MECHANICS OF DESIGN

By Karey L. Bassett

■

Designs By Richard Horn Jr., AIFD,
Siesta Flowers By Maahs, Sarasota, Fla.

LONG-LASTING FLOWERS provide beauty and value to customers. But before designers can assemble beautiful floral arrangements, they must complete proper flower care and handling procedures. Richard Horn Jr., AIFD, Siesta Flowers By Maahs, Sarasota, Fla., outlines steps for conditioning and storing flowers in this chapter. For information about care and handling of individual flower varieties, refer to In Season, which appears monthly in FLORIST. Thanks to the Society of American Florists and Floralife Inc.

FLOWER CARE AND HANDLING

By the time flowers reach customers, they've been handled by growers, wholesalers and retailers. If one member of the distribution chain processes flowers improperly, retailers lose products to spoilage and customers watch arrangements die quickly. Of course, customer dissatisfaction hurts the floral industry. FTD research has shown that poor quality flowers result in a low perceived value among consumers. Customers who receive poor quality flowers may by-pass flowers in favor of other gifts in the future. Florists who implement proper care and handling procedures increase customer satisfaction and reduce flower spoilage.

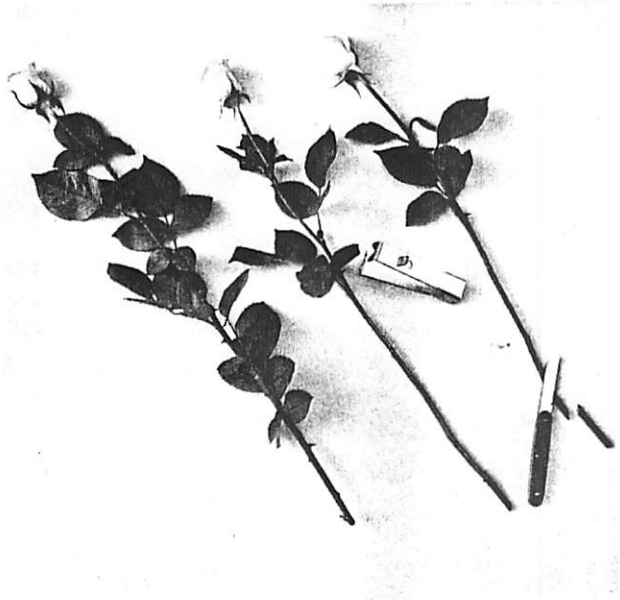
PURCHASE AND INSPECTION

For optimum vase life, flowers should be purchased in the correct stage of development. Flowers harvested too early won't open; those overly mature will wither soon. Ask wholesalers about their products. They should be willing to answer questions about product origins and receipt dates. Ask them which post-harvest treatments or chemicals they use to make flowers last longer.

Immediately unpack and inspect all products upon arrival in the shop. Make sure the order was properly filled and that all materials are healthy and in good condition. Check for pests, broken stems, temperature damage and other problems. Quickly report any problems to the wholesaler.

FLOWER PREPARATION

Use a sharp knife, shears or underwater stem cutter to cut stems 1 inch from the bottom, where blockages of the flower's vascular system usually occur. Dull tools pinch stems, hindering water absorption. Stems should be cut underwater so the vascular system can absorb water immediately. If the stem is cut out of water, it takes in air which blocks the stem, preventing proper water intake.



A stripping tool and sharp knife are used to remove foliage and thorns and cut stems.

Cut stems underwater at an angle. While a diagonal cut doesn't increase water absorption, it has two advantages over a straight cut. First, it makes the stem easier to insert into floral foam. Also, the point of the angle-cut stem will rest on the bottom of the container, allowing the stem to take in fluid. A horizontally cut stem may rest flat on the container's bottom, preventing the stem from absorbing water. Cut, rather than pound, woody stems to avoid damaging the vascular system.

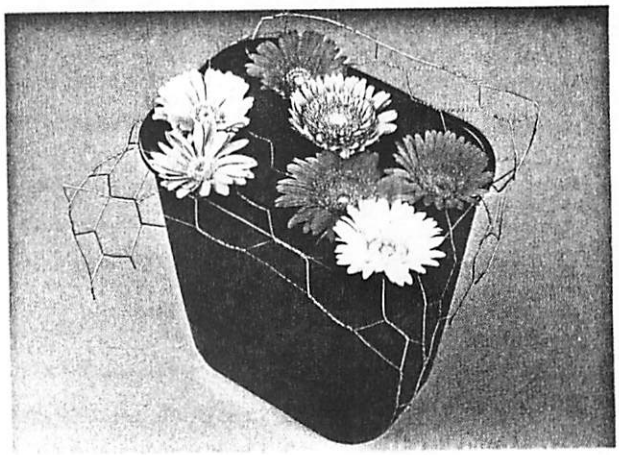
To prevent decay, remove foliage that will fall below the water line. To remove foliage from thornless stems, gently grasp the stem and slide your hand down its length. Horn explained how to use a stem-stripping tool.

1. Grasp a flower in one hand and the stripping tool in the other.
2. Place the open stripping tool around the stem above the foliage that will fall below the water line. Pinch the tool together so its teeth close around the stem.
3. Gently pull the tool down to the end of the stem.

Horn mentioned another method to remove leaves and dull thorns. First, pluck the leaves off the stem. Next, cut the tips off thorns with a sharp knife or scissors.

CONDITIONING AND STORAGE

The quality of the water in which flowers are stored can affect the flowers' vase life. Water quality can be improved with various flower foods and other water treatments. Before selecting chemical treatments, have water tested to determine its pH, total dissolved solids and hardness. Use warm water (100-110 F) to condition flowers because it contains fewer air bubbles that block stems.



To store gerberas, suspend them from chicken wire so the stem ends hang underwater.

Flowers that aren't sensitive to ethylene gas benefit from hydrating solutions, which lower the water's acidity and help stems take up water. Hydrating solutions should be prepared according to manufacturer's instructions and used soon after flowers arrive in the shop. Following hydration, flowers should be placed in a flower food solution.

According to Floralife Inc. literature, flower food or floral preservatives "provide food in the form of a sugar source to keep flowers alive, reduce water and stem contamination by bacteria and fungi, bind elements in the water that can have a harmful effect on flower life and precipitate them on the bottom as a harmless deposit, and help lower pH and keep the water/food conducting system in flowers working at maximum efficiency."

FLOWER CARE AND HANDLING

Although many homemade flower treatments have been used, they're ineffective or fall short of the scientifically researched commercial preservatives. Be sure to change holding solutions frequently. Give packets of flower food to customers and encourage home flower care.

While most flowers can be stored in the shop upright in buckets, others require special treatment. Gerbera stems will bend under the weight of the heavy blossoms and should be suspended from chicken wire or another frame. Refer to chapter eight for instructions on making a chicken wire frame.

TEMPERATURE

Most flowers require low temperatures and high humidity to remain fresh. Unfortunately, humidity is easier to maintain in warm air than cool air. Temperatures of 32-36 F are recommended for most flowers. Humidity should be above 80 percent. Proper air circulation keeps flowers evenly cooled.

According to the Society of American Florists' Care and Handling of Flowers and Plants manual, "Low temperature and high humidity helps slow down respiration or breakdown of food, reduce water loss by transpiration, reduce ethylene production and flower sensitivity—flowers are less susceptible to damage at lower temperatures, reduce microorganism growth and development, and slow development and deterioration rate."

ETHYLENE SENSITIVITY

Florists must protect many flowers from ethylene gas. Plants, fruit, vegetables, flowers and foliage produce odorless and colorless ethylene gas. The gas is also produced by vehicle exhaust, fungi and bacteria. Ethylene-sensitive flowers exposed to the gas may appear wilted or "sleepy." Blooms and leaves may fall off the stems or buds may fail to open.

Take these precautions to eliminate as much ethylene as possible. Keep the flower cooler's temperature low. Ethylene does more damage in warmer temperatures. Don't store food, such as employees' lunches and fruit basket products, in the flower cooler. Remove cuttings and foliage scraps from design room and cooler floors. Remove wilted flowers from the rest of the stock. Scrub buckets with an antibacterial solution before each use. Purchase ethylene-sensitive flowers treated with silver thiosulfate (STS) or treat products with STS in the shop. STS is a chemical solution which increases flowers' resistance to ethylene.

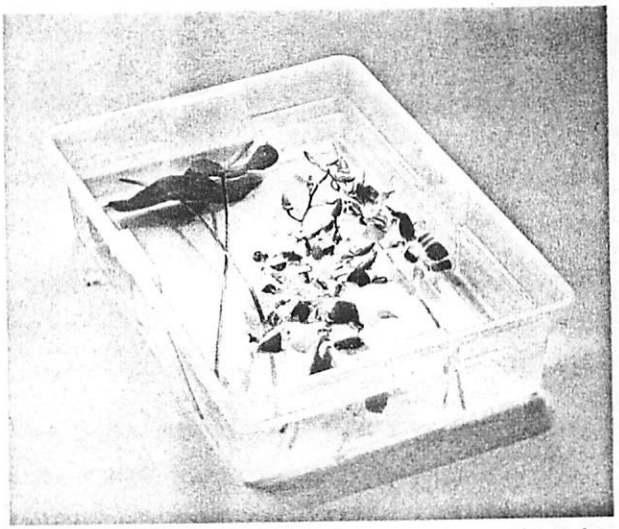
The following is a list of ethylene-sensitive flowers taken from Dew-y's FloraCare® Manual, published by Floralife Inc.:

- agapanthus
- alstroemeria
- anemone
- astilbe
- bouvardia
- campanula
- carnation
- miniature carnation
- cornflower
- delphinium
- dendrobium
- eremerus
- freesia
- goldenrod
- gypsophila
- kniphofia
- lily
- monkshood
- phlox
- scabiosa
- rose
- snapdragon
- stock
- sweet pea
- sweet William

TROPICAL FLOWERS

Tropical flowers require different treatment. They should be cut at an angle underwater and placed in a flower food solution. Horn suggests submerging entire anthuriums and dendrobiums in room-temperature water for 15 minutes if they arrive limp.

Tropical flowers like anthuriums, orchids, birds of paradise, heliconias and gingers are sensitive to cold temperatures. The SAF manual suggests storing them outside the cooler at the following temperatures: anthuriums at 55 F, birds of paradise and



Place entire anthuriums underwater to replenish moisture lost during shipment.

red gingers at 45-50 F, heliconias at 55-60 F, and orchids at 50-55 F. Humidity of 90-95 percent suit tropical flowers, so mist them liberally. Some cooler manufacturers make special refrigerators for tropical flowers.

CONDITIONING FLOWERS

Follow these steps for handling flowers after they arrive in your shop:

1. Inspect the order. Carefully remove individual, paper-wrapped flower bunches from the delivery carton one at a time.
2. Unwrap each bunch and remove rubber bands, twist ties or other binding materials.
3. Hold stems' ends under warm (100-110 F) water. Cut approximately 1 inch from the ends at an angle with a sharp knife or cutting tool. Avoid pinching the stems. Underwater cutters cut an entire bunch of stems at once.
4. To prevent decay, remove foliage that will fall below the water line.
5. Place ethylene-sensitive flowers in an STS solution. Non-ethylene-sensitive flowers should be treated with a hydrating solution. Prepare both solutions according to manufacturer's directions.
6. Place stems in a warm (100-110 F) solution of water and flower food prepared according to manufacturer's instructions. Store flowers (other than tropicals) in a cooler.
7. Maintain cooler temperatures at 32-36 F and 85 percent humidity.