

Specific Horticultural Techniques Applied the Flower Crops

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Introduction:

Floral cultivars such as rose, chrysanthemum, tuberose, China aster, carnation, gladiolus, crossandra, anthurium and jasmine are commercially cultivated in both open field and protected greenhouse conditions. These flowers are highly sought after by consumers due to their market demand. Various specialized horticultural techniques such as pinching, disbudding, defoliation, staking, netting, and de-suckering are implemented to ensure successful cultivation of flower crops. These practices contribute to the development of a robust plant structure, enhanced growth, increased

branching, improved flower quality, and ultimately higher flower production yields.

Pinching:

Pinching is a significant horticultural technique utilized in flower crops to manage plant size and promote bushiness. This practice aids in height control and branch proliferation by removing apical buds bearing two to three open leaves. It is commonly applied in the flower crops such as rose, marigold, carnation, chrysanthemum and annual chrysanthemum to optimize plant growth and development.

Desuckering:

In the vegetative growth phase of plants, vertical growth occurs as new plant



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structures continuously emerge at the base of the plant. These emerging structures, known as suckers, are removed through a process called desuckering to prevent excessive and irregular plant growth. It is common practice in the cultivation of chrysanthemum plants to promote optimal growth patterns.

central buds are removed and the lateral buds are retained on the plant. It is generally followed in carnation and dahlia, rose, chrysanthemum etc.



Disbudding:

In this technique of removal of unwanted flower bud to control the size of flowers, this operation is done to increase the size of flowers. In standard carnation and standard chrysanthemum the lateral buds are removed and the central buds keep intact and in spray chrysanthemum and spray carnation

Staking:

Certain tall flower crops, such as gladiolus and chrysanthemum, carnation need support to grow upright but dwarf plants are not required because dwarf plants are bushy in nature. In tall plants provide support in, the plants are tied to bamboo stakes, metal hog wire, or sturdy wooden sticks. In India, bamboo is commonly used for staking plants, either as whole pieces or split depending on the plant's size.



Defoliation:

It is removal of the leaves for improving the size of flowers and flowering and to reduce the transpiration rate during water stress condition. This operation is generally done manually or by using chemicals. They are generally followed in anthurium jasmine etc.

straw, etc. are also used as mulches in flower crops. Mulching with plastic (Black & White) sheet reduces the growth of weeds and improves the root system, basically black plastic mulching is more use then white plastic mulch.



Mulching:

It is process to covering the soil with the help of plastic sheets or other organic mulches like straw, cotton seed hull, peanut hulls on the beds on which plants are grown for retaining the soil moisture and avoiding the growth of weeds. Wheat straw, pine needles,



Organic mulch



Inorganic mulch

Purpose of Mulching:

- Conservation of the soil moisture
- Suppression the weed growth
- To control the disease and pest
- To regulate the soil temperature

Pruning:

Pruning it may be defined as in a simple word removable of disease, damage affected twigs in the plants. To enter proper sunlight, increase the number of new branches & Increase the productivity, development of proper colour in the fruits surface.



Netting in carnation:

Carnation crops have a natural tendency to bend, so it is important to provide proper support while they are growing.



A good support material for carnation crops is metallic wire woven with nylon mesh. The wire should be supported with poles every

2 m along the length of the crop bed. The poles at both ends of the bed should be strong to provide adequate support. The metallic wire should be tied around the bed lengthwise with support from the poles. Nylon wires should be woven across the bed in a net-like pattern. To provide optimal support, the width of the meshes can be increased gradually. For example, the bottom net can have a mesh size of 10x10 cm, followed by two nets with mesh sizes of 12.5x12.5cm, and finally the uppermost net can have a mesh size of 15x15 cm. This setup will help ensure that the carnation crop grows upright and healthy.

References:

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2. Singh, J., & Singh, J. (2014). Basic

