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Utilization Of Urban Agricultural Practices In Osogbo Metropolis Osun State, Nigeria

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Abstract

Urban agriculture is fundamental to Nigeria's economy, as it addresses the pressing issues of food insecurity, rapid urbanization, and environmental degradation and promotes sustainable livelihoods, hence, this study assessed the utilization of urban agricultural practices in Osogbo metropolis. Specifically, it described the socio-economic characteristics of the respondents, identified the urban farming practices in the study area, as well as the level of utilization of these practices and constraints facing utilization of urban agricultural practices. To accomplish the objectives of the study, data was collected with the aid of a well-structured interview schedule and snowballing was used to generate a sampling frame and, consequently, random sampling to obtain 83 respondents as the sample size. Data collected was analyzed using frequency counts, percentages and mean while Pearson product moment correlation (PPMC) was used to test the hypothesis. Result revealed that Urban livestock is very popular in the study area, while Aquaponics and hydroponics attracted less attention. Women participated more in urban agricultural practices, as 60.2% of the respondents were female, also, respondents earned a substantial amount of money from urban agriculture. Regulatory restriction, Initial investment cost and Limited space were the constraints facing the utilization of urban agricultural practices. There was significant relationship between annual income ($r= 0.247$, $p= 0.024$) and level of utilization of urban agricultural practices. The study concluded that many urban dwellers in Osogbo metropolis practiced urban agriculture, such as urban livestock and culinary gardens, but faced problems of regulatory restrictions, initial investment cost and limited space. The study recommends that, the extension services of Osun State Agricultural Development Programme should be extended to those practicing urban agriculture, this will go a long way in improving and sustaining households' livelihoods.

Keywords: Urban**,** Agriculture**,** Urban Agriculture, Utilization**,** Urban Farming

Introduction

Urban agriculture can be referred to as small areas within cities, such as vacant lots, gardens, verges, balconies and containers, that are used for growing crops and raising small livestock or milk cows for own-consumption or sale in neighborhood markets (Poulsen *et al.,* 2015). However, the global urban population has been expanding rapidly over the last few decades, in early 2010s, half of the world's population was living in cities (The World Bank, 2014). This proportion is expected to reach 70 percent by 2050 mainly driven by the growing urbanization in the developing world, particularly in sub-Saharan Africa (SSA) (FAO, 2012; Poulsen *et al.,* 2015). By the end of the current decade, 24 of the world's 30 fastest growing cities will be African, and within 18 years, the urban population of SSA is projected to reach almost 600 million, twice how much it was in 2010 (FAO, 2012). As a result of this rapid urbanization, ensuring food security of urban residents has become a critical challenge (Poulsen *et al.,* 2015) and the focus of food insecurity has shifted and expanded from rural to urban areas (Davies *et al.,* 2020).

Urban Agriculture has a potential to increase food security in several ways (Poulsen *et al*., 2015). First, it may create easier and stable access to nutritious food for those households producing their own food (Binns *et al*, 2013). Secondly, household may be able to generate additional income by selling their products and hence improve their livelihood (Redwood, 2009). Third, it could help to improve food security of the community by increasing the total production output available in the market (Poulsen *et al*. 2015).

The urban mass exodus which is exacerbated by migrants of able-bodied men and youth leaving the disadvantaged groups (women, children, elderly, retired and people terminally ill) in the rural areas to perform agricultural operations with simple implements which cannot sustain their subsistence production let alone for supply to the cities (Adedayo and Tunde, 2012) had led to hunger and starvation in the land, hence, there is need to increase food production in urban space to meet up urban food requirement. Therefore, this study examined the utilization of Urban Agriculture in Osogbo metropolis, the study describes the socio-economic characteristics of the respondents; examined the level of utilization of urban agricultural practices and investigate the constraints facing utilization of urban agricultural practices in the study area.

Methodology

This study was carried out in Osogbo metropolis, in Osun state, Nigeria. This study makes use of a two-stage sampling technique, the first stage involved the purposive selection of three communities from the two local government areas that made up Osogbo and its environ, and that are well known with urban farming, the selected communities includes Oke-oniti, Oke-Bale and Oke-Ayepe. Snowballing was used to generate sampling frame and consequently random sampling to obtain 83 respondents as sample size.

Results And Discussion

Socio-Economic Characteristics Of The Respondents

Data presented in table 1 revealed the following information, 5% of the respondents fall under the age of 20 years, 38.4% were between the ages of 21-40 years, 36.0% were between the ages of 41-60 years of age, while 20.4% claimed to be above 60 years, as their mean age sum up to be 45.30. This is indicative that people that are full of vigor and strength are more involved in urban agriculture. Olofin (2006) established that farmers between 30 and 70 years of age undertake urban crop production. Also, 39.8% of the respondents were male, while 60.2% were female, this implies that women participated more in urban agricultural practices.

Table 1: Distribution of the respondents according to their socio-economic characteristics n=84

Socio-Economic Characteristics	Frequency	Percentage	Mean
Age (years)			
≤ 20	5	4.8	
21-40	32	38.4	
41-60	30	36.0	45.30
61 & above	17	20.4	
Sex			
Male	34	39.8	
Female	50	60.2	
Marital status			
Single	16	19.3	
Separated	3	2.4	
Divorced	2	2.4	
Widow	7	8.4	
Married	56	67.5	
Religion			
Islam	27	32.5	
Christianity	48	57.8	
Traditional	9	9.6	
Academic qualification			
Primary school	8	8.4	
Secondary	29	34.9	3.5
Tertiary	47	56.6	
Secondary occupation			
Farming	27	35.5	
Artisan	27	35.5	
Trading	22	26.5	
Transport service	5	6.0	
Clergy	3	2.4	
Household size (persons)			
≤ 5	36	43.4	
6-9	38	43.9	2.1
10 and above	10	10.8	
Annual income (#)			
0-300, 000	47	56.6	356103
300001-600,000	26	31.2	
Social organization			
No	39	47.0	
Yes	45	53.0	

Source: Field survey, 2024.

This result agreed with the findings of Paola (2003), who reported that women are more dominant in farming due to the fact that they are responsible in feeding the family, also table 1 further revealed that 67.5% of the respondents were married, 19.3% claimed to be single, 8.4% were widow while 3% were separated.
Furthermore, 57.8% of these respondents were Christians, 32.5% Muslims, while very few 8.4% claimed to be traditional worshipers, more than half, 56.6% of the respondents had tertiary education, 34.9% had secondary school education, while very few 8.4% had primary school education, this implies that the respondents in the study area are well learned. Also 35.3% of the respondents claimed farming and artisan as their secondary occupation, 26.5% claimed trading, 6.0% claimed transport services, while very few 2.4% were clergy. Also 43.4% of these respondents had up to 5 individuals in their household, 45.9% had between the 6- 9, while very few 10.8% had up to 9 individuals in their home.
Lastly table 1 revealed the annual income of the respondents from urban agriculture, 56.6% earned up to #300,000, also 31.2% earned between #300001,00 to #600,000, also 4.8% earned between #60001- #800,000, while 7.2% earned up to 800001 and above .Also 53.0% of the respondents claimed to belong to social organization.

Level Of Utilization Of Urban Agricultural Practices

The result presented in Table 2 showed the level of Utilization of Urban Agricultural practices among the respondents, the most utilized practice to the least utilized was rank using Weigh mean score. Urban livestock ranked first as the most utilize practice with a Weighted mean score of 1.80, Culinary gardens in second with a WMS of 1.39, Aquaponics ranked third with a WMS of 1.16, Backyard snail farming with a WMS of 0.69 ranked fourth, Hydroponics ranked fifth with a WMS of 0.36, while Community gardens and Seed libraries ranked least in sixth and seventh with a WMS of 0.25 and 0.22 respectively. This implied that among the selected agricultural practices, Urban livestock and Culinary gardens is the most utilized practices. This is in agreement with the findings of Olumba, *et al.,* (2021) who found poultry as the prominent livestock raised by urban farmers in Southeast Nigeria.

Constraints Facing Utilization Of Urban Agricultural Practices

The result presented in Table 3 showed the constraints facing utilization of Urban agricultural practices, the constraints was ranked from highest to least using Weighted mean score, Regulatory restriction ranked first with a WMS of 1.19, Initial investment cost ranked second with a WMS of 1.04, Limited space ranked third with a WMS of 0.96, Improper sewage disposal, Incomplete information about urban agriculture, Water access, Incomplete information, about urban agriculture, Inadequate equipment to practice, Lack of technical know-how, Limited access to extension services, Water quality were are ranked 4th, 5th, 6th, 7th, 8th, 9th,and 10th with a WMS of 0.88, 0.86, 0.84, 0.83, 0.83, 0.75, 0.53, and 0.14 respectively, while High cost of soil management ranked least in eleventh with a WMS of 0.05. This implies that majority of urban dwellers would have love to participate in urban agriculture, but face problem like Regulatory restriction and Initial investment cost, this may be so, because most of the urban areas in Nigeria are guiding by strict laws that might not permit these practices.

Table 2: Distribution of the respondents according to the Level of Utilization of Urban Agricultural practices

Practices *	Always utilized	Moderately utilized	Occasionally utilized	Not utilized	WMS	Rank
Urban livestock	29 (34.9)	30(36.1)	3(2.4)	22(26.5)	1.80	1st
Culinary gardens	17(20.5)	31(37.3)	3(2.4)	33(39.8)	1.39	2nd
Aquaponics	15(18.1)	23(27.7)	6(6.0)	40(48.2)	1.16	3rd
Backyard snail farming	6(6.0)	20(24.1)	2(2.4)	56(67.5)	0.69	4th
Hydroponics	3(2.4)	9(10.08)	6(7.2)	66(79.5)	0.36	5th
Community gardens	3(2.4)	5(6.0)	5(6.0)	71(85.5)	0.25	6th
Seed libraries	3(3.6)	3(3.6)	3(3.6)	75(89.2)	0.22	7th

Source: Field survey, 2024. *Multiple Response

Table 3: Distribution of the respondents according to the Constraint facing utilization of urban agricultural practices

Constraints	Serious	Mild	Not a problem	WMS	Rank
Regulatory restriction	30(36.1)	40(47.0)	14(16.9)	1.19	1st
Initial investment	29(33.7)	30(36.1)	25(30.1)	1.04	2nd
Limited space	12(13.3)	58(69.9)	14(16.9)	0.96	3rd
Improper sewage disposal	12(13.3)	51(61.4)	21(25.3)	0.88	4th
Incomplete information about urban agriculture	12(13.3)	49(59.0)	23(27.7)	0.86	5th
Water access	17(19.3)	30(36.1)	37(44.6)	0.84	6th
Inadequate equipment to practice	5(6.0)	60(71.1)	19(22.9)	0.83	7th
Lack of technical know-how	17(19.3)	30(36.1)	37(44.6)	0.75	8th
Limited access to extension services	9(9.6)	28(33.7)	47(56.6)	0.53	9th
Water quality	3(2.4)	8(9.6)	73(88.0)	0.14	10th
High cost of soil management	2(1.2)	2(2.4)	80(96.4)	0.05	11th

Source: Field survey, 2024 *Multiple Response

Hypothesis Testing

Pearson product moment Correlation analysis of the relationship between the socio-economic characteristics of the respondents and level of utilization of urban agricultural practices.

Data presented in Table 4 shows that, there is a positive and significant relationship between annual income (r= 0.247, p= 0.024) and level of utilization of urban agricultural practices. This implies that the more the respondents realizes from this practices the more they engage in it, also this result means that irrespective of the standard of living of the respondents before engaging in urban agriculture, they considered their standard of living to have been better than others after engaging in urban agriculture. This finding agrees with that of Mupeta *et. al.* (2020), that the income of households that practiced urban agriculture increased from 13.7% to 19.1%. It implies that urban agriculture has the potential to improve household standard of living through enhanced income.

Table 4: PPMC showing the relationship between selected socio-economic characteristics of the respondents and level of utilization of urban agricultural practices

Variables	r- value	p- value	Remark
Age	0.126	0.257	Not significant
Academic qualification	0.042	0.707	Not significant
Annual income	0.247*	0.024	Significant

Source: Computed data, 2024.
*correlation is significant at the 0.05 level (2 tailed)

Conclusion And Recommendation

Based on this research findings, it can be concluded that, many urban dwellers were practicing urban agriculture such as urban livestock and culinary gardens and but faced problem of regulatory restrictions, initial investment cost as well as Limited space.

Form findings made during this research work, it is recommended that extension services of Osun State Agricultural Development Programme should be extended to those practicing urban agriculture. This will go a long way in improving and sustaining households' livelihoods.

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