

JOB ROLE – GARDENER

Sector – Agriculture

(Qualification Pack Code: AGR/Q0801)

PPT's for Class XI



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UNIT 1: INTRODUCTION TO FLORICULTURE

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Session Objectives

The students will be able to:

- Describe floriculture and its importance.
- Explain prospects and present status of floriculture in India.
- Know about classification of ornamental plants.

Introduction

Ornamental plants and flowers are associated with our civilisation since time immemorial. Floriculture is an important branch of horticulture dealing with cut or loose flowers, ornamental plants, such as foliage plants, trees, shrubs, climbers, palms, bamboo, cacti and succulents, dried flowers, essential oils and landscape gardening. It has aesthetic value and is becoming a necessity for pollution-free environment in cities. Loose flowers were cultivated for domestic use like *veni*, *gajra*, etc., and for various celebrations, such as marriage, birthday, religious offerings and other social gatherings.

Floriculture

Floriculture is a branch of horticulture that deals with the cultivation, processing and marketing of ornamental plants, vis-a-vis landscaping and maintenance of gardens so that surroundings may appear aesthetically pleasant.



Flower cultivation

Importance of Floriculture

Floriculture is one of the most potential components of the horticulture industry, being important from aesthetic, social and economic points of view. The importance of commercial floriculture are as follows:

1. Production of cut flower: Cut flowers are harvested with stalk, especially for arrangement in vases. Important cut flower crops are- rose, carnation, chrysanthemum, orchid, gerbera, lily, gladiolus, tulip, narcissus, bird of paradise, heliconia, ranunculus, tulip, calla lily, *etc.*

Importance of Floriculture

2. Production of loose flower: Loose flowers are plucked from plants just below the calyx. Loose flowers comprise rose, chrysanthemum, marigold, jasmine, tuberose, gaillardia, crossandra, barleria, spider lily, eranthemum, *etc.*

3. Production of cut greens: Cut greens or cut foliage (leaves and stems) are attractive in form, colour and freshness. These are long-lasting and in great demand in floriculture trade. Some of the cut foliages in demand are asparagus, ferns, thuja, cupressus (goldcrest), *etc.*

Importance of Floriculture

4. Pot plants: These are of considerable commercial importance for instant gardening and for indoor, as well as, outdoor decoration. Examples of potted plants are aglaonema, aralia, chlorophytum, croton, diffenbachia, dracaena, maranta, money plant, *etc.*

5. Flower seeds and planting materials: There is a lot of demand for good quality flower seeds, especially annual ornamentals and ornamental planting materials. Flower seeds of annuals are produced in large numbers for sale. A large number of bulbous plants, such as gladiolus, tuberose, amaryllis, dahlia, lilies, freesia, tulip, calla lily, *etc.*, are multiplied and marketed.

Importance of Floriculture

6. Nursery: Nurseries are meant for multiplying and supplying plants and planting materials. It includes nursery seedlings or prepared plants of trees, shrubs, climbers, annual seedlings, perennials, foliage plants, bulbous plants, cacti and other succulents, palms, plants for indoor decoration, grasses, seeds, bulbs, *etc.*

7. Lawn: It is a green carpet for a landscape. It is a well-mown turf made in the field in the front of house. It has aesthetic and recreational value. It is believed that lawns improve the value of property.

Importance of Floriculture

8. Production of perfumes: The demand for natural floral extracts like perfumes from flowers is increasing by the day. Some flowers, such as rose, jasmine, screw pine and tuberose are used for the extraction of essential oils, which are a base for the preparation of perfumes, scents or attar.

9. Colour pigments: Flowers are used to extract natural pigments. Carotenoids, extracted from flowers, are used commercially in pharmaceuticals, food supplements, and animal feed additives and as food colourant.

Importance of Floriculture

10. Dried flowers: Since fresh cut flowers and cut foliage are comparatively short-lived and have limited availability period, dry flower technique is used, wherein flowers can be easily dried, preserved and processed to retain its beauty, as well as, value for a longer period of time. eg. acroclinum, dahlias, larkspur, lotus pods, etc.

11. Pollution-free environment: Ornamental plants help improve the environment aesthetically and health-wise. Some trees have been found to be useful in preventing air and noise pollution in urban areas. Trees provide shade and create better microclimate.

Importance of Floriculture

Aesthetic value of flowers

Aesthetic value may be defined as the theory of the level of beauty of certain natural resources. Flowers symbolise passion, purity, beauty, peace, love, adoration, etc., and are well-proofed for their aesthetic value. Some common aesthetic values of flowers are as follow:

1. Psychological: Flowers bring feelings of peace and comfort when given to an ailing member at home or in hospital or rehabilitation centres, and to family members or friends in general. They help in achieving higher level of personal development and satisfaction.

Importance of Floriculture

Aesthetic value of flowers

2. Landscaping: It is the treatment of a piece of land with a goal to make it attractive and beautiful. It is becoming common as it beautifies an area, adds calmness and freshness to the surrounding. It is important for offices, residences, educational institute, supermarkets *etc.*

3. Indoor gardening: Growing plants inside a house is known as indoor gardening. It is not only makes the appearance of indoors beautiful, pleasant and attractive but also improves the air quality and adds freshness to an area.

Importance of Floriculture

Aesthetic value of flowers

4. Flower arrangement: It is the aesthetic and artistic form of flower display, which refreshes the mind. It provides a means of livelihood to the arranger. Cut and loose flowers are used for various flower arrangements and can be presented on various occasions, such as weddings, birthdays, etc. They add beauty to the table when used as a centerpiece.

Present Status of Floriculture in India

- Due to the changing lifestyles and increase in the per capita income, the demand for floriculture has also gone up substantially. At present, it has become one of the profit making trades, owing to constant rise in the demand of flowers and its products.
- Floriculture exports from India are primarily dominated by fresh cut flowers and dried flowers.

Present Status of Floriculture in India

- The various fields of revenue generation in floriculture include cut flower production, loose flower production, nursery, potted plants, seed industry, extraction of essential oils and value-added products.
- The production of loose flowers is the highest in Tamil Nadu, followed by Karnataka and Madhya Pradesh, whereas, the production of cut flowers is the highest in West Bengal, followed by Karnataka, Odisha and Uttar Pradesh.

Present Status of Floriculture in India

- Several seed companies have established production units in major flower growing states to meet the demand of flower seeds.
- Seasonal flower and seed production is a established business in Punjab, Karnataka and Maharashtra.
- Some of the agri-export zones for floriculture set up by the Government of India are in Maharashtra, Sikkim, Tamil Nadu, Uttarakhand and Karnataka (APEDA).

Present Status of Floriculture in India

- In terms of floricultural production and export units, south India dominates, having more than half of the total units.
- The United States, Germany, the United Kingdom, the Netherlands and the United Arab Emirates are perhaps some of the major countries, which import floricultural produce from India.

Prospectus of Indian Floriculture

- The demand for floricultural plants and their produce, such as bouquet, garland, *veni* and value-added products increasing by the day.
- Opportunities for floriculture are increasing due to various uses of flowers — for aesthetics, prayers, festivals and other occasions, and perhaps due to the increasing purchasing power of people.
- Strategically and geographically, our country is well located between major flower markets — Europe and East Asia.

Prospectus of Indian Floriculture

- The availability of diverse agro-climatic conditions in the country enables to grow all flowers in one season or the other.
- Floriculture offers employment for skilled, as well as, unskilled human resources, including rural youth and women.
- The scope of turf or lawn grasses, vertical gardening, roof gardening, etc., is on the rise in climate change
- Protected and hi-tech cultivation of cut flowers has a great future.

Classification of Ornamentals Plants

1. Based on life span

Annuals: These complete the process of life in one growing season. *eg.* China aster, coreopsis, gomphrena, marigold, petunia, tithonia, verbena, zinnia, *etc.*

Biennials: These complete the process of life in two season. *eg.* Amaranthus, celosia, hollyhock, pansy, *etc.*

Perennials: Plants that have a life cycle that is more than two years.

Classification of Ornamentals Plants

1. Based on life span

Perennials

- a) **Woody perennials:** These mostly comprise trees, shrubs and vines, which have woody stems and branches, such as *Cassia siamea*, *C. fistula*, *C. biflora*, *Peltophorum*, etc.
- b) **Herbaceous perennials:** These comprise plants with soft and herbaceous (non-woody) main stalk, such as Anthurium, bird of paradise, heliconia, etc.

Classification of Ornamentals Plants

2. Based on season of growth

Winter season annuals: These are grown in the winter season and withstanding low temperature. Such as Candytuft, antirrhinum, larkspur, nasturtium, *etc.*

Summer season annuals: These are grown in the summer season and can tolerant high temperature to produce flowers. Such as Cosmos, gaillardia, gomphrena, kochia, *etc.*

Rainy season annuals: These are grown in the rainy season and can produce flowers under high humidity and rainfall as compared to other annuals. Such as Amaranthus, balsam, cock's comb, gaillardia, *etc.*

Classification of Ornamentals Plants

3. Based on market value

Loose flower: Loose flowers are harvested without stalk. Barleria, bedding dahlia, calotropis, chrysanthemum (spray type), *etc.*

Cut flower: Cut flowers are fresh flowers, flower buds or spikes harvested along with their stems attached to the flowers, length of stems being as specified to individual flowers. *eg.* Gerbera, gladiolus, anthurium, *etc.*

Flower yielding value added product: They are used as raw material in industries for the extraction of essential oils and preparation of edible products, such as *gulkand* and rose water from rose.

Classification of Ornamentals Plants

4. Based on type of plant

Herbaceous: Liliun, Verbena, Viola, *etc.*

Shrubs: Bougainvillea, Lawsonia, Hamelia, Nyctanthes, Rose, Tecoma, *etc.*

Trees: Gulmohar, Amaltas, Kadamb, Pride of India, *etc.*

Climbers and Creepers: Adenocalymma, Antigonon, Rangoon Creeper, Madhulata, Petrea, Thunbergia, *etc.*

Classification of Ornamentals Plants

5. Based on mode of propagation

Bulbous plants: Lily, Narcissus, Tuberose, Tulip, *etc.*

Cormous plants: Crocus, Gladiolus, Watsonia, *etc.*

Rhizomatous plants: Canna, Iris, Lotus, *etc.*

Tuberous plants: Begonia, Dahlia (root tuber), *etc.*

Summary

In this session, you have learnt about the floriculture and its importance, prospects and present status of floriculture in India and classification of ornamental plants.

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