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## International Journal of Agricultural Extension

ISSN: 2311-6110 (Online), 2311-8547 (Print)

<http://www.escijournals.net/IJAE>

### GENDER PARTICIPATION IN URBAN AGRICULTURE IN IBADAN METROPOLIS OF OYO STATE, NIGERIA

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#### ABSTRACT

Study was conducted to investigate gender participation in urban agriculture among crop farmers in Ibadan metropolis of Oyo State. Simple random sampling technique was used to select one hundred and twenty (120) farmers in all while proportionate sampling was used to select 70 males, 50 females from four Local Government Areas (LGA) out of eleven (11) LGAs in Ibadan metropolis. Descriptive and inferential statistics (chi-square analysis) was used to analyze the data collected. Results show that majority (70%) of the female and 37.1% of the male were between 26-47 years of age, 90% (male) and 70% (female) had one form of education or the other, and cultivated less than 2 acres of farm land. The female respondents were more involved in marketing of agricultural products (78.8%) and processing (60.2%) while male respondents were more involved in land clearing (55.7%), planting (67.1%) and thinning (77.1%). Lack of credit facilities, lack of government support and lack of access to input were some factors affecting gender participation in Urban Agriculture (UA) according to respondents' submission. Chi-square analysis revealed significant association between educational status at  $p < 0.05$  with participation of males in UA. It is recommended that government should come up with a policy to support UA so as to reduce the problem of food insecurity and hunger in the urban areas.

**Keywords:** Gender, participation, urban agriculture.

#### INTRODUCTION

Urban agriculture (UA) is a dynamic concept that comprises a lot of livelihood systems ranging from subsistence production and processing of crops and livestock at household level to more commercialized agriculture. It can be defined as the growing of plants and raising of animals for food and other uses within and around cities and towns and related activities such as the production and delivery of inputs, processing and marketing products. Ensuring food security and appropriate nutrition of the urban population, in particular the poor households has become a tremendous challenge in many cities in developing countries (FAO, 2007). Growing poverty, hunger and lack of employment opportunities, as well as the special

opportunities provided by the city, including the growing demand for food, proximity to markets and availability of cheap resources such as urban organic wastes and wastewater, have stimulated the development of diverse agricultural production systems in and around cities. These systems are often specialized in perishable products, such as green leafy vegetables, eggs and meat, and exploit vacant open spaces (Pious, 2000).

Urban agriculture is complementary to rural agriculture and is integrated into the local urban economic and ecological system; (Smit *et al.*, 1996, FAO, 1996; COAG/FAO 1999). Smit *et al.* (1996) claims that an estimated 800 million people are engaged in UA worldwide; of these, 200 million are market producers, employing 150 million people full time. Despite limited support and heavy losses, UA is generating produce valued in the tens of millions of US Dollars, year in year

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out; (Mougeut, 2000). Advocates of urban agriculture point out major benefits like it; enables the urban poor to reduce household food expenses, which enhances food security and nutritional control, especially in critical circumstances. It increases the amount of food available and enhances freshness of perishable food items reaching urban consumers. Case studies have shown that there are different nutritional benefits derived especially among children when poor urban families farm (IFPRI, 2002). Affordable food releases more incomes for other expenditures, including health and education. And since urban farmers are more likely to be female, urban agriculture contributes to the empowerment of women and is an attractive alternative to informal, poorly paid jobs. The advocates assert that urban agriculture is important not just to low-income earners, but also to middle-income earners, the unemployed and the underemployed (Okpala, 2003).

In Nigeria, urban agriculture has not received the appropriate public and institutional support despite its significant contribution to urban food security, poverty alleviation, empowerment and improved human nutrition through the provision of balanced diet (Egbuna, 2017). However, urban population growth in fueling the demand for a timely supply of fresh vegetable and livestock produce can be satisfied through urban production. With the increasing human population and high demand for food, there is need for proper food security in the country, so as to intensify the effort of all year-round food production.

Gender analysis in UA is essential for policy formulation and programme planning to ensure equity in resource allocation and a balanced development that benefit both males and female urban farmers. Consequently, this study was conducted to assess gender participation in urban agriculture among crop farmers in Ibadan. Specifically, the study aimed to:

- investigate the personal characteristics of male and female urban farmers.
- explore gender participation in urban agriculture.
- identify the factors affecting gender participation in urban agriculture.

#### **METHODOLOGY**

**The study area:** The study was carried out in Ibadan, Oyo State, Nigeria. Ibadan is located in south-western Nigeria, it is the capital of Oyo state and it is reputed to be the largest indigenous city in Africa, south of the Sahara. It has an estimated population of 1,338,659

according to 2006 estimate. There are eleven Local Government Areas (LGAs) in Ibadan metropolis consisting of five urban and six semi-urban LGAs. The principal inhabitants of the city are the Yoruba's. Ibadan is one of the four agricultural zones of the Oyo State Agricultural Development Project (ADP) and has eleven local government areas (Tomori, 2017).

**Sampling and statistics:** A multistage sampling procedure was used to select two local government areas from urban and peri-urban (semi-urban) areas making a total of four local government areas (LGAs), namely: Ibadan north, Ibadan East, Akinyele and Lagelu. Simple random sampling technique was used to select three villages from each of the LGA to give a total of twelve villages. Twelve farmers were also randomly selected (7 males, 5 female) to make a total of one hundred and forty-four (144) farmers but only one hundred and twenty (120) questionnaires were properly administered and used for data analysis. A well-structured questionnaire was used to elicit information from respondents, on their personal characteristics, gender participation in urban agriculture, factors affecting their participation and factors affecting urban agricultural sustainability.

Descriptive statistics such as frequency counts, percentages, and mean was used to describe the socio-economic characteristics, gender participation in UA activities, and factors affecting gender participation in UA. For the purpose of empirical assessment to know the participation level of respondents in UA, scores of 2, 1 and 0 was assigned for high, average and low participation respectively for selected agricultural activities. The overall score for participation was 30; this was later categorized arbitrarily into the following levels: high participation (21-30), average participation (11-20) and low participation (1-10). Chi-square analysis was used to find out the relationship between selected personal characteristics and level of gender participation in UA using Statistical package for social science (SPSS) software.

#### **RESULTS AND DISCUSSION**

**Personal characteristics of respondents:** Findings mentioned in table 1 revealed that the mean age of the male and female respondents was 48.3 years and 42.1 years respectively. This indicates that the respondents are still in their active age category. About 66% of the male and 56% of the female were married. Also, and also 45.7% and 46% of the males and female

respondents respectively had secondary education. Thirty percent of the male and 10% of the female had tertiary education. This may be an advantage on the part of the respondents in seeking information and understanding the technicalities involved in the application and adoption of new agricultural technologies. According to Agbamu (2006), education has always been known to positively influence the adoption of improved technologies.

Trading was the major occupation of 34.3% (males) and 38% females followed by agro-processing. The mean household size was 9.5 and 8.9 for the male and female respondents respectively. This is contrary to the opinion of some researchers that large household size is only found in the rural areas, although a large household size can be a source of labour on the farm. About 69% and 78% of the male and female respondents were members of one association or another. The data on source of capital revealed that

58.6% and 64% of the males and females obtained capital from personal savings, the number of years spent in UA farming were 16.4 years (males) and 12 years (female). This indicates that respondents have been in urban farming for a long period and would probably have experience in urban agriculture.

Majority (62.8% male and 66% female) of the respondents cultivated less than 2 acres of farmland for UA (with mean acres of 2.8 and 2.2 for male and female respondents respectively). This corroborates the findings of Salau a& Attah (2012) that most farmers in the urban areas cultivate at subsistence level which is most likely connected with the difficulty of acquiring land for farming purposes. Studies have shown that most urban farmers in Nigeria operate on small scale (Aniedu, 2006). More than half (58.6%) of the males and 74% of the females were majorly into maize and cassava production and also cultivated other crops such as leafy vegetables, pepper and tomatoes.

Table 1. Socioeconomic Characteristics of respondents.

Variables	Freq	(%)	Mean	Freq	(%)	Mean
Age						
<25 years	3	4.3		2	4.0	
26-36 years	9	12.8		8	16.0	
37-47 years	17	24.3	48.3	27	54.0	42.1
48-58 years	34	48.6		10	20.0	
>58 years	5	7.1		3	6.0	
Religion						
Islam	39	48.6		28	56.0	
Christian	31	37.1		22	44.0	
Marital status						
Single	16	22.8		14	28.0	
Married	45	65.7		28	56.0	
Divorced	4	5.7		3	6.0	
Widow/widower	4	5.7		5	10.0	
Educational status						
No formal education	9	10.0		7	14.0	
Primary education	10	14.3		15	30.0	
Secondary education	32	45.7		23	46.0	
Tertiary education	19	30.0		5	10.0	
Major occupation						
Civil servant	15	21.4		4	8.0	
Trading	23	34.3		19	38.0	
Artisan	7	10.0		4	8.0	
Agro-marketing	14	20.0		6	12.0	
Agro-processing	10	14.3		17	34.0	
Household size						
1-5	22	31.4		19	38.0	
6-10	38	52.3	9.6	23	46.0	8.9
>10	10	14.3		8	16.0	

Membership of association					
Yes	48	68.6		39	78.0
No	22	31.4		11	22.0
Source of capital					
Personal savings	41	58.6		32	64.0
Family and friends	10	14.3		10	20.0
Associations	12	17.1		5	10.0
Bank loan	7	10.0		3	6.0
Years in UA farming					
1-10	18	25.7		15	34.0
11-20	32	45.7		21	42.0
21-30	12	17.1	16.4	9	14.0
>30	8	11.4		5	10.0
Farm size					
< 2 acres	44	62.8		33	66.0
2.5- 4 acres	16	22.8	2.8	11	22.0
4.5- 6 acres	6	8.6		5	10.0
>6 acres	4	5.7		1	2.0
Types of crop cultivated					
Maize/cassava/yam	41	58.6		37	74.0
Maize/yam	21	30.0		6	12.0
Groundnut/cocoa/cowpea	8	11.4		7	14.0

#### Gender participation in urban Agriculture (UA):

Table 2 show the distribution of respondents based on their participation in different agricultural activities. Harvesting of crops ranked 1st among the male respondents, this was followed by planting (2<sup>nd</sup>), thinning (3<sup>rd</sup>), land clearing (4<sup>th</sup>) and supplying. The female respondents were very much involved in marketing, processing, and storage as these ranked 1st and 2<sup>nd</sup> respectively. This corroborates the submission OF Damisa et al. (2007) that women are the backbone of the family and are responsible for about 100% of the work of processing of crops and 60% in marketing. He also opined that women farmers from Oyo state, Nigeria contribute 60% to planting, 95% to weeding and 95% to harvesting crops.

Above all, the result indicated that both male and female respondents were involved in UA at different stages from land clearing to marketing, although the women were more into processing. This is in line with Adedayo and Tunde (2013) submission that Nigerian women play major roles in key farming operations such as planting,

weeding, and harvesting. Amali (1989) added that women labour input is highest in food production, processing and marketing of both raw and processed agricultural products. As regards the level of participation (Table 3), it can be concluded that women participated averagely in UA more than their male counterpart. This may be because participation focuses on people as agent of development. The concept therefore, emphasis participation of people in UA as important means to agricultural development process. According to Keough (1998), participation is a multidimensional dynamic process that takes varying forms and people will participate in any activity that will be beneficial to them.

**Factors affecting gender participation in UA:** Table 4 shows the factors that affect gender participation in UA. Unavailability of land and lack of access to credit were some of the factors identified by both male and female respondents as these ranked 1<sup>st</sup> and 2<sup>nd</sup>. According to Simetele & Binns (2008), access to land is a major constraint in UA as land owners prefer to build house on their lands than to use for UA.

Table 2. Level of gender participation in UA.

Participation level	Male	Female
High participation	12 (17.1)	0 (0.0)
Average participation	53 (75.7)	42 (84.0)
Low participation	5 (7.1)	8 (16.0)

Percentages are in parentheses.

Table 2. Gender participation in urban agricultural activities.

Activities	Male					Female				
	Very involved	Rarely involved	Not involved	Mean	Rank	Very involved	Rarely involved	Not involved	Mean	Rank
Land clearing	39 (55.7%)	7(10.0%)	24(34.3%)	2.13	4th	13(26.0%)	16(32.0%)	21(42.0%)	1.55	5th
Stumping	23 (32.8%)	16(22.8%)	31(44.3%)	1.77	8th	14(28.0%)	17(34.0%)	19(38.0%)	2.10	4th
Ploughing/harrowing	18 (25.7%)	14(20.0%)	38(52.8%)	1.48	9th	4(8.0%)	2(4.0%)	44(38.0%)	2.71	3rd
Ridging/reap making	28(40.0%)	12(17.1%)	30(42.8%)	2.00	7th	13(26.0%)	17(34.0%)	20(40.0%)	1.19	9th
Planting	47 (67.1%)	19(27.1%)	4(5.7%)	2.48	2nd	23(46.0%)	19(38.0%)	8(16.0%)	1.18	10th
Irrigation/wetting	24 (34.3%)	31(44.3%)	15(21.4%)	1.03	11th	13(26.0%)	14(28.0%)	23(46.0%)	1.14	12th
Fertilizer application	25 (35.7%)	33(47.1%)	12(17.1%)	1.95	8th	6(12.0%)	19(38.0%)	25(50.0%)	1.22	6th
Weeding	34 (48.6%)	10(14.3%)	26(37.1%)	2.02	6th	19(38.0%)	16(32.0%)	15(30.0%)	1.21	7th
Thinning	40 (57.1%)	22(31.4%)	8(11.4%)	2.16	3rd	22(44.0%)	9(18.0%)	19(38.0%)	1.15	11th
Supplying	35 (54.3%)	23(32.8%)	9(12.8%)	2.03	5th	22(44.0%)	9(18.0%)	19(38.0%)	1.20	8th
Herbicide application	21 (30.0%)	39(55.7%)	10(14.3%)	1.22	10th	7(14.0%)	22(44.0%)	21(42.0%)	2.00	5th
Harvesting	54 (77.1%)	7(10.0%)	9(12.8%)	2.99	1st	23(46.0%)	22(44.0%)	5(10.0%)	1.03	13th
Processing	18 (25.7%)	12(17.1%)	40(57.4%)	1.67	9th	21(42.0%)	17(34.0%)	12(24.0%)	2.98	1st
Storage	28 (40.0%)	17(24.3%)	25(35.7%)	1.65	9th	22(44.0%)	13(26.0%)	15(30.0%)	2.67	2nd
Marketing	34 (48.6%)	10 (14.3%)	26 (37.1%)	2.06	6th	21 (42.0%)	17 (34.0%)	12 (24.0%)	2.98	1st
Mean level	1.90					1.71				

Table 4. Distribution of respondents according to factors affecting gender participation in UA.

Factors	Male					Female				
	Major	Minor	Not affected	Mean	Rank	Major	Minor	Not affected	Mean	Rank
Lack of access to credit facilities	36 (51.4%)	19(27.1%)	15(21.4%)	2.26	2nd	28 (56.0%)	10 (20.0%)	12 (24.0%)	2.44	2nd
Unavailability of land for UA	44 (62.8%)	9(12.8%)	17(24.3%)	2.55	1st	33 (66.0%)	4 (8.0%)	13 (26.0%)	2.77	1st
Lack of access to farm input	28(40.0%)	38(54.2%)	4(5.7%)	2.20	4th	30 (60.0%)	16 (32.0%)	4 (8.0%)	2.34	3rd
Unavailability of market linkage	13 (18.6%)	30(42.8%)	27(38.6%)	2.15	6th	22 (44.0%)	16 (32.0%)	12 (24.0%)	2.27	4th
Unfavorable weather condition	19 (27.1%)	30(42.8%)	21(30.0%)	1.67	7th	20 (40.0%)	10 (20.0%)	20 (40.0%)	1.21	5th
Lack of govt. support	15 (21.4%)	31(44.3%)	24(34.0%)	1.21	5th	21 (42.0%)	12 (24.0%)	17 (34.0%)	2.00	7th
Soil infertility	21(30.0%)	38(54.2%)	11(15.7%)	2.23	3rd	22 (44.0%)	14 (28.0%)	14 (28.0%)	1.34	6th
Mean level	1.88					1.977				

Competition and power of ownership of land and legitimate land users has led to shrinkage of farm lands in many cities. Also, lack of credit facilities has always been a problem to small scale farmers and this can also discourage both men and women from engaging in UA. Other factors identified by respondents were lack of access to farm input, Unavailability of market linkage, Unfavorable weather condition, Lack of government support for UA and soil infertility. Other factors identified by male respondents include soil fertility (mean=2.23; ranked 3rd), lack of access to farm inputs (mean= 2.20; ranked 4th).

**Relationship between selected personal characteristics of respondents and level of participation in UA:** Table 5 shows the level of participation in UA is not affected by age, household size and farm size. This implies that level of gender participation in UA is not determined by the aforementioned variables. Ekong (2003) opined that the motive behind farming in urban agriculture is not primarily for sale but as a means for individual to contribute to family household-food security so as to reduce expenses on food and enhance family income. Also, Geldof (1994) submitted that people will participate in any activity that will be of benefit to them and this may have no significance with age, household size, farm size or gender. Educational status was significant to male participation in UA and this is in line with Agbamu (2007) submission that education is important and very useful especially when farmers need to comprehend the technicalities involved in technology adoption and continued use.

#### **CONCLUSION AND RECOMMENDATIONS**

The study concluded that both male and female participate in UA in different ways from land preparation through weeding to marketing and storage but at different levels of participation. Though, inadequate access to credit, land, farm inputs and lack of government support discourage gender participation in UA. The study support UA because of its potentials and multidimensional benefits of achieving food security among household. In view of the need to supply nutritionally adequate and safe food to city dwellers, there is need to encourage UA by the government by documenting a policy in support UA. Ensuring the availability and affordability of farm inputs to farmers is also paramount to increasing agricultural productivity. There is also the need for the government to create an

enabling environment for urban farmers through an institutionalize frame work that will link them to formal sources of credit. Efforts to achieve food security must be an overall drive to eradicate poverty and promote sustainable development of the society as a whole.

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