

**RURAL WOMEN FARMERS INVOLVEMENT IN YAM PRODUCTION IN ABIA STATE, NIGERIA:
IMPLICATION FOR FOOD SECURITY AND EMPOWERMENT.**

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Abstract

The study was conducted to examine the extent of involvement of rural women farmers in yam production in Abia State, Nigeria. Multi-stage sampling technique was used in selection of the study location and the respondents. Primary data were elicited from 234 women yam farmers with the aid of interview schedule. Descriptive statistics such as frequencies and percentages were used for data analysis. Results of the study revealed that 97% of the selected women farmers were fully involved in yam production. Ninety percent of them produced yam both for family use and for market. On the other hand, 72% of the women cultivated between 0.11 and 0.5 hectare of land to produce between 3,000kg and 8,000kg of yams. More than 80% of the respondents indicated full participation in all the production activities except in ridging/mounding. The identified constraints include; scarcity/high cost of seed yam, lack of access to land, unavailability of loan and credit, scarcity/high cost of fertilizer, and others. It was then recommended that rural women farmers should be encouraged by providing appropriate production resources, extension services and favourable policies to enhance their production for food security, and increase their income for economic empowerment.

Keywords: rural women, involvement, yam production, food security, economic empowerment.

Introduction

Yam is one of the important tuber crops grown by farmers in Nigeria. It is a good source of carbohydrate in the diet of most Nigerians (Nze, 2016). The crop is prestigious and is very much important for food in the dietary of man/livestock, income and social activities (Orkwor *et al*; 1998). Yam has been diversified into different food forms to make it evenly accessible to urban households in Nigeria. This involves not only production but processing and marketing which are mostly done by rural women to enhance food security and economic empowerment in their various levels. There is always high demand for both fresh yam tubers and its processed food forms (pounded yam, yam flour etc.) among the rural and urban dwellers. Yam production in Nigeria has been observed to be more financially rewarding enterprise than groundnut, rubber, cotton production (Idachaba, 2004). Nigeria is the world largest producer of the crop with annual production of about 36.72 million metric tonnes (NRCRI, 2010,

SPORE 2011). Traditionally, yam was regarded as “men’s crop” in Igbo land, and as such used to be exclusively cultivated by men. However, empirical studies have revealed that in recent times women are participating in the production, processing and marketing of the crop. For instance, Epu, (2010) reported that women are major yam producers in some part of Nigeria. In support of this, Ironkwe, *et al* (2004) earlier reported that women participated almost in all the yam production activities in Abia State. In addition, Damisa, *et al.* (2007) and Sharon (2008) observed that women farmers contribute much in food production, processing, marketing, and in provision of labour force for carrying out farm operations.

Despite these contributions made by women farmers in yam production, research and documentation on the activities of women in yam production are very limited while their contributions are relegated to the back ground and under-valued in conventional agriculture, economic analysis and policies (Abiola and Omoabugan, 2001). Therefore, there is need for improved statistics on the contributions of women farmers in various phases of agricultural production. These are needed for proper formulation, implementation, monitoring and evaluation of agricultural development programmes and for increased agricultural production, for food security and economic empowerment.

Food security has been defined as the availability of food of adequate quality and quantity consistently with decent existence at all times to the people (Idachaba, 2004). According to Food and Agricultural Organization, food security is obtained when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO, 1996). Therefore, the main goal of food security is for individuals to be able to obtain adequate food needed at all times. According to Oladeji, Olaguruju and Olaguruju (2015), food security embraces food production, stability of supply and access to food. Thus, sustainable production of food is the first pillar of food security. (Odurukwe *et al.*, 2006). Food security, therefore, requires that poor and vulnerable have secured access to the food they want (Nana-Sinkam, 1995) and this could only be accomplished through agriculture. Therefore, it is important that agricultural production should be revived and

improved. This is because agriculture is the main stay of the country's economy, contributing about 42% of total GDP, employing about 77% of the working population (Olaolu, Akinnagbe and Agber, 2013) and the rural women farmers being in the majority. This means that rural women involvement in yam production will lead to up liftment and stability of supply and access to food to the populace as well as their entrepreneurship ability. However, to achieve the food security of the nation through yam production, women farmers should be adequately empowered.

Empowerment means giving authority to someone and makes him or her take full control of his or her destiny. It is a process of enablement towards self-sustenance and self-dependence. Women empowerment therefore, refers to those measures taken to enhance the socio-cultural, economic and political status of women towards improving their standard of living and making them contribute meaningfully to household and national development. In this context, we are considering women economic empowerment which has to do with giving women appropriate enablement to attain economic self-sustenance through yam production, and marketing as livelihood entrepreneurship. With this, rural women farmers would be able to enhance their yam production capacity for household food security, and also increase their income for economic empowerment. Since empowerment occurs through improvement of conditions, standards and events (Adams, 2008), empowering women will give them opportunity to be more involved in all aspect of production, processing and marketing of agricultural products (Eze and Eze 2013).

Therefore, determining the roles of women farmers and their constraints in yam production is of great importance as this would help to quantify the contributions made, identify problems encountered and the prospect of their roles in increasing yam production for food security in the country. It will also reveal the areas where the rural women could be helped through provision of the necessary environment for acquisition of knowledge and skill, provision of resources, market information and strategies needed for a good entrepreneurship. The results of this study would help the government, policy makers, research and extension workers in the formulation of relevant policies and programs, and development and transfer of relevant technologies for the target group to enhance their productive potentials in yam production for increased food security and economic empowerment.

Objectives

This study, therefore, was set out to achieve the following specific objectives:

- 1) examine the extent of women farmers' involvement in yam production in Abia State,
- 2) identify the activities carried out by women farmers in yam production in the State,
- 3) examine their access to productive resources in yam production and
- 4) identify major yam production constraints faced by the women farmers.

Methodology

The study was conducted in the three agricultural zones of Abia State (Aba, Umuahia and Ohafia). A multi-stage sampling technique was adopted in selecting the study location specifically where yam is being produced. In the first stage, 3 blocks were randomly selected from each of the 3 agricultural zones in the State, using the ADP blocking system. In the second stage, 3 circles were randomly selected from each of the selected blocks. Finally, 3 farm families were randomly chosen from each of the selected circles as the study locations. Simple random sampling was used in selecting the respondents from lists of women yam growers. The lists were collected from zonal offices of Agricultural Development Programme (ADP) in the State. In all, 243 respondents (81 from each zone) were selected and interviewed using interview schedule.

The primary data were collected based on the objectives of the study; and were analyzed using frequencies and percentages. However, objective one specifically was analyzed by examining the following variables such as the type of women involvement in yam production, purpose for yam production, size of land devoted for yam production, quantity produced (output in kg) and type of market used for selling the output (produce).

Results and Discussion

Extent of women farmers' involvement in yam production

Table 1 shows the extent of involvement of the respondents in yam production. Out of 243 respondent, 235 (96.71%) were involved in yam production while 8 (3.29%), were not involved. The higher proportion of the women farmers involved in the yam production as shown in the result is an indication that majority of the women farmers are really actively engaged in yam production in Abia State. This confirms the findings of Ezumah and Didomenico (1995) and Abiola and Omoabugan (2001). This result achieved the number one objective of the study, which was set to ascertain women farmers' involvement in yam production in Abia State. It also implied that the rural women farmers are important in the issues of sustainability of the product for food security and empowerment in the State. Therefore, any programme to address the issue of food security in the State should adequately consider the women farmers.

Table 1: Distribution of respondents by type of involvement in yam production

Involvement	Frequency	Percentage
Full-time involvement	235	96.71
Part-time involvement	8	3.29
Total	243	100.00

Majority of the respondents (90%) produced yam both for family use and for sale while 10% produced only for family use (Table 2). This implies that women farmers in the State are growing yam both for subsistence and for commercial purposes. This also indicates that the rural women farmers are into yam production for household food security and economic empowerment. Table 3 revealed that 72% of the

respondents used between 0.11-0.5 hectare farm lands for yam production to produce between 3,000kg to 8,000kg of ware yam. The implication of this is that most women farmers in the study area are small scale farmers and as such need to increase the hectares under yam cultivation in order to increase their productivity to meet up the demand of the increasing population.

Table 2: Distribution of respondents by purpose for yam production

Purpose	Frequency	Percentage
Both for family use and for sale	218	90.00
For family use only	25	10.00
Total	243	100.00

Ninety-five (95%) of the respondents indicated participation in marketing of their produce (Table 3).

Table 3: Distribution of respondents by size of land devoted to yam production

Size of land	Output (kg)	Frequency	Percentage
0.01 - 0.01	1000 – 2, 900	16	6.58
0.11 – 0.5	3000 – 8000	175	72.02
0.51 – 1.0	8, 900 – 12, 000	43	17.70
>1	>12, 000	9	3.70
Total	Total	243	100.00

Majority of the respondents (82%) who indicated participation in marketing sold their yam at farm gate market while the rest sold in both local and main markets (Table 4). This means that women farmers do not only produce the crops but also take part in the sales to realize income for family use. This also implies that most of the yams produced by farmers are being sold at farm gate prices and with little or no

profit and the women would need help in this area to enhance their entrepreneurship in yam production and marketing business to improve their present levels. However, the high participation of the women farmers in these areas considered as shown in Tables 1 – 4 is an indication of active and high extent of involvement of women farmers in yam production in the State.

Table 4: Distribution of respondents by types of market used

Market outlet	Frequency	Percentage
Farm gate market	199	81.89
Local markets	175	72.02
Urban markets	120	49.55

Multiple responses recorded

Activities carried out by women into yam production in the State

Table 5 shows the various farm operations the women farmer carried out in yam production in Abia State. Almost all the women farmers (96.30%) were involved in decision-making, while 100% were involved in weeding, cleaning and processing of the harvested yam tubers and also in marketing of the tubers. Majority (97.12%) were involved in transporting the harvested tubers using the traditional method. Larger proportions (85.60%) were involved in land preparation, planting and fertilizer

application. Women were also found to be engaged in the other activities like sett-cutting (83.12%), fertilizer application (83.12%), and staking/trailing (78.60%). The implication of this result is that majority of the rural women farmers in Abia State are actively involved in yam production activities as they were found to be participating in almost all the operations involved in yam production. Furthermore, in some areas, it was revealed that women farmers were being used as farm labourers to carry out even the farm operations which are supposed to be exclusively for men e.g. bush clearing, mound/ridge making and harvesting.

Table 5: Distribution of respondents according to actives carried out in yam production

Activities	Frequency	Percentage
Decision – making	234	96.30
Land preparation	208	85.60
Mounding ridging	92	37.86
Sett-cutting	202	83.12
Planting	208	85.60
Weeding	243	100.00
Fertilizer application	208	85.60
Staking/ trailing	191	78.60
Harvesting	202	83.12
Clearing	243	100.00
Transportation	236	97.12
Processing	243	100.00
Marketing	243	100.00

Multiple responses recorded.**Access to productive farm resources in yam production in the State**

Table 6 shows that 50% of the respondents had access to land which are usual inherited by their husbands, while 48% had access to labour. On the other hand 46% had access to agricultural information, while less than 30% had access to credit, fertilizer and loan. The results show that many women farmers in the State still lack access to essential farm resources and agricultural information which are necessary for their production. This could

negatively affect their productivity and also hinder their ability to adopt relevant technologies that might enhance their yam production for food security and economic empowerment. The result also confirms the findings of Ezumah and Didomenic (1995) and Ironkwe (2005) which state that women farmers are still faced with problem of limited access to the essential farm input, extension services which are needed to increase production for increased food production.

Table 6: Distribution of respondents according to access to productive resources

Productive resources	Frequency	Percentage
Land	120	49.55
Labour	116	47.64
Agricultural information	112	46.07
Credits	58	23.87
Fertilizer	32	12.17
Loans	4	1.65

Multiple responses recorded**Major yam production constraints encountered by the rural women farmers in the State**

Table 7 reveals various constraints faced by the women farmers in yam production in the State. Scarcity and high cost of seed yam (100%), lack of agricultural information (95.06%), scarcity of labour

(95.06%) as well as lack of access to land (93.00%), lack of loan/access to credit (85.60%) and scarcity and high cost of fertilizer (83.12%) and others were the major production constraints indicated by the respondents. For the rural women to increase their productivity, these constraints need to be properly addressed.

Table 7: Distribution of respondents according to constraints encountered

Constraints	Frequency	Percentage
Scarcity/high cost of seed yam	234	100.00
Lack of access to Agricultural information	231	95.06
Scarcity/high cost of labour	231	95.06
Lack of access to land	226	93.00
Lack of access to loans/credits	208	85.60
Scarcity/high cost of fertilizer	202	83.12
Lack of steady market outlet	189	77.78
Lack of good roads transportation system	182	74.90

Multiple responses recorded

Policy implications

The results of this study have some important implication for policies aimed at sustaining increased yam production for food security and empowerment. It is also important if the production potentials of the rural women farmers are to be harnessed to increase their productivity and income in the yam production in Abia State. The achievement of collective self-reliance in food production would not be possible without the full participation of rural women farmers, who represent about half of the country's total population. The women farmers therefore need the efforts of research, extension and the government as well as favorable economic policies to enable them increase their productivity. This could be achieved by evolving and implementing a policy which would create enabling environment for the rural women to participate actively in the production activities. These include:

- Providing loans and credits to rural women farmers to enable them hire labour purchase land, planting materials and inputs for their production activities.
- Making land accessible to rural women farmers for their agricultural production
- Ensuring availability of complementary inputs and at reduced cost for rural women
- Ensuring steady market and good prices for yams to enhance their income
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Conclusion and Recommendation

The study revealed the crucial roles played by women farmer in yam production and the major constraints that have hitherto affected their production. This implies that women farmers, in the recent time, are contributing a lot in yam production. Therefore, to increase and sustain high yam production level in the State, serious attention should be given to the women farmers' problems and solutions provided to address these problems. This will help in empowering the rural women farmers to enhance their production levels to achieve the much desired food self-sufficiency in the country. In order to achieve the above, this study recommends the following:

- 1) Research and extension should intensify efforts in developing and transferring relevant high friendly agricultural technologies to women farmers in the State to enable them increase production at minimum cost. For instance, information on yam miniset technology should be made available to the women farmers. They should also be encouraged to adopt the technology to solve the problem of scarcity and high cost of seed yam. Research should also develop technologies to alleviate the problems involve in planting, weeding and harvesting of yam to encourage active participation of women farmers in the production process.

- 2) Education: education is a key to rural women farmers' empowerment. Our rural women farmers need to be trained on improved methods of yam production and method of seed selection for increased production of clean healthy seed and ware yams.
- 3) Capacity building: the rural women farmers need to be exposed to various vocational trades and technologies in yam production, storage, processing, and marketing to acquire the skill and knowledge required to improve their production for economic empowerment.
- 4) Government should also pursue policies aimed at making more lands available to the women farmers in the State, such measures should include:
 - a) Leasing out State owned lands to women farmers for their agricultural production.
 - b) Empowering women farmers to own land.
 - c) Giving soft loan grants to women farmers to enable them acquire land and other agricultural inputs.
 - d) Formation of cooperative's societies. There is need for rural women farmers to form themselves into cooperatives for purpose of taking full advantage of loan credits and other facilities from international donors and government institutions.
- 5) Government should recruit more extension agents to ensure effective coverage of women farmers in the State.
- 6) The extension worker should intensify efforts towards educating the women farmers on the available relevant yam-based technologies that could help to increase and sustain their production. This could be done by organizing skill acquisition programmes, workshops and trainings.
- 7) The women farmers should be assisted by the government to market their products by providing good rural market network for free flow of market information. Construction of feeder roads to link villages with urban center is highly essential in this regard.

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