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Motivations for Women Involvement in Urban Agriculture in Nigeria

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Abstract

Poverty and food insecurity are some of the problems facing Nigerian population and governments at various levels today. Urban agriculture holds promise at solving these intractable problems. Urban agriculture is a practice that takes place in all urban centres, but existing studies have not succinctly examined the involvement of women in agriculture in small urban centres of Nigeria. The aim of this paper therefore, is to examine the motives behind involvement of women in urban agriculture in small agro-towns of Kwara State, Nigeria. A total of 1,801 women farmers were selected from 13 settlements cutting across 8 LGAs. Simple percentages, graphic illustrations, charts, tabulation and cross tabulation and stepwise multiple regression analysis were used to analyze the generated data. The study identifies three factors: food security, income supplement and accessibility to land, accounting for 98.6% as the best predictors of women involvement in urban agriculture. The study recommends that urban agriculture should be given official recognition by advocating for its support while women should be provided with financial resources to expand their farm plots.

Keywords: Poverty, Food security, urban agriculture and Women farmers Introduction

Introduction

Poverty and food insecurity are some of the challenges facing Nigeria's population and governments at various levels today. These problems are more serious in the urban than rural areas. This is because food expenditures can be as much as 60–80% of the total income of low income households in the urban areas (Ruel et al., 1998). Upon this, the urban poor still need to pay for other services and basic necessity of life that the income received cannot take care of. Successive governments in the country have launched various programmes that were meant to curb food insecurity and alleviate poverty. Some of the programmes could not withstand the test of time while some failed totally and this aggravates poverty and food insecurity. Agricultural production holds promise at solving these problems.

Initially, agriculture contributes tremendously to economic development and food security of Nigeria. In the early 1960s, agriculture

employed over 80percent of the working population and contributed significantly to Gross Domestic Product in Nigeria. However, since the early 1970s the oil sector displaced agriculture while the able bodied men and youths moved from rural to urban areas in search of paid employment leaving very few people especially women in the rural areas to produce food for the nation. Women have now become the main labour force in the rural areas due to the absence of men who seek jobs in urban areas (European Commission, 1996). These women still perform agricultural operations with simple implements which cannot sustain their subsistence production let alone producing for the whole country.

Meanwhile, increasing population in the urban centers as a result of rural-urban migration and natural growth rate necessitated the need to feed more mouths. Hence, there is the need to increase productivity since food produced in the rural areas cannot sustain the growing population. So in order to at least solve the food insecurity problem, women became the

backbone of urban agriculture just like the rural areas. Urban women went into farming so as to maintain livelihoods and contribute to household incomes through subsistence production and they even sell surplus for cash (Hovorka, 2003). They are important in the translation of the products of a vibrant agriculture sector into food and nutritional security for their households. This background information provides an insight into the rationale for the involvement of women in urban agriculture in small towns of Nigeria. For the purpose of this study, urban agriculture is defined as the “production of food and non-food plant and tree crops and animal husbandry including livestock, fowl, fish, and snails both within (intra-) and fringe (peri-) built-up urban areas” (Mougeot, 1994, p. 1).

Study Area: Small Urban Centres

The growth of small urban areas in Nigeria has been linked with urbanization process. This is as a result of movement of people from rural to urban areas for various reasons. For instance the fastest urbanization growth period in the world was experienced in Nigeria after the creation of more states in 1967 and during the oil boom eras of 1970. A lot of people migrated from the rural to urban areas which led to the growth of larger, medium-sized and small towns in Nigeria. While stressing the roles of medium-sized and small towns, Okafor (1985) emphasized that these towns serve as a relief to big cities by absorbing population that are often experienced in the big cities. In an attempt to compare medium and small towns with larger towns, Okafor also discovered that small and medium-sized towns blend both the urban and rural features sharing similar physical economic and social traits, except that the level and magnitude of economic and social activities differ.

Small urban areas evolved as a result of increasing population in the large urban centres. These are interface between large urban centres and rural areas. Furthermore, small urban areas provide services to the rural areas and such include diffusion of information and ideas, distribution of imported consumer goods, supply of social services, provision of employment as well as food crop production and marketing of agricultural products among

others, all which focus on urban development. However, for the purpose of this study small urban areas are towns with a population of between 5,000 and 20,000 people. In Kwara State, the 1991 population census projected to 2001 revealed that there are forty-one (41) settlements with a population of between 5,000 and 20,000 people from thirteen (13) Local Government Areas. This study therefore focuses on these settlements. It is also interesting to know that there are few large urban centres in Kwara State and a large proportion of the urban settlements in the state are small towns where most agricultural production occur. It is therefore necessary to examine in details, agricultural production within small towns, as most past studies laid emphasis on large towns.

Methods of Study

The study employed a multistage sampling technique to sample respondents. The first stage involved using the thirteen (13) local government areas as the sampling frame, then all the small towns with a population of between 10,000 and 20,000 people were selected. In all, thirteen (13) small towns (fig1) from eight (8) local government areas were sampled. In the second stage, five percent (5%) of the households in the selected towns was chosen for the questionnaire administration using random sampling procedure.

Based on the national average of five persons per household reported by National Bureau of Statistics (NBS), in 2006, there are 36,014 estimated numbers of household in the study area and 5% of this gave 1,801 sampled respondents. Systematic sampling technique was used in the third stage. In this context the first building on all the major roads and foot paths in each town were randomly selected to examine a household while the second was skipped. (i.e. all odd numbered houses with women farmers were surveyed while the even numbers were skipped). In each of such households surveyed, only one woman was sampled until the last woman to make a total of 1,801 women farmers.

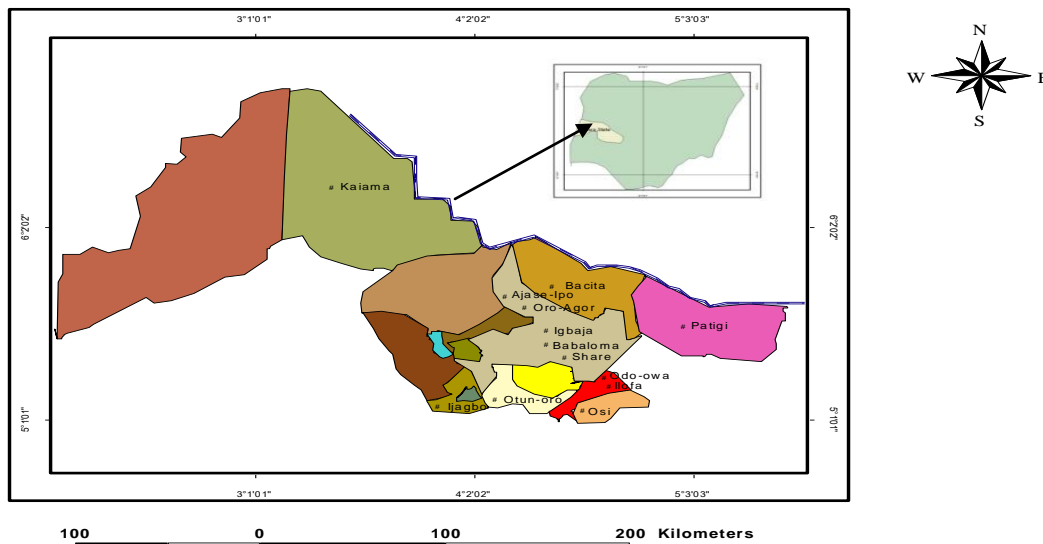


Figure 1: Kwara State showing the Sampled Small Towns (inset: Nigeria showing Kwara)
Source: Kwara State Ministry of Lands and Housing, Ilorin, 2010

The study employed simple percentages, tabulation and cross tabulation to analyze the socio-economic characteristics of urban women farmers. Stepwise multiple regression analysis was also used to analyze the most important factors that motivate women into urban agriculture. This was used because of its advantage of being able to isolate the most important variables determining involvement of women in urban agriculture in the study area. This method was used by Adebayo (1998) and Adedayo and Yusuf (2004:129).

In order to assess the most significant motives behind women involvement in urban agriculture, the regression equation is written thus:

$$Y_1 = a + b_1x_1 + b_2x_2 + b_3x_3 \dots \dots \dots b_n x_n + e$$

- Y₁ = % of women practicing urban agriculture
- a = intercept
- e = error terms
- b₁-b_n = regression coefficients
- X₁ - X_n = Reasons why women engage in urban agriculture summarized as respondents ranking in order of importance are:

- X₁ = Income supplement; X₂ = Food security;
- X₃ = Unemployment; X₄ = Increase in prices of goods;
- X₅ = Interest/hobby; X₆ = Skills/Experience;
- X₇ = Educational status of women X₈ = Accessibility to land;
- X₉ = Types of farm activities; X₁₀ = Accessibility to capital;
- and X₁₁ = Culture

Results and Discussions

General Characteristics of Respondents

Age distribution survey of the respondents reveals that almost 95% of the respondents fell within the age range of 18 to 59 years. This shows that most of the respondents are in economically active age and hence can actively practice agricultural production of any form. Furthermore, 72.6% of the respondents are married, implying that there is possibility of getting cheaper labour from their children. Educational status of women farmers revealed that 51.9% had no formal education. The implication of this is that large proportions of urban women farmers are public officers in the middle and low income levels who do not have enough education. They however engage in urban agriculture to supplement their low

income. It was further revealed that 49.6% are civil servants and only 27.0% are not employed. This shows that majority of the respondents have primary occupation and that urban farming is largely a supplementary activity. This is in support of Dennery (1997) who observed that urban dwellers who work and own farms are far better than their counterparts who relied only on their daily income and salaries.

Women Involvement in Urban Farming

When women’s involvement in urban agriculture was considered, the study indicates that 93.1% of the respondents earn less than N50, 000 annually from their main occupation. This is generally low when considered in the context of the national minimum income of one dollar per day as estimated by the United Nations. This amount is inadequate to sustain a family on food purchase in addition to other services that they have to pay for, such as child education, health, electricity, water, rent, etc, hence the need to be involved in urban agriculture. As regards the farming status of the respondents, 73% of the urban women are part-time farmers while only 27% are full-time farmers. This is expected since most of the respondents claimed that they are involved in urban agricultural activity so as to supplement income, for food security and employment purposes among others.

Motives of Urban Women Involvement in Agriculture

In order to measure the motives behind women’s involvement in urban agricultural production in the study area, eleven variables revealed by the sampled women farmers were

subjected to stepwise multiple regression analysis. Table 1 gives a matrix of simple correlation obtained between the input variables, that is, the eleven (11) motivating factors for women’s involvement in agricultural activity in the thirteen (13) sampled settlements. The highest correlation matrix (0.965) exists between variables X₁ and X₈ i.e. income supplements and restricted accessibility of women farmers to land. This relationship explains that the more income accruing from urban farming, the more the ability of women farmers to procure land for agricultural production especially where land rights for women are readily accessible. This implies production can be increased as a result of this. Apart from this, variable X₁ (income supplement) is highly correlated with variables X₂ (food security) 0.928. This implies that urban agriculture ensures food security as well as supplementary income.

The second equally high level of relationship was found between variable X₅ (interest) and X₆ (skills) 0.941. This suggests that the more a woman farmer has skills/experience in agricultural occupation the more is her interest in urban farming participation. Other variables that are highly correlated include X₂ (food security) relating to both X₄ (increase in price of goods) 0.880, and X₈ (accessibility to land) 0.911. This implies that women farmers are involved in urban agriculture for food security and because of increase in the prices of goods in Nigeria. Furthermore, accessibility to land for agriculture has enhanced food security and this in turn has contributed to a healthy living in the study area.

Table 1: Correlation Matrix of Motivation for Women in Urban Agriculture

	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁
X ₁	1										
X ₂	0.928	1									
X ₃	0.668	0.84	1								
X ₄	0.87	0.88	0.704	1							
X ₅	0.74	0.877	0.841	0.736	1						
X ₆	0.729	0.89	0.947	0.692	0.941	1					
X ₇	0.653	0.689	0.579	0.735	0.774	0.632	1				
X ₈	0.965	0.911	0.704	0.917	0.712	0.702	0.687	1			
X ₉	0.452	0.72	0.873	0.503	0.796	0.866	0.57	0.473	1		
X ₁₀	0.712	0.507	0.172	0.445	0.341	0.24	0.549	0.694	0.042	1	
X ₁₁	0.62	0.307	0.051	0.499	-0.002	-0.045	0.291	0.631	-0.249	0.77	1

Note: Correlations that exceeding 0.6000 are significant at the 1% confidence level
Source: Computer output

The respondents were asked to rank the emerging motivating factors in order of importance which were then subjected to stepwise multiple regression analysis in order to measure the contribution of each factor to women involvement in urban agriculture. The dependent variable (Y_1) represents percentage of women involved in urban agriculture while the independent variables are the eleven (11) selected factors earlier highlighted.

The result of the multiple regression suggests some interesting findings. Only three of the eleven (11) independent variables, were found to be significant at the specified tolerant level of 0.50 entries into the model. These are food security (X_2), income supplement (X_1) and accessibility to land (X_8). As revealed in Table

2, food security (X_2) is perhaps the most important determinant of women’s involvement in agricultural production in small towns surveyed. This variable with a correlation coefficient of 0.972 and a coefficient determination of 0.945 indicates that about 94.5% of its variance is associated with variation in women’s involvement in agricultural production in the study area. This is expected because there are more mouths to be fed in the increasingly expanding urban communities with limited food supply. In addition, urban women farmers enhance the food supply within and around the urban environment. There are several ways in which urban agriculture contributes to food security. It increases the amount of food available and enhances the freshness of perishable foods reaching urban consumers when needed.

Table 2: Stepwise Multiple Regression on Women involvement in Urban Agriculture

Variables	Parameter Estimates	Standard Error	R	R ²	Cumulative Percentage	Percentage Contribution
Intercept	2.447	1.082				
X_2	15.493	0.4717	0.972	.0945	94.5	94.5
X_1	8.842	0.3431	0.987	.0974	97.4	2.9
X_8	3.015	0.2672	0.993	0.986	98.6	1.2

Source: Computer output

Similarly, income supplement (X_1) also appears to be another very important motive for women’s involvement in agricultural production in the study area. It has a joint correlation coefficient of 0.987 and a coefficient of determination of 0.974. This means that about 97.4% of the variance of women involvement in urban agricultural production is jointly explained by two variables X_2 and X_1 . Income supplement however added about 2.9% of the joint explanation. One can infer that women are involved in urban agricultural production in order to supplement their income as well as that of their husbands from other sources. This is expected since most of the respondents are low and middle income earners and majority of them earn less than ₦50, 000 annually from their main occupations. Also, the irregularity in the payment of salaries, pensions and increasing inflation rates make it

unwise for them to depend on salaries alone but had to venture into urban agriculture to generate income. This buttresses the earlier work of Olawepo (2008) which states that the conditions of rising food prices and decreasing real wage have forced many Nigerian wage earners into part-time farming in order to supplement their income.

Accessibility to land (X_8) happens to be another motivating factor for women participation in urban agriculture. The coefficient of correlation of this variable is 0.993 with a coefficient of determination of 0.986. This indicates that about 98.6% of the variation in the participation of women in agriculture is jointly explained by food security, income supplement and difference in accessibility to land. This variable X_8 however has an additional 1.2% contribution suggesting that accessibility to land is a

motivating factor of women involvement in urban agriculture because land is very critical in agricultural production and can be used as collateral to obtain agricultural loan from banks. Land is an important resource to which farmers must have access in order to be able to increase food production. This study also revealed that most of the women farmers cultivate small plots of land because they do not have enough access to land among other reasons.

In all, the three variables together accounted for about 98.6% of the total variance of urban women's involvement in agricultural production in the small towns under investigation. The remaining factors are either not significant in women motivation for agricultural production or that their values are too low to offer any meaningful explanation in this study. This however does not mean that there are no other factors which are not explained by this study. The explanatory regression equation can thus be written as:

$$Y_1 = 2.447 + 15.493X_2 + 8.842 X_1 + 3.015 X_8$$

Res = 98.6% S.E = 1.082

The implication of this is that an increase in the motivation of women farmers to produce more food will lead to a higher level of food security within small towns. Also, more income will be accrued as an additional income to other non-farm incomes. The same could be said of an increase in accessibility to land either through a policy change or a favourable land right acquisition by women. This will ensure a sort of sustainable urban food production. This is because the three variables X_2 , X_1 and X_8 correlate positively in order of importance to the variations in the proportion of women involvement in agriculture among the sampled urban towns.

Implications of the Study for Planning

Based on the foregoing, this study thus recommends the following measures towards improving agriculture in small urban areas of Kwara State, Nigeria: urban agriculture should be included in urban planning by the planners. Urban agriculture should also be established as a legitimate and viable urban economic activity. Furthermore, since it has been identified that

women participate in urban agriculture, they should be provided with production resources especially land. This is because if women have greater control over land, the incentive for them to increase production may be greater.. The practice of urban agriculture as a coping mechanism in dealing with poverty and economic hardship which are prevalent in urban areas can be adopted in similar communities. This would therefore lead to increased production, better income and improved standard of living for urban dwellers. Innovations and policy needs of urban farmers which this study did not cover should be embarked upon by future researchers.

Conclusion

The major factors identified in this study as attraction of women into urban agricultural activity include food security, income supplement and accessibility to land. In order words, once these factors are considered, urban agriculture will be promoted and income realized from urban farming can be used to satisfy other necessities of life. This implies that women are involved in urban agriculture as a result of high cost of living in the urban areas. Hence, given the noted effects of urban agriculture on poverty reduction and its significant impact on the social and economic life of its practitioners, it should be encouraged based on its potentials in both small and big towns in Nigeria as well as other developing world countries.

References

- Adebayo, E. F. (1998)** "Gender Differences in Resource Utilization in Oyo State, Nigeria. Studies in Humanities", *Journal of the Usman Danfodiyo University, Sokoto*, Vol. 5, pp. 60-67.
- Adedayo, A. and Yusuf O. R. (2004)** "Cooperatives and Poverty Alleviation in Rural Settlements of Kwara State, Nigeria. Savanna", *A Journal of the Environmental and Social Sciences*, Vol. 19(2), pp. 123-131.
- Dennery, P. (1997)** "Urban Agriculture in Informal Settlements: How can it contribute to poverty alleviation?" *Agriculture and Rural Development*, Vol. 4(2), pp. 46-48.

European Commission (1996) Commissioned paper on relations between EU and ACP countries on the events of 21st Century, Brussels, European Commission.

Hovorka, A. J. (2003) "Gender, Commercial urban Agriculture and urban food supply in Greater Gaborone, Botswana", Ph. D. Dissertation, School of Geography, Clark University Worcester, M.A IDRC Publication.

Mougeot, L. J. A. (1994) "African city farming from a world perspective", In: Egziabher, A. G., Lee- Smith, D., Maxwell, D.G., Memon, P.A., Mougeot, L.J.A., Sawio, C.J. (Eds.). *Cities Feeding People: An Examination of Urban Agriculture in East Africa*. International Development Research Center, Ottawa, Canada, pp. 1-24.

National Bureau of Statistics (NBS) (2006) Socio-economic survey on Nigeria, Abuja.

Okafor, F. C. (1985) "The Functional Role of Medium-sized Towns in Regional Development: The Case of South-Eastern Nigeria", *Third World Planning Review*, Vol. 7(2), pp. 143-157.

Olawepo, R. A. (2008) "The Household Logic of Urban Agriculture and Food Production in Ilorin, Nigeria", *European Journal of Social Sciences*, Rome, Italy, Vol. 6(2), pp. 288- 296.

Ruel, M. T., Garret J. L., Morris S. S., Maxwell D., Oshaug A., Engle P., Memon P., Slack A. and Haddad L. (1998) "Urban challenges to Food and Nutrition Security: A Review of Food Security, Health and Care giving in the cities", FCND Discussion paper No. 51 International Food policy Research Institute.