

# **CBCS PG: Botany Elective, Semester-II**

**Paper-II:** Plant Resources II (Allotted Topics)

**Topic: Techniques for Producing Ornamental  
Plants: Orchid and Gladiolus**

# Ornamental plants

Ornamental plants are plants that are grown for decorative purposes in gardens and landscape design projects, as house plants, for cut flowers and specimen display. The cultivation of these, called *floriculture*.



# Orchid Plant/Flower







**Orchid is suitable for the coastal areas (Chennai) where the humidity is high**



**Orchid cultivation under shade net**

# Varieties common in India

Sonia 17, Sonia 28, Emma White



## **Climate**

75% green shade net with 70 - 80% humidity, 18 - 28°C temperature and high light intensity is ideal for growing this tropical orchid

## **Growing environment:**

75% shade net house with 70- 80% humidity, day temperature of 21 - 28°C and night temperature of 18 to 21°C is ideal for growing this tropical orchid.

## **Propagation**





## **Growing media:**

Most common potting mixture consists of charcoal, broken pieces of bricks and tiles, coconut husk and fiber.



## **Irrigation:**

Time to time water is required to maintain humidity.

## **Nutrients:**

Foliar application of NPK 20:10:10 @ 0.2% at weekly intervals starting from 30 days after planting.



## **Growth regulators**

Foliar application of GA3 at bimonthly intervals starting from 30 days after planting.

## **Repotting**

Orchids need repotting regularly, usually every two to three years.

1. When the plant grows large and overgrows its container.
2. When the potting material deteriorates
3. When the plant has to be split or divided

## **Splitting or division of plants**

Plant grown to a large clump with 2 or 3 old canes and new shoots, divided before repotting. Each division at least one old cane of two years' growth, one new shoot & some new roots.

## **Harvest**

Flower fully matures only 3 or 4 days after it opens. Flowers are harvested when they are fully open as the flowers cut prior to their maturity will wilt before reaching the wholesaler. Immediately after harvest, the lower 0.75cm of the peduncle is cut off, and the flower is inserted into a fresh tube of water containing preservative. Harvesting the spike when 75 per cent of the flowers are open and remaining buds are unopen.

**Spike ready for harvest**







# Orchid grown professionally



# Gladiolus

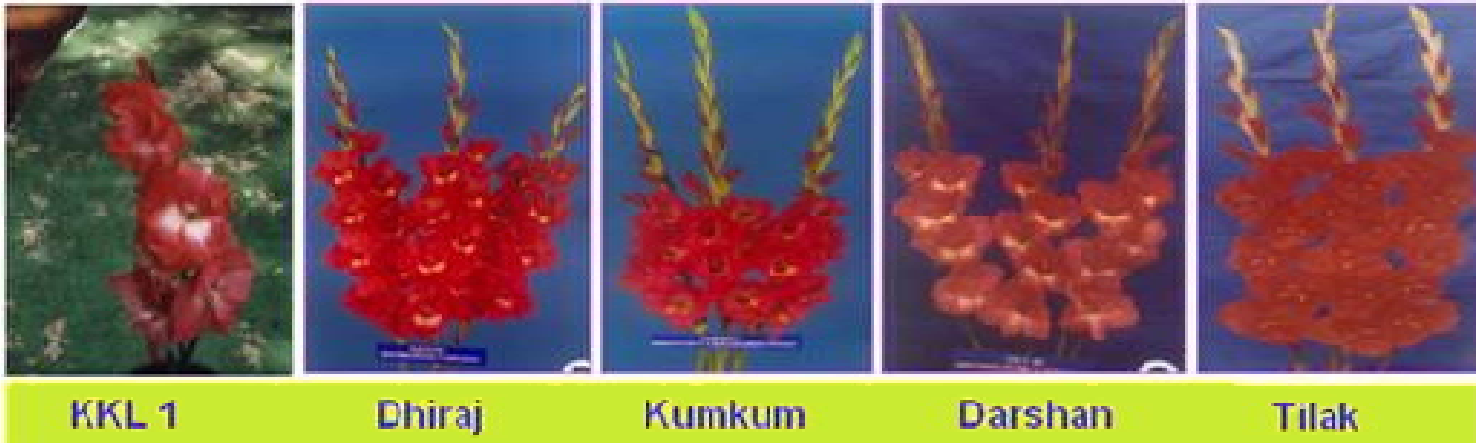






## Varieties

Tropic Sea, White Prosperity, Priscilla, Summer Sunshine, Pusa Swarnima, Jackson Ville Gold, KKL.1, Archana, Basant Bahar, Indrani, Kalima, Kohra, Aarti, Arka Kesar, Darshan, Dhiraj, Agnirekha, Archana, Bindiya, Shree Ganesh



**Climate:** Subtropical and temperate climatic conditions are suitable. The crop performs well under a temperature range of 27 - 30°C. It requires full exposure to sunlight and performs well with long day conditions of 12 to 14 hour photoperiod.

**Soil:** Well drained sandy loam soil rich in organic matter with pH of 6 to 7.

## **Propagation:**

### **Field preparation and planting:**

Beds of size 6 x 2 m a spacing of 40 x 25 cm (88,888 plants/ha) or 25 x 25 cm (1,60,000 plants/ha).

### **Planting season:**

October for plains and March-April for hills.

### **Planting system**

Ridges and furrows system is adopted.

**Irrigation:** Irrigate at 7-10 day intervals in sandy soils and at less frequent intervals in heavy soils.

**Nutrition:** 120 kg N, per hectare is recommended.

## **Manuring**

### **Top dressing**

N alone is given @ 30 kg/ha during 4 leaf stage as foliar spray and 30 kg/ha during bud stage as soil application.



