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HOME GARDENING AS A FOOD SECURITY STRATEGY AMONG YOUTHS IN URBAN AREAS OF ONDO STATE, NIGERIA

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ABSTRACT

The study assessed home gardening activities as a food security strategy among youths in urban areas of Ondo State, Nigeria. Specifically, it described the socio-economic characteristics of urban youths; identified the home gardening activities carried out; investigated the level of involvement of respondents in home gardening practices and identified the contribution of home gardening to food security of households. A multi-stage sampling procedure was used to select 150 urban youths for the study. Data was collected with the aid of structured interview schedule and questionnaire and presented using frequency tables, percentages and mean. Relationship between socio-economic characteristics and level of involvement in home gardening was tested using Chi square. Results showed that respondents' mean age was 28.66 years, 41.0 percent had tertiary education and 92.0 percent made use of land of less than 1 acre for their gardening activities. Respondents were involved in production of maize (80.0%), amaranthus (80.0%), poultry (56.0%) and goats (40.0%). The mean score for total involvement was 61.63±30.47. Provision of food all year round (mean=2.31) and easy access to food (2.49) were the main contributions of home gardening to food security. At P ≤ 0.01, size of land used for gardening (24.551= 2λ) and years of gardening experience (28.018= 2λ) were significantly associated with level of involvement in home gardening practices. The study concluded that urban youths in Ondo State, Nigeria practised home gardening, although at a low level and it contributed moderately to the food security of their households.

KEYWORDS: *Home gardening, Food security, Urban agriculture, Youth, Sustainable development.*

1.0 INTRODUCTION

The Sustainable Development Goals (SDGs) represent a comprehensive global framework adopted by the United Nations in 2015 to promote inclusive, equitable, and environmentally sound development (United Nations, 2015). One of the main objectives of the SDGs is to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture. Orsini, Kahane and Nono-Womdim (2013) reported that as of year 2007, more than half of the world population lives in urban cities and this consequently brings about increasing urban poverty and polluted environment, growing food insecurity and malnutrition, and increasing unemployment especially in developing countries like Nigeria. Lal (2020) asserted that one major ways to assuage these challenges and promote sustainable economic development is a new type of agriculture referred to as urban agriculture. Abusomwan (2025) described urban agriculture as growing of food crops or raising livestock right in the heart of the city; and it is becoming an increasingly important way to tackle food insecurity and poverty in cities around the world, especially in rapidly growing places like Nigeria. According to Kareem and Raheem (2012), there are various ways through which urban agriculture can be carried out and these include: commercial farming, community garden and home/backyard gardens.

Home gardening, as defined by Odebole (2006) in Ojaowhe and Oshio

(2023) is a mixed cropping system that encompasses food crops and livestock that can serve as supplementary source of food and income around the home. Common crop grown in home garden include yam, cassava, potato, plantain, banana, maize, vegetables like bitter leaf, water leaf, pumpkin leaf, tomato, garden egg, pepper, garden egg, trees like mango, pear, pawpaw, orange, guava, curry, scent leaf among others. Common animals raised in home garden include goat, poultry, snail, rabbit, grass cutter, cattle, sheep, fish, and pigs among others. Home garden promote food security by providing access to nutritious, safe, diverse and healthy diet (Izuagie and Ibidapo, 2025); by providing food products that are mostly safe, fresh, healthy and nutrient dense; by saving cost of transportation and time because of easy and instant access to fresh produce; and serving as an avenue for making food and medicinal spices available to the most vulnerable low income population (Ojaowhe and Oshio, 2023). Lal (2020) stated that home gardening ensures food security for urban households during period of crisis and provide added immunity against fluctuating global food prices. Furthermore, Adeloye and Oke (2025) implied that home gardening contributes immensely to the households' welfare by being a safety net during food deficit periods, increasing households' purchasing power, and reducing household expenditure, which constitutes the largest share of household spending; acts as a means of an additional source of veritable livelihood; could be a potential poverty alleviation measure among rural households; and medicinal plants from home gardens could be used to treat various illnesses and diseases and to improve household health conditions.

As reviewed above, the benefits of home gardening as a strategy for promoting food security and enhancing sustainable agricultural and economic development cannot be overemphasized. This study therefore seeks to add to existing body of knowledge by investigating the involvement of youth in home gardening activities in urban areas of Ondo State, Nigeria as it affects food security. In order to achieve this aim the study was designed with the specific objectives to: describe the socio-economic characteristics of the respondents in the study area; identify the various types of home gardening activities carried out by the respondents in the study area; investigate the level of involvement of respondents in home gardening practices in the study area and determine the contribution of home gardening to food security of respondents' households in the study area. Furthermore, a null hypothesis was formulated to determine the association between the socio-economic characteristics of the respondents and their levels of involvement in home gardening.

2.0 MATERIALS AND METHODS

The study was carried out in Ondo State, Nigeria. The state is located in South-western Nigeria. Ondo State was created on the 3rd February, 1976. Ondo State is bounded by Edo, Delta, Kogi, Ekiti, Ogun and Osun States and the Atlantic Ocean. At present Ondo State is made up of 18 Local Government Area (LGAs). The targeted population for the study were all youths living in urban areas of Ondo State who were involved in home gardening activities. A multi-stage sampling prosedure was used in selecting respondents for the study. The first stage involved purposive sampling of Ondo Central Senatorial District because of its urbanness. At stage two, two LGAs were purposively selected in Ondo Central based on their level of urbanness. The selected LGAs were Akure North and Ondo West Local Government Areas. At the third stage, 75 youths involved in home gardening activities were selected using accidental sampling from each LGA making a total of 150 respondents interviewed for the study. The data for this study was collected using structured and validated interview schedules

and questionnaires to collect relevant information based on the objectives of the study. The questions were drawn in English language and translated to local language for illiterate respondents. Data was coded, processed, summarized and presented using descriptive statistics such as frequency counts, percentages, mean and standard deviation. Chi-square was used to determine the association between socio-economic characteristics and level of involvement in home gardening activities among the respondents.

3.0 RESULTS AND DISCUSSIONS

3.1 Socio-economic Characteristics of the Respondents

Results in Table 1 revealed the distribution of the respondents based on their socio-economic characteristics. The mean age of the respondents was 28.66 ± 6.99 years. Eight percent of the respondents were 20 years or less, 36.0 percent fell within 21 to 25 years, 44.0 percent were between 26 and 30 years and 22.0 percent were above 30 years. This implies that majority of the respondents were still in their active and productive age. Fifty eight percent of the respondents were females while 42.0 percent were males. This implies that women were more involved in home gardening in the study area. This can be as a result of the fact that, women, being home makers, are in charge of feeding the family and are responsible for providing nutritious and balanced diet which can be obtained from home gardens. This result corroborates Tanimonure, *et al.* (2025) who reported that participation in home gardening seemed to be a female-dominated activity in the study of home gardening for advancing nutritional security and income generation in response to the COVID-19 pandemic in Nigeria.

Forty percent of the respondents were married while 60.0 percent of the respondents were single. This showed that a higher number of the respondents were not married and this could be as a result of their young age. Household size shows the number of persons that reside in the respondent's household. Only 28.0 percent of the respondents had a household size of less than 6, while 72.0 percent of the respondents had a household size of more than 6 people. The mean household size was 8.02±1.82. This implies that the higher the household size, the more the tendency to be involved in gardening as it is a means of providing food for the large family and also to boost the economic condition of the household. Also, there are more people that contribute to the labour required for gardening. Twenty eight percent of the respondents had secondary school education, 41.0 percent had obtained or are undergoing training to obtain tertiary education; 16.0 percent had primary education, 9.3 percent had no formal education while 6.0 percent had obtained or are undergoing training to obtain post tertiary education. This was an indication that majority of the respondents were literate. By implications high educational attainment will assist the respondents in accessing information on effective home gardening activities. Also, respondents live in the urban areas where there is better access to education.

Majority (86.7 %) of the respondents were Christians while 13.3 percent were adherent of Islamic religion. This shows that there were more Christians in the study area. Thirty six percent of the respondents were self employed while 16.0 percent were government employees. Twenty percent were employed by private individuals and 28.0 percent claimed to be unemployed. People involved in home gardening activities need flexible work hours to engage in home gardening practices. It is revealed that 31.3 percent of the respondents had been involved in gardening activities for less than 5 years. 41.7 percent had been gardening between 5-10 years while 28.0 percent had been involved for more than 10 years. It can be implied that gardening became popular in

recent times as a result of economic downturn which has led to an ever increasing price of food. Majority (92.0%) of the respondents make use of land of less than 1 acre for their gardening activities, while only 8.0 percent utilize land of more than 1 acre. This implies that gardening in the urban area is done with limited size of land, which can be as a result of high cost of land in the urban centres. Most of the respondents make use of their backyards to plant their crops and rear their animals. More than half of the respondents (62.0%) claimed that the purpose of their gardening activity is for home consumption only, while 38.0 percent claimed their gardening is for both commercial and home use. None of the respondents claimed their gardening was for commercial purpose only. The implication of this is that gardening in the study was done on a small scale basically meant for home use while the little excess was sold.

Table 1: Distribution of respondents by selected socio-economic characteristics N=150

Variables	Frequency	Percentage (%)	Mean
Age (years)			
≤20	12	8.0	28.66±6.99
21-25	54	36.0	
26-30	66	44.0	
>30	18	12.0	
Sex			
Male	63	42.0	
Female	87	58.0	
Marital status			
Married	60	40.0	
Single	90	60.0	
Household size			
< 6	42	28.0	8.02±1.82
≥6	108	72.0	
Level of education			
No education	14	9.3	
Primary	24	16.0	
Secondary	42	28.0	
Tertiary	61	40.7	
Postgraduate	9	6.0	
Religion			
Christianity	76	76.0	
Islamic	12	12.0	
Occupation			
Self employed	54	36.0	
Civil servant	24	16.0	
Private employer	30	20.0	
Unemployed	42	28.0	
Years of involvement in gardening activities			
< 5	47	31.3	
5-10	61	40.7	7.58±2.22
≥10	42	28.0	
Garden size			

< 1 acre	132	88.0	0.86±0.21
≥1 acre	18	12.0	
Purpose of gardening			
Home use only	93	62.0	
Commercial and home use	57	38.0	

Source: Field survey, 2025.

3.2 Gardening Activities involved in by the Respondents

Results in Table 2 show the distribution of the respondents on the type of gardening activities they were engaged in. These include the types of crops grown and the animals reared in their home gardens. The following were the percentages of the respondents who were engaged in various activities: growing of maize (80.0%), amaranthus vegetables (80.0%), tomatoes (76.0%), banana/plantain (64.0%), peppers (62.0%), pumpkin (60.0%), cassava (56.0%), bitter leaf (56.0%), papaya (56.0%), cassava (54.0%), india spinach (53.3%), citrus (52.0%), egg plant (50.0%), yam (48.0%), okra (42.0%), pineapples (32.0%), cocoyam (28.0%), cucumber (24.0%), soursop (20.0%), melon (12.0%) and sugarcane (8.0%). Others were rearing of poultry (56.0%), goat (40.0%), rabbits (36.0%), grass cutters (28.0), fish (18.0%), bee keeping (6.0%) and pigs (4.0%). It can be inferred from the above result that the respondents engage more in production of staple foods, fruits, vegetables and meats which provide balanced diet required for normal functioning of the human body. This result agrees with Adeloye and Oke (2025), who reported that households in Osun State cultivated plantain, tomatoes, pepper, pawpaw, bitterleaf, cassava, maize, and rear fowl often in their home gardens. Also, Izuagie and Ibidapo (2025) reported that household in Ondo State mostly favour the cultivation of arable crops (yam, cocoyam, maize, cassava), fruits and vegetables

Table 2: Distribution of respondents by the types of gardening activities N=150

Activity	Frequency	Percentage (%)
Maize	120	80.0
Amaranthus	120	80.0
Tomatoes	114	76.0
Banana/plantain	96	64.0
Peppers	93	62.0
Pumpkin	90	60.0
Bitter leaf	84	56.0
Cassava	84	56.0
India spinach	80	53.3
Citrus	78	52.0
Eggplants	75	50.0
Yam	72	48.0
Okra	63	42.0
Pineapples	48	32.0
Cocoyam	42	28.0
Cucumber	36	24.0

Soursop	30	20.0
Melon	18	12.0
Sugarcane	12	8.0
Poultry	84	56.0
Goat	60	40.0
Rabbits	54	36.0
Grass cutter	42	28.0
Fish	27	18.0
Beekeeping	9	6.0
Pigs	6	4.0

Source: Field survey, 2025.

3.3 Level of Involvement of Respondents in Home Gardening Practices

Results in Table 3 show the level of involvement of respondents in home gardening practices. Level of involvement was operationalized by unifying and summing the sizes of different activities engaged in by the respondents. These included size of land for each production, the number of plants per unit area in cases of annual crops, the number of trees in cases of tree crops, and the number of animals. The overall level of involvement was categorized into low, moderate and high level of involvement using equal interval. The mean score for total involvement in home gardening was 61.63±30.47; with 29.50 as the minimum and 180.50 as the maximum score. Majority (64.0%) of the respondents had low level of involvement as they scored less than 60.00 points on the involvement scale; 30.0 percent practised gardening moderately as they scored within 60.00 and 120.24 points; and only 6 percent had high level of involvement among the respondents as they scored above 120.25 points. This implies that gardening is practised on a low scale in the urban areas of Ondo State, Nigeria and this can be as a result of the following: low access to land, lack of agricultural input, high cost of feed and medicines for animals, little knowledge on the practice of urban agriculture, poor security of produce and insufficient time as a result of respondents' occupations among others.

Table 3: Distribution of respondents by level of involvement in home gardening activities

Level of involvement	F	(%) N=150
Low	96	64.0
Average	45	30.0
High	9	6.0
Mean	61.63±30.47	
Minimum score	29.50	
Maximum score	180.50	

Source: Field survey, 2025

3.4 Contributions of home gardening to food security among youths in the urban areas of Ondo State, Nigeria

Table 4 shows the analysis of home garden contributions to food security of youths in the study area. A Likert-type scale rated as highly contributed (HC = 3), moderately contributed (MC = 2) and slightly contributed (SC = 1) were used against the various item statements for the responses of respondents. The result shows that home

garden contributes moderately to the respondents' household food security in the study area. The grand mean was 1.98. The decision rule indicates that item statements with a mean less than or equal to 1 are classified to have contributed slightly to respondents' household food security; item with means above 1 and less than or equal to 2 are considered to have moderately contributed to food security and those with a mean greater than 2 or equal to 3 are found to have contributed highly to food security. Hence, responses to all item statements as shown in Table 4 show that home gardens moderately contributed to respondents' households' food security in the study area. The implication of the above result is that urban youths in Ondo State acknowledged that home gardening contributes to the food security of their households in moderation. This finding disagrees with Izuagie and Ibidapo (2025), who reported that home garden, contributes extremely to household food security with a grand mean of 2.71 in rural households of Ondo State, Nigeria.

Table 4: Distribution of respondents by contribution of home gardening to food security

Contribution of home garden (HG)	HC	MC	SC	Mean	D
Provision of easy access to food	84	56	10	2.49	HC
HG is an easy source of fresh food for my household	81	44	25	2.37	HC
Provision of food all year round	69	58	23	2.31	HC
The value of food produced from my garden outweighs the cost of production	48	62	40	2.05	HC
My HG help me to combat unstable food prices in the market	43	68	39	2.03	HC
Provision of all the food group needed by the household (balanced diet)	31	70	49	1.88	MC
I can easily store the excess food I get from the HG	36	54	60	1.84	MC
Provision of income which can be used to buy other types of food that are not grown in the garden	24	48	78	1.64	MC
HG is a source of medicinal plants which can improve family health and general well being	20	53	77	1.62	MC
Provision of the food quantity needed by the household	26	38	86	1.60	MC

Grand mean = 1.98 Highly contributed (HC) = 3; moderately contributed (MC) = 2 and slightly contributed (SC) = 1 D = Decision

Source: Field survey, 2025.

3.5 Test of Hypothesis

The results of Chi-square analysis in Table 5 show the association of socio-economic characteristics of the respondents and their level of involvement in home gardening practices. At $P \leq 0.01$, size of land used for gardening ($\chi^2 = 24.551$) and years of involvement in gardening activities ($\chi^2 = 28.018$) were found to be significantly associated with level of involvement in home gardening practices. At $P \leq 0.10$, purpose of gardening ($\chi^2 = 9.950$) was significant. This indicates that the more land that is accessible to youths in the study area, the more their involvement in home gardening activities. This agreed with Gwacela *et al.* (2024) that access to more farm land and inputs empowers home gardeners to expand their gardens and scale of operations. Also, the higher the number of years they have been involved in gardening practices the more their experiences and likelihood of being more involved in home gardening activities.

Table 5: Results of Chi square analysis showing the association of respondents' socio-economic characteristics and level of involvement in home gardening practices

Variables	χ^2	Degree of freedom	Contingency coefficient
Age	3.42	4	0.256
Sex	1.09	2	0.148
Religion	5.25	3	0.311
Household size	4.04	4	0.276
Level of education	5.50*	4	0.318
Occupation	3.75	6	0.267
Purpose of gardening	9.95*	4	0.411
Size of land	24.55**	4	0.578
Years of involvement in home gardening activities	28.02**	6	0.603

**Significant at 0.01 p-level *Significant at 0.10 p-level
Source: Field survey, 2025

4.0 CONCLUSION AND RECOMMENDATION

Based on the research findings, it was concluded that urban youths in Ondo State, Nigeria practice home gardening, although at a low level and it contributed moderately to the food security of their households. It was recommended that information about urban agriculture should be made available to the general public by channels of social and mass media; extension agents should not limit their area of coverage to rural areas but extend their visits to households practicing urban agriculture and landlords should be encouraged to leave a portion of their land for agriculture and not cover the whole portion with concrete.

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