria already has cassava flour.

Cassava and cassava – based products are the most important daily meal for the people of Southeastern Nigeria (Okafor, 2018). A study on the consumption pattern of cassava in Southeastern Nigeria also shows that 53.3% and 34% of people ate cassava in different forms daily and every other day respectively (Onyemauwa, 2012). Recently, National Root Crop Research Institute (NCRI), Umudike and International Institute of Tropical Agriculture (IITA), Ibadan have jointly developed cassava bio-fortified with Vitamin A, popularly known as yellow cassava. This is to complement government

efforts to check deficiency of Vitamin A and malnutrition in the country (Adeola, *et al*, 2017). Yellow cassava provided major health benefits for consumers as it contains Vitamin A which combat various ill-health challenges with its vitamin A Deficiency (VAD), (Frano, *et al* 2013). According to Ilona, *et al* 2017) reported cassava as a promising vehicle for bio-fortification to increase vitamin A content and dietary intake amongst the people, thereby producing micronutrient deficiency. Vitamin A is an important micronutrient, essential for optimal health. Cassava pro-vitamin A carotenaid is a potential mechanism for alleviating Vitamin A deficiency. Yellow cassava has been reported to be high yielding, major pests and diseases resistant, low in post-harvest deterioration for both farmers and consumers, which are of great benefits of the crop (Adeola *et al*, 2017).

The role women play in agricultural activities is well established and vary according to customs in different regions and communities in the world, crop such as groundnut, cassava, sweet potato, vegetables, maize, millet to mention but a few are termed women's crops (Ecoforum, 1988). Similarly, in Southeastern Nigeria cassava, vegetable, maize and cocoyam are considered woman's crops (Okafor, 2020). Consequently, women are denied equal access to land, sources of money capital and education relative to the men folk. Melena (2000) reported that on many occasions, male extension workers have transferred informations and technologies which pertain to crops grown by women to male farmers. The failure to consult women or to consider their specific roles and responsibilities can prevent new agricultural projects or technologies from being adopted.

There is a tremendous contribution of women and their involvement in every segment of farming especially in cassava production. Despite these potential, impressive and uses of cassava of self-sufficiency in food production, Nigeria is yet to fully harness the economic potentials of the crop. Gain/profits derived from cassava production by these women is still not sufficient to keep them above the poverty line.

In line with various contributions of women in cassava production and benefits that yellow cassava offers, the variety is increasingly pushed to more smallholder farmers especially women for its production. As yellow cassava production is gaining ground and increasing, this study was therefore designed to examine the contribution of women farmers in yellow cassava production in respect to revamp Nigeria's economy.

Objectives

The specific objectives of the study were to:

(a) examine women's socio-economic characteristics in yellow cassava production.

(b) ascertain extension services and women farmers perception on the importance of yellow cassava nutritional value.

(c) identify various reasons why they embarked on yellow cassava production and

(d) identify the perceived constraints of women contribution in yellow cassava production in the study area.

Methodology

Cassava women farmers in Anambra State formed the population of the study. A multi-stage sampling technique was used to select 132 respondents from 3 agricultural zones. In stage one, simple random selection technique was used to select four (4) blocks from each of the 3 agricultural zones in Anambra State. This gave a total number of (12) blocks selected for the study. In stage two, four (4) circles from each of the twelve (12) blocks. This made a total of forty-eight (48) circles selected.

In stage three, three (3) respondents were selected from each of the forty eight (48) circles except for Anambra Zone where only 2 respondents each were selected in 6 circles due to paucity of yellow cassava producers there, while others were 3 respondents. This gave a grand total of (132) selected sample size of the respondents for the study.

To examine the socio-economic characteristics of the respondents, frequency counts and percentages were used to measure their responses. However also, sources of farm input and access to extension services were measured with frequency counts and percentages.

To measure the various reasons why the respondents embarked on the production of yellow cassava variety, a list of necessary reasons and benefits of yellow cassava production was provided and respondents were asked to indicate their level of agreement with those reasons on the list on a three point Likert-type scale of: “strongly agreed = 3”, “agreed = 2”, “disagreed = 1”. A cut-off point of 2 was used to determine their reasons to embark on yellow cassava production.

To identify their perceived constraints in yellow cassava production, a list of possible constraints was provided and respondents were expected to rate the effects/seriousness of the constraints. A three point Likert-type scale of “very serious =3”, “serious =2” and “not serious =1” was used to determine their responses. A cut-off point of 2 was used to determine the major constraints.

Discussions

The table 1 on age showed that the mean age of women yellow cassava producers in the study area was….years. A combination of respondents between 31-41 years (22.72%) and (42-52 years made (37.88%). These two grouped comprised the majority and economically active farmers which is favourable for expansion of yellow cassava production in the area. Effiong, *et al* (2015) agreed with the findings that majority of yellow cassava producers (72.15%) were with the age of 30-50 years.

Majority of the respondents (78.03%) were married. By this, it showed they have already enough experience in cassava farming. Okorie (2012) observed that 79% of cassava

producers were married while 5% were single. This can be explained in terms of supply of agricultural family labour.

The result in table 1 further showed that majority (71.21%) of the women had farming as their major occupation while (21.21%) are traders and combine their farming activities with trading, while civil servants combine their work with farming. This implied that a good percentage of the respondents have interest on yellow cassava production and care willing to expand their farms for more output and income if given the support. It was observed that majority (78.03%) of the respondents indicated they do not belong to farmers co-operative group possible because they are not aware of the benefits they will derive when they belong to a co-operative.

Result also in table 1 still indicated that majority (48.48%) sourced their farm input from extension unit (ADP). This implied that less than half of the women are aware of innovation of yellow cassava variety process which may likely improve yielding desired results. Majority (45.45%) to the women farmers had access to extension services, this shows that they will get every necessary assistance from the services of the extension agents to improve more on their production.

Results

Socio-economic characteristics of the women farmers on yellow cassava.

Table 1: Socio-economic characteristics of the respondents

	Factors	**Frequency**	**Percentage** (n=132)
(a)	**Age (years)**		
	20-30	18	13.64
	31-41	30	22.72
	42-52	50	37.88
	53-63	22	16.67
	64 and above	12	9.09
(b)	**Marital Status**		
	Married	103	78.03
	Single	15	11.36
	Widows	14	10.61
(c)	**Major Occupation**		
	Farming	94	71.21
	Trading	28	21.21
	Civil Service	10	7.58

(d)	**Source of farm input**				
	Market	40		30.3	
	Neigbhours	18		13.64	
	Extension ADP		64		48.48
	Friends (co-farmers)	10		7.58	
(e)	**Access to extension services**				
	Yes		60		45.45
	Not often		24		18.18
	No		48		36.37

Source: Okafor, Field survey data, 2020

Reasons why women embarked on yellow cassava production.

Table 2 revealed various reasons why women farmers embarked on the production of yellow cassava. The result showed that their major reasons include: to increase income (M=2.85), for its nutritional value (M=2.82), less sugar for diabetic patients (M.2.80), to increase yield (M=2.64), and for sale of improved cassava stem (M=2.41). Frano, *et al* (2013) reported that yellow cassava provides major health benefits in various health challenges associated with Vitamin A Deficiency (VAD) and less sugar content for diabetic patients. These reasons therefore have been found essential and useful to improve and encourage women more on yellow cassava production.

Yellow cassava has been reported to be high yielding, resistant to major pests and diseases and have shown delay in the onset of post-harvest deterioration which can be helpful in acceptance of the crop for both farmers and consumers (Adeola *et al*, 2017).

Table 2: Mean score of why women embarked on yellow cassava production

Reasons		**Mean Score**
1.	To increase yield	2.64
2.	Less sugar for diabetic patients	2.80
3.	To increase sale of new cassava stem	2.47
4.	To increase income	2.85
5.	Easy sell to processors	0.65
6.	For its nutritional value (Vitamin A)	2.82
7.	Tubers are retained in the soil for years After maturity	0.79

8.	An improved variety in the market		1.54
9.	For export to other countries	0.18	

Source: Okafor's Field survey data, 2020

Discussions

Constraints to women farmers contributions to yellow cassava production in the study area.

Data in table 3 indicated major constraints of women farmers to yellow cassava production. They include: inability to access loan (M=2.49); high cost of fertilizer (M=2.37); Non-sticking for fufu (M=2.37), scarcity of yellow cassava stem (M=2.36); high cost of labour (M=2.35); poor price of yellow cassava tubers (M=2.46) transportation cost of tubers (M=2.16) and pests and diseases (M.2.14) among other constraints. Earlier studies on cassava production indentified similar constraints to be responsible for the low contribution of women in yellow cassava production. Whether a woman producers for subsistence or for the market, these factors affect her efficiency and overall productivity (Okafor, 2020). Farmers especially women find it difficult to access capital as they often lack the collateral needed to access capital from financial institution. Emmanuel (2013) reported also that constraints of finance, modern production system, better market access, emergence of modern cassava production system.

Table 3: Mean score and standard deviation of constraints to yellow cassava production

S/n	Constraints	Mean score	Standard Deviation (n=132)
(1)	Inability to access loan	2.49	0.64
(2)	Poor value of fufu/Non sticking	2.37	0.80
(2)	Scarcity of yellow cassava stem	2.36	0.69
(3)	High cost of labour	2.35	0.79
(4)	High cost of fertilizer	2.37	0.80
(5)	Poor price of yellow cassava tubers	2.46	0.59
(6)	Pests access of disease	2.14	0.94
(7)	Poor access of land	2.04	0.92
(8)	Transportation cost of tubers	2.16	0.92
(9)	Inadequate information about the Nutritional value of the new variety	1.26	0.65
(10)	Non membership of cooperative group	1.28	0.42

Source: Okafor's Field survey data, 2020

Conclusion

From the findings, women contributed actively in all agricultural operations especially in cassava production in Anambra State. However their productivity in cassava production is limited by socio-economic and technical constraints. Gender equality continues to constrain women's ability to participate in and contributed meaningfully to the economy. Their low involvement in yellow cassava production could be as a result of the outstanding factors listed as constraints which can be improved by more enlightenment programme, government assistance by way of access to loan, access to inputs at subsidized rate and adequate dissemination of information on the yellow cassava nutritional and health value which is essential to encourage more farmers to embark on yellow cassava production, popularize the benefits and revamp Nigeria's economy in general.

Recommendations:

Based on the findings, the study is advocating the following recommendations:

- ❖ The result of the study should serve as a guide to farmers and investors who are interested in yellow cassava production.
- ❖ Yellow cassava farmers should belong to a co-operative association in their area.
- ❖ Extension service should cover yellow cassava farmers in order to boost production.
- ❖ Investors should be encouraged to set up industries to process yellow cassava into value added products.
- ❖ Financial institutions should make special funds available for yellow cassava farmers.

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