

PRACTICE THE 3 C'S: NEW TECHNOLOGY TO IMPROVE QUALITY AND SAVE LABOR

> Flower quality is the key to establishing a highly respected floral business. Advancements in care and handling practices allow growers, wholesalers and retailers to guarantee flower quality. New care and handling technology supports the basic care and handling practices essential to maintaining quality focusing on basic postharvest steps.

The American Floral Endowment has established the three C's for care and handling: cooling, care and cleanliness. All three are equally important.

Cooling – Most flowers should be stored and shipped between 33 and 36 F to reduce respiration and preserve the sugars within the leaves, stems and flowers for use after harvest.

Care – Flowers require water and sugar to sustain the natural metabolic processes within the flower. Using clean water and a commercial hydration or flower food promotes water uptake in the flower. Flower food provides natural horticultural sugars, while limiting bacterial growth due to the low water pH resulting from the buffers in the postharvest products. Without water and sugar, flower life will be shortened, and flowers may not open properly.

Cleanliness – This is a “must do” step in successful care and handling. Clean buckets, fresh water and clean clippers limit the buildup of microbes in storage and vase solutions. Bacteria can block stems and restrict water movement up the stem.

New technology makes following these key handling practices easier and more effective.



SHUTTERSTOCK/FUSIONSTUDIO

No need to cut flower stems – You read that correctly! New hydration and flower food solutions — specifically Floralife Express Technology Hydration and Flower Food Solutions and Chrysal FloPro 2 — eliminate the need to re-cut stems. Think about the time and labor you can save if you do not cut stems! Continue to use clean buckets and clippers with these products, as with other flower hydration and food products.

Controlling ethylene – Ethylene is a colorless and odorless gas that reduces vase life, prevents flowers from opening and may cause flower buds and leaves to drop. It is well known that atmospheric ethylene in coolers, workstations and display areas, as well as during transport, will damage flowers. It is not widely recognized that flowers themselves can produce ethylene when stressed due to lack of water, high temperatures, vibration, or extended storage.

Anti-ethylene treatments prevent the action of external ethylene and the production of internal ethylene, even if the flowers are stressed. After harvest, growers add these anti-ethylene products, such as Floralife's Ethylbloc and Ethylene Buster by Chrysal. Traditionally, truck compartments loaded with flowers were also treated with these products; now, small sachets can be slipped into individual shipping boxes.

Ethylene-sensitive flowers include carnations, delphinium, baby's breath, lilies, snapdragons, roses, and many others. Anti-ethylene products are cost-effective — only about \$0.0005 cents per stem. Yet some of these flowers

are still not shipped with the benefits of anti-ethylene products. Many rose varieties will last longer and open fully when treated. Commercial air purification systems for coolers are designed to control ethylene in the air but do not control ethylene produced within the flower. So, if the flowers have been stressed, it is unlikely that the air purification systems will prevent ethylene damage. Retail and wholesale florists should require flower suppliers to use an anti-ethylene product on all ethylene-sensitive cut flowers and potted plants.

Enhanced flower foam – Foamflower foam's formulation has been improved to increase the life of stems inserted into it. In the past, some retail florists were concerned that flowers and foliage in foam might not last as long as flowers in vase solutions. That is no longer a worry. Flower foams are available in different textures and forms for specific uses. The foam market also now offers products that are biodegradable, appealing to retailers and consumers concerned with sustainability.

New technologies are emerging all the time. Review your care and handling processes over the summer and identify which procedures and products to update to enhance the quality of your flowers and increase your customers' satisfaction with their purchases. 🌸

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CONVENIENT CHEAT SHEETS

The American Floral Endowment has created short summaries offering guidance on cooling, care and cleanliness. You can print them out and hang them prominently in your shop's bathroom or design room. Find them at safnow.org/moreonline.