

Assessment of Plant Seedlings Enterprises by Private Nurseries in Sokoto Metropolis, Sokoto State, Nigeria

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Abstract: *The study was conducted in Sokoto metropolis to examine the viability of seedlings production in Sokoto metropolis by private nursery operators with a purpose of assessing of it is profitability and engagement of the youth in such enterprises to reduce unemployment in the state. This research was conducted to assess the socio-economic contribution of the commercial nurseries in Sokoto metropolis. Purposive sampling was used through administration of structured questionnaire. Parameters evaluated include socio-economic characteristics of the respondents, plant species raised, costs and return, cash flow of the enterprise, rate of return on investment (RORI) and cost- benefit ratio. Data obtained were subjected to descriptive statistics analysis. The plant raised in the nursery includes trees and ornamental plants. In the study area only Male engaged in the seedlings enterprise. The total monthly rate of return of seedling enterprise was evaluated to be N1,900,000, and the monthly profit N900,000, while the total profit gain per annum is N10,800,000. The main dominant of production is high cost of transportation; price fluctuation, inadequate capital, as well as inadequate storage facilities affected the output per unit area.*

Keywords: *Seedlings, Nursery, Enterprises, Socio-economic Ornamental, Metropolis*

INTRODUCTION

Seedling production business is a form of self-employment opportunity that generates income with relatively low investment expenditure, and thereby possess the potential of enhancing the socio-economic aspect of the state. While a small scale enterprise is a business that is privately owned and operated, with a small number of employees and relatively low volume of sales (Wikipedia, 2011). Both the governmental and non-governmental organizations (NGOs) are engaging smallholder farmers in tree growing Larinde and Ruth, (2014). They are established to produce seedlings grown under favourable conditions at germination and early growth stage before transplanting to the field for planting purpose. Plant nurseries can be an informal, small scaled arrangement or a large commercial enterprise that vary in size, facilities (supplies, tools, equipment, etc.), types of seedlings produced, and operations (Larinde and Ruth, 2014). The seedling production centers or nurseries have been receiving increasing attention and patronage

as more people plant trees, shrubs and grasses around their buildings indicated that a nursery producing 6,000 seedlings or more per annum could allow the operator to break even. An optimal nursery size that could provide livelihood benefits is one producing about 25,000 seedlings per annum, very small nurseries would incur high seedling production costs, and would probably not justify the expenditure required for durable infrastructure and certified seedling production (Larinde and Ruth, 2014) Nurseries have the common goal of producing plant material for improving sites. They are established to produce seedlings, grown under favourable conditions at germination and early growth stage before transplanting to the field for planting purpose.

Consequently, commercial seedlings production centres have been gaining more attention and patronage. People have increasingly realized the need to plant trees, shrubs and grasses around their buildings, farms and garden. Nursery is a well-managed site designed to produce seedlings grown under favourable condition until they are ready for planting out in the field (Dedefo *et al.*, 2017). Tree nursery can be an informal, small scaled arrangement or a large commercial enterprise (Roshetko *et al.*, 2010). A major feature of the urban landscape is now the establishment of tree nurseries, springing up mainly along major roads and highways, abandoned lands, along streets, foot paths and even in private homes. This has created viable employment opportunities and means of livelihood for quite a number of people thus improving the national economy (Asiedu, *et al.*, 2012). The aim of this research is to assess the socio-economic contribution of commercial nurseries in Sokoto metropolis

MATERIALS AND METHODS

STUDY AREA

Sokoto is located between Latitudes 12^o46'N to 13^o08'N and a longitude of 5^o14'E to 5^o30'E. at average elevation of 272m above sea level. The total population of the area is estimated at 1.1 million people as in the year 2016 with an average annual growth rate of 2.6%, and an average density of 500 persons/km². Sokoto metropolis covers 16 km radius from Kangiwa square and it shares borders with Kware local council to the east, Wamakko to the west and Dange-Shuni area council to the south, (Mamman, 1996). A cursory look at the growth of Sokoto Metropolis in terms of increase in developed land shows that, as at 1986 the total developed land in the metropolis is 26.3 square kilometres, 32.2 km² in 2002, 40.9km² in 2005 and the growth is projected to be within the region of 80-82 square kilometres by the year 2020 (Eniolorunda and Dankani, 2012).

Sokoto metropolis is situated in the Sudan savannah vegetation belt (Olayinka, 2003), means annual rainfall in the area is between 600mm to 750mm which normally starts in may/ June and ends in October with average ambient temperature of about 14C in hammatan and about 36C in hot season (Odjugo, 2010; Ifabiyi and Eniolorunda, 2012; Umar, 2013). Generally, the vegetation of the area is characterized by short and stunted shrubs and grasses around the metropolis, but the inner part and the precincts have vestiges and patches of vegetation composed mainly of trees (Eniolorunda, and Dankani 2012). In the north of the metropolis is the Sokoto-Rima river floodplain which prevents the city growth in that direction.

DATA COLLECTION

Primary and secondary data were used in this study, the primary data were generated using structured questionnaire and secondary information were sourced from the internet, journals, past project, proceeding and others literature related to the study.

SAMPLING PROCEDURE

The preliminary survey was conducted in the area where seedlings businesses are carried out, target respondents are seedlings entrepreneur, and one hundred (100) respondents were used in the areas in which the businesses are carried out.

DATA ANALYSIS

Data collected were analysed using description statistical tools in the form of frequency and percentage. The economic evaluation of nursery seedling was used to estimate the profit gain per annum.

RESULTS

SOCIO-ECONOMIC OF THE RESPONDENTS

The data obtained from the study areas where seedlings enterprise are carried out are summarized and present in the tables.

Table 1. Below Age, sex, marital status, education background, years of marketing experience.

| AGE VARIABLE | FREQUANCY | PERCENTAGE |
|-------------------------|-----------|------------|
| 18 – 25 | 29 | 29% |
| 26 – 33 | 35 | 35% |
| 34 – 41 | 22 | 22% |
| 42 – 50 | 14 | 14% |
| TOTAL | 100 | 100% |
| SEX | | |
| Male | 100 | 100% |
| Female | 0 | 0% |
| TOTAL | 100 | 100% |
| MARITAL STATUS | | |
| Single | 63 | 63% |
| Married | 31 | 31% |
| Divorced | 6 | 6% |
| TTOAL | 100 | 100% |
| EDUCATION BACKGROUND | | |
| Primary | 16 | 16% |
| Secondary | 52 | 52% |
| Tertiary | 22 | 22% |

| | | |
|----------------------|-----|------|
| Qur'anic | 10 | 10% |
| TOTAL | 100 | 100% |
| MARKETING EXPERIENCE | | |
| 2 -5 | 33 | 33% |
| 6 – 10 | 28 | 28% |
| 11 – 15 | 19 | 19% |
| 16 – 20 | 12 | 12% |
| 20 ABOVE | 8 | 8% |
| TOTAL | 100 | 100% |

SOURCE: Field survey 2021

MARKETING CHANNEL

Table 2. Below, Marketing channel, source of seed.

| MARKETING CHANNEL | FREQUANCY | PERCENTAGE% |
|--------------------------|-----------|-------------|
| Wholesaler | 88 | 88% |
| Retailer | 12 | 12% |
| TOTAL | 100 | 100% |
| SOURCE OF SEED | | |
| Standing tree and market | 26 | 26% |
| Fell tree and market | 11 | 11% |
| Market place | 63 | 63% |
| TOTAL | 100 | 100% |

SOURCE: Field survey 2021,

CHECK LIST SEEDLING RAISED IN NURSERIES AND THEIR PRICE.

Table 3. Below Seedling raised and price

| COMMON NAME | SCIENCETIFIC NAME | PRICE |
|---------------------------|---------------------------------|--------|
| TREE AND ORNAMENTAL PLANT | | |
| Monkey tail tree | <i>Alcaria araucana</i> | 15,000 |
| Neem | <i>Azadirachta indica</i> | 500 |
| Date tree | <i>Phoenix dectylefera</i> | 1,500 |
| Guava | <i>Psidium guajava</i> | 1,000 |
| Eucalyptus | <i>Eucalyptus camaldulensis</i> | 1,000 |
| Mango tree | <i>Mangifera indica</i> | 1,500 |
| Cashew tree | <i>Anacardium occidentale</i> | 1,000 |
| Gum Arabic | <i>Acacia nilotica</i> | 300 |
| Acacia tree | <i>Ixoracoccinea</i> | 200 |
| Setellete | <i>Terminalia mentalis</i> | 1,500 |
| Ceiba tree | <i>Ceiba pentandra</i> | 20,000 |
| Umbrella tree | <i>Terminalia catappa</i> | 1,500 |
| Royal palm | <i>Roystonearegia</i> | 1,000 |
| Moringa | <i>moringa olefera</i> | 150 |
| Masquerade tree | <i>Polyalthialongifolia</i> | 1,000 |

| | | |
|-----------------|-----------------------------|-------|
| Pawpaw | <i>Carica papaya</i> | 1,000 |
| Pink oleander | <i>Nevium oleander</i> | 200 |
| Sun flower | <i>Helianthus giganteus</i> | 500 |
| Yellow oleander | <i>Cascabela thevetia</i> | 300 |
| Ficus | <i>Ficus benjamina</i> | 500 |

SOURCE: Field survey 2021,

CHECKLIST OF SEEDLING ENTERPRISE

Table 4. Below, means of transportation, problems associated with seedlings enterprise in the study area.

| MEANS OF TRANSPORT | FREQUANCY | PERCENTAGE % |
|-------------------------------|-----------|--------------|
| By truck | 5 | 5% |
| Tricycle | 12 | 12% |
| Motor | 83 | 83% |
| TOTAL | 100 | 100% |
| PROBLEMS | | |
| Inadequate capital | 13 | 13% |
| Price fluctuation | 26 | 26% |
| Poor transport | 43 | 43% |
| Inadequate storage facilities | 19 | 19% |
| TOTAL | 100 | 100% |

SOURCE: Field survey 2021,

CONCULUTUION AND RECOMMENDATION

Based on the findings of this research study Seedlings enterprises are of great value to the economy of the sokoto metropolis, thus, needs to be encouraged and promote as a means of livelihood among the people. Seedlings enterprise is a viable means of income generation, which one can engage in, as a means of self-employment. Seedlings business provides employment and income generation that is the major reason why most of the respondents engaged in seedlings production. Apart from income generation, seedlings enterprises serve as a means of conservation of plant species and the control of environmental problem such as climate change, deforestation, erosion and flooding. The government institutions can assist on this by working in collaboration with seedlings entrepreneur to keep them abreast of the current means of seedling propagation and management, record keeping and business principles.

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