Importance of ornamental horticulture in India cannot be over emphasized. Now, the role of floriculture in the economic prosperity of our country is well established. Export of floricultural products to foreign markets has brought about rapid development in commercial floriculture. Gardening in urban areas and incepting the inside houses, offices, banks, shops, hospitals, hotels and other buildings with ornamental plants has become very popular due to lack of open space.

This book includes brief description and methods of growing ornamental plants like trees, shrubs, climbers, annuuals, palms, ferns, orchids and cacti and succulents, etc. Moreover, historic development of garden, garden styles, and different types of gardens have also been included in the book. There is a special mention on the role of ornamental plants in controlling environmental pollution. Designing of gardens, maintenance of lawn, hedges and edges, rockery, topiary, etc. all have been beautifully placed to make it useful. An endeavor has been made to provide useful and latest information on various aspects of ornamental horticulture.

This book finally ends with the list of some reference books, magazines and references. It has been written for the requirement of the students of horticulture, horticulturists, landscapedesigners, amateurs and also for the growers.

The long felt demand of the students in ornamental horticulture has promoted me to take the initiative in writing this book. This book is written following the syllabus of colleges and universities of India. It has been written in a simple and easy to understandable language.

I am grateful to Dr. R.G. Maiti, ex-senior Professor of Department of Horticulture, B.C.K.V, Mohanpur, West Bengal for his support and continuous encouragement in bringing out this book.

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Readers are welcome to send their suggestion for further improvement in the text.

Kalyani, 2004

S.N. Das
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The plants which complete their life cycle in a year or within a season are called annuals. All seasonal flowers are annual. Annuals are an important group of flowering plants widely used for garden decoration, production of cut flowers and pot plants. Few types also have colourful foliage. They are easy to grow and produce flower profusely in a short time. Annuals vary in height, growth habit and also in shape and colour of the flowers.

**Importance and uses**

Annuals are important plants for the garden. They are grown in the garden in the pots, beds, edges, lawns, rock gardens, baskets, and herbaceous border, shrubbery border and also in shady places. Pot grown annuals with colourful foliage and flowers are excellent for indoor decoration. Annuals are also grown as pot-plants in different situations. They are also used as cut flower for vase decoration. Different colourful dwarf annuals are also used for making carpet beds and edges in the garden.

**Classification**

Depending on the growing season, annuals are classified into three main groups namely summer season annuals; rainy season annuals and winter annuals.

1. **Summer season annuals**

   The plants grow luxuriously and produce flowers in hot climate of summer season. They have ability to withstand light-temperature and hot air. For summer season annuals seeds are sown in mid February to first week of March. Seedlings are transplanted at the end of March to first week of April. The annuals which can grow in this season are Sunflower, Zinnia, Kochia, Gaillardia, Gomphrena, Cosmos, Portulaca, Petunia, Coreopsis, etc.

2. **Rainy season annuals**

   Rainy season annuals, which are grown in rainy season and can withstand heavy rains, high relative humidity of the atmosphere and
high temperature. Seeds are sown in the month of June and seedlings are transplanted in July. Rainy season annuals are Balsam, Cockscornb, Amaranthus, Gaillardia, Ipomoea, Torenia, etc.

3. Winter annuals

Annuals, which grow and bloom in winter season are called winter annuals. The plant bear cool temperature and dry weather. Seeds are sown in the seedbeds or pans in September and seedlings are transplanted in October in the plains. There is a large number of winter annuals available in wide range of flower form and colour. Winter annuals with their brilliant colour and sweet fragrance of the flowers, fill the gardens which has magical effects on the minds of the people. Some important winter season annuals are Antirrhinum, (Snapdragon), Aster, Acroclinum, Calendula, Carnation, Chrysanthemum (annual), Cosmos, Dianthus, Helichrysum, Lupin, Nasturtium, Pansy, Petunia, Salvia, Lupin, Poppy, Sweet sultan, Hollyhock, Verbena, etc.

Depending on purpose of use, annuals can also be classified into different groups that are mentioned here under:

a. **Annuals for pot:** Different annuals grow well in the pot. They are Carnation, Antirrhinum, Petunia, Aster, Marigold (F1 hybrid), Calendula, etc.

b. **Annuals for bedding:** Dwarf annuals like Phlox, Pansy, Candytuft, Verbena, Balsum, Portulaca, etc. are used successfully for bedding purpose.

c. **Annuals for hanging basket:** Dwarf and spreading annuals like Nasturtium, Verbena, Portulaca, Phlox, etc. grow well in baskets.

d. **Annuals for cut flower:** Annuals like Carnation, Antirrhinum, Sweet sultan, Aster, Lupin, etc. are used widely for production of cut flowers.

e. **Annuals for loose flower:** Some annuals like Marigold, Aster, Annual Chrysanthemum, Sunflower, Zinnia, etc. are cultivated commercially for loose flower production.

f. **Annuals for shady place:** Annuals like Salvia and Cineraria grow well in shady situation.

g. **Annuals for screening:** Some annuals like Hollyhock and Sweet pea are used specially for making the screen.

h. **Annuals for dry flower:** Annuals like Acroclinum, Statice, and Helichrysum are very helpful for making dry flower.
Cultivation of Annuals

1. Raising the seedlings: Annuals are usually propagated by seeds. Seeds are sown in seedbeds or seed pans to raise seedlings. Nursery beds should be 15 cm above the ground level. The length and width of the bed should be 2-3 m and 1 m respectively. This will help to undertake the operations like watering, thinning and weeding, etc. Soil should be dug out up to the depth of 8-10 cm and made fine. Weeds are uprooted and the bed is kept weed free. Then add well decomposed FYM @ 15 kg/sq.m and mix with soil. To check the soil borne pathogens the soil should be drenched with 0.1% Captan solution. Formalin solution (0.2 %) can also be used to sterilize the soil. After application of formalin the bed should immediately be covered with polythene sheet for 3-4 days. Seeds should be treated with the seed treating chemicals like Agrosan GN, Captan, Bavistin, Ziram, etc. Seeds should be sown in lines 5-6 cm apart and at a depth of about 0.5 cm. The depth of sowing the seeds may be increased with increase in size of seeds. After sowing, the seeds should be covered with the fine mixture of soil and FYM. Watering should be done by a rose can after sowing of seeds. Thereafter watering of seedbed should be done twice in a week. To ensure better germination of seeds, the bed should be covered with newspaper, straw or cloth to provide darkness. To check the entry of white ants the beds should be dusted with Linden Dust (1.3%) or Methyl Parathion Dust (1.5%). When the seeds start germinating then the cover is removed. Seedlings bearing 3-4 leaves within 3-4 weeks are ready for transplanting.

2. Preparation of land: Annuals are grown in beds as well as in pots. For growing them in beds land should be prepared well. Land should be prepared by digging or ploughing up to the depth of 15-20 cm. Clods are broken and made fine. Soil should be almost weed free. Then the land is levelled by keeping a gentle slope for drainage of excess water. Mix 5 kg well rotten F.Y.M. or cow dung manure, 50 g CAN, 60 g Superphosphate and 20 g muriate of potash per sq. m with the soil. Then light irrigation is given before transplanting for better establishment of the seedlings.

3. Transplanting of seedlings: Seedlings should be transplanted when they become 6-8 cm long and bear 3-4 leaves. They should be transplanted in the evening when the day becomes cool. Tall, medium and dwarf annuals are planted in the beds at a distance of 30-45 cm, 15-20 cm and 10-15 cm, respectively. After transplanting, the seedlings should be watered immediately. Some plants like Hollyhock, Sunflower,
Ornamental-horticulture refers to the study of various groups of ornamental plants which are used to decorate indoor and outdoor gardens. Ornamental horticulture is the art and science of the development of garden plants for ornamental purposes. In Illinois, many in the business pass on to it usually as the "green" industry, not be confused with green (i.e., wholesome, natural, environmentally conscious) living. It has its roots in agriculture, but moves beyond the business of growing for food. It is an extremely varied regulation where the individual plant is more important than a crop. It is Free Handbook. Frequently Asked Questions. Youth Awards. Certificate in Horticulture (Ornamental Horticulture). Learn practical garden & horticulture skills. Propagate & cultivate hundreds of different ornamental plants -science & plant knowledge beyond most other courses. Improve your long term career & employment prospects. Course Code. The Certificate in Horticulture (Ornamental Horticulture) is a vocationally oriented course comprising core studies (general horticulture) and stream studies specific to ornamental horticulture. develop general and broad based skills in horticultural practices and plant identification. build more specific knowledge in areas of ornamental horticulture including garden maintenance, turf care, arboriculture, landscaping and nursery work. Basic Horticulture - II. Student Handbook. Class XII. Convener & Editor. Vegetable and ornamental plants nursery: For fruit plant nursery, one require larger area, whereas for most of the flowering annuals and vegetables, little smaller area is required for nursery. Hence, raising and maintaining of vegetable or ornamental plants nursery can be a good option in such localities. In big cities and town, there is always a great demand for herbaceous perennials, shade loving plants, climbers etc. 2.