

## 1. Harvesting

- Harvest during early morning or late evening
- Use sharp, clean tools
- Select flowers at proper maturity stage
- Avoid damaged or diseased flowers

### Example:

- Rose: Tight bud stage
- Gladiolus: 1-2 florets open
- Carnation: Half open stage

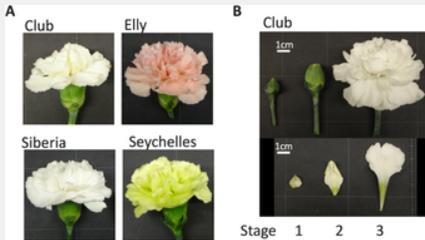
## 2. Pre-Cooling

- Remove field heat immediately after harvest
- Helps reduce respiration and water loss
- Methods: Cold room cooling, ice cooling, or evaporative cooling

**Benefit:** Maintains freshness and increases shelf life

## 3. Grading and Sorting

- Separate flowers based on size, colour, stem length, and quality
- Remove damaged and diseased flowers
- Helps in uniform packaging and better price



## 4. Conditioning and Pulsing

- Place stems in clean water or preservative solution
- Improves water uptake
- Pulsing solutions contain sugar and chemicals

### Example:

- Sugar solution (2-5%)
- Silver thiosulphate (STS)
- 8-HQC (8-Hydroxyquinoline citrate)

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## INTRODUCTION

Post-harvest handling of cut flowers involves careful management after harvesting to preserve their freshness, beauty, and vase life. Cut flowers are highly delicate and perishable in nature. They easily lose water and are very sensitive to temperature changes and microbial infection. Without proper care, flowers wilt quickly and lose their market value. Good post-harvest practices help maintain their appearance, color, and quality. These practices also reduce losses during storage and transportation. Proper handling ensures that flowers reach consumers in fresh and attractive condition. Ultimately, it helps growers get better prices and improves customer satisfaction.

### Objectives of Post-Harvest Handling

- Maintain freshness and quality
- Extend vase life
- Reduce post-harvest losses
- Ensure better transport and marketing
- Increase farmers' profit and consumer satisfaction

### Important Steps in Post-Harvest Handling



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क्रमांक: COOP/2023/KOTA/201080/26/18

# एग्रीकल्चर फ़ोरम फॉर टेक्निकल एजुकेशन ऑफ़ फार्मिंग सोसायटी

कोटा, राजस्थान



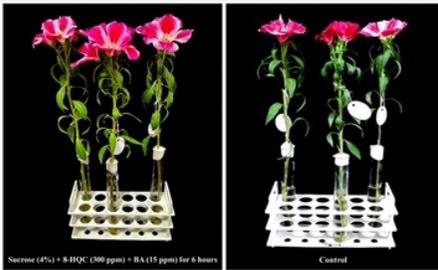
## Post-Harvest Handling of Cut Flowers

संकलन

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### 5. Packaging

- Use corrugated fibreboard boxes
- Wrap flowers in paper or plastic sleeves
- Pack properly to avoid damage

**Benefit:** Protects flowers during transport



### 6. Storage

- Store flowers at low temperature (0-4°C for most flowers)
- Maintain proper humidity (90-95%)
- Avoid ethylene gas exposure

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### 7. Transportation

- Use refrigerated vehicles if possible
- Avoid mechanical damage
- Transport quickly to market

#### Importance of Preservative Solutions

Preservatives help in:

- Extending vase life
- Preventing bacterial growth
- Improving flower opening

#### Common preservatives:

Common preservatives used in cut flowers include sugar, citric acid, and 8-HQC (8-Hydroxyquinoline citrate). Sugar acts as a source of energy and helps maintain flower freshness and proper opening. Citric acid helps maintain the acidity (pH) of the solution and improves water uptake by the stems. 8-HQC is an antimicrobial compound that prevents bacterial growth and keeps the water clean. Together, these preservatives help extend vase life, maintain quality, and improve the overall longevity of cut flowers.

#### Factors Affecting Vase Life

The vase life of cut flowers is influenced by several important factors. Temperature plays a crucial role; as high temperature increase respiration and cause flowers to wilt faster, while low temperatures help maintain freshness. Water quality is also important because clean water improves water uptake and prevents microbial growth. The stage of harvest affects longevity, as flowers harvested at the proper maturity stage last longer. Proper storage conditions, including suitable temperature and humidity, help slow down deterioration. In addition, careful handling practices during harvesting, packaging, and transportation prevent physical damage and help extend the vase life of cut flowers.

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### Benefits of Proper Post-Harvest Handling

- Increases shelf life
- Maintains flower quality
- Reduces losses
- Improves market price
- Enhances export potential

### CONCLUSION

Proper post-harvest handling of cut flowers is essential to maintain freshness, beauty, and vase life. Practices such as proper harvesting, pre-cooling, grading, pulsing, packaging, storage, and transportation help reduce losses and improve market value. These techniques ensure better quality flowers for consumers and higher profit for farmers. Therefore, post-harvest management plays a key role in the success of the floriculture industry.

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