



**OYO STATE COLLEGE OF AGRICULTURE AND
TECHNOLOGY, IGBOORA (OYSCATECH)**



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**A SYNERGY BETWEEN AGRICULTURAL PRODUCTION,
TECHNOLOGICAL INNOVATION & MANAGEMENT EFFICIENCY:
A PANACEA TO ECONOMIC STABILITY
DURING PANDEMIC**

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ORNAMENTAL PLANT SURVEY FOR GEOREFERENCED MAP PRODUCTION.

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Abstract

Study was carried out in Oyo State College of Agriculture and Technology, Igboora Oyo State using (OYSCATECH) Global Positioning System (GPS) to take coordinates (longitude and latitude) of all the existing ornamental plants in the community. The sampling of ornamental plant and identification were done. Samples of parts (leaves, barks and root) of the ornamental plant were collected, placed in polythene bags for identification. The Global positioning system (GPS) reading was taken using accuracy that are acceptable for locating ornamental plant for satellite map of ornamental plant production for the institution (OYSCATECH). Astronomical upsurge in human population has adversely affected the distribution of ornamental trees in the study area. Despite, immeasurable benefits of ornamental trees, to human and natural environment. Ornamental trees were discovered to be sparsely distributed within the study area. The few ornamental trees available were as a result of deliberate planting of some few individuals. This deprived the area of shade provision, control of erosion and soil richness.

Introduction

Over the years Ornamental plants have undergone different levels of disturbance due to unprecedented increase in human population, (Oloyede *et al.*, 2011), Plants of this category have wide spectrum of areas where they are grown as well as variety of its parts used for aesthetic purpose (flowers, leaves, scent, overall foliage texture, fruit stem and bark). Basically, they are grown in flower gardens, roadside or residential areas as house plants. Ornamental plants provide aesthetic functions by creating side attraction for human activities. The presence of these plants in an environment makes it beautiful and attractive in addition to been cool and inviting (Baiyewu *et al.*, 2005). Nigeria is an agrarian society with about 70 per cent of her over 140 million population engaged in agricultural production (Oloyede *et al.*, 2008) which have led to cutting of trees for firewood collection, charcoal production, and infrastructural developments (Agbaje., 2008). This had impacted tree diversity, abundance, species composition, indigenous knowledge of tree flora and conservation. Sustainable development advocates that humans and biodiversity coexist side by side (Adekunle, 2008). A university campus should be promoted as a model environment for sustainable development. (Oloyede and Odu, 2011) reported that, to protect trees from declining, it is essential to examine the current status of species diversity, composition and abundance as it will provide guidance for their management and valuable reference for assessment as well as improve our knowledge in identification of ecologically useful species (Adekunle, 2013). A higher number of ornamental species increases the number of ecological niches and as well as the number of associated species (Oloyede *et al.*, 2008). In the last century, landscape was considered as an important tool in enhancing life quality of individuals with the recent developments in urbanization in the world, particularly in developed countries. Today, green area quantity per-capital is used as a standard of life quality. The endeavors for increasing green areas in towns and close surroundings resulted in an increase of demand for outdoor ornamental plants (Ago, 2009). Similarly certain are called ornamental trees. This term is used when they are used as part of a garden, park, or landscape setting, for instance for their flowers, their texture, form, size and shape, and other aesthetic characteristics. In some countries trees in 'utilitarian' landscape are used such as screening, and roadside plantings as amenity trees (Adekunle *et al* 2008).

The term largely corresponds to 'garden plant', though the latter is much less precise, as any plant may be grown in a garden (Adekunle *et al*, 2008). Ornamental plants are plants which are grown for display purposes, rather than functional ones. While some plants are both ornamental and functional, people usually use the term “ornamental plants” to refer to plants which have no value beyond being attractive, although many people feel that this is value enough. Ornamental plants are the keystone of ornamental gardening, and come in a range of shapes, sizes and colors suitable to a broad array of climates, landscapes, and gardening needs. Some ornamental plants are grown for showy foliage (Momoh, 2008). Their foliage may be deciduous, turning bright orange, red, and yellow before dropping off in the fall, or evergreen, in which case it stays green year-round. Some ornamental foliage has a striking appearance created by lacy leaves or long needles, while other ornamentals are grown for distinctively colored leaves, such as silvery-gray ground covers and bright red grasses, among many others. Ornamental grasses are grasses grown as ornamental plants. There has been no prior survey of available ornamental plants in the study area. The objective of the study is to survey available ornamental plant (hedges) species in Oyo State College of Agriculture and technology, Igboora, using GPS to produce a map.

Materials and methods

Study Area

The experiment was carried out at Oyo State College of Agriculture and Technology (OYSCATECH), Igboora.

Materials

The materials used for this experiment includes; Global Positioning System (GPS), Paper tape, Plant press, Floriculturist.

Methods

Oyo State College of Agriculture and Technology (OYSCATECH) premises was sampled completely, the Global Positioning System (GPS) was used to take coordinates (Longitude and Latitude) of ornamental plants (hedges), and complete sampling of ornamental plants (hedges) and identification was done. Samples of parts of the ornamental plants (hedges) were collected, placed in a plant press for the floriculturist to identify and the GPS reading was used to produce a map of ornamental plants (hedges) of (OYSCATECH), Igboora.

Result and discussion

Table 1 showed that ornamental plant (hedges) species are fewer within the study area. There is no richness in diversity of ornamental plants species. Moreover, ornamental plants are not evenly distributed within the study area, most of the existing species are planted by some individual, the common existing species are the indigenous type *Murraya paniculata* species with 65% and the least occurrence species are *Guaiacum spp* with 30%.

Table 1: Description of ornamental plants (hedges), location and GPS reading.

Location	GPS Reading		Type of flower found	Botanical name
	Latitude	Longitude		
Faculty of Plant and Environmental Science	7°24.694' N	3° 17.688' E	Murraya Paniculata, Green bush, Yellow bush, Yellow ficus	<i>Murraya exotica</i> , <i>Duranta eracta</i> , <i>Duranta repens</i> , <i>Ficus aurea</i>
Bovas building	7° 24.575' N	3° 17.774' E	White acalita, Yellow ficus, Red acalita	<i>Achille millefolium</i> , <i>Ficus aurea</i> ,
Canteen and HRE classroom	7° 24.673' N	3°17.930' E	Murraya Paniculata, Double ixorel, Yellow ficus, West indice	<i>Murraya exotica</i> , <i>Ixora coccinea</i> , <i>Ficus aurea</i> ,

Slt lab and classroom	7° 24.675' N	3° 17.928' E	Murraya Paniculata, Yellow bush, Double ixorel,	<i>Murraya exotica</i> , <i>Duranta repens</i> , <i>Ixora coccinea</i> ,
Road that lead to school gate	7° 24.790' N	3° 17.921' E	Yellow bush, Green bush, Yellow ficus	<i>Duranta repens</i> , <i>Duranta erecta</i> <i>Ficus aurea</i>
Behind the hall	7° 24.758' N	3° 17.978' E	Green bush	<i>Duranta erecta</i> ,
Admin and Rector office	7° 24.688' N	3° 18.027' E	Yellow ficus, West indice, Crotine, Double ixorel,	<i>Ficus aurea</i> , <i>Crotine spp</i> <i>Ixora coccinea</i> ,
Department of Animal health	7° 24.841' N	3° 17.943' E	Murraya Paniculata Yellow ficus, Double ixorel	<i>Murraya exotica</i> <i>Ficus aurea</i> , <i>Ixora coccinea</i>
ICT	7° 24.872' N	3° 17.993' E	Double ixorel Green bush	<i>Ixora coccinea</i> , <i>Duranta erecta</i>
School gate	7° 24.876' N	3° 18.090' E	Yellow bush Green bush	<i>Duranta repens</i> , <i>Duranta erecta</i> ,
Department of Fisheries	7° 24.680' N	3° 17.674' E	Tuja occidentalis MurrayaPaniculata	<i>Tuja occidentalis</i> <i>Murraya exotica</i>

The table 2 showed the importance of ornamental plant and how it benefits the environment, location and type of flower with their location included. The usefulness of ornamental plants includes, aesthetic purpose and as landscape project. According to Nana, 2010 the big impacts that we can feel when ornamental plant is planted and cared for is that the mind becomes relaxed, the surrounding air can also become cleaner and better for breathing.

Table 2: Ornamental plants (hedges) location and benefits

Location	Type of flower	Benefits
Faculty of Plant and Environmental Science	Murraya Spp Green bush, Yellow bush, Yellow ficus	Hedge plant, Hedge, flowering plant, Hedge, flowering plant, Beautify environment
Bovas building	White acalita, Yellow ficus, Red acalita	Used for decoration in the garden, Beautify environment,
Canteen and HRE classroom	MurrayaPaniculata, Double ixorel, Yellow ficus, West indice	Hedge plant, Hedge plant, Beautify environment, Attractive purpose
Slt lab and classroom	MurrayaPaniculata, Yellow bush, Double ixorel,	Hedge plant, Hedge, flowering plant, Hedge plant,

Road that lead to school gate	Yellow ficus Yellow bush, Green bush, Yellow ficus	Beautify environment Hedge, flowering plant, Hedge, flowering plant, Beautify environment
Behind the hall Admin and Rector office	Green bush Yellow ficus, West indice, Crotine, Double ixorel, MurrayaPaniculata	Hedge, flowering plant Beautify environment, Attractive purpose, Attractive purpose Hedge plant, Hedge plant
Department of Animal health	Yellow ficus, Double ixorel	Beautify environment, Hedge plant
ICT	Double ixorel, Green bush, Ixorel japonica	Hedge plant, Hedge flowering plant, Hedge plant
Front of the school	Yellow bush, Green bush, Tujaoccidentalis	Hedge, flowering plant, Hedge, flowering plant, Decoration
Department of Fisheries	MurrayaPaniculata	Hedge plant

Conclusion

Ornamental plant (hedges) improve the environment by adding to its aesthetic features, it can easily control erosion and improves soil fertility status. Research on ornamental plants will improve our understanding of various unique phenomena in ornamental plants and accelerate the development of innovative means of production and utilization of ornamental plants.

Recommendation

The drive to plant and maintain the existing ones should be encouraged among stakeholders of college community. Further, studies should be carried out on the effect of ornamental plant (hedges) on soil quality in the study area.

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