

## EXTENDING POSTPRODUCTION QUALITY

### INTRODUCTION

- Potted plants need to be taken care of continually throughout the late production, holding, shipping, and retailing phase to ensure high quality
- Shelf life refers to the postproduction period of potted plants

### PRODUCTION

- Shelf life is extended by continuing the production environment during the postproduction phase
- Important environmental conditions:
  - Light
  - Nutrition
  - Temperature
  - Water
- Allow optimum light to penetrate plants in order to keep carbohydrate levels high
- Maintain high carbohydrate levels to insure that the plant has energy during postproduction

### CONDITIONING PLANTS

- Process used to increase plant tolerance and extend keeping quality by subjecting plants to controlled stress

- Applied during the late stages of production
- Conditioning methods used to increase plant tolerance to the postproduction environment:
  - Nutrition
  - Water
  - Temperature
  - Light
- Nutrition conditioning
  - Most effective method
  - Achieved by restricting fertilization
  - Substrate must have an optimum amount of nutrients before stress begins
  - Discontinue fertilization during the last two weeks of production
- Water conditioning
  - Applied to plants after visible-bud stage
  - Water plants when slight wilting occurs during late production
  - Monitor for signs of root or leaf tip burn
- Temperature conditioning
  - Best for flowering potted plants
  - Not used for tropical foliage plants
  - Reducing temperature 5-10°F for the last 2 to 3 weeks of production

- Light conditioning
  - Used on tropical foliage plants
  - Light intensity is reduced for plant conditioning depending on plant species
  - Not effective on bedding plants

## CAUTIONS DURING SHIPPING

- Ethylene gas accumulation is a common problem
- Ethylene is generated from truck engines and decaying plant parts
- Symptoms include leaf chlorosis, wilting, and abscission of leaves, flowers, and buds
- To lower ethylene levels:
  - Remove damaged plant debris
  - Ensure good ventilation in truck, packaging, and holding areas
  - Reduced temperature below 65°F slows down ethylene accumulation

## RETAIL HANDLING

- Low light level (500–1000 fc) slows growth of foliage plants
- Too much or too little light will cause problems in plant quality

- During summer months, a heavily shaded environment is desirable
- Low temperatures (55-65°F) are desirable
- Plants located close to the parking area may be exposed to ethylene gas from car exhaust
- Monitor plants for signs of ethylene damage

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