

Nursery Raising



S.N. Das

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PREFACE

Horticulture has emerged as one of the most important sector for diversification of agriculture. Revolution in agriculture can only be achieved by increasing the production of horticultural crops. The major constraint which limits the productivity of horticultural crops in India is the non-availability of genuine and quality planting materials. Thus the production of genuine planting materials can be done by establishing nurseries in India. Plant materials can be raised by adopting proper techniques of plant propagation in the nurseries. Thus the plant propagation work has been recognised as a fundamental practice in the field of horticulture. The nurseries must be equipped with all the required technological facilities which have recently developed.

The nurserymen and the growers face some problems and difficulties during multiplication of fruit and ornamental plants. This book will provides fundamental informations required for raising a nursery. The methods of vegetative propagation like cutting, layering, grafting and budding have discussed in a comprehensive form. Cultural practices, plant protection measures, and standardisation of the methods for commercial propagation of some selected horticultural plants have also been taken under consideration. The book is written in a simple and understandable language. Incorporation of line drawings and coloured photographs has made this book more attractive to the readers. The materials included in this book is considered useful to the undergraduate and postgraduate students of agricultural universities and colleges, growers, nurserymen, horticulturists and gardeners.

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IMPORTANCE OF NURSERY

In horticulture, nursery is a place where the plants are usually reared for future use. Here the plant materials like seedlings, saplings of trees, shrubs and plants are grown, developed and maintained before permanent placement, sale or used as stock plants for propagation programme.

Recently, a nursery is no longer an area where only the plants are grown but also the place where plants, seeds, seedlings, and materials like pesticides, fertilizers, implements, etc. are kept for sale. The nursery specially involves the production and distribution of different plant materials.

The availability of quality planting materials is the foundation of crop production. If the plant materials are genuine, reliable and have guaranteed performance, they will certainly give higher yield and top-quality crop. Therefore, nursery is a place where from one can get plant materials of true-to-type. For successful horticultural production this type of planting material is a must. Now, nursery is undoubtedly a very paying business. But the establishment of nursery is also a permanent venture and it needs extra care and attention. Any mistake made initially can not be rectified easily in the later stage.

The importance of a nursery is mentioned below :

1. The young plants are grown and maintained with extra care and attention than the field grown plants.
2. Propagation of plants by vegetative methods needs special care before planting in the field, which can be done easily in the nursery.
3. Many plants do not respond well to direct seed sowing in the field. They are grown well by transplanting the seedlings. Seedlings can

be raised successfully in the nursery.

4. Cutting of different horticultural plants root and raise well in the nursery beds.
5. Seedlings and plant materials are hardened well in the nursery before planting in the main field.
6. Seasoning of the seedlings against the adverse natural calamities is only possible in the nursery.
7. Besides raising seedlings or saplings in nursery, it also provides more time for preplanting land preparations and other related works.

To get success in nursery business one has to maintain the standard of the quality of produce. The demand of the nursery products largely depend upon their quality. There should not be any compromise with quality of nursery products. A good nursery should have the following qualities :

- (a) A nursery should supply only the genuine plant materials in regard to the variety and species of the crop plant.
- (b) Plant materials produced should be healthy, true-to-type and free from any type of disease and insect attack.
- (c) The nursery should have got registration from the Proper registration authority of the State Department of Horticulture.
- (d) Nursery grown plants should be sold at proper stage following the departmental guidelines.
- (e) The cost of the nursery products should be comparatively cheaper and acceptable to the customers.
- (f) The nursery should be prompt in regard to supply of the plants and other correspondences.
- (g) Plants that are sold from the nursery must be properly packed, so that it can stand the transport shock well and reach to the customer in fresh condition.
- (h) Each plant should be properly labelled before handing over to the customers.
- (i) Nurserymen should be honest, sincere and well-behaved.

TYPES OF NURSERY

The nursery business in India can be classified into two main groups depending on its size, viz. Home nursery and Commercial nursery.

1. Home nursery : It is small in size in which the plant materials are grown to meet the demand for one's own use. This type of nursery is only for personnel use. The main objective of such nursery is to provide the quality materials. Usually costly method of nursery practices are followed in this type of nursery for raising high quality planting materials. Here the economy does not play a major role.

2. Commercial nursery : This type of nursery is large in size and the main objective of such nursery is to earn money on investment. Costly nursery practices are usually avoided. Moreover, the control on quality of planting material is also reduced. Commercial nurseries should be located in the cities and towns or in the villages also. Commercial nursery is further classified in two main groups, viz. (a) Rural nursery and (b) Urban nursery.

a) Rural nursery : Rural nursery is located in the village areas near the high way road or railway station. This type of nursery is developed to supply the plant materials in the rural areas. Usually the size of rural nursery is large because the land and labour is easily available. Moreover, price of land and labour charge is also comparatively cheaper. Planting materials produced and sold in this nursery are also cheaper because the cost of production of planting materials is less.

(b) Urban nursery : This type of nursery is located in a town or city. The size of the nursery is usually small because the land is costly and not easily available. This nursery has its rural counterparts under the same or other ownership. It collects the order and supplies the planting materials from the rural nurseries. In such dealing, urban nursery

enjoys the commission as being the middleman. The planting material is costly in this nursery because the cost of raising the planting material is high due to costly labour charges and other management practices.

The nursery can also be classified into different types based on the business, like wholesale nursery, the retail nursery, mail-order nursery, landscape nursery and the agency nursery.

(i) Whole sale nursery : In whole sale nursery, the plant materials are produced in large quantity for sale to retail outlets. This nursery is located in rural areas, where the land and labour are available at cheaper rate. For this reason rural nurseries can afford to expand their business without incurring too much additional expenses.

(ii) Retail nursery : Retail nurseries are those which purchase the plant materials from whole sale nursery. This nursery is largely dependent on house and also keep seeds, tools and implements, fertilizers, pesticides, etc. for sale. It basically performs two functions like care of the plants till their growth and resale these plants to the customers.

(iii) Mail order nursery : It is a specialized type of whole sale nursery. It depends primarily on the catalogue display of the plants, which it offers for sale. Customers see the catalogue and order or receive the plants through mail or parcel service. This nursery is located in the locality, where land is comparatively cheaper and labour, water and transport facilities are easily available easily.

(iv) Land scape nursery : The landscape nursery should be located near a populous town or city because urban people requires the landscape plants for indoor decoration or beautifying their houses.

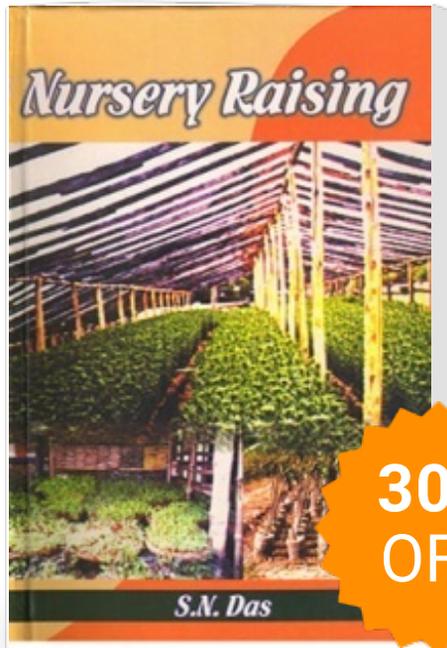
(v) Agency nursery : This nursery sells its products through agents or sales representatives. Such nurseries are highly specialized and are usually limited in numbers.

On the basis of types of plant materials produced. The nursery may be further classified into the following five groups. They are :

(i) Pomological nursery : This type of nursery is very specific in production of plants. The nursery raises only different fruit plants. It can also be said to be 'Fruit nursery'. A well known fruit nursery is located at Saharanpur of Uttar Pradesh.

(ii) Olericulture nursery : It deals with the production of both seeds and seedlings of different vegetable crops.

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