

*Full Length Research Paper*

# Contribution of some ornamental plants to the socio-economic development of urban household in Akure metropolis

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**This study examined the ornamental plant nursery business in Nigeria, using Akure Metropolis, Ondo State as a case study. The study specifically identified the factors affecting ornamental plant nursery operations and income generated and challenges of ornamental plant nursery business in the state. For the study ornamental nursery operators/owners households were surveyed across the study area and interviewed via the use of the questionnaire. Descriptive and the regression analysis were the tools used in analysing the study data gathered. The study results showed that ornamental plant nursery operators are aging. Inadequate land and pest attack was indicated as a major constraint to ornamental plant nursery production. The study therefore recommends the education of youths and others alike to appreciate ornamental plant nursery business considering the business profitability.**

**Key word:** Ornamental, nursery, landscaping, plant, nursery.

## INTRODUCTION

The sustainability of the environment depends on the ways and manners in which all natural resources and artificial resources are being utilized. Global warming and ozone layer depletion is now a global issue of great concern because the effect on human lives is enormous which require an urgent attention in order to avert present and future problems that may arise (Walker and Steffen, 1997).

Ornamental plants are attractive plants use for decorative purposes. These include any plant cultured, and tamed to serve a particular function such as shade, windbreak, and beautifying places. In recent years, the growing of ornamental plants has increased across the

country as a common strategy of attraction to control the unused available and marginal land, which serves as a dumping ground for refuse and some unwanted materials. Nigeria being one of the developing nation, ornamentals has gained recognition through the development of mega cities as millennium goal initiative to beautify the environment (Oseni, 2004)

Urban forestry is the act of planting trees in the cities either for recreational purposes or avenue purposes to improve the environment (NBS/CBN, 2006). In urban environment, ornamental plant functions frequently in relation to human environment. They are usually selected, planted and nurtured by people with specific

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intention either to provide shading or by government as avenue on a drive way. Many urban dwellers also generate money from the sale of these ornamental plants. The functional benefits provided by these trees depend on structural attributes thereby improving the climatic nature of the environment (Eyffe, 2001).

An unplanned environment looks ugly, unhealthy and undesirable (Oloyede, 2008). The state of the Nigeria environment has become precarious due to the problems associated with deforestation, soil degrading, desertification, massive land and coastal erosion, loss of tree cover and bio-diversity, the drying up of rivers and lake, situation of water bodies and flooding. These problems have all contributed to accentuate climate change and a host of other environmental phenomenons. We are then faced with the challenges of promotions of massive and large afforestation/reforestation and landscaping in general (Is-haq et al., 2008).

Ornamental plants are therefore used for decorative purposes in landscaping; they beautify the home and places such as street road, round about etc. Aesthetically, plant can become a piece of living sculpture when placed against a plain wall or fence, they create an interesting shadow pattern of branches and leave plant can be used as background for other planting. They provide suitable environment for birds and other wildlife. The effect of Ozone layer depletion may expose the earth to harmful, high energy and high frequency ultraviolet radiation and can result to skin cancer, sunburn, damage to plant and reduction of plankton population in the oceans. The harmful effect of ozone layer depletion can be reduced drastically through planting ornamental plants in the urban areas. This will in no small way help in absorbing carbon (iv) oxide and use it to manufacture their food (photosynthesis) which will have hitherto escaped to the atmosphere and cause damage to this layer (Oyin, 2010). Therefore this work examined the contributions of ornamental plants to the socio-economic development of urban household in Akure metropolis.

## MATERIALS AND METHODS

### The study area

The study area- Akure is one of the second generation State capitals and a rapidly growing medium sized urban center in Nigeria. It is located around latitude 7° 15' North of the equator and 5° 14' East, at an approximate altitude of 370 m above the sea level. It has a population of 190,000 (1991 census) and rose from a rural town to one of the country's medium sized urban centers with an estimated population of 241,000 by 2003 using 2% yearly increase (Fadamiro and Atolage, 2005). The rapidity of its development within the last twenty-five years stemmed from the political status of the town which was initially a provisional headquarter and later a state capital thus serving as the seat of both the local and state governments since 1976. This accounted for the influx of people to the city for employment and other related activities. It is thus expected that the environmental situation would be critical in terms of the ability to meet up with the sporadic development devoid of adequate planning and monitoring

(Fadamiro and Atolage, 2005).

### Data collection

The primary data were collected on the contribution of ornamental plants to the socio-economic development of urban household in Akure metropolis using semi-structured questionnaire. Simple random sampling techniques were used in the study. 200 questionnaires were administered to 200 household heads that were randomly selected with the study area.

### Data analysis

The data obtained was collated and subjected to descriptive statistics - frequency and percentage distribution to illustrate the contribution of ornamental plants to the socio-economic development of urban household in Akure metropolis.

## RESULTS

Table 1 shows that those interviewed falls between age 20 and 60 above with age bracket 20-30 having the highest percentage of 66% and age group 60 and above with the lowest percentage of 10% (Table 1). 59.3% of the respondents were single and only 10% are divorced with the married family with 30.7 % (Table 3). Table 4 shows the educational status of respondents with 60% having possessed tertiary education. Table 5 shows that respondent interviewed were engaged in daily work ranging from civil servant with the highest population with 51.3% and horticulturist with the lowest of 11.3%. Table 6 shows percentage of people that use ornamental plant within the metropolis. 76% of those interviewed uses ornamental plant in one form or the other in their daily activity. Table 7 shows various way in which ornamental plants is being used. The highest level of usage is for medical purpose with 38% and recreational activities with the lowest value of 12%. Table 8 shows the rate of sales of ornamental plant as it was reported by the respondent, with yes having 70% and No, 30% of the respondent. It was recorded that its sales is an established factor in the metropolis as it shows 70% of sales. The sales per year as was given by the respondent within the metropolis shows that the highest percentage is found to be 5000 with 44% and between 5000 and 10000 with the lowest of 16% (Table 9). Table 10 shows the regression relationship between sales and annual income. The ANOVA show that there is significant ( $p \leq 0.05$ ) difference between the two factors. Challenges faced by the respondent has shown that questionnaire ranges from 52 to 10%. Land space has the highest value and water with lowest value. Examples of ornamental plant species encountered in the study area are as follows, *Duranta rapens*, *Izora* spp., *Tresenae* spp., *Hibiscus* spp., *Achalipha* spp., *Pinus* spp., *Calitrix* spp., *Queen of philipines*, *Gardenea* spp., *Ashoka* spp., *Fiucss* spp., *Benjamnae* spp., *Bongovillia*, *Stick match*, *Eucalyptus* spp., *Taxilalium* spp., *Culius* spp., *Crotons*, *Roses*, *Queen of the night*, *West Indian fumor* and *Olianda*.

**Table 1.** Age distribution.

Age distribution	Frequency	Percentage
20-30	99	66.0
41-50	18	12.0
51-60	18	12.0
>60	15	10.0
Total	150	100.0

Source: Field survey (2011).

**Table 2.** Genders.

Gender	Frequency	Percentage
Male	43	86.0
Female	7	14.0
Total	50	100.0

Source: Field survey (2011).

**Table 3.** Marital Status of the respondents.

Status	Frequency	Percentage (%)
Single	89	59.3
Married	46	30.7
Divorce	15	10.0
Total	150	100.0

Source: Field survey (2011).

## DISCUSSION

The socio-economic characteristics of the ornamental plant nursery operation to the well being of the inhabitants of Akure metropolis was analyzed using data collected from the field. It was revealed in Table 1 that most of the ornamental plants nursery operator respondents' were within age range bracket of 21 to 60 years. This age bracket composed of youths and few adults. This implies that ornamental plants nursery business in the study area can be greatly improved upon, since it is concentrated mostly in the hands of young and agile individuals which may be as a result of fresh graduate coming into the labour market of the state with little or no available job opportunity. Table 2 also indicates that most of the ornamental plants nursery operator respondents 86.0% were males. The large male female margin of respondents shows that ornamental plants production business is not popular among the women folks in the study area. This may be due to the high labour requirements for ornamental plants nursery operations. Also those involved are majorly single non married portion of the populace as shown in Table 3, as this is a growing industry in Nigeria. More than half of

**Table 4.** Educational background of the respondents.

Education	Frequency	Percentage
Non formal	3	6.0
Primary	5	10.0
Secondary	12	24.0
Tertiary	30	60.0
Total	50	100.0

Source: Field survey (2011).

**Table 5.** Occupation of respondents.

Occupation	Frequency	Percentage
Horticulturist	17	11.3
Civil servant	77	51.3
Trader	56	37.3
Total	150	100.0

Source: Field survey (2011).

**Table 6.** Usage of ornamental plant.

Usage	Frequency	Percentage (%)
Yes	114	76.0
No	36	24.0
Total	150	100.0

Source: Field survey (2011).

**Table 7.** Purpose of ornamental plant.

Purpose	Frequency	Percentage (%)
Medicinal	57	38.0
Beautification	55	36.7
Recreational	18	12.0
Environmental	20	13.3
Total	150	100.0

Source: Field survey (2011).

**Table 8.** Sales of ornamental plant.

Sales	Frequency	Percentage
Yes	35	70.0
No	15	30.0
Total	50	100.0

Source: Field survey (2011).

the respondents have had tertiary education (Table 4) from post-secondary institutions like the polytechnics, colleges of education and the universities, indicating that

**Table 9.** Sales of ornamental plant per year.

Sales per year(N)	Frequency	Percentage
<5000	22	44.0
5000-10000	8	16.0
11000-15000	9	18.0
16000 -20000	11	22.0
<b>Total</b>	<b>50</b>	<b>100.0</b>

Source: Field survey (2011).

**Table 10.** Regression table.

Model	Sum of squares	Df	Mean square	F	Sig.
Regression	61.581	1	61.581	76.180	0.000 <sup>a</sup>
Residual	36.376	45	0.808		
Total	97.957	46			

Source: Field survey (2011).

**Table 11.** Challenges facing ornamental plantation.

Challenges	Frequency	Percentage (%)
Pest attack	19	38.0
Land space	26	52.0
Water	5	10.0
Total	50	100.0

Source: Field survey (2011).

corroborated the age of those involved in the business, ornamental plants nursery operations in the study area have acquired reasonable formal educational background that could enable them introduce improvements into their ornamental plants nursery business. This level of education is far above the primary school education status in Nigeria.

The high literacy level of the respondents could affect their choice of inputs and the utilization of existing inputs and also their willingness to adopt improved technologies. This is supported by the report of Fakayode et al. (2008). Table 5 shows the degree of involvement of respondent on daily basis. The survey work shows that the largest numbers of the populace were civil servant and those involve in horticultural work are the least. The involvement of people in this business is still on the increase and with the age range involved, there is possibility of future improvement on the involvement in this business. This point can be buttress with Table 6 as the number of ornamental use is very high. This high utilization of ornamental plant either for beautification, recreational, income generation or for medicinal purpose gives a clear picture of what the future holds for

ornamental plant within the metropolis as reported in Table 7. Among all the various use of ornamental plant, beautification and medicinal application is of great importance to people. among all the ornamental plant used either for beautification or medicinal plant, following species are very common within the state; Yellow ficus , Green bush, Red acalypha, crocin, Ixora double and single. The income derived from ornamental plants which serve as one the source of socio-economic determination as shown in Table 8 reveals that the bulk of the sales ranges between 5000 and 18000, which is still relatively low. Regression analysis was carried out to determine the influence of hypothesized factors including quantity sold X1 on the volume of sales of ornamental plants in the study area as shown in Table 10. The regression analysis was significance for annual income and sales which means that sales of ornamental plant as the tendency to increase the income of those involve in the business. This is supported with the R<sup>2</sup> value which is about 62.9%. The linear function met the lead equations' criteria and was therefore chosen as the lead equation. The equation is presented as  $Y = M0.729 + 0.35$ .

### Challenges

Table 11 indicates the frequency distributions of constraints to ornamental plants nursery activities in the study area. The table shows that the most prevalent limitation to ornamental plants nursing business is the operators' inability to access adequate land necessary to capitalize their farms. This problem as reported by the farmers has particularly relegated the production of ornamental plants to mere small garden. This report is

similar to report given by Bankole (2002) as most of the land involves in the production are leased with very high levy on them which may serve as a limiting factor to income generation. Also insect attack, though not too much is also a factor as most of the ornamental plant are not indigenous, and this factor has brought about low adaptability and high insect attack on their growth.

## Conclusion

In conclusion ornamental plants nursery occupation is profitable and inadequate funding was indicated as a major constraint to ornamental plant nursery production. The study results shows that ornamental plant nursery operators were on the increase, even if the involvement are still more within the 20 to 30 years of age of the respondent and labour were revealed to significantly determine receipts from ornamental plants nursery operation in the study area. The result also indicates that ornamental plants nursery occupation is profitable. Inadequate land was indicated as a major constraint to ornamental plant nursery production. Based on the study findings therefore there is a need for all stake holders in the ornamental plants nursery industry to seek out ways of providing adequate land especially to boost ornamental plant production in the study area. In this vein ornamental plant nursery operators can be mobilized into viable cooperatives so that they can gain from the use of pooled resources and finances in cooperatives. There is also the need to educate youths and others alike as regards the gains derivable from ornamental plant nursery production business especially considering its viability and profitability. Lastly, the consumption of ornamental plants for beautification should be encouraged as this would widen the market scope for the ornamental agriculture thereby encouraging participation in the ornamental business.

## Conflict of Interest

The authors have not declared any conflict of interest.

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