

JOB ROLE – FLORICULTURIST (OPEN CULTIVATION)

Sector – Agriculture

(Qualification Pack Code: AGR/Q0701)

PPT's for Class XI



PSS Central Institute of Vocational Education
Shyamla Hills, Bhopal – 462 013 , Madhya Pradesh, India

www.psscive.ac.in

UNIT 4: FIELD PREPRATION AND CULTURAL OPERATIONS

Session 2: Tillage and Cultural Operations

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Session Objectives

The student will be able to :

- Explain field preparation.
- Describe special practices in flower cultivation.

Introduction

Preparation of land is important for the cultivation of ornamental crops to ensure that the field is ready for planting. It covers various practices from ploughing to levelling of fields for cultivation.

Preparation of Field

Ploughing

The digging of field is done through plough and the operation is known as 'ploughing'. The cultivation of flowers field should be first dug out to a certain depth in order to improve aeration and drainage, and provide easy space for growth and development of roots. Ploughing of the field two to three times across is recommended for better results.

Preparation of Field

Harrowing

It is aspects to break clods after ploughing and smoothening the soil surface for growing ornamental crops.

Levelling

Levelling of land ensures better implementation of irrigation and planting of crop. After harrowing, the soil is planked to have a uniform level and slope. After levelling of the land, the desired layout of specific dimensions used for planting.

Special Practices in Flower Cultivation

Weeding

It refers to the removal of all unwanted plants from the field, other than those planted or sown. Periodical removal of weeds is beneficial for the growth and development of crop as this prevents competition of weeds with the main crop for sunlight, water, air and nutrients.

Special Practices in Flower Cultivation

Mulching

It is a process of covering the soil around plants with organic wastes, like straw, dry grass or leaves, saw dust and crop residues, etc., or synthetic materials, like plastic sheets.

Mulching is a good cultural method that preserves soil moisture, soil erosion and protects weeds. It also helps in maintaining the soil temperature.

Special Practices in Flower Cultivation

Staking

It is a practice to support plants growing straight and saving them from bending or lodging. It saves the plants from being blown over by winds, rains and due to the weight of their stems when in bloom or in fruiting. Bamboo stakes are most common, and other than this, branches of shrubs and trees, i.e., *neem*, *subabool*, *phalsa*, *eucalyptus*, etc., can also be used effectively for this purpose.

Special Practices in Flower Cultivation

Earthing up

It is refers the digging and pulling the soil in between the rows and heaping it around the stem of plants.

This encourages the development of additional underground food storage structures, such as bulbs, corms, rhizomes or tubers as in case of tuberose, gladiolus, canna, begonia and dahlia.

Special Practices in Flower Cultivation

Deshooting

It is the removal of all side shoots (offshoots/offsets) emerging from the base of the plant. The main purpose of deshooting is to divert the energy of the plant towards the development of shoots or buds.

Special Practices in Flower Cultivation

Disbudding

It is the removal of floral buds when a large flower on a plant is desired, as in chrysanthemum and dahlia.

Pinching

It is removal of the growing tips of the vegetative buds to promote bushy growth for more flowering in case of chrysanthemum. It is the removal of 3–5 cm growing tips when the plants are 8–10 cm tall. Pinching is also a common practice in carnation and marigold.

Special Practices in Flower Cultivation

Training

This gives the plant a desired height, shape and strong framework with desired number of properly distributed branches and eliminates weak crotch development.

Pruning

The removal of twigs, branches, shoots, limbs, or roots is termed as pruning. Pruning is done with a view to increase the usefulness of the plant.

Special Practices in Flower Cultivation

Principles of pruning

1. The main principle of pruning is to reduce the apical dominance so that lateral branches are encouraged for quality blooms with long stems as in roses.
2. All dead, diseased or insect-infested wood and weaker branches are removed.
3. The stronger the growth, the lighter the pruning, and the lighter the growth, the severe is the pruning.

Special Practices in Flower Cultivation

Objectives of pruning

- To give a definite direction and shape to the plant
- To develop a strong framework.
- To utilise the available space effectively
- To impart dwarfing in the plant and invigorating its growth
- To influence productiveness and quality of the produce
- To penetrate necessary light and air to inner portion of the plant
- To remove all dead, diseased and interlacing twigs or branches

Special Practices in Flower Cultivation

Time of pruning

1. The plant bearing flower on last season's growth is, generally, pruned immediately after flowering.
2. Those plants flowering on current season's growth are pruned sufficiently ahead of the flowering season.

Summary

In this session you have learnt about the field preparation and special practices in flower cultivation.

Project Coordinator : Dr. Rajiv Kumar Pathak

Assistance

Dr. Sanvar Mal Choudhary

Dr. Narendra Vasure



Joint Director

**PSS Central Institute of Vocational Education
Shyamla Hills, Bhopal – 462013 , Madhya Pradesh, India**

E-mail: jdpsscive@gmail.com

Tel. +91 755 2660691, 2704100, 2660391, 2660564

Fax +91 755 2660481

Website: www.psscive.ac.in