A COMPARATIVE STUDY ON PLANT SPECIES AND ECONOMICS OF NURSERY BUSINESS IN DHAKA CITY-A CASE STUDY

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DEPARTMENT OF
AGROFORESTRY AND ENVIRONMENTAL SCIENCE
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DHAKA-1207

DECEMBER 2016

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By

MD. EHTASHAM BARI
REG. No. 15-06969
Session: July-December 2014

A Thesis
Submitted to the
Department of Agroforestry and Environmental Science
Sher-e-Bangla Agricultural University, Dhaka
in partial fulfillment of requirements
for the degree of

Master of Science (MS)

in
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CERTIFICATE

This is to certify that the thesis entitled "A Comparative Study On Plant Species and Economics of Nursery Business In Dhaka City-A Case Study" submitted to the Faculty of Agriculture, Sher-e-Bangla Agricultural University (SAU), Dhaka in partial fulfillment of the requirements for the degree of Masters of Science (MS) in Agroforestry and Environmental Science, embodies the results of a piece of bona fide research work carried out by Md. Ehtasham Bari, Registration no. 15-06969 under my supervision and guidance. No part of the thesis has been submitted for any other degree or diploma.

I further certify that such help or source of information, as has been availed of during the course of this investigation has duly been acknowledged.

Dated: December 2016

Place: Dhaka, Bangladesh

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Dedicated

This thesis is dedicated to my supportive and hilarious wife, Shyamoli Akter, and my two amazing child, Zahin Zawad & Zubin Zawad.

A COMPARATIVE STUDY ON PLANT SPECIES AND ECONOMICS OF NURSERY BUSINESS IN DHAKA CITY-A CASE STUDY

MD. EHTASHAM BARI

ABSTRACT

The study was conducted in four areas of DCC (Agargaon area; Dhaka University, High court and Doyel Chattar area; Gulshan and Baridhara area; and Airport road and Uttara area;) from January 2017 to March 2017. A total of 225 nurseries were identified in the studied area of which 40 nurseries were selected, which representing four areas of DCC. This study aimed to assess the socio-economic characteristics, plants species composition, nursery economics and main problems faced by the nursery owners in nursery business. On an average, a total of 325 species were identified in the nurseries of studied area of DCC. Among them 308 was found in the Agargaon study area, 300 in the Dhaka University, High court and DoyelChattar study area, 278 in the Gulshan and Baridhara study area and 294 in the Airport road and Uttara study area. The highest profit % in ornamental plant 411.13 in the Agargaon study area, 417.28 in the Dhaka University, High court and Doyel Chattar study area, 413.02 in the Gulshan and Baridhara study area and 407.50in the Airport road and Uttara study area of Dhaka City Corporation. Benefit cost ratio was calculated as 3.026 in the Agargaon study area, 3.329 in the Dhaka University, High court and Doyel Chattar study area, 3.480 in the Gulshan and Baridhara study area and 3.208 in the Airport road and Uttara study area of Dhaka City Corporation. Thus, the present finding revealed that nursery business is a profitable enterprise in the studied area and among them Gulshan and Baridhara area was more profitable.

Acknowledgement

At first, I am expressing gratitude to the almighty Allah for giving me the opportunity to study in this program and to conduct this research. Then, I wish to express my heartfelt appreciation to the following persons who in various ways have contributed in performing this study and to successfully complete this dissertation.

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December 2016
SAU, Dhaka ***The Author***

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CHAPTER I
INTRODUCTION

Dhaka is the capital of Bangladesh situated almost at the middle place of country; it lies between 23°33' and 24°41 north latitudes and 90˚11' and 90°37' east longitudes. The total area of the Dhaka zilla is 1463.60 sq. km of which 45.92 sq. km is reverie and 0.28 sq. km is under forest. Dhaka gained city status in 1947 when it was made the capital of East Pakistan and by that time stretched over an area of about 40 sq. km.. The present population of DCC is about 125.0 million (Banglapedia, 2014).In the process of rapid urbanization of Dhaka city, it was found that about 20 percent vegetation coverage that was present in 1989 has gradually decreased to 15.5 percent and 7.3 percent in the year 2002 and 2010 respectively (BBS, 2011). Vegetation found in the Dhaka city is only 1.87 percent (BBS, 2015).

Already unplanned urbanization has caused serious ecological imbalances in the city. Under these alarming situations, agricultural production and forest resources must be increased by afforestation program. Nurseries can play an important role for producing seedlings and saplings of various types of plants. Plants are important part of the natural life system, and they have a vital role in sustainability of town and cities. The benefit of plants, in an urban area can be grouped into environmental, economic and social categories. In Dhaka city there are a huge demand of seedling and sapling to elite and middle class people. Nurseryman can grow plants or saplings to keep the environment pure and look attractive. The DCC is forming a special cell to make Dhaka a green city. Both government and people have been more attentive for plantation activities. As a result the demand for seedling is increasing.

Nurseries are places where seedlings are raised for planting purposes. In the nursery, the young seedlings are tended from sowing to develop in such a way as to be able to endure the hard field conditions (Mason, 2004). The nursery industry

is a very wonderful and exciting business, as the production of plants for profit has the potential of providing many personal and financial rewards. However, just as many other farming enterprises that appears to be very simple on the surface, the nursery business is very complex and requires a great deal of knowledge and skill not only in production, but also in labour management and marketing.

Throughout the world, nurseries come in various types and sizes. Many are small family business, which is sometimes just a small hobby business to supplement the family's normal source of income (Mason, 2004). Many potential producers do not realize the skill and knowledge required to produce a quality nursery crop in the field. Another crucial item that is often under-estimated is the amount of money that is required to produce a saleable plant. Ahmed (2003) reported that nursery is one of the most important income based activities in Bangladesh, which has led to poverty reduction and socio-economic improvement of the poor section of the population. The nursery business has already cast a very positive impact on rural economy in terms of poverty alleviation and women empowerment.

Nurseries have proven essential in ensuring availability of Quality Planting Material (QPM) at local level, ensuring their multiplication but also providing technical assistance to farmers. Urban nursery provides countless varieties of shrubs, grasses, vines, fruit and ornamental trees to consumers and landscapers alike. About 69,000 families are directly or indirectly involved in the nursery industry for their livelihoods; 13,000 are directly involved as full time labor, 32,000 are involved as part time labor, over 15,000 families are indirectly involved in the nursery sector over all in Bangladesh as input sellers, transport labor, market actor (BBS 2015).

There are many studies that have been conducted on nursery business of various aspect. However within urban vegetation research, little attention has been paid to the socioeconomic importance of nursery business and no research has been reported in home and abroad to determine the socioeconomic importance.

Unfortunately, except some economic studies (Islam *et al*., 1998), no study has been conducted for nursery business. Therefore, detail information about the nursery business would help the researchers as well as policy makers for the improvement of the nursery business.

Justification of the study:

- Nurseries are places where seedlings & saplings are raised for planting purposes.
- In the nursery, the young seedlings are tended from sowing to develop in such a way as to be able to endure the hard field conditions (Mason, 2004).
- Nurseries have proven essential in ensuring availability of Quality Planting Material (QPM) at local level, ensuring their multiplication but also providing technical assistance to planters.
- The inhabitants living in Dhaka know a very little about diversification of plant species in various location of DCC.
- Noted that, Most of the city dwellers are in dark about sales prices of various species at different location.
- Though it is a business, The city people are not able to enjoy the best price during buying their seedlings & saplings.
- Therefore, detail information about the nursery business would help the DCC people, researchers as well as policy makers for the improvement of the nursery business.

The study was undertaken with following objectives:

i. To identify plant species composition of the selected areas;

ii. To find out the economic analysis of Nursery business for ranking among areas**.**

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CHAPTER II
REVIEW OF LITERATURE

The purpose of this chapter is to review and discuss literature having relevance to the present study. The socio-economic effect of nursery is a new dimension of research in our country and hence direct literature was not available for this study. However, an attempt has been made in this chapter to review some inter linked literature on this aspect from home and abroad.

About 17.4% of the total lands surfaces of Bangladesh are under actual forest cover (Mondal, 2000) and that is again not evenly distributed all over the country (Chowdhury and Sattar, 1993). Most of the forests are distributed in the eastern and northwestern part of the country and mangrove forest in southwest part of the country named as `Sundarban forest'. With the increase of population and urbanization forest was destroying at a very rapid rate. The present level of utilization of forest product in the country to meet the demands of various forest based industries in the urban and rural areas amount to about 1.076 million cubic meter timber and 1.784 million cubic meter of fuel wood in the year 2000 (Ahmed, 2002). With the population explosion increasing industrial capacity, rapid urbanization and expected higher standard of living. Therefore maintain a balance economy as well as to meet the estimated demand for forest product, more and more land area of Bangladesh should be put under forest cover. As the same way the selection and culture of fruit trees have to increase as our demand. There are about 140 fruit plants in our country. They have much variety diversity. They have diversity in size & shape, in habitat, in adaptation power, in flowering, in production season, in somatically element and in the activity on human and animal life. The unconventional fruits have plenty of food values. These fruits also can be the source of nutrition and they have also preventive power against disease. So it should be our duty to conserve the fruit plants from extinction. Despite all these advantages, however, national consumption in terms of fruit,

vegetables and spices is still low. Successful fruit, vegetable and spices cultivation stars with good planting materials. There are more and more nurserymen who produce saplings to supply to growers.

A plant nursery is a managed site, designed to produce seedlings, grown under favorable conditions until they are ready for final planting. Individual entrepreneurs and NGOs working with social forestry have also established nurseries throughout the country. The number of private nurseries in Bangladesh has increased from a few hundred to about 15000 during the last five years.

In the middle of 19th century, the Forest Department (FD) first developed plant nurseries in Bangladesh for producing and planting forest trees only. It was then extended to some commercial fruit trees, which was confined to government level. FD is the mother department responsible for seedling production and still it is one of the prime jobs of FD staff. Besides, Bangladesh Agricultural Development Corporation (BADC) and Horticultural Division of the Department of Agricultural Extension (DAE) have established some nurseries for producing seedlings/ saplings in different places of the country. In the middle 20th century, some private nurseries were developed to raise horticultural plants only. As demand has increased, a large number of private nurseries were established all over the countries.

Currently private sector is the largest sector in producing and distributing of planting materials of different types of fruit, timber, flower, ornamental, medicinal, spices and vegetables species. Near about 15000 nurseries producing and supplying various types of seedlings/ saplings, which are the 80% of total demand. Government and non-government agencies are trying to support the private nurseries for ensuring quality seedlings/ grafts and make the nursery as a profitable enterprise.

Chaitanya Nursery a horticultural nursery established by Ishwar Chandra Guha in 1894 on an area of about 6.0 ha at Bosepara, Jamalpur. The nursery was named

after his father ChaitanyaGuha. In addition to being a traditional farm it was conceived as an experimental center in which Guha attempted to introduce modern scientific agricultural methods, exotic crops, vegetables and flowers in local climatic conditions. Improved and high yielding varieties of potato, cabbage, cauliflower and brinjal raised in the farm attracted wide attention. Guha also pioneered camphor cultivation in Bengal.

According to the National Nursery Society (NNS), a platform of the country's nurseries, nearly 0.2 million people are directly involved in nurseries and 0.15 million farmers are now engaged in commercial horticulture and floriculture business.

The establishment of nurseries has become a major feature of the urban plantation and landscape in Dhaka City Corporation, springing up mainly along major roads and highways, along streets, footpaths, Hotel, apartments/ homes and homes garden, kitchen garden and also rooftop garden. There are an economic activity creating viable employment for a number of families in the country and providing invaluable service to the fast growing landscape and horticultural industries. There have a scope to create opportunities for start-ups or beginners for either full-time employment.

Alam (2008) in his field research on study of nursery plants, their management strategy and socio-economics in the greater Dhaka district of Bangladesh, carried out an experiment on floristic composition of nursery plants and found the number of fruit yielding plants 57, timber yielding plants 27, ornamental plants 79 and medicinal plants 36.

FAO (1984) reported that more than 500 species of medicinal plants have been listed from the undergrowth vegetation of the forests and village groves many of them are used by the villagers and the tribal communities for human and animal treatments (Khan, 1991). But this valuable medicinal plant species have been reported to be disappearing rapidly in Bangladesh.

Rashid *et al.,* (1986) reported that in all situations the success or failure of a grafting program is highly dependent upon the co-ordination of the grafting operation with the optimum stage of plant activity. Most of the tree species start producing new vegetative buds and shoots during the month of April-May as that time both temperature and humidity increases in atmosphere and soil. Similarly, growth and development of rootstock seedlings are also boosted during that time of the year. Therefore, practices of grafting during this favorable time of the year generally yield better results.Khan *et al.,* (l988) conducted a study at Jamalpur area on Homegarden and observed that the plant species grown on homestead the dominant ones were jackfruit (7.47 plant/farm house), mango (4.03) and bamboo (1.63).

Hague *et al.,* (1997) reported that information regarding endangered tree and timber species are very limited and scanty. it has been know that some important timber and wood tree species both wild and semi domesticated are endangered in part of their distribution ranges where the species have been reduced to below the minimum viable population level due to fragmentation of habits in to patches and introduction of quick growing exotic timber species, Endangered tree species are Deshi gab, Maruha, Cassia fistula.

Ahsan*et al.,* (1997) reported that wild medicinal plants play an invaluable role in the health services and the very livelihood of majority of the rural population. Given the importance of herbal medicine the Government of Bangladesh has brought the system of Unani and Ayurvedic medicine ensure availability, commercial manufacturing and marketing the quality Unani and Ayurvedic medicine and drugs.

Joshi and Rawat (1997) reported the need for conservation and propagation of alpine and sub-alpine medicinal plants of northwest Himalayas. The alpine and sub-alpine areas of North-west Himalayas provide a wealth of highly prized medicinal and aromatic plants, which have become depleted, rare or endangered,

as a result of loss of forest land, uncontrolled grazing and irregular exploitation of medicinal herbs on forest and other land by commercials enterprises.

Hague *et al*., (1997) reported that information regarding endangered tree and timber species are very limited and scanty. it has been know that some important timber and wood tree species both wild and semi domesticated are endangered in part of their distribution ranges where the species have been reduced to below the minimum viable population level due to fragmentation of habits in to patches and introduction of quick growing exotic timber species, Endangered tree species are Deshi gab, Maruha, Cassia fistula.

Khan (1991) reported more than 500 species of medicinal plant have been listed from the undergrowth vegetation of the forests and village groves. Many of them are used by the villagers and the tribal communities for human and animal treatments but this valuable medicinal plants species has been reported to be disappearing rapidly in Bangladesh. Hug and Khan (1992) reported that the cost of a nursery of 10 decimals was Tk.15,000 to produce 50,000 seedlings per year. The obtained cost benefit analysis suggested that if each of the seedlings was sold to Tk. 1.00, a yearly profit of Tk. 10,700 could be obtained from each of the nurseries. This profit however did not take into account cost of labor.

Chowdhury and Mar (1993) in a study showed that farmers, either retained or planted trees on the crop field for 17 reasons of which fruit, cash, insurance, fuel, juice of pump, timber for construction material and increase of soil fertility etc.

Haque*et al.,* (2007) in this study on an economic study of plant nursery business in Jessore and Gazipur districts during 2002-2003 to assess the socio-economic status of plant nursery business in Bangladesh. A total of 40 private plant nurseries, four government nurseries (BADC) and six NGO nurseries (BRAC) were selected for the study. Study revealed that 60% of the private nursery owners had secondary level of education and 50% owners performed their business on leased land. More than 55% owners had 6-10 years of experience in nursery

business. This business has vast potentials of generating employment and income of the owners. The yearly net returns per ha for private, government, and NGO nursery were Tk. 215766, Tk. 120149, and Tk. 535961, respectively. The rates of returns over full-cost were found to be 1.43 for private, 1.37 for government, and 1.50 for NGO nurseries. Non-availability of improved seeds/seedlings was the main constraint for private and NGO nurseries, whereas lack of adequate fund was the crucial problem for government nurseries.

Dixon *et al.* (1994ab); Jose (2009) and Kumar *et al.* (2011) reported that retention of forests, fasten with various afforestation and reforestation programmes can play an influential act in mitigation global climate change through atmospheric carbon sequestration.

Studies conducted by Dixon *et al.* (1994ab), and Nair *et al.* (2009) states that global coverage of Agroforests is 1023 million ha which represents a carbon sequestration potential of 1.9 Pg of carbon over 50 years at a ratio of 94 Mg ha^{-1} in governed landscapes.

According to Saha*et al.* (2010); Kumar and Nair (2011) and Nair (2012) that worldwide attention has been assigned to what extent controlled landscapes, such as community forests, village woodlots, agroforests, and roadside plantations beneath participatory management, could hold carbon and contribute to climate change mitigation. Expanding the supply of forest products, mainly fuel wood, to upgrade rural socioeconomic conditions and reversing the activity of environmental degradation through proper water and soil conservation are the leading objectives of participatory forest management in Bangladesh. Since an outcome, 48,420 ha of roadside plantations, 8778 ha of agroforestry and 30,666 ha of woodlots plantation have been raised during last 30 years in Bangladesh (JashimUddinand Inoue, 2012).

Agroforestry Improvement Partnership (AFIP- January 2012) worked for poverty reduction by enabling poor and extreme poor households to have access to quality planting material in rural areas. This has resulted in increased production of and income from agroforestry products. The project initiative allowed poor and extreme poor households to have additional income and employment opportunities and better nutrition from fruit trees. Each year, about 7.2 million people are planting 1,2 billion Quality Planting Material (QPM) sold by the 9,042 nurseries supported by the project. These users include around 45% poor and extreme poor. About 69,000 families are directly or indirectly involved in the nursery industry for their livelihoods; 13,000 are directly involved as full time labour, 32,000 are involved as part time labour, while 15,000 families are indirectly involved in the nursery sector as input sellers, transport labour, market actor etc. and over 9,000 are involved as entrepreneur of these nurseries. Presently, the average monthly income of a male labourer in the nurseries is around BDT 6,330 and for a female labourer is BDT 4,230, respectively 32% and 4% higher compared to the average income in 2010. The survey result indicated that on an average, farmers have a gross margin (Total Return-Variable Cost) of BDT 24,000 per year. The different agroforestry practices (plantation of trees in and around of homesteads, orchards, road side plantation, plantation in dike, pond bank plantation etc.) contributed to generate additional income of BDT 172,800 million for 7.2 million people, about BDT 24,000 per person and year. This income was generated by 94% from fruit trees and 6% from timber trees.

CHAPTER III
METHODOLOGY

In any scientific research, methodology plays an important role. Appropriate methodology enables the researcher to collect valid and reliable information to analyze that information properly in order to arrive at correct conclusion. The methods and procedures followed in this study have been discussed in this chapter.

3.1 Location of the study

The study was conducted in four location of Dhaka City Corporation (North and South). Dhaka is situated almost at the middle place of country;it lies between 23°33' and 24°41 north latitudes and 90˚11' and 90°37' east longitudes. The district is bounded on the north by Gazipur, on the east by Narayanganj, on the west by Manikganj and on the south by Munshiganj. The total area of the Dhaka zila is 1463.60 sq. km of which 45.92 sq. km is reverie and 0.28 sq. km is under forest.

Dhaka gained city status in 1947 when it was made the capital of East Pakistan and by that time stretched over an area of about 40 sq. km. The importance of Dhaka increased exponentially after 1971, when it became the capital of independent Bangladesh. As a result the city expanded phenomenally and according to the census of 1991 the area and population of Dhaka Megacity or Dhaka Statistical Metropolitan Area (DSMA) were 1,600 sq km and 6.83 million, respectively. The present population of DSMA is about 125.0 million (Banglapedia, 2014).

Figure3.1: A map of Dhaka city

3.2 Climate

Dhaka city has three distinct seasons: winter (November-February) dry with temperatureof 10° to 20°C; the pre-monsoon season (March-May) sometimes rain and hot with temperature reaching up to 40°C; and the monsoon (June-October) very wet with temperatures around 30°C. Dhaka experiences about 2,000 mm rainfall annually, of which about 80% falls during the monsoon (Banglapedia, 2014).

3.3 Sampling technique and selection of nursery owners

At the first phase of the study, it is concerned that it is generally not possible to make survey covering all the respondents. A sampling frame was constructed in consultation with the leaders of Nursery Malik Samity and relevant persons before final sample selection. There are 225 nurseries in the study area. For the convenience of time and money, a simple random sampling technique was followed. Out of total of 225 nursery in DCC, 40 nursery of following four location were selected for this study.

Item	Agargaon areas	Dhaka University High court &DoyelChattar areas	Gulshan&Baridhara areas	Airport road &Uttara areas	Total
	Number	Number	Number	Number	
Total nursery	60	55	40	70	225
Sample	10	10	10	10	40

3.4 Period of the study

The study was conducted during the period from January to March 2017 through field testing of interview schedule, direct interviewing of the respondents, field visit and observations, and discussion with the concerned experienced farmers.

3.5 Preparation of the survey schedule

Preparation of interview schedule Based on the field observation and objectives of the study, an interview schedule was prepared. The draft interview schedule was validated in the field and then necessary modifications were done incorporating the information recorded during the testing of the interview schedule. After pretesting and necessary adjustment, a final schedule was prepared to collect data from the selected respondents. The interview schedule of the present study is presented in Appendix 1.

3.6 Methods of Data Collection

This study followed the survey method. The author himself conducted the survey. Primary data were collected from nursery owners using pre-tested semi-structured questionnaire. The author collected data and related information through direct interview from the selected nursery owners. Collecting of accurate and reliable data and information was not an easy work. Because, most of the nursery owners did not keep accurate written records of their nursery activities. For this reason, it was very difficult to collect actual data and the researcher had to rely on the memory of the respondents. The interviews were normally conducted early in the morning as they were not busy at that time.

3.7 Period of survey (Collection of data)

Data collection was started in 1stJanuary 2017 and completed March 2017. After the questionnaire was finalized primary data were collected through personal interview with the nursery owners. Before beginning the interview each

respondent was given a brief description about the nature and purpose of the study. Then the questions were asked in a simple manner with explanation wherever necessary. The information supplied by the nursery grower was recorded directly on the interviewed questionnaire. Interviewers were requested to provide correct information as far as possible. The information was checked carefully before leaving the study area.

Plate 3.1: Photographs shows the interviewing with nursery owners in Agargaon areas

Plate 3.2: Photographs shows the interviewing with nursery owners in Dhaka University, High court and Doyel Chattar areas

Plate 3.3: Photographs shows the interviewing with nursery owners in Gulshan and Baridhara areas

Plate 3.4: Photographs shows the interviewing with nursery owners in Airport road and Uttara areas

3.8 Processing and analysis of data

Collected data were checked and cross-checked before transferring to Excel sheets. Then the information were tabulated and analyzed for achieving the objectives of the study as far as possible. Tabular analysis was used to classify the collected data and to derive relevant findings.

3.9 Benefit Cost Ratio (BCR)

Economic performance of different systems of cultivation was estimated following partial budgeting system (Hussain *et al.,* 2008; Singh *et al.*,2008;). The variable costs for each system are calculated based on the labour requirement for sowing/transplanting and weeding and also for irrigation, manure and fertilizer, seed and other input cost. The gross benefits of different systems were estimated by deducting the variable cost from the gross return. Benefit cost ratio was calculated by dividing the gross return / total return by the total cost. Benefit cost ratio

(undiscounted method) is a measure to see the efficiency of resource use which were in the present study area on the basis of total cost and cash cost.

$$\text{BCR} = \frac{\text{Gross return}}{\text{Total cost}}$$

CHAPTER IV
RESULTS AND DISCUSSION

This results and findings of the study have been presented and discussed in the following heads keeping the objectives of the study in mind. The aim of this chapter is to present a brief description of the socio-economic characteristics of the nursery owners in the studied area. It was not possible to collect all the information regarding the socio-economic characteristics of the respondents. In order to get a complete picture of nursery business in the studied area, it is essential to know the socio-economic characteristics of the nursery owners. Socio-economic characteristics of the plant producers and traders affect their production patterns and technology use. For this reason, it is essential to know their socio-economic characteristics.

4.1 Socio-economic characteristics of nursery owners

People differ from one to another in many aspects. Behavior of an individual is largely determined by his or her characteristics. The following socio-economic characteristics have been considered in the study, viz., age, educational level, family size, occupation, income etc.

4.1.1 Age

The age of an individual is one of the most important factors to make up his personality and this might play an important role on farmer's perception in nursery establishment and management.

The age structure of the sample nursery owners was explained by the classifying into three age groups: (i) Young aged (18 to 30 years), (ii) Middle aged (31-50 years) and (iii) Old aged (above 50 years). Distribution of respondents according to their age category is shown in Table 4.1.In Agargaon areas, the result showed that about 20%, 70% and 10% of the respondents in the study area belonged to the age category of young, middle and old aged, respectively. In Dhaka University, High court and Doyel Chattar areas, the result showed that about 10%, 60% and 30% of the respondents in the study area belonged to the age category of young, middle and old aged, respectively. In Gulshan and Baridhara areas, the result showed that about 30%, 40% and 30% of the respondents

in the study area belonged to the age category of young, middle and old aged, respectively. In Airport road and Uttara areas, the result showed that about 20%, 60% and 20% of the respondents in the study area belonged to the age category of young, middle and old aged, respectively. From over all study areas, it was found that majority of the nursery owners are middle aged (31-50 years old) people.

The present finding revealed that about 57.50 % nursery owners in the age category of 31-50 years were engaged in nursery business.

Table 4.1: Distribution of nursery owners according to their age at the study area

Age Category	Agargaon areas		Dhaka University, High court and DoyelChattar areas		Gulshan and Baridhara areas		Airport road and Uttara areas		Average
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	
Young aged (18-30)	2	20	1	10	3	30	2	20	20.00
Middle aged (31-50)	7	70	6	60	4	40	6	60	57.50
Old aged (51 and Above)	1	10	3	30	3	30	2	20	22.50
Total	10	100	10	100	10	100	10	100	100

4.1.2 Education

Education develops mental and physiological ability of a person to understand, decide and adopt new ideas and practices. It also helps farmers to increase their power of observation and decision making ability.

The educational level of nursery owners' ranged from primary to above graduate. The respondents were grouped into five categories as shown in Table 4.2. It appeared that in Agargaon areas,about 50%nursery owners were graduate level of education followed by 20% were HSC, 20% were above and 10% were SSC level of education. In Dhaka University, High court and DoyelChattar areas, about 50%nursery owners were graduate

level of education followed by 20% were above and 20% were HSC level of education. In Gulshan and Baridhara areas, about 50%nursery owners were graduate level of education followed by 40% were above and 10% were HSC level of education. In Airport road and Uttara areas, about 40%nursery owners were graduate level of education followed by 30% were above and 10% were HSC level of education.

The present finding revealed that graduatelevel of education was relatively more involved in nursery business.About 80% of the respondents weregraduate and above graduate degrees, they were either retired person or unemployed people after completion of their study. It indicates that nursery business is an economic activity for the respondents that created alternative employment opportunity.

Table 4.2: Distribution of nursery owners according to their education at the study area

Educational level	Agargaon areas		Dhaka University, High court and DoyelChattar areas		Gulshan and Baridhara areas		Airport road and Uttara areas		Average
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	
Primary	0	0	0	0	0	0	0	0	0
SSC	1	10	0	0	0	0	0	0	2.50
HSC	2	20	2	20	1	10	2	20	17.50
Graduate	5	50	5	50	5	50	4	40	47.50
Above	2	20	3	30	4	40	4	430	32.50
Total	10	100	10	100	10	100	10	100	100

4.1.3 Family Size

Families were defined as a group of individuals living together, taking meals unitedly and live under the control of one person as its head. It included husband, wife, and son, daughter and brother, sister, parents etc. The socio-economic characteristics of the nursery owners revealed that the average family size was up to 4 which werelower to the national average of 5.71 persons per family (BBS, 1996).

Table4.3 shows that, in Agargaon areas 60 % families had small (up to 4) members where 30% families had medium (5–6) and 10% had above members 7 members of family. In Dhaka University, High court and Doyel Chattar areas 80 % families had small (up to 4) members and 20% families had medium (5–6) members of family. In Gulshan and Baridhara areas 90% families had small (up to 4) members and 10% families had medium (5–6) members of family. In Airport road and Uttara areas70 % families had small (up to 4) members where 20% families had medium (5–6) and 10% had above 7 members of family. The present findings revealed that more than half of the respondents were small (up to 4) members of family.

Table 4.3: Distribution of the nursery owners according to the family size

Family Size	Agargaon areas		Dhaka University, High court and DoyelChattar areas		Gulshan and Baridhara areas		Airport road and Uttara areas		Average
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	
Small (up to 4)	6	60	8	80	9	90	7	70	75
Medium (5 – 6)	3	30	2	20	1	10	2	20	20
Large (7 and above)	1	10	0	0	0	0	1	10	50
Total	10	100	10	100	10	100	10	100	100

4.1.4 Occupation

The occupation of the respondent nursery owners is presented in Table4.4. It was observed that there were mostly six categories of occupation of the respondents in the study area. In Agargaon areas, among them 70 % respondents were nursery as a primary occupation followed by 20% was other business and10% was service holder. In Dhaka University, High court and Doyel Chattar areas, among them 60 % respondents were nursery as a primary occupation followed by 20% was other business and20% was service holder .In Gulshan and Baridhara areas, among them 50% respondents were

nursery as a primary occupation followed by30% was service holder and 20% was other business .In Airport road and Uttara areas, among them 80% respondents were nursery as a primary occupation followed by10% was other business and10% was service holder. The present findings revealed that about 70 percent of the respondents were taken nursery as primary occupation.

Table 4.4: Distribution of the nursery owner's according to their occupation

Occupation	Agargaon areas		Dhaka University, High court and DoyelChattar areas		Gulshan and Baridhara areas		Airport road and Uttara areas		Average
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	
Agriculture	0	0	0	0	0	0	0	0	0
Service holder	1	10	2	20	3	30	1	10	17.5
Nursery	7	70	6	60	5	50	8	80	65.00
Other Business	2	20	2	20	2	20	1	10	17.50
Student	0	0	0	0	0	0	0	0	0
Total	10	100	10	100	10	100	10	100	100

4.2 Nursery related characters

4.2.1 Size of nursery

The area of the nursery (decimal) is an important factor for nursery business. The nursery size of the respondents classified into three categories viz. Small size nursery (below 10 decimal), Medium size nursery (10 -30 decimal) andLarge size nursery (above 30 decimal).The study showed that, Agargaon areas in thehighest number of nursery (80%) was found to have medium size (10- 30 decimal) followed by 10% nursery to have small size (below 10 decimal) and 10% nursery have large size(above 30 decimals). In Dhaka University, High court andDoyelChattar areas in the highest number of nursery (80%) was found to have medium size (10- 30 decimal) followed by 10% nursery to have small size (below 10 decimal) and 10% nursery have large size(above 30 decimals). In GulshanandBaridhara areas in the highest number of nursery (70%) was found to have medium size (10- 30 decimal) followed by 20% nursery to have small size (below 10 decimal) and 10% nursery have large size(above 30 decimals). In Airport road andUttara areas in the highest number of nursery (60%) was found to have medium size (10- 30 decimal) followed by 20% nursery to have small size (below 10 decimal) and 20% nursery have large size(above 30 decimals).

Table 4.5: Distribution of the nursery size of selected nurseries

Size of nursery	Agargaon areas		Dhaka University, High court and DoyelChattar areas		Gulshan and Baridhara areas		Airport road and Uttara areas		Average
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	
Small (Below 10 decimal)	1	10	1	10	2	20	2	20	15.0
Medium (10 – 30 decimal)	8	80	8	80	7	70	6	60	72.5
Large (above 30 decimal)	1	10	1	10	1	10	2	20	12.5
Total	10	100	10	100	10	100	10	100	100

4.2.2 Age of establishment of nursery

The establishment period of the nurseries were categorized into less than one year to over 40 years (Table 4.6). It was found that, in Agargaon areas,the highest number of (40%) respondents had established their nursery within 0-10 years, closely followed by 30% respondents within 11-20 years, 20% respondents had established their nursery 21-30 years and only10% of nursery owners had established their nurseries above 31 years. In Dhaka University, High court andDoyelChattar areas, the highest number of (50%) respondents had established their nursery within 0-10 years, closely followed by 20% respondents within 11-20 years, 10% respondents had established their nursery 21-30 years and 0% of nursery owners had established their nurseries above 31 years.In GulshanandBaridhara areas, the highest number of (60%) respondents had established their nursery within 0-10 years, closely followed by 30% respondents within 11-20 years, 10% respondents had established their nursery 21-30 years and 0% of nursery owners had established their nurseries above 31 years.In Airport road andUttara areas, the highest number of (60%) respondents had established their nursery within 0-10 years, closely followed by 40% respondents within 11-20 years, no respondents had established their nursery 21-30 years and above 31 years.

Table 4.6: Distribution of the nursery owners according to the year of establishment of the nurseries

Years of establishment of nursery (Year)	Agargaon areas		Dhaka University, High court and DoyelChattar areas		Gulshan and Baridhara areas		Airport road and Uttara areas		Average
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	
0-10	4	40	5	50	6	60	6	60	52.5
11-20	3	30	2	20	3	30	4	40	30.0
21-30	2	20	1	10	1	10	0	00	10.0
31 and above	1	10	2	20	0	00	0	00	7.50

Total	10	100	10	100	10	100	10	100	100

4.2.3 Experience in nursery business

The experience means the year of involvement of the nursery owners with nursery business. Study showed that the experience of the respondents was categorized into less than one year to over twenty years. In Agargaon areas, it is found that most of the nursery owners (40%) had 11-15 years' experience followed by 30% nursery owners had 6-10 years' experience, 20% nursery owners had 0-5 years' experience, while 10% nursery owners were found to have above 16 years.In Dhaka University, High court andDoyel Chattar areas, it is found that most of the nursery owners (40%) had 6-10 years' experience followed by 30% nursery owners had 11-15 years' experience, 20% nursery owners had 0-5 years' experience, while 10% nursery owners were found to have above 16 years.In Gulshan and Baridhara areas, it is found that most of the nursery owners (50%) had 6-10 years' experience followed by 30% nursery owners had 0-5 years' experience, 20% nursery owners had 11-15 years' experience, while 0% nursery owners were found to have above 16 years. In Airport road and Uttara areas, it is found that most of the nursery owners (40%) had 6-10 years' experience followed by 30% nursery owners had 11-15 years' experience, 30% nursery owners had 0-5 years' experience, while 0% nursery owners were found to have above 16 years.

Table 4.7: Distribution of experience of nursery owners in nursery business

Years of establishment of nursery (Year)	Agargaon areas		Dhaka University, High court and DoyelChattar areas		Gulshan and Baridhara areas		Airport road and Uttara areas		Average
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	
0-5	2	20	2	20	3	30	3	30	25.0
6-10	3	30	4	40	5	50	4	40	40.0
11-15	4	40	3	30	2	20	3	30	30.0
above 16	1	10	1	10	0	00	0	00	5.0

Total	10	100	10	100	10	100	10	100	100

4.2.4 Use of communication tools

Business used to rely on communication for almost every aspect of their operations. In this study, four types of modern communication tools were found to use in nursery business. The tools were mobile phone, land phone, internet (e-mail), and facebook services. In Agargaon areas, among the modern communication tools on an average cent percent (100) of the respondents had mobile phone, 20.00% respondents had land telephone, 50.00 and 70.00% nursery owner use internet (e-mail) and facebook,respectively. In Dhaka University, High court andDoyelChattarareas, among the modern communication tools on an average cent percent of the respondents had mobile phone, 10.00% respondents had land telephone, 60.0 and 80.00% nursery owner use internet (e-mail) and facebook, respectively. In GulshanandBaridhara areas, among the modern communication tools on an average cent percent of the respondents had mobile phone, 10.00% respondents had land telephone, 60.00 and 90.00% nursery owner use internet (e-mail) and facebook, respectively. In Airport road andUttara areas, among the modern communication tools on an average cent percent of the respondents had mobile phone, 20.00% respondents had land telephone, 50.00 and 80.00% nursery owner use internet (e-mail) and facebook, respectively.

Table 4.8: Use of communication tools by the nursery owners

Communication tools	Agargaon areas	Dhaka University, High court and DoyelChattar areas	Gulshan and Baridhara areas	Airport road and Uttara areas	Average
	Percent (%)	Percent (%)	Percent (%)	Percent (%)	
Land phone	20.00	10.00	10.00	20.00	15.00
Mobile phone	100	100	100	100	100
Internet (e-mail)	50.00	60.00	70.00	50.00	60.00
Face book	70.00	80.00	90.00	80.00	80.00

4.2.5 Annual Income

The annual income of the respondent is an important indication of how much he can invest in his nursery business. Usually, the person who had more income can invest more in nursery business. The annual income or gross profit of the respondents of the studied nurseries categorized into three phase: (i) below 1 crore (ii) 1 to 3crore and (iii) above 3crore. Data from Table 4.9 revealed that in Agargaon areas, 50% of nursery owner's yearly income was low (below 1 crore), 30% of nursery owner's yearly income is 1– 3crore and 20% of nursery owner's were high level of income (above 3crore). In Dhaka University, High court and Doyel Chattar areas, 40% of nursery owner's yearly income was low (below 1 crore), 50% of nursery owner's yearly income is 1– 3crore and 10% of nursery owner's were high level of income (above 3crore). In Gulshan and Baridhara areas, 20% of nursery owner's yearly income was low (below 1 crore), 50% of nursery owner's yearly income is 1–3crore and 30% of nursery owner's were high level of income (below 3crore). In Airport road and Uttara areas, 40% of nursery owner's yearly income was low (below 1 crore), 30% of nursery owner's yearly income is 1– 3crore and 30% of nursery owner's were high level of income (above 3crore).

Table 4.9: Distribution of the yearly income of the nursery owner's

Annual income	Agargaon areas		Dhaka University, High court and DoyelChattar areas		Gulshan and Baridhara areas		Airport road and Uttara areas		Average
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	
Low income (below 1 crore)	5	50	4	40	2	20	4	40	37.50
Medium income (1 - 3 crore)	3	30	5	50	5	50	3	30	40.00
High income (above 3crore)	2	20	1	10	3	30	3	30	22.50
Total	10	100	10	100	10	100	10	100	100

4.3 Species composition and cost effectiveness at studied areas

4.3.1 Species composition

Wide variation in species composition of planting materials at different nurseries was observed during study (Table4.10).The distribution of plant species might have influenced by the local environment, place and demand of the locality. Therefore species composition varied from place to place. On an average, a total of 325 species were identified in the nurseries of the study area of DCC which divided in seven categories. They are (i) Fruit, (ii) Flower, (iii) Ornamental, (iv) Timber, (v) Medicinal, (vi) Spices & (vii) Vegetable. In case of Agargaon areas, the species ranking were as: fruit species (100%), Medicinal species (100%), vegetable species (100%), Spice species (100%),flower species (91.36%), ornamental species (92.92%) and Timber species (90%). In Dhaka University, High court and Doyel Chattar areas the species ranking were as: flower species (98.77%), ornamental species (94.69%), fruit species (91.67%), Spice species (91.67%),Timber species (90.00%), vegetable and species (81.25%) and Medicinal species (69.57%).In Dhaka University, Gulshan and Baridhara areas the species ranking were as :ornamental species (100%),fruit species (85.00%), flower species (80.25%), Timber species (80%), species (75%),medicinal species (60.87%), Spice species (58.33%) vegetable and at the.In Airport road and Uttara areasareas the species ranking were as:Timber species (100%), flower species (95.06%), vegetable and species (93.75%),fruit species (93.33%), ornamental species (89.38%), Medicinal species (73.91 %) and Spice species (66.67%).

Table 4.10: Species composition in the nursery in the study area

Species	Agargaon areas		Dhaka University, High court and DoyelChattar areas		Gulshan and Baridhara areas		Airport road and Uttara areas		Highest Number of Species
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	
Fruit plant	60	100.00	55	91.67	51	85.00	56	93.33	60
Flower plant	74	91.36	80	98.77	65	80.25	77	95.06	81
Ornamental plant	105	92.92	107	94.69	113	100.00	101	89.38	113
Timber plant	18	90.00	18	90.00	16	80.00	20	100.00	20
Medicinal plants	23	100.00	16	69.57	14	60.87	17	73.91	23
Spices plants	12	100.00	11	91.67	7	58.33	8	66.67	12
Vegetables	16	100.00	13	81.25	12	75.00	15	93.75	16
Total Species	308	94.77	300	92.30	278	85.54	294	90.46	**325**

4.3.2 Cost effectiveness, distribution of sale and profit of the different species

This study attempts to identify species composition and pricing of cost items and profit of different species which are involved in nursery business. The nursery owners incurred certain costs for the use of different inputs in the process of nursery business. Therefore, it is very essential to explain all the cost items to find out the benefit cost ratio under different management. For analytical advantages, the cost items were classified under the following heads.

4.3.3Fruit plant species

The distribution of costing price, selling price and profit according to fruit species in the study area is presented in Table4.11. It was observed that the average costing price per seedling was TK.58.26 whereas average selling price per seedling was TK.179.40. So, there was a difference of TK.121.14 between the average costing price and average selling price per seedling and the profit percentage was 244.26% in Agargaon areas. In Dhaka University, High court and Doyel Chattar areas the average costing price per seedling was TK. 51.65 whereas average selling price per seedling was TK.158.65. So, there was a difference of TK.106.70 between the average costing price and average selling price per seedling and the profit percentage was 245.31%. In Gulshan and Baridhara areas, the average costing price per seedling was TK. 64.42 whereas average selling price per seedling was TK.215.44. So, there was a difference of TK.151.03between the average costing price and average selling price per seedling and the profit percentage was 272.86%. In Airport road and Uttara areas, the average costing price per seedling was TK. 52.17 whereas average selling price per seedling was TK.161.28. So, there was a difference of TK.109.11 between the average costing price and average selling price per seedling and the profit percentage was 249.71%

Table 4.11: Distribution of fruit plant species according to their cost, sale price and profit

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
1	Aam	49.43	267.50	218.08	441.22	48.00	250.00	202.00	420.83	54.00	337.50	283.50	525.00	48.00	255.00	207.00	431.25
2	Alubokhara	88.28	240.75	152.48	172.73	82.50	225.00	142.50	172.73	103.13	303.75	200.63	194.55	84.15	229.50	145.35	172.73
3	Amloki	12.84	42.80	29.96	233.33	12.00	40.00	28.00	233.33	15.00	54.00	39.00	260.00	12.24	40.80	28.56	233.33
4	Amra	31.03	90.95	59.92	193.10	29.00	85.00	56.00	193.10	36.25	114.75	78.50	216.55	29.58	86.70	57.12	193.10
5	Anarosh	48.15	112.35	64.20	133.33	45.00	105.00	60.00	133.33	56.25	141.75	85.50	152.00	45.90	107.10	61.20	133.33
6	Angur	25.68	90.95	65.27	254.17	24.00	85.00	61.00	254.17	30.00	114.75	84.75	282.50	24.48	86.70	62.22	254.17
7	Apple	107.00	321.00	214.00	200.00	100.00	300.00	200.00	200.00	125.00	405.00	280.00	224.00	102.00	306.00	204.00	200.00
8	Ashfal	37.45	112.35	74.90	200.00	35.00	105.00	70.00	200.00	43.75	141.75	98.00	224.00	35.70	107.10	71.40	200.00
9	Ata	16.59	42.80	26.22	158.06	15.50	40.00	24.50	158.06	19.38	54.00	34.63	178.71	15.81	40.80	24.99	158.06
10	Avocado	160.50	588.50	428.00	266.67	150.00	550.00	400.00	266.67	187.50	742.50	555.00	296.00	153.00	561.00	408.00	266.67
11	Bael	24.08	96.30	72.23	300.00	22.50	90.00	67.50	300.00	28.13	121.50	93.38	332.00	22.95	91.80	68.85	300.00

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
12	Bilimbi	12.84	26.75	13.91	108.33	12.00	25.00	13.00	108.33	15.00	33.75	18.75	125.00	12.24	25.50	13.26	108.33
13	Cherryfal	31.03	160.50	129.47	417.24	29.00	150.00	121.00	417.24	36.25	202.50	166.25	458.62	29.58	153.00	123.42	417.24
14	Chocklet	69.55	321.00	251.45	361.54	65.00	300.00	235.00	361.54	81.25	405.00	323.75	398.46	66.30	306.00	239.70	361.54
15	Chulta	18.52	90.95	72.44	391.22	17.00	85.00	68.00	400.00	21.25	114.75	93.50	440.00	19.00	86.70	67.70	356.32
16	Cukor	15.52	48.15	32.64	210.34	14.50	45.00	30.50	210.34	18.13	60.75	42.63	235.17	14.79	45.90	31.11	210.34
17	Dalim	28.36	107.00	78.65	277.36	26.50	100.00	73.50	277.36	33.13	135.00	101.88	307.55	27.03	102.00	74.97	277.36
18	Dawa	25.68	140.50	114.82	447.12	-	-	-	-	-	-	-	-	24.00	150.00	126.00	525.00
19	Dragon	69.55	160.50	90.95	130.77	65.00	150.00	85.00	130.77	81.25	202.50	121.25	149.23	66.30	153.00	86.70	130.77
20	Dumur	69.55	139.10	69.55	100.00	65.00	130.00	65.00	100.00	-	-	-	-	66.30	132.60	66.30	100.00
21	Durian	294.25	963.00	668.75	227.27	-	-	-	-	-	-	-	-	-	-	-	-
22	Gub	21.40	85.60	64.20	300.00	20.00	80.00	60.00	300.00	-	-	-	-	20.40	81.60	61.20	300.00
23	Gulapju	24.08	69.55	45.4	188.	22.50	65.00	42.5	188.	-	-	-	-	22.50	65.00	42.5	188.

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
	m			8	89			0	89							0	89
24	Jambura	29.43	128.40	98.98	336.36	27.50	120.00	92.50	336.36	34.38	162.00	127.63	371.27	28.05	122.40	94.35	336.36
25	Jamrul	25.68	107.00	81.32	316.67	24.00	100.00	76.00	316.67	30.00	135.00	105.00	350.00	24.48	102.00	77.52	316.67
26	Jolpai	23.01	107.00	84.00	365.12	21.50	100.00	78.50	365.12	26.88	135.00	108.13	402.33	21.93	102.00	80.07	365.12
27	Kajubadam	93.63	197.95	104.33	111.43	87.50	185.00	97.50	111.43	109.38	249.75	140.38	128.34	89.25	188.70	99.45	111.43
28	Kalojam	9.10	24.08	14.98	164.71	8.50	22.50	14.00	164.71	10.63	30.38	19.75	185.88	8.67	22.95	14.28	164.71
29	Kamranga	20.33	80.25	59.92	294.74	19.00	75.00	56.00	294.74	23.75	101.25	77.50	326.32	19.38	76.50	57.12	294.74
30	Kathal	14.45	42.80	28.36	196.30	13.50	40.00	26.50	196.30	16.88	54.00	37.13	220.00	13.77	40.80	27.03	196.30
31	Kathbadam	25.68	69.55	43.87	170.83	24.00	65.00	41.00	170.83	30.00	87.75	57.75	192.50	24.48	66.30	41.82	170.83
32	Kawfal	34.78	133.75	98.98	284.62	-	-	-	-	-	-	-	-	-	-	-	-
33	Khejur	80.25	214.00	133.75	166.67	75.00	200.00	125.00	166.67	-	-	-	-	76.50	204.00	127.50	166.67
34	Kodbel	24.08	85.60	61.53	255.56	22.50	80.00	57.50	255.56	28.13	108.00	79.88	284.00	22.95	81.60	58.65	255.56

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
35	Kola	74.90	133.75	58.85	78.57	70.00	125.00	55.00	78.57	87.50	168.75	81.25	92.86	71.40	127.50	56.10	78.57
36	Komola	29.43	107.00	77.58	263.64	27.50	100.00	72.50	263.64	34.38	135.00	100.63	292.73	28.05	102.00	73.95	263.64
37	Koromcha	24.08	117.70	93.63	388.89	22.50	110.00	87.50	388.89	28.13	148.50	120.38	428.00	22.95	112.20	89.25	388.89
38	Kul	18.73	48.15	29.43	157.14	17.50	45.00	27.50	157.14	21.88	60.75	38.88	177.71	17.85	45.90	28.05	157.14
39	Lebu	23.33	100.50	77.17	330.78	23.00	135.00	112.00	486.96	28.75	182.25	153.50	533.91	23.46	137.70	114.24	486.96
40	Letchu	26.75	131.20	104.45	390.47	25.00	130.00	105.00	420.00	31.25	175.50	144.25	461.60	25.50	132.60	107.10	420.00
41	Lotkon	26.75	101.65	74.90	280.00	25.00	95.00	70.00	280.00	-	-	-	-	25.50	96.90	71.40	280.00
42	Malta	29.43	96.30	66.88	227.27	27.50	90.00	62.50	227.27	34.38	121.50	87.13	253.45	28.05	91.80	63.75	227.27
43	Mangostin	294.25	1230.50	936.25	318.18	275.00	1150.00	875.00	318.18	343.75	1552.50	1208.75	351.64	280.50	1173.00	892.50	318.18
44	Musambi	29.43	101.65	72.23	245.45	-	-	-	-	-	-	-	-	-	-	-	-
45	Narikel	69.55	214.00	144.45	207.69	65.00	200.00	135.00	207.69	81.25	270.00	188.75	232.31	66.30	204.00	137.70	207.69
46	Nashpoti	36.38	184.0	147.	405.	34.00	159.0	125.	367.	42.50	214.6	172.1	405.	34.68	162.1	127.	367.

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
			0	62	77		0	00	65		5	5	06		8	50	65
47	Orbori	12.84	48.15	35.31	275.00	12.00	45.00	33.00	275.00	15.00	60.75	45.75	305.00	12.24	45.90	33.66	275.00
48	Peach fal	28.36	107.00	78.65	277.36	26.50	100.00	73.50	277.36	33.13	135.00	101.88	307.55	27.03	102.00	74.97	277.36
49	Persimmon	294.25	642.00	347.75	118.18	275.00	600.00	325.00	118.18	343.75	810.00	466.25	135.64	280.50	612.00	331.50	118.18
50	Piyara	20.33	101.65	81.32	400.00	19.00	85.00	66.00	347.37	23.75	114.75	91.00	383.16	19.38	86.70	67.32	347.37
51	Rabmutan	321.00	535.00	214.00	66.67	300.00	500.00	200.00	66.67	375.00	675.00	300.00	80.00	306.00	510.00	204.00	66.67
52	Rutifal	74.90	160.50	85.60	114.29	-	-	-	-	-	-	-	-	-	-	-	-
53	Satkora	37.45	187.00	149.55	399.33	35.00	200.00	165.00	471.43	43.75	270.00	226.25	517.14	35.70	204.00	168.30	471.43
54	Sharifa	19.26	58.85	39.59	205.56	18.00	55.00	37.00	205.56	22.50	74.25	51.75	230.00	18.36	56.10	37.74	205.56
55	Sofeda	42.80	128.40	85.60	200.00	40.00	120.00	80.00	200.00	50.00	162.00	112.00	224.00	40.80	122.40	81.60	200.00
56	Star apple	36.38	107.00	70.62	194.12	34.00	100.00	66.00	194.12	42.50	135.00	92.50	217.65	34.68	102.00	67.32	194.12
57	Strawberry	12.84	40.13	27.29	212.50	12.00	37.50	25.50	212.50	15.00	50.63	35.63	237.50	12.24	38.25	26.01	212.50

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
58	Tang fal	23.01	64.20	41.20	179.07	21.50	60.00	38.50	179.07	26.88	81.00	54.13	201.40	21.93	61.20	39.27	179.07
59	Tetul	24.08	80.25	56.18	233.33	22.50	75.00	52.50	233.33	28.13	101.25	73.13	260.00	22.95	76.50	53.55	233.33
60	Thai Logan	203.30	428.00	224.70	110.53	190.00	400.00	210.00	110.53	237.50	540.00	302.50	127.37	193.80	408.00	214.20	110.53
Average		58.26	179.40	121.14	244.26	51.65	158.35	106.70	245.31	64.42	215.44	245.31	272.86	52.17	161.28	109.11	249.71

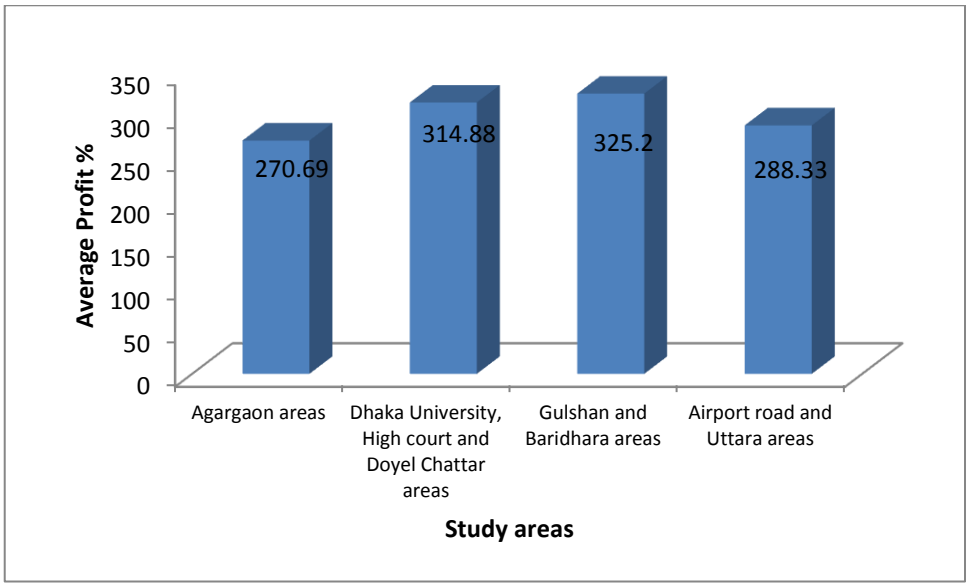

Fig. 4.1 Average profit % of fruit plant of different study areas

4.3.4 Flower plant species

The distribution of costing price, selling price and profit according to flower species in the study area is presented in Table 4.12. It was observed that the average costing price per seedling was TK. 38.05 whereas average selling price per seedling was TK.120.10. So, there was a difference of TK.82.05 between the average costing price and average selling price per seedling and the profit percentage was 270.69% in Agargaon areas. In Dhaka University, High court and DoyelChattar areas the average costing price per seedling was TK. 43.79 whereas average selling price per seedling was TK.152.03. So, there was a difference of TK.108.24 between the average costing price and average selling price per seedling and the profit percentage was 314.88%. In Gulshan and Baridhara areas, the average costing price per seedling was TK. 43.65 whereas average selling price per seedling was TK.154.38. So, there was a difference of TK.110.73 between the average costing price and average selling price per seedling and the profit percentage was 325.20%. In Airport road and Uttara areas, the average costing price per seedling was TK. 38.51 whereas average selling price per seedling was TK.126.52. So, there was a difference of TK.88.01 between the average costing price and average selling price per seedling and the profit percentage was 288.33%.

Table 4.12 Distribution of flower plant species according to their cost, sale price and profit

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
1	Adeninum	65.00	350.00	285.00	438.46	68.72	403.20	334.48	486.69	70.85	420.00	349.15	492.80	66.95	364.00	297.05	443.69
2	Agelia	40.00	205.00	165.00	412.50	42.29	236.16	193.87	458.40	43.60	246.00	202.40	464.22	41.20	213.20	172.00	417.48
3	Alamonda	17.50	55.00	37.50	214.29	18.50	63.36	44.86	242.44	19.08	66.00	46.93	246.00	18.03	57.20	39.18	217.34
4	Anthorium	40.00	205.00	165.00	412.50	42.29	236.16	193.87	458.40	43.60	246.00	202.40	464.22	41.20	213.20	172.00	417.48
5	Aster	9.00	32.50	23.50	261.11	9.52	37.44	27.92	293.46	9.81	39.00	29.19	297.55	9.27	33.80	24.53	264.62
6	Bakul	11.50	30.00	18.50	160.87	12.16	34.56	22.40	184.24	12.54	36.00	23.47	187.20	11.85	31.20	19.36	163.40
7	Beli	13.50	77.50	64.00	474.07	14.27	89.28	75.01	525.49	14.72	93.00	78.29	532.01	13.91	80.60	66.70	479.65
8	Bokful	25.00	80.00	55.00	220.00	26.43	92.16	65.73	248.66	27.25	96.00	68.75	252.29	25.75	83.20	57.45	223.11
9	Botamful	10.00	45.00	35.00	350.00	10.57	51.84	41.27	390.31	10.90	54.00	43.10	395.41	10.30	46.80	36.50	354.37
10	Bouganvallia	100.00	350.00	250.00	250.00	105.73	403.20	297.47	281.35	109.00	420.00	311.00	285.32	103.00	364.00	261.00	253.40
11	Branfelsia	22.50	95.00	72.5	322.	23.79	109.4	85.6	360.	-	-	-	-	23.18	98.80	75.6	326.32

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
				0	22		4	5	04							3	
12	Bromolia	22.50	100.00	77.50	344.44	23.79	115.20	91.41	384.25	24.53	120.00	95.48	389.30	23.18	104.00	80.83	348.76
13	Calendula	9.00	32.50	23.50	261.11	9.52	37.44	27.92	293.46	-	-	-	-	9.27	33.80	24.53	264.62
14	Carnation	17.50	100.00	82.50	471.43	18.50	115.20	96.70	522.61	19.08	120.00	100.93	529.10	18.03	104.00	85.98	476.98
15	Cattleya	400.00	900.00	500.00	125.00	422.92	1036.80	613.88	145.15	436.00	1080.00	644.00	147.71	412.00	936.00	524.00	127.18
16	Cemilia	40.00	290.00	250.00	625.00	42.29	334.08	291.79	689.94	43.60	348.00	304.40	698.17	41.20	301.60	260.40	632.04
17	Chameli	24.00	50.00	26.00	108.33	25.38	57.60	32.22	126.99	26.16	60.00	33.84	129.36	24.72	52.00	27.28	110.36
18	Chondramollika	50.00	95.00	45.00	90.00	52.87	109.44	56.58	107.02	54.50	114.00	59.50	109.17	51.50	98.80	47.30	91.84
19	Cosmos	10.00	40.00	30.00	300.00	10.57	46.08	35.51	335.83	10.90	48.00	37.10	340.37	10.30	41.60	31.30	303.88
20	Cymbidium	-	-	-	-	132.16	316.80	184.64	139.70	-	-	-	-	-	-	-	-
21	Dendrobium	150.00	300.00	150.00	100.00	158.60	345.60	187.01	117.91	163.50	360.00	196.50	120.18	154.50	312.00	157.50	101.94
22	Dianthus	13.50	40.00	26.50	196.30	14.27	46.08	31.81	222.83	-	-	-	-	13.91	41.60	27.70	199.17

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
23	Dolonchapa	30.00	150.00	120.00	400.00	31.72	172.80	141.08	444.78	32.70	180.00	147.30	450.46	30.90	156.00	125.10	404.85
24	Dopati	7.50	10.00	2.50	33.33	7.93	11.52	3.59	45.28			0.00	#DIV/0!	7.73	10.40	2.68	34.63
25	Euphorbia	29.00	85.00	56.00	193.10	30.66	97.92	67.26	219.36	31.61	102.00	70.39	222.68	29.87	88.40	58.53	195.95
26	Gashful	8.50	22.50	14.00	164.71	8.99	25.92	16.93	188.41	9.27	27.00	17.74	191.42	8.76	23.40	14.65	167.28
27	Ghada	11.00	50.00	39.00	354.55	11.63	57.60	45.97	395.26	11.99	60.00	48.01	400.42	11.33	52.00	40.67	358.96
28	Golap	22.50	150.00	127.50	566.67	23.79	172.80	149.01	626.38	24.53	180.00	155.48	633.94	23.18	156.00	132.83	573.14
29	Gondhoraj	13.50	40.00	26.50	196.30	14.27	46.08	31.81	222.83	14.72	48.00	33.29	226.20	13.91	41.60	27.70	199.17
30	Hesnahena	13.50	45.00	31.50	233.33	14.27	51.84	37.57	263.19	14.72	54.00	39.29	266.97	13.91	46.80	32.90	236.57
31	Hydrenga	-	-	-	-	37.01	345.60	308.59	833.92	-	-	-	-	36.05	312.00	275.95	765.46
32	Ipomoea	45.00	115.00	70.00	155.56	47.58	132.48	84.90	178.45	49.05	138.00	88.95	181.35	46.35	119.60	73.25	158.04
33	Jarul	21.50	57.50	36.00	167.44	22.73	66.24	43.51	191.40	23.44	69.00	45.57	194.43	22.15	59.80	37.66	170.04
34	Jerbera	45.00	160.0	115.	255.	47.58	184.3	136.	287.	49.05	192.0	142.	291.4	46.35	166.4	120.	259.01

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		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
			0	00	56		2	74	40		0	95	4		0	05	
35	Jhumkalota	21.50	97.50	76.00	353.49	22.73	112.32	89.59	394.11	23.44	117.00	93.57	399.25	22.15	101.40	79.26	357.89
36	Joba	18.50	62.50	44.00	237.84	19.56	72.00	52.44	268.10	20.17	75.00	54.84	271.93	19.06	65.00	45.95	241.12
37	Jui	16.00	72.50	56.50	353.13	16.92	83.52	66.60	393.71	17.44	87.00	69.56	398.85	16.48	75.40	58.92	357.52
38	Kamini	20.00	142.50	122.50	612.50	21.15	164.16	143.01	676.32	21.80	171.00	149.20	684.40	20.60	148.20	127.60	619.42
39	Kanchon	21.50	57.50	36.00	167.44	22.73	66.24	43.51	191.40	23.44	69.00	45.57	194.43	22.15	59.80	37.66	170.04
40	Kata mehedi	-	-	-	-	13.22	115.20	101.98	771.65	-	-	-	-	12.88	104.00	91.13	707.77
41	Kathalichapa	29.00	70.00	41.00	141.38	30.66	80.64	49.98	163.00	31.61	84.00	52.39	165.74	29.87	72.80	42.93	143.72
42	Kodom	10.00	55.00	45.00	450.00	10.57	63.36	52.79	499.26	10.90	66.00	55.10	505.50	10.30	57.20	46.90	455.34
43	Kolaboti	16.00	40.00	24.00	150.00	16.92	46.08	29.16	172.39	17.44	48.00	30.56	175.23	16.48	41.60	25.12	152.43
44	Korobi	21.50	92.50	71.00	330.23	22.73	106.56	83.83	368.77	23.44	111.00	87.57	373.65	22.15	96.20	74.06	334.41
45	Krishnachura	21.50	50.00	28.50	132.56	22.73	57.60	34.87	153.39	-	-	-	-	22.15	52.00	29.86	134.82

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46	Lantana	-	-	-	-	15.82	92.16	76.34	482.73	-	-	-	-	15.67	83.20	67.54	431.12
47	Lily	25.00	95.00	70.00	280.00	26.43	109.44	83.01	314.04	27.25	114.00	86.75	318.35	25.75	98.80	73.05	283.69
48	Lipistic	30.00	175.00	145.00	483.33	31.72	201.60	169.88	535.58	32.70	210.00	177.30	542.20	30.90	182.00	151.10	489.00
49	Lupin	12.50	55.00	42.50	340.00	13.22	63.36	50.14	379.41	13.63	66.00	52.38	384.40	12.88	57.20	44.33	344.27
50	Madhobilota	24.00	60.00	36.00	150.00	25.38	69.12	43.74	172.39	26.16	72.00	45.84	175.23	24.72	62.40	37.68	152.43
51	Maloti	24.00	47.50	23.50	97.92	25.38	54.72	29.34	115.64	26.16	57.00	30.84	117.89	24.72	49.40	24.68	99.84
52	May flower	65.00	105.00	40.00	61.54	68.72	120.96	52.24	76.01	-	-	-	-	66.95	109.20	42.25	63.11
53	Meghnolia	40.00	290.00	250.00	625.00	42.29	334.08	291.79	689.94	-	-	-	-	41.20	301.60	260.40	632.04
54	Mokkora	-	-	-	-	290.76	921.60	630.84	216.97	-	-	-	-	-	-	-	-
55	Musanda	22.50	97.50	75.00	333.33	23.79	112.32	88.53	372.15	24.53	117.00	92.48	377.06	23.18	101.40	78.23	337.54
56	Nageshorchapa	13.50	100.00	86.50	640.74	14.27	115.20	100.93	707.09	14.72	120.00	105.29	715.49	13.91	104.00	90.10	647.93
57	Night Queen	25.00	150.0	125.	500.	26.43	172.8	146.	553.	27.25	180.0	152.	560.5	25.75	156.0	130.	505.83

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
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			0	00	00		0	37	74		0	75	5		0	25	
58	Noyontara	9.00	32.50	23.50	261.11	9.52	37.44	27.92	293.46	9.81	39.00	29.19	297.55	9.27	33.80	24.53	264.62
59	Oncidium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	Oparajita	10.00	22.50	12.50	125.00	10.57	25.92	15.35	145.15	10.90	27.00	16.10	147.71	10.30	23.40	13.10	127.18
61	Petunia	13.50	47.50	34.00	251.85	14.27	54.72	40.45	283.37	14.72	57.00	42.29	287.36	13.91	49.40	35.50	255.27
62	Phalaenopsis	450.00	950.00	500.00	111.11	475.79	1094.40	618.62	130.02	490.50	1140.00	649.50	132.42	463.50	988.00	524.50	113.16
63	Poinsettia	-	-	-	-	37.01	132.48	95.47	258.00	-	-	-	-	-	-	-	-
64	Polash	21.50	57.50	36.00	167.44	22.73	66.24	43.51	191.40	23.44	69.00	45.57	194.43	22.15	59.80	37.66	170.04
65	Radhachura	24.00	50.00	26.00	108.33	25.38	57.60	32.22	126.99	26.16	60.00	33.84	129.36	24.72	52.00	27.28	110.36
66	Rojonigandha	30.00	100.00	70.00	233.33	31.72	115.20	83.48	263.19	32.70	120.00	87.30	266.97	30.90	104.00	73.10	236.57
67	Rongon	22.50	95.00	72.50	322.22	23.79	109.44	85.65	360.04	24.53	114.00	89.48	364.83	23.18	98.80	75.63	326.32
68	Salvia	13.50	40.00	26.50	196.30	14.27	46.08	31.81	222.83	14.72	48.00	33.29	226.20	13.91	41.60	27.70	199.17
69	Shafali	10.00	25.00	15.0	150.	10.57	28.80	18.2	172.	10.90	30.00	19.1	175.2	10.30	26.00	15.7	152.43

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
				0	00			3	39			0	3			0	
70	Shandha Maloti	10.00	17.50	7.50	75.00	10.57	20.16	9.59	90.67	-	-	-	-	10.30	18.20	7.90	76.70
71	Shapla	35.00	125.00	90.00	257.14	37.01	144.00	106.99	289.13	38.15	150.00	111.85	293.18	36.05	130.00	93.95	260.61
72	Shimul	21.50	57.50	36.00	167.44	22.73	66.24	43.51	191.40	23.44	69.00	45.57	194.43	22.15	59.80	37.66	170.04
73	Sonalu	13.50	55.00	41.50	307.41	14.27	63.36	49.09	343.90	14.72	66.00	51.29	348.52	13.91	57.20	43.30	311.36
74	Sornochapa	29.00	75.00	46.00	158.62	30.66	86.40	55.74	181.78	-	-	-	-	29.87	78.00	48.13	161.13
75	Spathiphullum	32.50	175.00	142.50	438.46	34.36	201.60	167.24	486.69	35.43	210.00	174.58	492.80	33.48	182.00	148.53	443.69
76	Surjamukhi	17.50	57.50	40.00	228.57	18.50	66.24	47.74	258.00	19.08	69.00	49.93	261.73	18.03	59.80	41.78	231.76
77	Tikoma	19.00	100.00	81.00	426.32	20.09	115.20	95.11	473.46	20.71	120.00	99.29	479.43	19.57	104.00	84.43	431.43
78	Tipu sultan	35.00	100.00	65.00	185.71	37.01	115.20	78.19	211.31	-	-	-	-	36.05	104.00	67.95	188.49
79	Togor	21.00	57.50	36.50	173.81	22.20	66.24	44.04	198.33	22.89	69.00	46.11	201.44	21.63	59.80	38.17	176.47
80	Vanda	150.00	325.00	175.00	116.67	158.60	374.40	215.81	136.07	163.50	390.00	226.50	138.53	154.50	338.00	183.50	118.77

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
81	Zinia	13.50	50.00	36.50	270.37	14.27	57.60	43.33	303.54	14.72	60.00	45.29	307.75	13.91	52.00	38.10	273.97
	Average	38.05	120.10	82.05	270.69	43.79	152.03	108.24	314.88	43.65	154.38	110.73	325.20	38.51	126.52	88.01	288.33

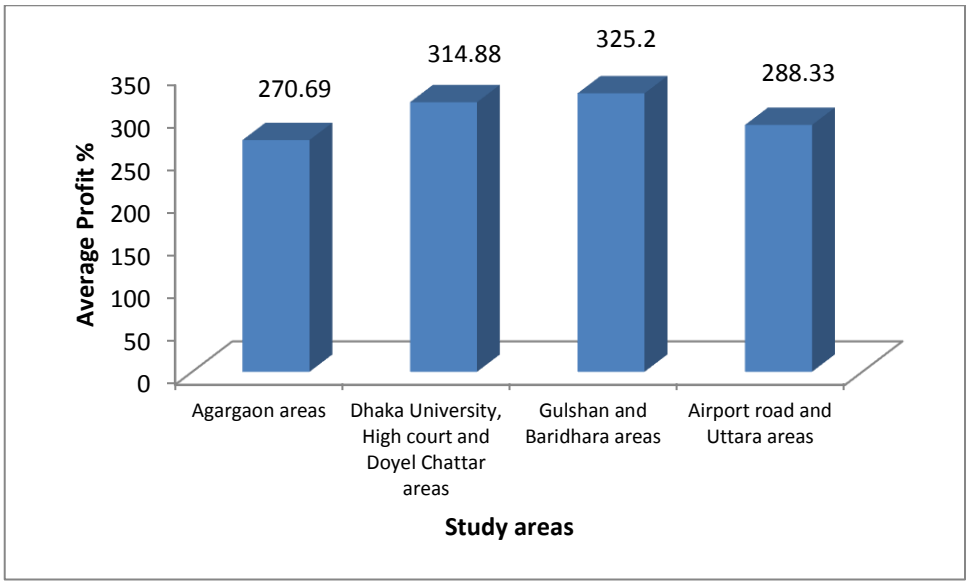

Fig. 4.2 Average profit % of flower plant of different study areas

4.3.5 Ornamental plant species

The distribution of costing price, selling price and profit according to ornamental species in the study area is presented in Table 4.13. It was observed that the average costing price per seedling was TK. 92.53 whereas average selling price per seedling was TK.440.75. So, there was a difference of TK.384.22 between the average costing price and average selling price per seedling and the profit percentage was 411.13% in Agargaon areas. In Dhaka University, High court and DoyelChattarareas the average costing price per seedling was TK. 98.62 whereas average selling price per seedling was TK.481.32. So, there was a difference of TK.382.70 between the average costing price and average selling price per seedling and the profit percentage was 417.28%. In Gulshan and Baridhara areas, the average costing price per seedling was TK. 100.77 whereas average selling price per seedling was TK.485.01. So, there was a difference of TK.384.23 between the average costing price and average selling price per seedling and the profit percentage was 413.02%. In Airport road and Uttara areas, the average costing price per seedling was TK. 97.60 whereas average selling price per seedling was TK.466.98. So, there was a difference of TK.369.38 between the average costing price and average selling price per seedling and the profit percentage was 407.50%

Table 4.13 Distribution of ornamental plant species according to their cost, sale price and profit

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)
1	Acalypha	32.50	225.00	192.50	592.31	34.45	243.00	208.55	605.37	36.08	250.43	214.35	594.18	33.48	235.13	201.65	602.39
2	Agave	22.50	125.00	102.50	455.56	23.85	135.00	111.15	466.04	24.98	139.13	114.15	457.06	23.18	130.63	107.45	463.65
3	Aglaonema	20.00	150.00	130.00	650.00	21.20	162.00	140.80	664.15	22.20	166.95	144.75	652.03	20.60	156.75	136.15	660.92
4	Air plants	125.00	350.00	225.00	180.00	132.50	378.00	245.50	185.28	138.75	389.55	250.80	180.76	128.75	365.75	237.00	184.08
5	Airconditioin plant	22.50	100.00	77.50	344.44	23.85	108.00	84.15	352.83	24.98	111.30	86.33	345.65	23.18	104.50	81.33	350.92
6	Alocasia	22.50	60.00	37.50	166.67	23.85	64.80	40.95	171.70	24.98	66.78	41.81	167.39	23.18	62.70	39.53	170.55
7	Areacha Palm	32.50	200.00	167.50	515.38	34.45	216.00	181.55	527.00	36.08	222.60	186.53	517.05	33.48	209.00	175.53	524.35
8	Arealia	23.00	175.00	152.00	660.87	24.38	189.00	164.62	675.23	25.53	194.78	169.25	662.93	23.69	182.88	159.19	671.95
9	Augishor	21.50	100.00	78.50	365.12	22.79	108.00	85.21	373.89	23.87	111.30	87.44	366.37	22.15	104.50	82.36	371.89
10	Baby's tears	29.00	100.00	71.00	244.83	30.74	108.00	77.26	251.33	32.19	111.30	79.11	245.76	29.87	104.50	74.63	249.85
11	Baobab	1000.00	3750.0	2750.0	275.00	1060.0	4050.0	2990.0	282.08	1110.0	4173.7	3063.7	276.01	1030.0	3918.7	2888.7	280.46

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)
12	Barrel cactus	300.00	2250.0	1950.0	650.00	318.00	2430.0	2112.0	664.15	333.00	2504.2	2171.2	652.03	309.00	2351.2	2042.2	660.92
13	Bashpata Dracaena	-	-	-	-	22.79	151.20	128.41	563.45	23.87	155.82	131.96	552.92	-	-	-	-
14	Benjamina	40.00	275.00	235.00	587.50	42.40	297.00	254.60	600.47	44.40	306.08	261.68	589.36	41.20	287.38	246.18	597.51
15	Bhutta Dracaena	40.00	310.00	270.00	675.00	42.40	334.80	292.40	689.62	44.40	345.03	300.63	677.09	41.20	323.95	282.75	686.29
16	Bird nest Fern	-	-	-	-	212.00	972.00	760.00	358.49	222.00	1001.0	779.70	351.22	-	-	-	-
17	Birds of paradise	50.00	265.00	215.00	430.00	53.00	286.20	233.20	440.00	55.50	294.95	239.45	431.43	51.50	276.93	225.43	437.72
18	Bleeding-heart	34.00	250.00	216.00	635.29	36.04	270.00	233.96	649.17	37.74	278.25	240.51	637.28	35.02	261.25	226.23	646.00
19	Blind pricklypear	50.00	135.00	85.00	170.00	53.00	145.80	92.80	175.09	55.50	150.26	94.76	170.73	51.50	141.08	89.58	173.93
20	Border Plants	5.50	30.00	24.50	445.45	5.83	32.40	26.57	455.75	6.11	33.39	27.29	446.93	5.67	31.35	25.69	453.40
21	Boston Fern	90.00	250.00	160.00	177.78	95.40	270.00	174.60	183.02	99.90	278.25	178.35	178.53	92.70	261.25	168.55	181.82
22	Bot	40.00	350.00	310.00	775.00	42.40	378.00	335.60	791.51	44.40	389.55	345.15	777.36	-	-	-	-
23	Bottle brush	17.50	90.00	72.50	414.29	18.55	97.20	78.65	423.99	19.43	100.17	80.75	415.68	18.03	94.05	76.03	421.78

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)
24	Bottle Palm	32.50	225.00	192.50	592.31	34.45	243.00	208.55	605.37	36.08	250.43	214.35	594.18	-	-	-	-
25	Cactus	135.00	1025.0	890.00	659.26	143.10	1107.0	963.90	673.58	149.85	1140.3	990.98	661.31	139.05	1071.3	932.08	670.32
26	Caladium	17.50	100.00	82.50	471.43	18.55	108.00	89.45	482.21	19.43	111.30	91.88	472.97	18.03	104.50	86.48	479.75
27	Cana	100.00	205.00	105.00	105.00	106.00	221.40	115.40	108.87	111.00	228.17	117.17	105.55	103.00	214.23	111.23	107.99
28	Candel cactus	125.00	275.00	150.00	120.00	132.50	297.00	164.50	124.15	138.75	306.08	167.33	120.59	128.75	287.38	158.63	123.20
29	Carmona	65.00	540.00	475.00	730.77	68.90	583.20	514.30	746.44	72.15	601.02	528.87	733.01	66.95	564.30	497.35	742.87
30	Carpet grass	4.50	15.00	10.50	233.33	4.77	16.20	11.43	239.62	5.00	16.70	11.70	234.23	4.64	15.68	11.04	238.19
31	Cassava	17.50	90.00	72.50	414.29	18.55	97.20	78.65	423.99	19.43	100.17	80.75	415.68	18.03	94.05	76.03	421.78
32	Cha	9.00	22.50	13.50	150.00	9.54	24.30	14.76	154.72	9.99	25.04	15.05	150.68	9.27	23.51	14.24	153.64
33	Champagne Palm	250.00	750.00	500.00	200.00	265.00	810.00	545.00	205.66	277.50	834.75	557.25	200.81	257.50	783.75	526.25	204.37
34	Chinese grass	22.50	85.00	62.50	277.78	23.85	91.80	67.95	284.91	24.98	94.61	69.63	278.80	23.18	88.83	65.65	283.28
35	Chinese Palm	21.50	115.00	93.50	434.88	22.79	124.20	101.41	444.98	23.87	128.00	104.13	436.33	22.15	120.18	98.03	442.67

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)
36	Christmas Cactus	115.00	350.00	235.00	204.35	121.90	378.00	256.10	210.09	127.65	389.55	261.90	205.17	118.45	365.75	247.30	208.78
37	Christmas tree	700.00	1500.00	800.00	114.29	742.00	1620.00	878.00	118.33	777.00	1669.50	892.50	114.86	721.00	1567.50	846.50	117.41
38	Christmas Tree	150.00	900.00	750.00	500.00	159.00	972.00	813.00	511.32	166.50	1001.70	835.20	501.62	154.50	940.50	786.00	508.74
39	Coffee	50.00	225.00	175.00	350.00	53.00	243.00	190.00	358.49	55.50	250.43	194.93	351.22	51.50	235.13	183.63	356.55
40	Coleus	7.00	20.00	13.00	185.71	7.42	21.60	14.18	191.11	7.77	22.26	14.49	186.49	7.21	20.90	13.69	189.88
41	Croton	83.50	625.00	541.50	648.50	88.51	675.00	586.49	662.63	92.69	695.63	602.94	650.53	86.01	653.13	567.12	659.40
42	Crystal Bamboo	40.00	300.00	260.00	650.00	42.40	324.00	281.60	664.15	44.40	333.90	289.50	652.03	41.20	313.50	272.30	660.92
43	Cycus Palm	300.00	2500.0	2200.0	733.33	318.00	2700.0	2382.0	749.06	333.00	2782.5	2449.5	735.59	309.00	2612.5	2303.5	745.47
44	Date Plam	250.00	2000.0	1750.0	700.00	265.00	2160.0	1895.0	715.09	277.50	2226.0	1948.5	702.16	257.50	2090.0	1832.5	711.65
45	Dieffenbachia	37.50	200.00	162.50	433.33	39.75	216.00	176.25	443.40	41.63	222.60	180.98	434.77	38.63	209.00	170.38	441.10
46	Diphenbachia	-	-	-	-	35.51	162.00	126.49	356.21	37.19	166.95	129.77	348.97	-	-	-	-
47	Dragon tree	25.00	270.00	245.00	980.00	26.50	291.60	265.10	1000.3	27.75	300.51	272.76	982.92	25.75	282.15	256.40	995.73

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)
48	Earth stars	70.00	185.00	115.00	164.29	74.20	199.80	125.60	169.27	77.70	205.91	128.21	165.00	72.10	193.33	121.23	168.13
49	Euphorbia	32.50	275.00	242.50	746.15	34.45	297.00	262.55	762.12	36.08	306.08	270.00	748.44	33.48	287.38	253.90	758.48
50	Ficus	45.00	440.00	395.00	877.78	47.70	475.20	427.50	896.23	49.95	489.72	439.77	880.42	46.35	459.80	413.45	892.02
51	Fishtail Palm	40.00	150.00	110.00	275.00	42.40	162.00	119.60	282.08	44.40	166.95	122.55	276.01	41.20	156.75	115.55	280.46
52	Fittonia	22.50	70.00	47.50	211.11	23.85	75.60	51.75	216.98	24.98	77.91	52.94	211.95	23.18	73.15	49.98	215.64
53	Forkoria	65.00	575.00	510.00	784.62	68.90	621.00	552.10	801.31	72.15	639.98	567.83	787.01	66.95	600.88	533.93	797.50
54	Fortune	137.50	290.00	152.50	110.91	145.75	313.20	167.45	114.89	152.63	322.77	170.15	111.48	141.63	303.05	161.43	113.98
55	Fortunei	110.00	260.00	150.00	136.36	-	-	-	-	122.10	289.38	167.28	137.00	113.30	271.70	158.40	139.81
56	Foxtail Fern	125.00	350.00	225.00	180.00	132.50	378.00	245.50	185.28	138.75	389.55	250.80	180.76	128.75	365.75	237.00	184.08
57	Foxtail Palm	1150.0	5500.0	4350.0	378.26	1219.0	5940.0	4721.0	387.28	1276.0	6121.0	4845.0	379.55	1184.0	5747.0	4563.0	385.23
58	Franklinia	50.00	205.00	155.00	310.00	53.00	221.40	168.40	317.74	55.50	228.17	172.67	311.11	51.50	214.23	162.73	315.97
59	Gold dust dracaena	27.50	75.00	47.50	172.73	29.15	81.00	51.85	177.87	30.53	83.48	52.95	173.46	28.33	78.38	50.05	176.70

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)
60	Golden Bamboo	40.00	300.00	260.00	650.00	42.40	324.00	281.60	664.15	44.40	333.90	289.50	652.03	41.20	313.50	272.30	660.92
61	Green Money plant	17.50	100.00	82.50	471.43	18.55	108.00	89.45	482.21	19.43	111.30	91.88	472.97	18.03	104.50	86.48	479.75
62	Heliconia	55.00	200.00	145.00	263.64	58.30	216.00	157.70	270.50	61.05	222.60	161.55	264.62	56.65	209.00	152.35	268.93
63	Hizol	50.00	165.00	115.00	230.00	53.00	178.20	125.20	236.23	55.50	183.65	128.15	230.89	-	-	-	-
64	Hoya	90.00	250.00	160.00	177.78	95.40	270.00	174.60	183.02	99.90	278.25	178.35	178.53	92.70	261.25	168.55	181.82
65	Indian Fern	57.50	300.00	242.50	421.74	-	-	-	-	63.83	333.90	270.08	423.15	59.23	313.50	254.28	429.34
66	Ivy Lota	7.00	15.50	8.50	121.43	7.42	16.74	9.32	125.61	7.77	17.25	9.48	122.03	7.21	16.20	8.99	124.65
67	Jade Plant	45.00	325.00	280.00	622.22	47.70	351.00	303.30	635.85	49.95	361.73	311.78	624.17	46.35	339.63	293.28	632.74
68	Jakaranda	100.00	200.00	100.00	100.00	106.00	216.00	110.00	103.77	111.00	222.60	111.60	100.54	103.00	209.00	106.00	102.91
69	Kalathia	13.50	100.00	86.50	640.74	14.31	108.00	93.69	654.72	14.99	111.30	96.32	642.74	13.91	104.50	90.60	651.53
70	Kale	17.50	60.00	42.50	242.86	18.55	64.80	46.25	249.33	19.43	66.78	47.36	243.78	18.03	62.70	44.68	247.85
71	karpur	90.00	350.0	260.0	288.8	95.40	378.0	282.6	296.2	99.90	389.5	289.6	289.9	92.70	365.7	273.0	294.5

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)
			0	0	9		0	0	3		5	5	4		5	5	5
72	Kath golap	55.00	325.00	270.00	490.91	58.30	351.00	292.70	502.06	61.05	361.73	300.68	492.51	56.65	339.63	282.98	499.51
73	Kentina Palm	-	-	-	-	-	-	-	-	27.75	250.43	222.68	802.43	-	-	-	-
74	Love plant	100.00	375.00	275.00	275.00	106.00	405.00	299.00	282.08	111.00	417.38	306.38	276.01	103.00	391.88	288.88	280.46
75	Lutea	32.50	80.00	47.50	146.15	34.45	86.40	51.95	150.80	36.08	89.04	52.97	146.82	33.48	83.60	50.13	149.74
76	Marginata	17.50	100.00	82.50	471.43	18.55	108.00	89.45	482.21	19.43	111.30	91.88	472.97	18.03	104.50	86.48	479.75
77	Meranta	17.50	115.00	97.50	557.14	18.55	124.20	105.65	569.54	19.43	128.00	108.57	558.92	18.03	120.18	102.15	566.71
78	Money Plant	10.50	20.00	9.50	90.48	11.13	21.60	10.47	94.07	11.66	22.26	10.61	90.99	10.82	20.90	10.09	93.25
79	Monosteria	33.50	225.00	191.50	571.64	35.51	243.00	207.49	584.31	37.19	250.43	213.24	573.46	34.51	235.13	200.62	581.42
80	NagLingam	40.00	200.00	160.00	400.00	42.40	216.00	173.60	409.43	44.40	222.60	178.20	401.35	41.20	209.00	167.80	407.28
81	Old-man cactus	55.00	250.00	195.00	354.55	58.30	270.00	211.70	363.12	61.05	278.25	217.20	355.77	56.65	261.25	204.60	361.17
82	Paperomea	9.00	35.00	26.00	288.89	9.54	37.80	28.26	296.23	9.99	38.96	28.97	289.94	9.27	36.58	27.31	294.55
83	Parlor	275.0	1250.	975.0	354.5	291.5	1350.	1058.	363.1	305.2	1391.	1086.	355.7	283.2	1306.	1023.	361.1

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)
	Palm	0	0	0	5	0	0	0	2	5	5	0	7	5	5	0	7
84	Philadendron	-	-	-	-	-	-	-	-	48.29	306.08	257.79	533.89	-	-	-	-
85	Phonix Palm	50.00	250.00	200.00	400.00	53.00	270.00	217.00	409.43	55.50	278.25	222.75	401.35	51.50	261.25	209.75	407.28
86	Pichutia Palm	30.00	225.00	195.00	650.00	31.80	243.00	211.20	664.15	33.30	250.43	217.13	652.03	30.90	235.13	204.23	660.92
87	Pine	45.00	200.00	155.00	344.44	47.70	216.00	168.30	352.83	49.95	222.60	172.65	345.65	46.35	209.00	162.65	350.92
88	Pononjhaw	65.00	225.00	160.00	246.15	68.90	243.00	174.10	252.69	72.15	250.43	178.28	247.09	66.95	235.13	168.18	251.19
89	Rhapis Palm	60.00	500.00	440.00	733.33	63.60	540.00	476.40	749.06	66.60	556.50	489.90	735.59	61.80	522.50	460.70	745.47
90	Ribon Dracaena	21.50	145.00	123.50	574.42	22.79	156.60	133.81	587.14	23.87	161.39	137.52	576.24	22.15	151.53	129.38	584.24
91	Rubber	35.00	155.00	120.00	342.86	37.10	167.40	130.30	351.21	38.85	172.52	133.67	344.05	36.05	161.98	125.93	349.31
92	Sanserieria	27.50	150.00	122.50	445.45	29.15	162.00	132.85	455.75	30.53	166.95	136.43	446.93	28.33	156.75	128.43	453.40
93	Sansevieria	-	-	-	-	-	-	-	-	24.98	50.09	25.11	100.54	23.18	47.03	23.85	102.91
94	Scheffelara	55.00	425.00	370.00	672.73	58.30	459.00	400.70	687.31	61.05	473.03	411.98	674.82	56.65	444.13	387.48	683.98
95	Sedum	80.00	400.0	320.0	400.0	84.80	432.0	347.2	409.4	88.80	445.2	356.4	401.3	82.40	418.0	335.6	407.2

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)
			0	0	0		0	0	3		0	0	5		0	0	8
96	Silver Oak	100.00	250.00	150.00	150.00	106.00	270.00	164.00	154.72	111.00	278.25	167.25	150.68	103.00	261.25	158.25	153.64
97	Singunium	-	-	-	-	9.54	24.30	14.76	154.72	9.99	25.04	15.05	150.68	-	-	-	-
98	Song of India	27.50	115.00	87.50	318.18	29.15	124.20	95.05	326.07	30.53	128.00	97.47	319.31	28.33	120.18	91.85	324.27
99	Spider	9.00	65.00	56.00	622.22	9.54	70.20	60.66	635.85	9.99	72.35	62.36	624.17	9.27	67.93	58.66	632.74
100	Succulent	45.00	450.00	405.00	900.00	-	-	-	-	49.95	500.85	450.90	902.70	-	-	-	-
101	Supari	40.00	150.00	110.00	275.00	42.40	162.00	119.60	282.08	44.40	166.95	122.55	276.01	41.20	156.75	115.55	280.46
102	Thuja	150.00	1140.00	990.00	660.00	159.00	1231.20	1072.20	674.34	166.50	1268.82	1102.32	662.05	154.50	1191.30	1036.80	671.07
103	Triangle Palm	350.00	2250.00	1900.00	542.86	371.00	2430.00	2059.00	554.99	388.50	2504.25	2115.75	544.59	360.50	2351.25	1990.75	552.22
104	Valvate plant	27.50	75.00	47.50	172.73	29.15	81.00	51.85	177.87	30.53	83.48	52.95	173.46	28.33	78.38	50.05	176.70
105	Victoria Dracaena	-	-	-	-	185.50	1242.0	1056.0	569.54	194.25	1279.5	1085.0	558.92	-	-	-	-
106	Wandering jew	-	-	-	-	14.31	59.40	45.09	315.09	14.99	61.22	46.23	308.51	-	-	-	-
107	Washingto	400.0	1000.	600.0	150.0	424.0	1080.	656.0	154.7	444.0	1113.	669.0	150.6	412.0	1045.	633.0	153.6

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	Profit	Profit (%)
	n Palm	0	0	0	0	0	0	0	2	0	0	0	8	0	0	0	4
108	Wedelia	5.50	16.00	10.50	190.91	5.83	17.28	11.45	196.40	6.11	17.81	11.70	191.70	5.67	16.72	11.06	195.15
109	Weeping debdaru	22.50	100.00	77.50	344.44	23.85	108.00	84.15	352.83	24.98	111.30	86.33	345.65	23.18	104.50	81.33	350.92
110	White money plant	90.00	200.00	110.00	122.22	95.40	216.00	120.60	126.42	99.90	222.60	122.70	122.82	92.70	209.00	116.30	125.46
111	Yucca	100.00	750.00	650.00	650.00	106.00	810.00	704.00	664.15	111.00	834.75	723.75	652.03	103.00	783.75	680.75	660.92
112	Zamia Palm	150.00	1250.0	1100.0	733.33	159.00	1350.0	1191.0	749.06	166.50	1391.5	1224.5	735.59	154.50	1306.5	1151.5	745.47
113	ZZ Plant	50.00	200.00	150.00	300.00	53.00	216.00	163.00	307.55	55.50	222.60	167.10	301.08	51.50	209.00	157.50	305.83
	Average	92.53	440.75	348.22	411.13	98.62	481.32	382.70	417.28	100.77	485.01	384.23	413.02	97.60	466.98	369.38	407.50

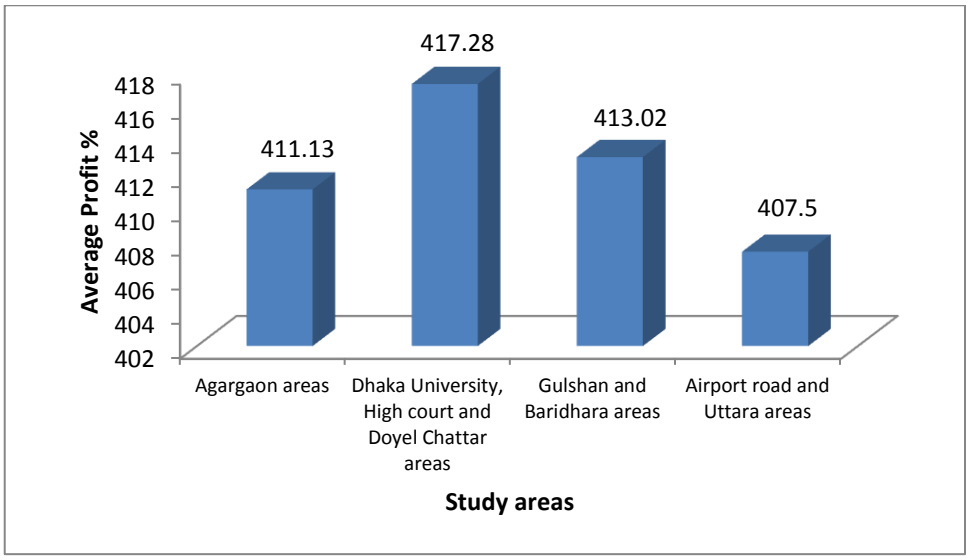

Fig. 4.3 Average profit % of ornamental plant of different study areas

4.3.6 Timber plant species

The distribution of costing price, selling price and profit according to timber species in the study area is presented in Table 4.14. It was observed that the average costing price per seedling was TK. 12.53 whereas average selling price per seedling was TK.42.97. So, there was a difference of TK.30.44 between the average costing price and average selling price per seedling and the profit percentage was 257.64% in Agargaon areas. In Dhaka University, High court and Doyel Chattar areas the average costing price per seedling was TK. 13.78 whereas average selling price per seedling was TK.48.13. So, there was a difference of TK.34.35 between the average costing price and average selling price per seedling and the profit percentage was 264.14%. In Gulshan and Baridhara areas, the average costing price per seedling was TK. 15.22 whereas average selling price per seedling was TK.57.57. So, there was a difference of TK.42.46 between the average costing price and average selling price per seedling and the profit percentage was 298.08%. In Airport road and Uttara areas, the average costing price per seedling was TK. 13.13 whereas average selling price per seedling was TK.46.89. So, there was a difference of TK.33.75 between the average costing price and average selling price per seedling and the profit percentage was 271.50%.

Table 4.14 Distribution of timber plant species according to their cost, sale price and profit

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
1	Aam	16.0	97.0	81.00	506.25	17.60	108.64	91.04	517.27	18.83	128.20	109.36	580.73	17.12	106.70	89.58	523.25
2	Babla	10.0	42.0	32.00	320.00	11.00	47.04	36.04	327.64	11.77	55.51	43.74	371.60	10.70	46.20	35.50	331.78
3	Bokain	10.0	32.0	22.00	220.00	11.00	35.84	24.84	225.82	11.77	42.29	30.52	259.31	10.70	35.20	24.50	228.97
4	Chapalish	10.0	32.0	22.00	220.00	11.00	35.84	24.84	225.82	11.77	42.29	30.52	259.31	10.70	35.20	24.50	228.97
5	Chitan	-	-	-	-	11.00	47.04	36.04	327.64	-	-	-	-	10.70	46.20	35.50	331.78
6	Civit	10.0	42.0	32.00	320.00	11.00	47.04	36.04	327.64	11.77	55.51	43.74	371.60	10.70	46.20	35.50	331.78
7	Debdaru	12.5	37.0	24.50	196.00	13.75	41.44	27.69	201.38	14.71	48.90	34.19	232.36	13.38	40.70	27.33	204.30
8	Euclyptus	10.0	34.5.0	24.50	245.00	11.00	38.64	27.64	251.27	-	-	-	-	10.70	37.95	27.25	254.67
9	Gamari	-	-	-	-	-	-	-	-	-	-	-	-	10.70	40.70	30.00	280.37
10	Gurjan	10.0	37.0	27.00	270.00	11.00	41.44	30.44	276.73	11.77	48.90	37.13	315.46	10.70	40.70	30.00	280.37
11	Khoir	10.0	42.0	32.00	320.00	11.00	47.04	36.04	327.64	11.77	55.51	43.74	371.60	10.70	46.20	35.50	331.78
12	Kori	10.0	37.0	27.0	270.0	11.00	41.44	30.4	276.7	11.77	48.90	37.13	315.4	10.70	40.70	30.0	280.3

				0	0			4	3				6			0	7
13	Lambu	21.0	52.0	31.00	147.62	23.10	58.24	35.14	152.12	24.72	68.72	44.01	178.04	22.47	57.20	34.73	154.56
14	Mehogoni	12.5	47.0	34.50	276.00	13.75	52.64	38.89	282.84	14.71	62.12	47.40	322.19	13.38	51.70	38.33	286.54
15	Pitraj	10.0	42.0	32.00	320.00	-	-	-	-	-	-	-	-	10.70	46.20	35.50	331.78
16	Rain tree	10.0	37.0	27.00	270.00	11.00	41.44	30.44	276.73	11.77	48.90	37.13	315.46	10.70	40.70	30.00	280.37
17	Sal	10.0	42.0	32.00	320.00	11.00	47.04	36.04	327.64	11.77	55.51	43.74	371.60	10.70	46.20	35.50	331.78
18	Segun	22.5	44.5	22.00	97.78	24.75	49.84	25.09	101.37	26.48	58.81	32.33	122.08	24.08	48.95	24.88	103.32
19	Sishu	10.0	29.5	19.50	195.00	11.00	33.04	22.04	200.36	11.77	38.99	27.22	231.24	10.70	32.45	21.75	203.27
20	Sundari	21.0	47.0	26.00	123.81	23.10	52.64	29.54	127.88	24.72	62.12	37.40	151.31	22.47	51.70	29.23	130.08
	Average	12.53	42.97	30.44	257.64	13.78	48.13	34.35	264.14	15.12	57.57	42.46	298.08	13.13	46.89	33.75	271.50

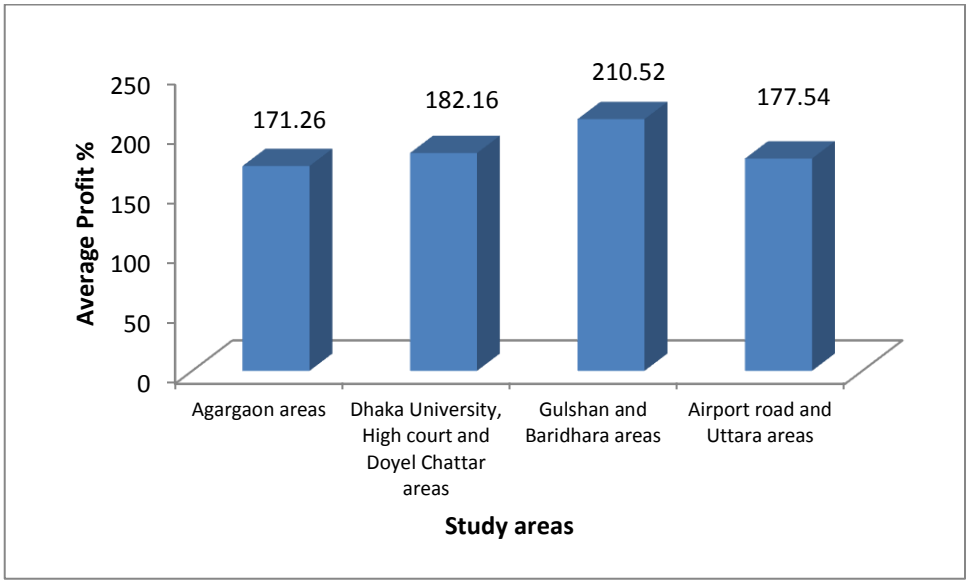

Fig. 4.4 Average profit % of timber plant of different study areas

4.3.7 Medicinal plant species

The distribution of costing price, selling price and profit according to medicinal species in the study area is presented in Table 4.15. It was observed that the average costing price per seedling was TK. 13.46 whereas average selling price per seedling was TK.35.69. So, there was a difference of TK.22.13 between the average costing price and average selling price per seedling and the profit percentage was 171.26% in Agargaon areas. In Dhaka University, High court and Doyel Chattar areas the average costing price per seedling was TK. 14.52 whereas average selling price per seedling was TK.39.81. So, there was a difference of TK.25.29 between the average costing price and average selling price per seedling and the profit percentage was 182.16%. In Gulshan and Baridhara areas, the average costing price per seedling was TK. 15.18 whereas average selling price per seedling was TK.46.22. So, there was a difference of TK.31.04 between the average costing price and average selling price per seedling and the profit percentage was 210.52%. In Airport road and Uttara areas, the average costing price per seedling was TK. 14.64 whereas average selling price per seedling was TK.39.77. So, there was a difference of TK.25.13 between the average costing price and average selling price per seedling and the profit percentage was 177.54%.

Table 4.15 Distribution of medicinal plant species according to their cost, sale price and profit

	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	profit %	Ave. cost price per seedling	Ave. sell price per seedling	profit	profit %	Ave. cost price per seedling	Ave. sell price per seedling	profit	profit %	Ave. cost price per seedling	Ave. sell price per seedling	profit	profit %
1	Amloki	12.75	38.25	25.50	200.00	14.03	42.84	28.82	205.45	14.70	50.55	35.85	243.89	13.64	42.08	28.43	208.41
2	Ashwagandha	11.73	35.7	23.97	204.35	12.90	39.98	27.08	209.88	13.81	47.18	33.37	241.74	12.55	39.27	26.72	212.88
3	Aurjun	20.4	45.9	25.50	125.00	22.44	51.41	28.97	129.09	-	-	-	-	21.83	50.49	28.66	131.31
4	Bashok	11.73	30.6	18.87	160.87	12.90	34.27	21.37	165.61	13.81	40.44	26.63	192.92	12.55	33.66	21.11	168.18
5	Bohera	11.73	33.15	21.42	182.61	-	-	-	-	-	-	-	-	-	-	-	-
6	Chirota	17.85	33.15	15.30	85.71	-	-	-	-	-	-	-	-	-	-	-	-
7	Datura	12.75	33.15	20.40	160.00	-	-	-	-	-	-	-	-	-	-	-	-
8	Gritokumari	11.73	35.7	23.97	204.35	12.90	39.98	27.08	209.88	13.81	47.18	33.37	241.74	12.55	39.27	26.72	212.88
9	Horitoki	17.85	35.7	17.85	100.00	19.64	39.98	20.35	103.64	21.01	47.18	26.17	124.57	19.10	39.27	20.17	105.61
10	Jostimodhu	15.3	40.8	25.50	166.67	-	-	-	-	-	-	-	-	16.37	44.88	28.51	174.14
11	Kalomegh	12.75	38.25	25.50	200.00	14.03	42.84	28.82	205.45	14.70	50.55	35.85	243.89	13.64	42.08	28.43	208.41
1	Mehedi	17.85	40.8	22.9	128.5	19.64	45.70	26.0	132.7	21.01	53.92	32.9	156.6	19.10	44.88	25.7	134.9

2				5	7			6	3			1	5			8	8
13	Neem	15.3	45.9	30.60	200.00	16.83	51.41	34.58	205.45	18.01	60.66	42.65	236.86	16.37	50.49	34.12	208.41
14	Nishinda	12.75	35.7	22.95	180.00	-	-	-	-	-	-	-	-	-	-	-	-
15	Pudina	9.18	22.95	13.77	150.00	10.10	25.70	15.61	154.55	10.80	30.33	19.53	180.71	9.82	25.25	15.42	157.01
16	Satomuli	15.3	35.7	20.40	133.33	16.83	39.98	23.15	137.58	18.01	47.18	29.17	162.00	16.37	39.27	22.90	139.88
17	Sharpogandha	11.73	33.15	21.42	182.61	12.90	37.13	24.23	187.75	13.81	43.81	30.00	217.33	12.55	36.47	23.91	190.53
18	Telakucha	9.18	33.15	23.97	261.11	10.10	37.13	27.03	267.68	-	-	-	-	-	-	-	-
19	Thankuni	8.16	28.05	19.89	243.75	8.98	31.42	22.44	250.00	9.60	37.07	27.47	285.98	8.73	30.86	22.12	253.39
20	Tulshi	12.75	35.7	22.95	180.00	14.03	39.98	25.96	185.09	14.70	47.18	32.48	220.96	13.64	39.27	25.63	187.85
21	Ulotchandal	12.75	35.7	22.95	180.00	-	-	-	-	-	-	-	-	-	-	-	-
22	Ulotkombor	12.75	33.15	20.40	160.00	14.03	37.13	23.10	164.73	14.70	43.81	29.11	198.03	13.64	36.47	22.82	167.29
23	Vringaraj	15.3	38.25	22.95	150.00	-	-	-	-	-	-	-	-	16.37	42.08	25.70	157.01
	Average	13.46	35.59	22.13	171.26	14.52	39.81	25.29	182.16	15.18	46.22	31.04	210.52	14.64	39.77	25.13	177.54

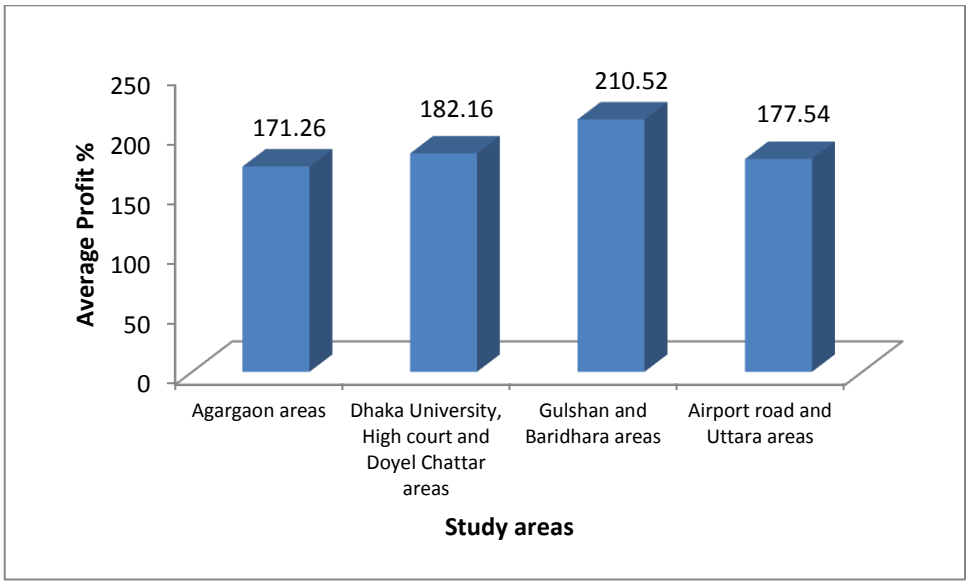

Fig. 4.5 Average profit % of medicinal plant of different study areas

4.3.8 Spices plant species

The distribution of costing price, selling price and profit according to spice species in the study area is presented in Table 4.16. It was observed that the average costing price per seedling was TK. 32.67 whereas average selling price per seedling was TK.77.92. So, there was a difference of TK.45.25 between the average costing price and average selling price per seedling and the profit percentage was 132.97% in Agargaon areas. In Dhaka University, High court and DoyelChattarareas the average costing price per seedling was TK. 34.70 whereas average selling price per seedling was TK.83.49. So, there was a difference of TK.48.79 between the average costing price and average selling price per seedling and the profit percentage was 135.12%. In Gulshan and Baridhara areas, the average costing price per seedling was TK. 42.61 whereas average selling price per seedling was TK.119.42. So, there was a difference of TK.76.80 between the average costing price and average selling price per seedling and the profit percentage was 181.93%. In Airport road and Uttara areas, the average costing price per seedling was TK. 36.97 whereas average selling price per seedling was TK.92.81. So, there was a difference of TK. 55.84 between the average costing price and average selling price per seedling and the profit percentage was 149.04%.

Table 4.16 Distribution of spices species according to their cost, sale price and profit

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. cost price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. cost price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. cost price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. cost price per seedling	profit	Profit (%)
1	Allspices	100.00	250.00	150.00	150.00	110.00	280.00	170.00	154.55	117.70	330.40	212.70	180.71	107.00	275.00	168.00	157.01
2	Capsicum	35.00	105.00	70.00	200.00	38.50	117.60	79.10	205.45	41.20	138.77	97.57	236.86	37.45	115.50	78.05	208.41
3	Chili	16.00	65.00	49.00	306.25	17.60	72.80	55.20	313.64	18.90	85.90	67.00	354.52	17.50	71.50	54.00	308.57
4	Daruchini	35.00	70.00	35.00	100.00	38.50	78.40	39.90	103.64	-	-	-	-	-	-	-	-
5	Elach	45.00	115.00	70.00	155.56	-	-	-	-	-	-	-	-	-	-	-	-
6	Golmoric	22.50	55.00	32.50	144.44	24.75	61.60	36.85	148.89	-	-	-	-	-	-	-	-
7	Holud	22.50	42.50	20.00	88.89	24.75	47.60	22.85	92.32	-	-	-	-	24.00	46.75	22.75	94.79
8	Kabacini	30.00	65.00	35.00	116.67	33.00	72.80	39.80	120.61	35.00	85.90	50.90	145.44	32.10	71.50	39.40	122.74
9	Karipata	13.50	20.00	6.50	48.15	14.85	22.40	7.55	50.84	-	-	-	-	-	-	-	-
10	Lemon grass	12.50	17.50	5.00	40.00	13.75	19.60	5.85	42.55	14.80	23.13	8.33	56.27	13.50	19.25	5.75	42.59
11	Lobogo	25.00	65.00	40.00	160.00	27.50	72.80	45.30	164.73	29.50	85.90	56.40	191.20	26.75	71.50	44.75	167.29
12	Tajpata	35.00	65.00	30.00	85.71	38.50	72.80	34.30	89.09	41.20	85.90	44.71	108.53	37.45	71.50	34.05	90.92

	Average	32.67	77.92	45.25	132.97	34.70	83.49	48.79	135.12	42.61	119.42	76.80	181.93	36.97	92.81	55.84	149.04

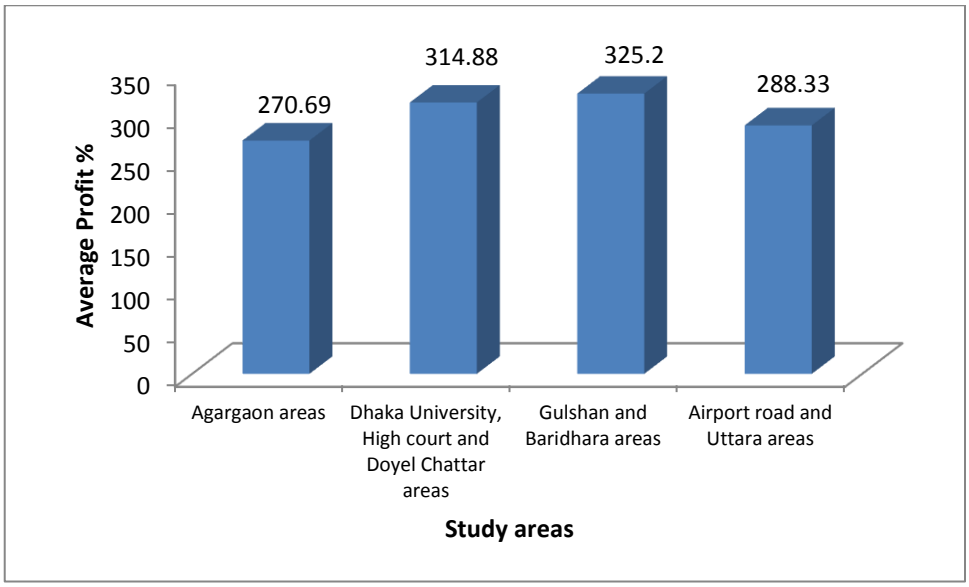

Fig. 4.6 Average profit % of spice plant of different study areas

4.3.9 Vegetable plant species

The distribution of costing price, selling price and profit according to vegetable species in the study area is presented in Table 4.17. It was observed that the average costing price per seedling was TK. 11.48 whereas average selling price per seedling was TK.27.40. So, there was a difference of TK.15.91 between the average costing price and average selling price per seedling and the profit percentage was 127.64% in Agargaon areas. In Dhaka University, High court and Doyel Chattar areas the average costing price per seedling was TK. 12.71 whereas average selling price per seedling was TK.31.23. So, there was a difference of TK.18.52 between the average costing price and average selling price per seedling and the profit percentage was 133.05%. In Gulshan and Baridhara areas, the average costing price per seedling was TK. 16.27 whereas average selling price per seedling was TK. 37.46. So, there was a difference of TK.21.19 between the average costing price and average selling price per seedling and the profit percentage was 119.45%. In Airport road and Uttara areas, the average costing price per seedling was TK. 12.01 whereas average selling price per seedling was TK. 29.52. So, there was a difference of TK.17.51 between the average costing price and average selling price per seedling and the profit percentage was 134.21%.

Table 4.17 Distribution of vegetable plant species according to their cost, sale price and profit

Sl no.	Bangla Name	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)	Ave. cost price per seedling	Ave. sell price per seedling	profit	Profit (%)
1	Badhacopi	9.45	21.00	11.55	122.22	10.40	23.52	13.13	126.26	14.70	27.75	13.05	88.80	10.11	23.10	12.99	128.45
2	Borboti	9.45	21.00	11.55	122.22	10.40	23.52	13.13	126.26	15.70	27.75	12.05	76.77	10.11	23.10	12.99	128.45
3	Brinjal	9.45	21.00	11.55	122.22	10.40	23.52	13.13	126.26	16.70	27.75	11.05	66.19	10.11	23.10	12.99	128.45
4	Brocoli	9.45	21.00	11.55	122.22	10.40	23.52	13.13	126.26	17.70	27.75	10.05	56.80	10.11	23.10	12.99	128.45
5	ChalKumra	9.45	21.00	11.55	122.22	10.40	23.52	13.13	126.26	18.70	27.75	9.05	48.41	10.11	23.10	12.99	128.45
6	Chicinga	9.45	21.00	11.55	122.22	-	-	-	-	-	-	-	-	9.65	22.00	12.35	127.98
7	Dharos	9.45	21.00	11.55	122.22	-	-	-	-	-	-	-	-	-	-	-	-
8	Fulcopi	9.45	21.00	11.55	122.22	9.90	22.40	12.50	126.26	10.70	26.50	15.80	147.66	9.65	22.00	12.35	127.98
9	Laow	9.45	21.00	11.55	122.22	9.90	22.40	12.50	126.26	10.70	26.50	15.80	147.66	9.65	22.00	12.35	127.98
10	Lettuce	9.45	23.63	14.18	150.00	9.90	25.20	15.30	154.55	-	-	-	-	9.65	24.75	15.10	156.48
11	Mistikumra	9.45	21.00	11.55	122.22	-	-	-	-	-	-	-	-	9.65	22.00	12.35	127.98

12	Papaya	11.03	26.25	15.23	138.10	11.55	28.00	16.45	142.42	12.50	33.04	20.54	164.32	11.24	27.50	16.27	144.77
13	Shajina	42.00	120.75	78.75	187.50	44.00	128.80	84.80	192.73	47.50	151.98	104.48	219.97	42.80	126.50	83.70	195.56
14	Sheem	9.45	21.00	11.55	122.22	9.90	22.40	12.50	126.26	10.70	26.43	15.73	147.03	9.65	22.00	12.35	127.98
15	Squash	9.45	21.00	11.55	122.22	9.90	22.40	12.50	126.26	10.70	26.43	15.73	147.03	9.65	22.00	12.35	127.98
16	Tamato	7.88	15.75	7.88	100.00	8.25	16.80	8.55	103.64	8.90	19.82	10.92	122.74	8.00	16.50	8.50	106.25
	Average	11.48	27.40	15.91	127.64	12.71	31.23	18.52	133.05	16.27	37.46	21.19	119.45	12.01	29.52	17.51	134.21

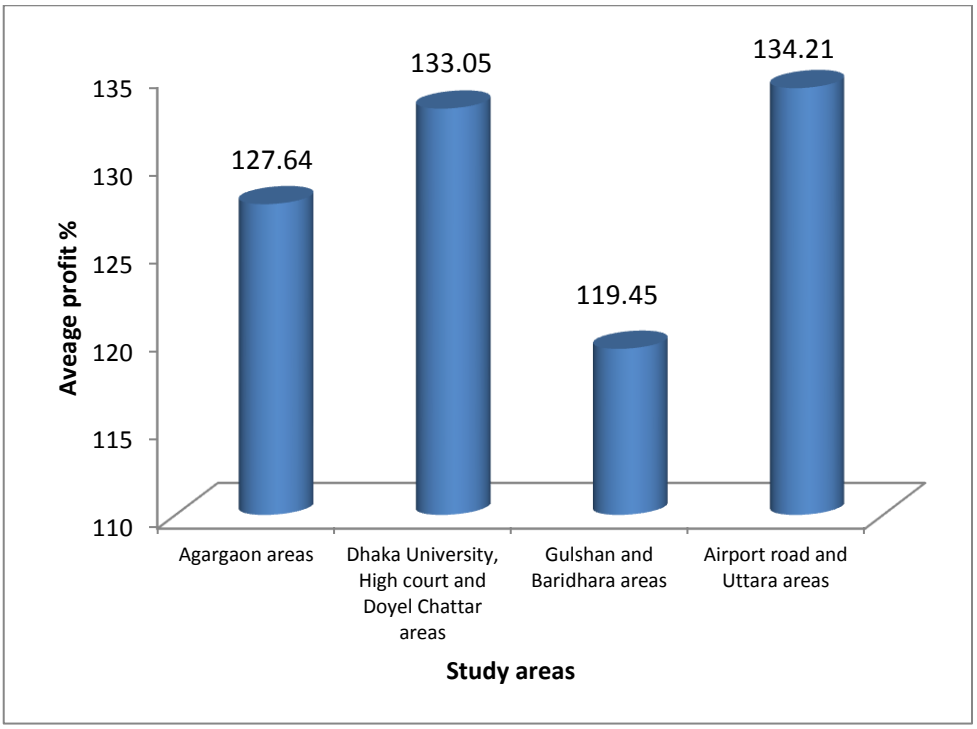

Fig. 4.7 Average profit % of vegetable plant of different study areas

4.4 Percent share of different species

Percent share of different plant species sold in the selected nurseries are presented in Table4.18. In Agargaon areas,it was found that total number of sold species was317345and total sell value 7808174 which ornamental have highest 46.79%.In Dhaka University, High court and DoyelChattarareas, It was found that total number of sold species was 287404and total sell value 7209989 which ornamental have highest 46.49%.In Gulshan and Baridhara areas, it was found that total number of sold species was 301440and total sell value 7827313 which ornamental have highest 51.82%.In Airport road and Uttara areas, it was found that total number of sold species was 289219and total sell value 7147274 which ornamental have highest 45.69%.

Table 4.18 Total number of sold plants with percentage and total salevalue (Tk.) with percentage of different categories of plants

Sl No.	Categories of plants	Agargaon areas				Dhaka University, High court and DoyelChattar areas				Gulshan and Baridhara areas				Airport road and Uttara areas			
		Total no. of sold plants	% of no. of sold species	Total sales value (Tk.)	% of total sale value	Total no. of sold plants	% of no. of sold species	Total sales value (Tk.)	% of total sale value	Total no. of sold plants	% of no. of sold species	Total sales value (Tk.)	% of total sale value	Total no. of sold plants	% of no. of sold species	Total sales value (Tk.)	% of total sale value
1	Fruit	77920	24.55	981075	12.56	70120	24.40	884000	12.26	66232	21.97	873143	11.16	69350	23.98	873156	12.22
2	Flower	10615	3.34	1046394	13.40	11354	3.95	1121755	15.56	10722	3.56	1109254	14.17	11230	3.88	1109291	15.52
3	Ornamental	148470	46.79	5454520	69.86	133623	46.49	4909068	68.09	156200	51.82	5554560	70.96	132135	45.69	4854523	67.92
4	Timber	29735	9.37	128777	1.65	26762	9.31	115899	1.61	25275	8.38	114612	1.46	31464	10.88	134612	1.88
5	Medicinal	28415	8.95	114720	1.47	25574	8.90	104848	1.45	24150	8.01	102150	1.31	25290	8.74	102100	1.43
6	Spices	6830	2.15	46808	0.60	6147	2.14	42127	0.58	5805	1.93	41654	0.53	6080	2.10	41659	0.58
7	Vegetable	15360	4.84	35880	0.46	13824	4.81	32292	0.45	13056	4.33	31940	0.41	13670	4.73	31933	0.45
	Average	31734	100	78081	100	28740	100	72099	100	30144	100	78273	100	28921	100	71472	100

		5		74		4		89		0		13		9		74	

4.5 Distribution of production and purchase ratio of different plant species

The distribution of production and purchaseratioof different species of plants by the nursery owners in the study area in Dhaka City Corporation is presented in Table4.19. In Agargaon areas, maximum quantity of plant species (65.96%) were purchased from others nursery and minimum quantity (34.04%) of plant species were produced in their nursery or production field. In Dhaka University, High court and DoyelChattar areas, it was observed that maximum quantity of plant species (69.03%) were purchased from others nursery and minimum quantity (30.97%) of plant species were produced in their nursery or production field. In Gulshan and Baridhara areas, it was observed that maximum quantity of plant species (71.07%) were purchased from others nursery and minimum quantity (28.93%) of plant species were produced in their nursery or production field. In Airport road and Uttara areas, it was observed that maximum quantity of plant species (68.00%) were purchased from others nursery and minimum quantity (32.00%) of plant species were produced in their nursery or production field.

Table 4.19 Distribution of production and purchase ratio of different species of plants by the nursery owners in the study area

Sl no.	Categories of plants	Agargaon areas		Dhaka University, High court and DoyelChattar areas		Gulshan and Baridhara areas		Airport road and Uttara areas	
		% of Production	% of Purchased	% of Production	% of Purchased	% of Production	% of Purchased	% of Production	% of Purchased
1	Fruit	18.67	81.33	16.99	83.01	15.87	84.13	17.55	82.45
2	Flower	7.15	92.85	6.51	93.49	6.08	93.92	6.72	93.28
3	Ornamental	32.50	67.50	29.57	70.43	27.62	72.38	30.55	69.45
4	Timber	56.83	43.17	51.71	48.29	48.30	51.70	53.42	46.58
5	Medicinal	9.84	90.16	8.96	91.04	8.37	91.63	9.25	90.75
6	Spices	40.38	59.62	36.75	63.25	34.32	65.68	37.96	62.04
7	Vegetable	72.90	27.10	66.34	33.66	61.97	38.03	68.53	31.47
	Average	34.04	65.96	30.97	69.03	28.93	71.07	32.00	68.00

4.6 Fixed cost of nursery business

Fixed cost is those which do not change in magnitude as the amount of output of the production process changes and are incurred even when production is not undertaken. Fixed costs are those costs which do not increase (or decrease) from selling one more unit of product or service. Fixed cost includes land/positionrent; family labourand depreciation cost of tools & equipment and the present study In Gulshan and Baridhara areas, the highest fixed cost was Tk. 49925.0 (Table 4.20).

4.6.1Variable cost of nursery business

The variable costs are the costs of using the variable inputs. These costs vary with the level of production. Higher the production more will be the variable costs; lower the production, lower will be the variable costs (Johl and Kapur, 1956). The variable cost of plant nursery included the cost of human labour, seeds/ seedlings, organic manures, chemical fertilizers, soil, earthen top, poly bag, polythene, irrigation, insecticides and interest on operating capital.

Distribution of total costing of the nursery owners in the studied area of DCCis presented in Table 4.20. The present findings revealed that, in Agargaon areas, the highest cost of nursery owners (95.90%) was incurred by seeds/ seedling purchasedand the lowest (0.01%) cost was incurred by interest on operating capital. In Dhaka University, High court and DoyelChattar areas, the highest cost of nursery owners (95.88%) was incurred by seeds/ seedling purchased and the lowest (0.01%) cost was incurred by interest on operating capital. In Gulshan and Baridhara areas, the highest cost of nursery owners (95.86%) was incurred by seeds/ seedling purchased and the lowest (0.01%) cost was incurred by interest on operating capital. In Airport road and Uttara areas, the highest cost of nursery owners (95.70%) was incurred by seeds/ seedling purchased and the lowest(0.01%) cost was incurred by interest on operating capital.

Table 4.20 Distribution of total gross revenue and costing of the nursery owners in the studied areas

Items	Agargaon areas		Dhaka University, High court and DoyelChattar areas		Gulshan and Baridhara areas		Airport road and Uttara areas	
Gross Revenue (GR)	15889240		18777904		21466885		16840253	
A. Total Variable Cost		Percentage		Percentage		Percentage		Percentage
Seeds/Seedlings	5035332.0	95.90	5408158.0	95.88	5913286.0	95.86	5270615.0	95.70
Fertilizer & hormone	12240.0	0.23	13220.0	0.23	14520.0	0.24	15972.0	0.23
Soil	15300.0	0.29	16624.0	0.29	18150.0	0.29	19765.0	0.29
Pesticide	5100.0	0.10	5508.0	0.10	6050.0	0.10	6655.0	0.10
Pot& Poly bag	25704.0	0.49	27760.0	0.49	30492.0	0.49	33540.0	0.49
Irrigation	22950.0	0.44	24786.0	0.44	27225.0	0.44	29940.0	0.44
Labour owned	20400.0	0.39	22030.0	0.39	24200.0	0.39	26620.0	0.39
Hired labour	12240.0	0.23	13200.0	0.23	14520.0	0.24	15970.0	0.23
Electric bill	1224.0	0.02	1320.0	0.02	1452.0	0.02	15970.0	0.23
Marketing/ Transport	20400.0	0.39	22032.0	0.39	24200.0	0.39	26620.0	0.39
Int. on operating capital	390.0	0.01	425.0	0.01	460.0	0.01	500.0	0.01
Miscellaneous	37230.0	0.71	40200.0	0.71	44165.0	0.72	48580.0	0.71
Total	5208510.0		5595263.0		6118720.0		5210747.0	
B. Total Fixed Cost								
Less rent on land	38250.0	0.73	41310.0	0.73	45375.0	0.74	42912.0	0.73
Less Dep. on equipments	3825.0	0.07	4131.0	0.07	4550.0	0.07	4991.0	0.07
Total	42075.0		45441.0		49925.0		46903.0	
Total Cost (A+B)	**5250585.0**	**100.00**	**5640704.0**	**100.00**	**6168645.0**	**100.00**	**5257650.0**	**100.00**

4.6.2 Benefit cost ratio

Benefit cost ratio was calculated by dividing the gross return or total return by the total cost, Benefit cost ratio (undiscounted method) is a measure to see the efficiency of resource use on the basis of total cost and cash cost.

$$\text{BCR} = \frac{\text{Gross return}}{\text{Total cost}}$$

Table 4.21 Distribution of BCR in the nursery owners in the studied areas

Items	Agargaon areas	Dhaka University, High court and DoyelChattar areas	Gulshan and Baridhara areas	Airport road and Uttara areas
Gross Return (GR)	15889240	18777904	21466885	16840253
Total Cost	5250585	5640704	6168645	5257650
BCR	3.026	3.329	3.480	3.203

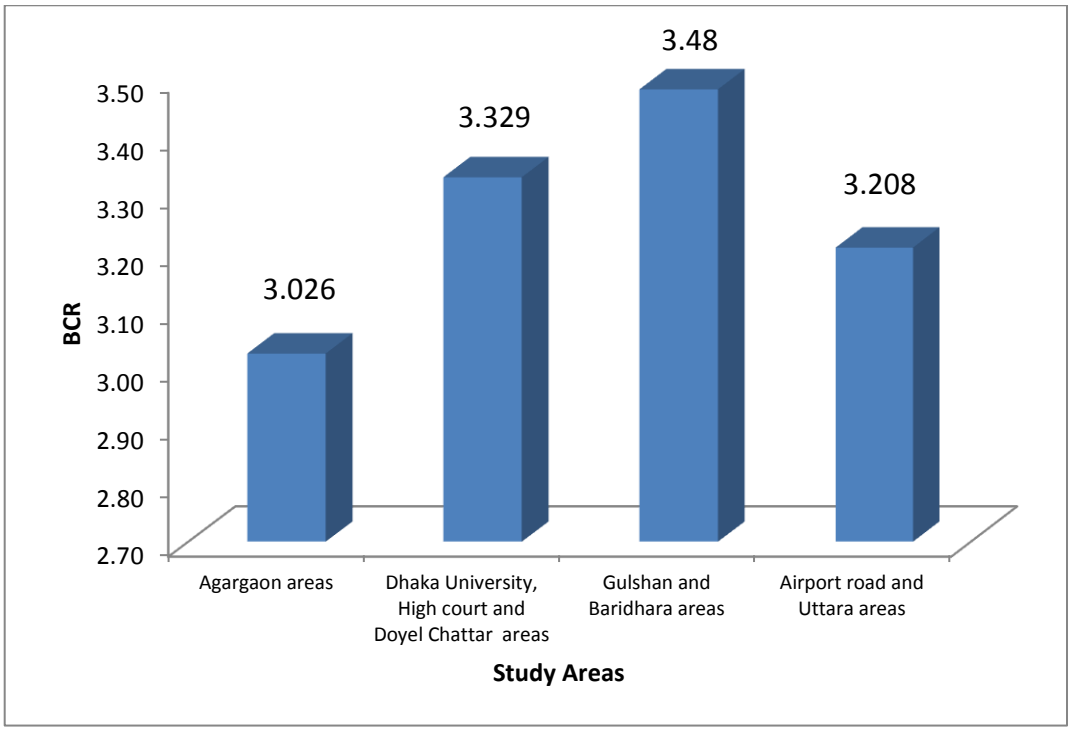

Fig. 4.8 Showing BCR of different study areas

Benefit cost ratio was calculated as3.026 of the nursery business in the Agargaon study area of Dhaka City Corporation that is higher than 1. Benefit cost ratio was calculated as 3.329 of the nursery business in the Dhaka University, High court and DoyelChattar study area of Dhaka City Corporation that is higher than 1. Benefit cost ratio was calculated as 3.480 of the nursery business in the Gulshan and Baridhara study area of Dhaka City Corporation that is higher than 1. Benefit cost ratio was calculated as 3.203 of the nursery business in the Airport road and Uttara study area of Dhaka City Corporation that is higher than 1. Thus, the present finding revealed that nursery owners were benefited in terms of benefit cost ratio in the studied area as well as it was observed that nursery business is profitable and among the four study area Gulshan and Baridhara areas are the highest BCR followed by Dhaka University, High court and Doyel Chattar areas and the lowest one Agargaon areas.

4.7 Factors affecting in nursery business in the study area

During data collection, the beneficiaries were asked about the problems they faced regarding the nursery production, management and marketing. The problem mentioned by the respondents (all four location total no. 40) were scored and ranked according to the number obtained by the respondents. A problem index was calculated and ranking was done accordingly (Table 4.22).

It was observed that 100% respondents were found to the lack of sales centre in the studied area followed by 92.50% were capital crisis problem, 80.00% were lack of proper technical training,70.00% were lack of skilled manpower, 67.00% were lack of water source in their nursery area, 60.00%Lack of quality seeds, seedlings, scion or any other planting materials,52.50% were high cost of nursery input (Soil, fertilizer & hormone, cow dung, technical expert etc.), 47.50% were marketing problem, 42.50% were lack of roads and parking space, 37.50% were the problem of natural calamities, 32.50% were in damage of seedlings, 30.00% were in lack of improved variety, 27.50% were in infestation of diseases and insects, 25.00% were in problem of stolen by the neighboring people, 20.00 % were in Lack of export knowledge respectively.

Table 4.22 Problem category and ranking of problems encountered by the respondents

Sl. No	Problems	No.	%	Ranked
1	Land/ Sale Centre Problem	40	100.00	1st
2	Lack of capital or economic problem	37	92.50	2nd
3	Lack of proper technical training	32	80.00	3rd
4	Lack of skilled manpower	28	70.00	4th
5	Lack of water sources for irrigation	27	67.50	5th
6	Lack of quality seeds, seedlings, scion or any other planting materials	24	60.00	6th
7	High cost of nursery input (Soil, fertilizer & hormone, cow dung, technical expert etc.)	21	52.50	7th
8	Marketing problem	19	47.50	8th
9	Lack of roads and parking space near nursery	17	42.50	9th
10	Natural calamities (Storm and hailstorm etc)	15	37.50	10th
11	Lack of nursery technical knowledge	13	32.50	11th
12	Damage of seedling/ sapling	12	30.00	12th
13	Lack of improved variety	11	27.50	13th
14	Infestation of diseases and insects	10	25.00	14th
15	Lack of export knowledge	9	20.00	15th

4.7.1 Probable solutions or suggestions to solve the existing problems

Nursery owners of the four location of DCCdeliver their valuable opinion for reducing eliminating existing problems is presented in Table4.23.

Table 4.23 Distribution of probable solutions or suggestions to solve the existing problems

Sl. No	Type of Problems	Suggestions / Solutions
01	Land/ sale centre problem is the main problems for the nursery business in Dhaka North City Corporation area. The land value in City Corporation area is so high. It is not possible to do nursery business in own purchased land. It must be rented land or Govt. kash land.	Public land should be given on lease basis to the real nursery entrepreneurs. OrGovt. khas land should provide in the nursery owners for operating nursery business in the city corporation area.
02	Lack of capital or economic problem	Easy and Low interest or interest free loan should be provided to the nursery owners. Sufficient Government budget should be allocated in time.
03	Lack of proper technical training	Govt. and NGO or related organization should provide proper technical training to their personnel.
04	Lack of skilled manpower	Technical training should be given to the nursery owners and workers regularly.
05	Lack of water sources for irrigation	Available water is a regular crisis in Dhaka City Corporation area. Knowledge of irrigation management should be developed

Sl. No	Type of Problems	Suggestions / Solutions
		and WASA can give support in the crisis of water in the studied area.
06	Lack of quality seeds, seedlings, scion or any other planting materials	Technical support from Government and NGO sectors and related training should be provided to the nursery owners. Liaison should be increased among the Government nurseries, research organizations and university germplasm center to provide sufficient quality planting materials.
07	High cost of nursery input (Soil, fertilizer & hormone, cow dung, technical expert etc.)	Provide Government and NGO financial support to overcome this problem.
08	Marketing problem	Much advertisement and Government sector should purchase seedling from them.
9	Lack of roads and parking space near nursery.	Dhaka City Corporation should repair and manage the roads and parking space for nursery entrepreneurs.
10	Natural calamities (Storm and hailstorm etc)	Training should be provided in this regard.
11	Lack of nursery technical knowledge.	Provide training and extension service to the nursery owners.
12	Damage of seedling/ sapling.	It is a natural phenomenon. Nursery owners should be careful and take care properly to decrease

Sl. No	Type of Problems	Suggestions / Solutions
		the damage of seedlings.
13	Lack of improved variety	Latest improved variety should be collect from research center and university. Budget should be allocated for this purpose.
14	Infestation of diseases and insects	Provide training for nursery disease management. Insect and disease should be controlled by the IPM system.
15	Lack of export knowledge. There is a huge scope to export nursery item from our country. Because India and Sri Lanka are exporting nursery item regularly.	Expert should be appointed by the Govt. to seeking buyer and produce quality seedlings. Govt. and NGO can provide support in this regard.

CHAPTER V
SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter documents the summary of findings for the previous discussion. Some conclusion and recommendation were also drawn on the basis of findings. A study was conducted to evaluate on nursery business in DCC as a case.

5.1 SUMMARY

Nursery business is highly seasonal, concentrated in spring and autumn. There is no guarantee that there will be demand for the product this will be affected by temperature, draught, cheaper foreign competition, fashion etc. The study was conducted four study area (Agargaon areas, Dhaka University, High court and DoyelChattar areas, Gulshan and Baridhara areas and Airport road and Uttara areas)in the nursery in DCC, covering 10 respondents of each area. In the study an attempt was made to document socioeconomic characteristics of nursery owners, determine the species composition and cost effectiveness of plant/tree species. To achieve the objectives of the study a simple random sampling technique was adopted to collect the necessary information through a structured questionnaire. Necessary information was collected duringJanuary 2017 to March 2017, through direct interview of the selected respondents. Collected data were compiled, coded, tabulated for processing and analyzed in accordance with the objective of the study. The study encompassed mostly the following issues.

From over all study areas, it was found that majority of the nursery owners are (57.78 %) in the age category of middle aged people (31-50 years) were engaged in nursery business.

In Dhaka University, High court and DoyelChattar areas, about 50% nursery owners were graduate level of education followed by 30% were above and 20% were HSC level of education. In Gulshan and Baridhara areas, about 50% nursery

owners were graduate level of education followed by 40% were above and 10% were HSC level of education. In Airport road and Uttara areas, about 40% nursery owners were graduate level of education followed by 30% were above and 10% were HSC level of education.

In Agargaon areas 60 % families had small (up to 4) members, In Dhaka University, High court and DoyelChattar areas 80 % families had small (up to 4) members, In Gulshan and Baridhara areas 90 % families had small (up to 4) members, In Airport road and Uttara areas 70 % families had small (up to 4) members.

In Agargaon areas, among them 70 % respondents were nursery as a primary occupation, In Dhaka University, High court and DoyelChattar areas, among them 60 % respondents, In Gulshan and Baridhara areas, among them 50% respondents and In Airport road and Uttara areas, among them 80% respondents.

Agargaon areas in the highest number of nursery 80% was found to have medium size (10- 30 decimal), In Dhaka University, High court and DoyelChattar areas in the highest number of nursery 80%, In Gulshan and Baridhara areas in the highest number of nursery 70% and In Airport road and Uttara areas in the highest number of nursery 60%. In all areas, among the modern communication tools on an average cent percent (100%) of the respondents had mobile phone.

A total of 325 species were identified in the nurseries of the study area of DCC which divided in seven categories. They are (i) Fruit, (ii) Flower, (iii) Ornamental, (iv) Timber, (v) Medicinal, (vi) Spices & (vii) Vegetable. Among the species ornamental species was dominated over all other species.

It was observed that the average the profit percentage of fruit was 244.26% in Agargaon areas, 245.31%, in Dhaka University, High court and DoyelChattar,

272.86%, in Gulshan and Baridhara areas, and 249.71% In Airport road and Uttara areas. The average the profit percentage of flower was 270.69% in Agargaon areas, 314.88% in Dhaka University, High court and DoyelChattar, 325.20%. In Gulshan and Baridhara areas and 288.33% in Airport road and Uttaraareas.Theaverage the profit percentage of Ornamental was 411.13% in Agargaon areas, 417.28% in Dhaka University, High court and DoyelChattar, 413.02% in Gulshan and Baridhara areas and 407.50% in Airport road and Uttara areas. The average the profit percentage of timber was 257.64% in Agargaon areas, 264.14% in Dhaka University, High court and DoyelChattar, 298.08% in Gulshan and Baridhara areas and 271.50% in Airport road and Uttara areas. The average the profit percentage of medicinal was 171.26% in Agargaon areas, 182.16% in Dhaka University, High court and DoyelChattar, 210.52% in Gulshan and Baridhara areas and 177.54% in Airport road and Uttaraareas.Theaverage the profit percentage of spices was 132.97% in Agargaon areas, 135.12%. in Dhaka University, High court and DoyelChattar, 119.45% in Gulshan and Baridhara areas and 149.04% in Airport road and Uttaraareas.Theaverage the profit percentage of spices vegetable was 127.64% in Agargaon areas, 133.05% in Dhaka University, High court and DoyelChattar, 181.93% in Gulshan and Baridhara areas and 134.21% in Airport road and Uttara areas.

In Agargaon areas it was found that total number of sold species was 317345 and total sell value 7808174. In Dhaka University, High court and DoyelChattar areas, sold species was 287404 and total sell value 7209989, In Gulshan and Baridhara areas, sold species was 301440 and total sell value 7827313and In Airport road and Uttara areas, It was found that total number of sold species was 289219 and total sell value 7147274.

The present findings revealed that, In Agargaon areas, the highest cost of nursery owners 95.90% was incurred by seeds/ seedling purchased, 95.88%) In Dhaka

University, High court and DoyelChattar areas, 95.86% in Gulshan and Baridhara areas and 95.70% in Airport road and Uttara areas.

Benefit cost ratio was calculated as 3.026 in the Agargaonstudy area, 3.329 in the Dhaka University, High court and DoyelChattarstudy area, 3.480 in the Gulshan and Baridharastudy area and 3.203 in the Airport road and Uttarastudy area of Dhaka City Corporation.

It was observed that nursery business is profitable and among the four study area Gulshan and Baridhara areas are the highest BCR followed by Dhaka University, High court and DoyelChattar areas and lowest one Agargaon areas.

5.2 CONCLUSION

From analysis it was found that middle age, secondary level, medium family size, main occupation, male, high training and high knowledge factors were better than other categories. The findings of the study reveal that, the nursery business found to be a profitable business in the study areas. The findings of the study also reveal that various socioeconomic problems, to some extent, hamper the nursery business in the studied areas. General people are highly benefiting by getting sapling/ seedlings from different plant nurseries and are contributing, to some extent, to the ecological balance of the country and food security.

1. Nursery business improved the nursery owner's socioeconomic condition and showed positive result. It is a productive and income generating activates, create employment opportunity which is potential tool for poverty alleviation in urban and rural areas.
2. A wide variation in species composition of planting materials at different nurseries was observed during studied. On an average, a total of 325 species were identified in the nurseries of studied area of DCC. Among them 308in the Agargaonstudy area, 300 in the Dhaka University, High court and DoyelChattarstudy area, 278 in the Gulshan and Baridharastudy area and 294 in the Airport road and Uttarastudy area were present.
3. The highest profit % in ornamental plant 411.13 in the Agargaonstudy area, 417.28 in the Dhaka University, High court and DoyelChattarstudy area, 413.02 in the Gulshan and Baridharastudy area and 407.50in the Airport road and Uttarastudy area of Dhaka City Corporation.
4. Benefit cost ratio was calculated as 3.026 in the Agargaonstudy area, 3.329 in the Dhaka University, High court and DoyelChattarstudy area, 3.480 in the Gulshan and Baridharastudy area and 3.208 in the Airport road and Uttarastudy area of Dhaka City Corporation. It was observed that Gulshan and Baridhara areas were the highest BCR.

5.2 RECOMMENDATION

On the basis of findings the present study is made the following recommendations:

1. There is no permanent nursery market in the studied area. Local Govt. or City Corporation may take necessary steps to establish a nursery market and easy credit facilities and proper technical training should be provides for the nursery development.
2. Quality planting materials should be developed and make a coordination and co-relation between research institutions, universities, Government agencies, NGO's and nursery representatives. There should be a proper supply chain of quality planting materials.
3. This industry has tremendous potential for generation of gainful employment in rural as well as urban areas. Since the global demand of floricultural products is increasing day by day, Bangladesh can effectively capitalize this opportunity to solve the problem of unemployment & poverty alleviation through achieving a consistent growth in production and export of nursery products.
4. Research should be given more importance on floriculture especially on nursery products.

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APPENDIX A

A COMPARATIVE STUDY ON PLANT SPECIES AND ECONOMICS OF NURSERY BUSINESS IN DHAKA CITY-A CASE STUDY

Survey Questionnaire

Objectives:

a) To identify plant species composition of the selected areas;

b) To find out the economic analysis of Nursery business for ranking among areas**.**

Please answer the following questions

Date of data collection: ..... *Serial number: .....*

SECTION-A: Socio-economic Information of nursery owners

1. Name of the nursery:
2. Classes of Nursery (√): i) Fruits ii) Timber iii) Medicinal iv) Ornamental v) Flowers vi) Mixed
3. Name of the nursery owners:
4. Respondent (√): Nursery owners / Other person
   If other person:

(a) Name:
(b) Designation:
(c) Relationship with nursery owner:

5. Address:
   a. Plot: …… b. Word/Village:…… c. PS/Union:……..
   d. District:…… Mobile No.: ……
6. Age: 1) 18-30 years (Young) 2) 31-50 years (Middle age) 3) 51 and above (Old age)
7. Educational Background:
   1) Below SSC 2) Below HSC 3) Below Degree 4) Degree 5) Above Degree
8. Family information :

No	Family Member	No. of Family Member
1.	Male	
2.	Female	
3.	Male Child	
4.	Female Child	

9. Occupation:

No	Occupation of head of Family	Primary	Secondary
1.	service holder		

2.	Business		
3.	Others		

10. Year of first established: .....

11. How long have you been involved with nursery? .....years

12. Area of the nursery (land): .....dec.

i) Own land .....dec. ii) Leased land.....dec. iii) Others.....

Section-B: Information on Species Composition, production & sales

1. Fruits species:

No.	Types of Plants	Average price per seedling	Ave. selling price per seedling	Profit
1	2	3	4	5
1				
2				
3				
	Total			

2. Flowers species

No.	Types of Plants	Average price per seedling	Ave. selling price per seedling	Profit
1	2	3	4	5
1				
2				
3				
	Total			

3. Ornamental species

No.	Types of Plants	Average price per seedling	Ave. selling price per seedling	Profit
1	2	3	4	5
1				
2				
3				
	Total			

4. Timber species

No.	Types of Plants	Average price per seedling	Ave. selling price per seedling	Profit
1	2	3	4	5
1				

No.	Types of Plants	Average price per seedling	Ave. selling price per seedling	Profit
1	2	3	4	5
2				
3				
	Total			

5. Medicinal species

No.	Types of Plants	Average price per seedling	Ave. selling price per seedling	Profit
1	2	3	4	5
1				
2				
3				
	Total			

6. Spices species

No.	Types of Plants	Average price per seedling	Ave. selling price per seedling	Profit
1	2	3	4	5
1				
2				
3				
	Total			

7. Vegetable

No.	Types of Plants	Average price per seedling	Ave. selling price per seedling	Profit
1	2	3	4	5
1				
2				
3				
	Total			

Section-C: Economics Study

a) Input use pattern and cost of different categories of plant nursery

Sl. No.	Name of the items	Quantity	Cost per unit item	Total cost	Remarks
Fixed Cost					
✓	Position rent				
✓	Construction of office & Shade				
Variable Cost					

Sl. No.	Name of the items	Quantity	Cost per unit item	Total cost	Remarks
1.	Family labour				
2.	Regular staff				
3.	Contactlabour				
4.	Own seeds				
5.	Seed purchase				
6.	Total seeds (4+5)				
7.	Own seedlings				
8.	Purchased seedlings				
9.	Total seedlings (7+8)				
10.	Cow dung (kg)				
11.	Poultry litter				
12.	Oilcake (kg)				
13.	Total manures (10-12)				
14.	Chemical fertilizer				
15.	Cost of soil				
16.	Cost of earthen pot/tray				
17.	Cost of polythene (bag and sheet)				
18.	Cost of chat pack				
19.	Drum (Plastic / Steel)				
20.	Cost of plastic pot/tray				
21.	Total pot cost (21-25))				
22.	Irrigation charge				
23.	Cost of Insecticide				
24.	Cost of fungicide				
25.	Cost of hormone				
26.	Total pesticide and hormone cost (28-30)				
27.	Cost of electricity bill				
28.	Cost of WASA bill				
29.	Int. operating capital				
30.	Land use cost				
31.	Temporary shed				
32.	Permanent shed Depreciation cost				
33.	Equipment cost				
34.	Loading/unloading cost				
35.	Transportation cost				
	Total				
36.	Full cost basis (100%)				
	Total cost (all above)				

Section-D: factors affecting or problems in nursery business

No	Problems	Suggestions to Overcome
1		
2		
3		
.		
.		

(Sign)
Name of Data Collector

Thank You Very Much for Your Kind Co-operation.