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## Constraints faced by plant nursery owners in Raipur, Chhattisgarh

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### Abstract

The present study was conducted in Raipur districts during 2021-2022 to assess the socio-economic status of plant nursery business. A total of 20 private plant nurseries were selected for the study. The study revealed that 50% of the nursery owners had primary level of education and 60% owners performed their business on their own land. More than 55% owners had up to 5 years of experience in nursery business.

**Keywords:** Plant nursery, constraints

### Introduction

India is an agrarian society with about 65 per cent of its population engaged in agricultural production. The agricultural sector provides food, employment, foreign exchange as well as raw materials for the nation's agro-allied industries among other benefits. In order to meet the nutritional demand of increasing population of the country, huge amount of fruits and vegetables need to be produced. The government has, therefore, given special emphasis for planting different fruit trees and medicinal plants over the country. In this situation, improved variety of fruit and medicinal saplings/seedlings are very essential for distribution among the farmers and other enthusiastic people. A huge number of private plant nurseries has been established in different parts of the country and are playing an important role for successful implementation of tree plantation as well as forestation programme in the country. Unfortunately, no study has been conducted for this plant nursery management or nursery business. Therefore, detail information about the plant nursery business would help the researchers as well as policy makers for the improvement of the business. Nevertheless, the findings of the study will encourage more entrepreneurs to invest in setting plant nursery.

### Objectives

1. Identify the socio-economic status of nursery owners.
2. Find out constraints faced by nursery owners.

### Materials and Methods

The study was conducted in Raipur city and its nearby areas of Chhattisgarh where the plant nurseries have been established. The sample plant nurseries were selected with consultation of the concerned personnel of the nursery. A total of 20 private plant nursery owners were purposively selected for the study. Both horticulture and forest nurseries are operated by private entrepreneurs. The data were collected through survey method by pre-tested interview schedules during January-February 2021-2022.

Weighted scores were calculated against each individual problem faced by the respondents using the following formula for ranking the severity of the nursery business problems.

Weighted Score =  $\sum S_i$

Where,  $S_i^{th}$  indicates the score given by the respondent for the

i problem, and  $i = 1, 2, 3, \dots, n$

### Results and Discussion

#### Socio-economic profile of private nursery owners

The socio-economic characteristics of the nursery owners revealed that the average family size was 6.5 which were more or less similar to the national average of persons per family of India.

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The adult male, female, and children constituted 55.38%, 33.84%, and 10.76% of total family members, respectively. On the average, 50% of the plant nursery owners had primary level of education, 40% secondary, and the rest owners had above secondary level of education (10%). About 50% of the respondents mentioned that their principal and sole occupation was nursery business and 46% respondents depended on nursery business along with other agricultural activities (Table 1). 55% of the nursery owners reported that their experience on nursery business was five years, while 30% reported 6-10 years. Only 15% of the respondents were experienced by more than 10 years. In the case of ownership pattern of nursery land, 50% nursery owners started business on their own lands, 30% on leased land and only 10% nursery owners mentioned both own plus leased land. The incomes of the nursery owners come from various sources. It was found that the main sources of income of the 83%, 9%, and 7% of the respondents were plant nursery, agricultural activities and privet service, respectively.

**Table 1:** Socio-economic profiles of the private plant nursery owners

Characteristics	
<b>Family size (no./farm)</b>	6.5 (100)
Adult male	3.6 (55.38%)
Adult-female	2.2 (33.84%)
Children (below 13 years)	0.7 (10.76%)
<b>Education level (%)</b>	--
Primary	50
Secondary	40
Above secondary	10
<b>Occupation (%)</b>	--
Nursery (sole)	50
Nursery + other agricultural activity	46
Nursery + service	04
<b>Source of income (%)</b>	--
Nursery	83
Other agriculture activities	09
Service	07
Other	01
<b>Length of nursery business (%)</b>	--
Up to 5 years	55
6 to 10 years	30
Above 10 years	15
<b>Ownership of nursery land (%)</b>	--
Own	60
Lease	30
Own plus lease	10

The present findings confirms the work of Segum *et al* (2008) [2] who reported that plant nursery business was managed by youth and few adults. They also reported that majority of the respondents have tertiary education having reasonable formal educational background that could enable them introduce improvements into plant nursery business. Majority of the respondents have an average experience of 5 years implies that the plant nursery operators in the study area can be considered to be quite knowledgeable on the operations and constraints of plant nursery operations. Respondents could therefore appreciate any improved technology introduced to them.

#### Land Distribution of sample plant nurseries

The average area per plant nursery was found to be 0.224 ha, which covered 24% of the total cultivated land. These

findings agree with the Iluyonade *et al.* (1997) [1] that about ninety per cent of ornamental plant production in Nigeria is operated in small land size. The nurseries in the study areas produce different types of saplings/seedlings and cutting of fruits, forest trees, and flowers. The names of the fruits, flowers, ornamentals, and forest plants produced in different sample nurseries are given in Table-2 and the prices of saplings are given in Table-2.

**Table 2:** Land distribution pattern of private plant nursery owners

Types of land	Area (ha/farm)
Owned cultivated land	0.832
Homestead land	0.080
Fallow	--
Rented in	0.173
Total cultivated land	0.923
Land under plant nursery	0.224 (24%)

#### Problems faced by plant nursery owners

The respondents were asked to give their opinion regarding the problems of plant nursery business. In this respect, respondents expressed more than one opinion which was ranked according to the importance of problems (Table 3). The study revealed that non-availability of improved seed/seedling in the study areas was the crucial problem for plant nurseries. The second most important problem faced by all nursery owners was low price of sapling and seedling. The other problems of nursery business were damage of seedling, lack of efficient labour, attack of insect and diseases, lack of technical know-how, inadequate irrigation and credit facilities. The present study was partly supported by Segum *et al.* (2008) [2] by quoting availability of quality planting material as the major constraint in plant nursery business which was followed by lack of adequate fund, pest and disease problem and poor marketing.

**Table 3:** Constraints of different categories of plant nursery

Constraints	Rank
Lack of adequate fund	5
Inadequate supply of improved seed and seedling	1
Lack of technical know-how	6
Low price of sapling and seedling	2
Lack of efficient labour	4
Damage of sapling and seedling	3
Infestation of insects and diseases	5
Lack of irrigation facilities	7
Lack of credit facilities	8

The findings of the study reveal that the level of education and experience regarding nursery business are quite satisfactory. Besides, the nursery business is found to be a profitable business in the study area. All the nurseries generate a substantial number of employment and income for the owners. The findings of the study also reveal that various socio-economic problems, to some extent, hamper the nursery business in the study area.

General people are highly benefiting by getting sapling of ornamentals, fruit trees from different plant nurseries and are contributing, to some extent, to the ecological balance of the region by planting of these saplings. Therefore, government should release adequate fund for the plant nursery so that private nursery owners can also receive improved saplings of different trees from government nurseries. Besides, government should provide training to the private nursery owners.

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