

# Floral Care & Handling Tips to Boost Your Bottom Line

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# Why is Care & Handling Important



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- Flowers are a perishable commodity.
  - Severed from the root system
- Flowers are a luxury good.
  - Consumer expendable income
- Flowers are commonly mishandled.
  - Consumer dissatisfaction!
  - Consumers expect 7 days of vase life
  - Should be what the industry minimally strives for!



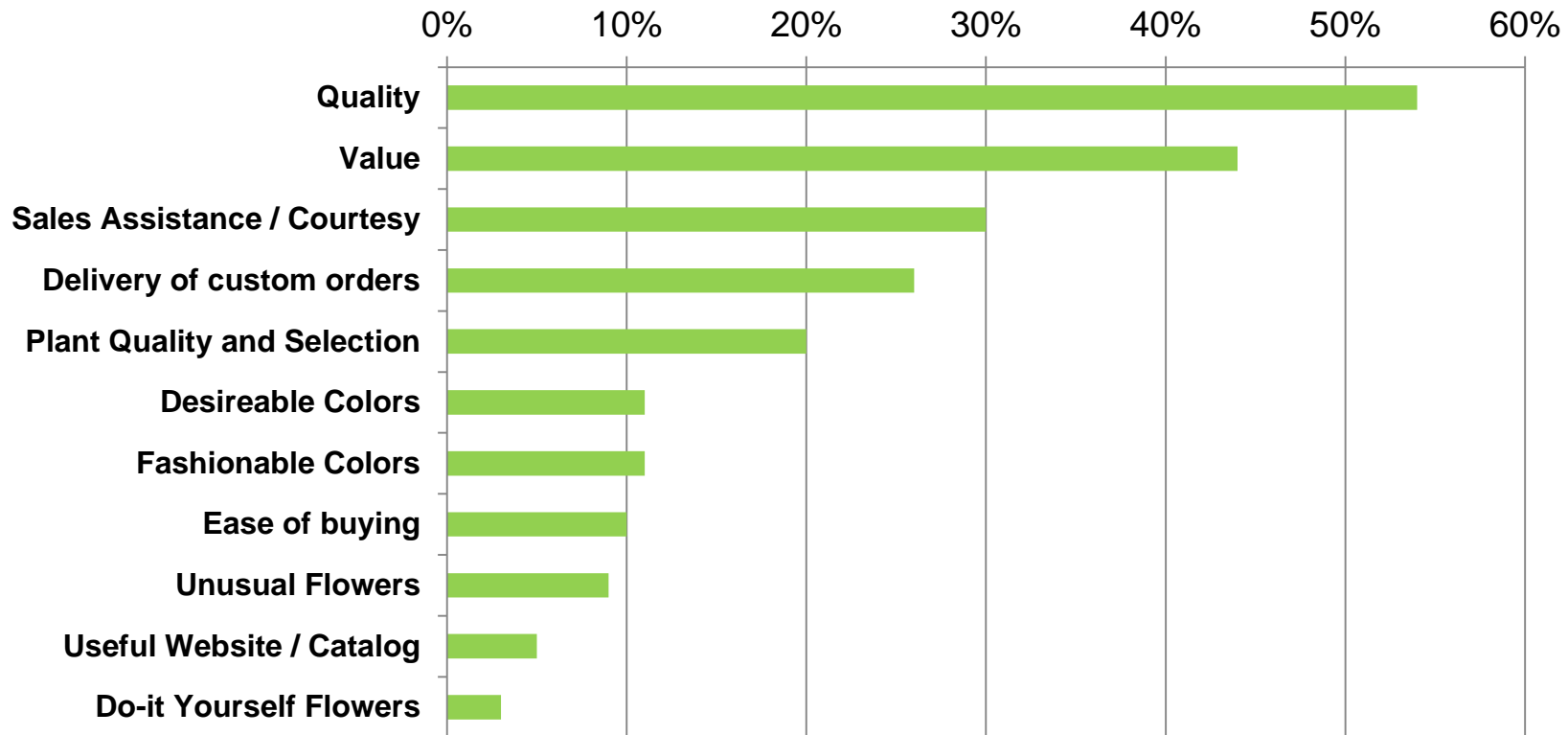
# Factors Influencing Consumer Behavior



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*Based on a consumer study of 1,200 flower-buying households in the U.S., over 14 years and four surveys, consumers rated the following positive/negative influencers*

## By Percent Surveyed



CARE: Time, Temperature, Sanitation

# Pillars of Cut Flower Care

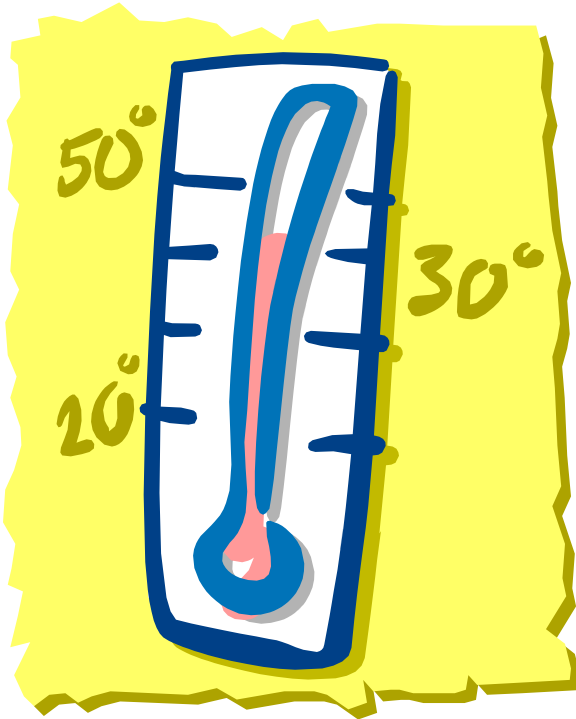
- Keep flowers away from heat as much as possible
- Keep the time outside water / solution as short as possible
- Prep your flowers - develop standardized procedures so quality does not become a coincidence – plan your time!



# Temperature



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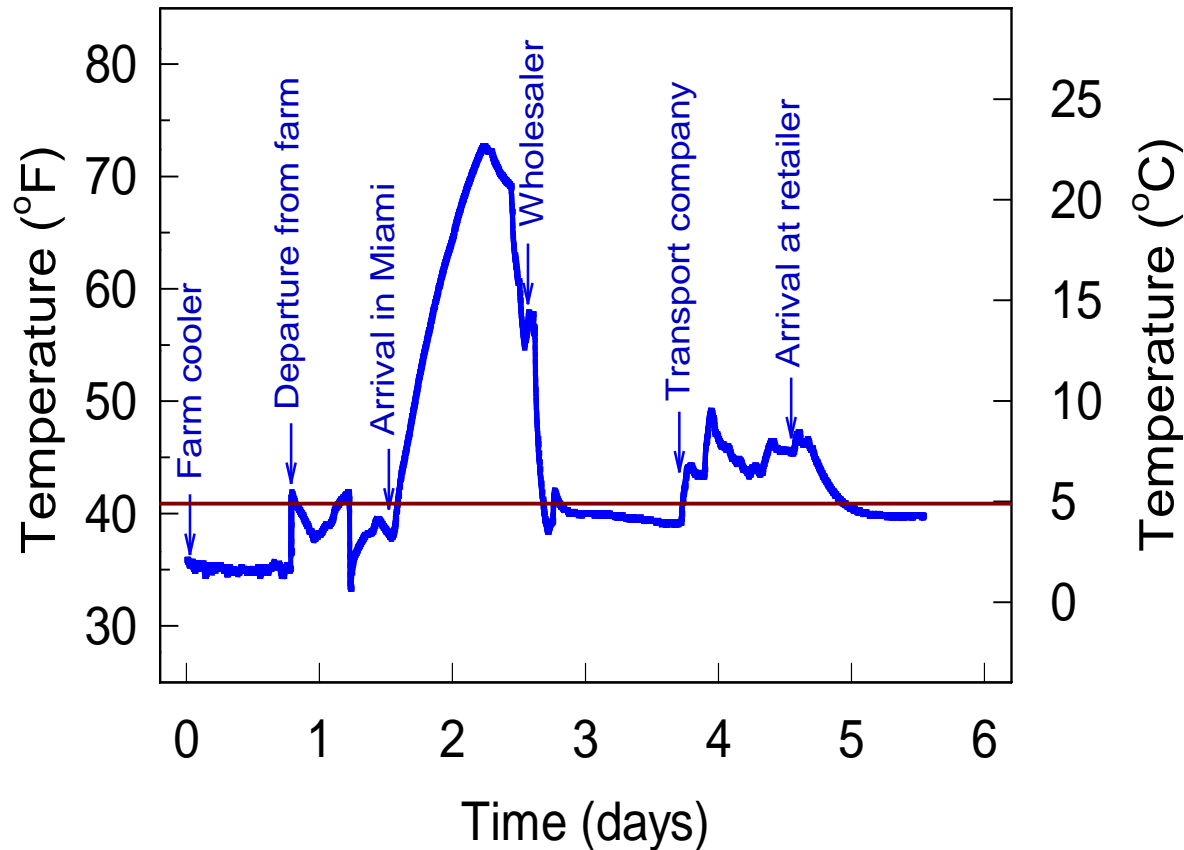
- Temperature has the most influence on vase-life as it effects the metabolism rate of the flower – low temperature slows metabolism
- High humidity slows water loss
- Hydrated flowers are healthy flowers
- High temperatures have a negative effect on the vase-life of flowers



# Temperature Management



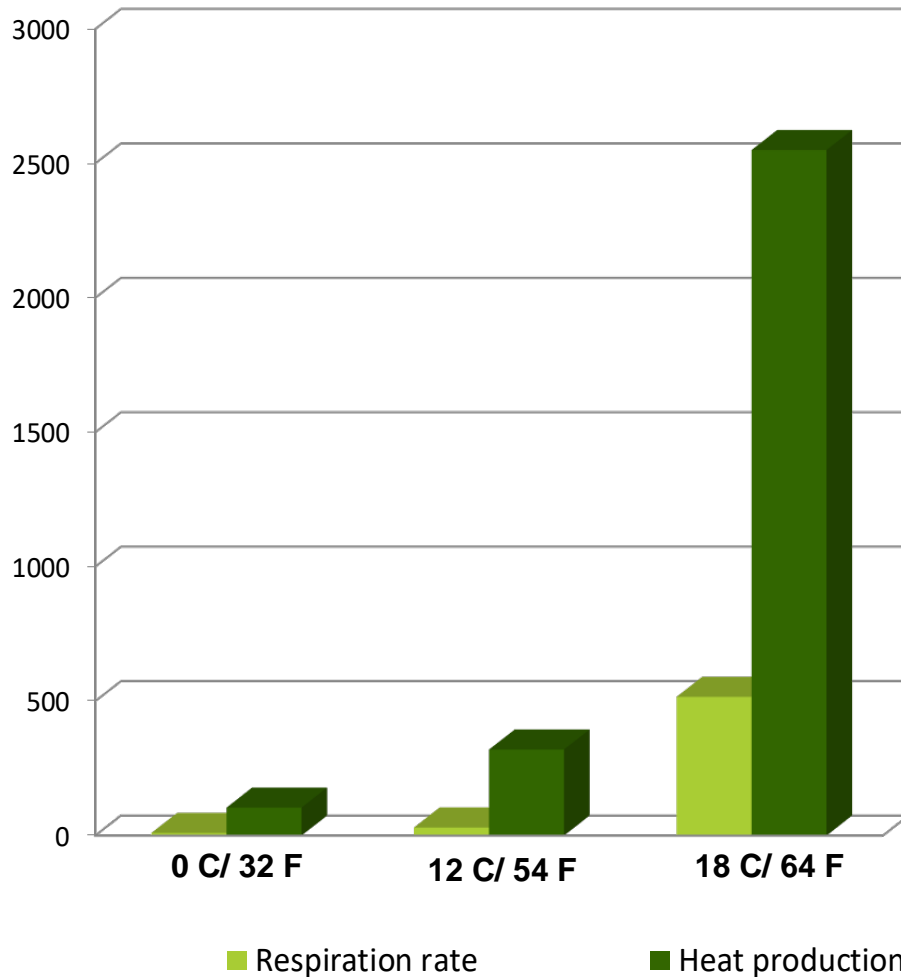
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**Flower temperatures during shipment from South America to the US.**



# Temperature & Respiration



- Cut flowers respire 3 x more at 54° F than at 34° F
- Increased respiration rate leads to shorter vase life
- Respiration creates additional heat

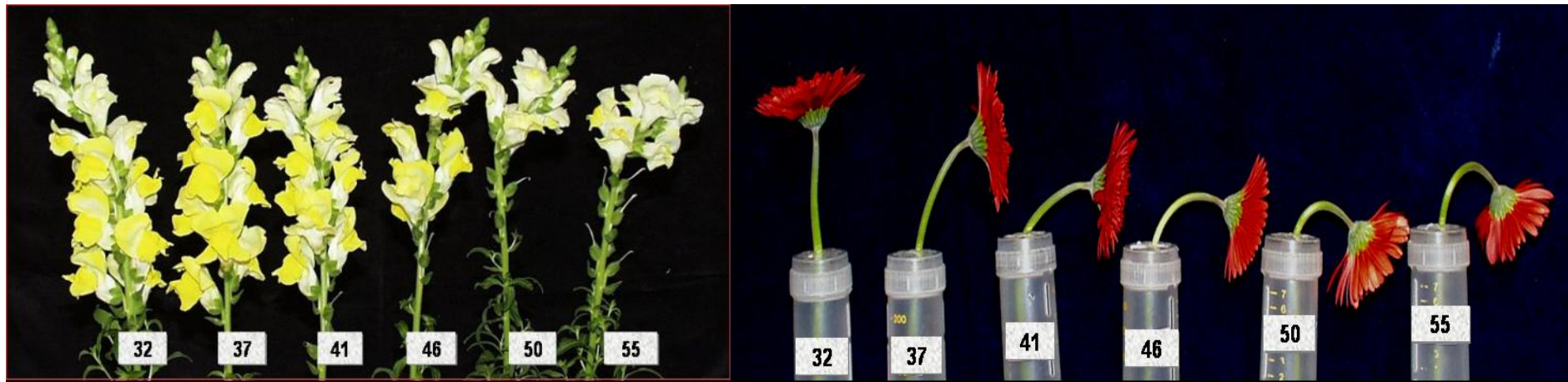




# Effects of Temperature



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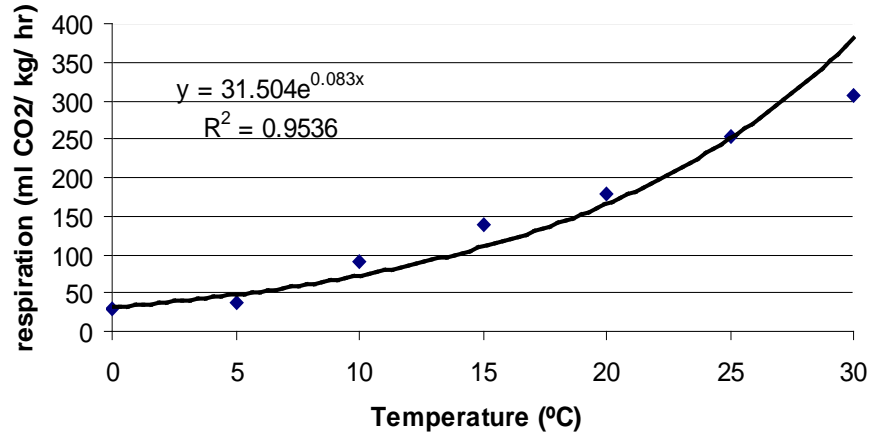
A few degrees matters!



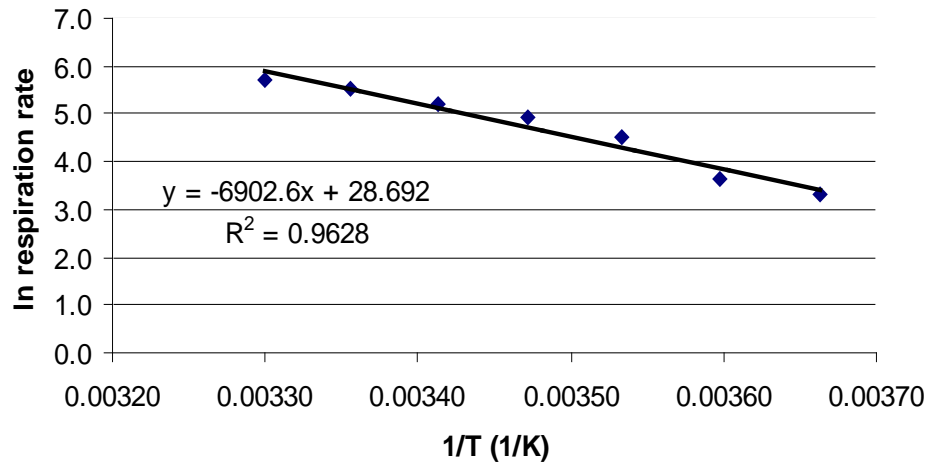
# Respiration



Pink Rose



Pink Rose



# Components in Flower Food



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Component	Function
Sugar	Provides carbohydrate (food) for the flowers
Acidifying agent	Flower stems take up water better at low pH (3.0-5.0). Acidifying agent lower the pH of solution
Stem unpluggers	Microbes (bacteria and fungi) grow rapidly in vase water. These microbes clog the “plumbing” of the flower stems and impede the water uptake  Stem unpluggers keep the vase water clean and stems free flowing



# Importance of Correct Dose



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- Correct dosage is important for best performance of flower food
- Both under- and over-dosing reduce the effectiveness of flower food





# Importance of Correct Dosing!



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0%

25%

50%

100%



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# BACTERIA AND *BOTRYTIS*

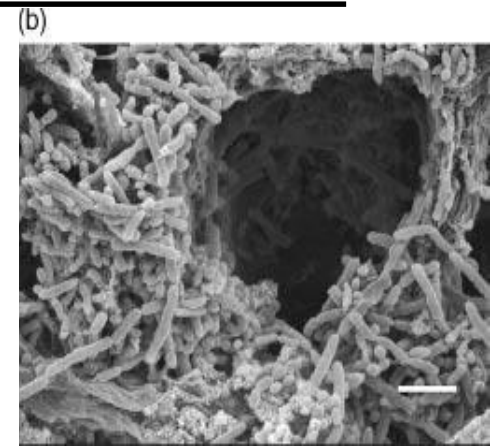
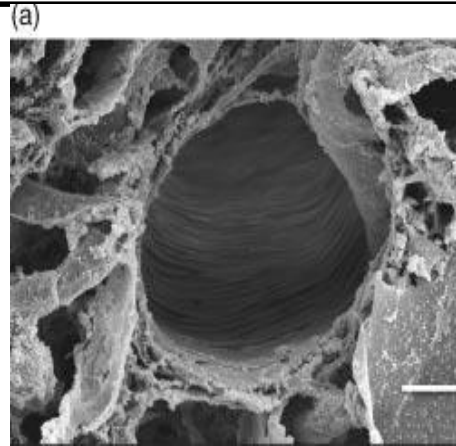


# Why sanitation is important



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- Bacteria clogs stems.
- Clogged stems lead to hydration problems and bent neck.
- Bacteria produce ethylene.
- Fungi are opportunists.
- The effectiveness of all postharvest products is dependent on a clean environment.



Fungicide, bactericide, cleaner is needed.



# Industrial Cleaner



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- **Disinfect, Clean, and Deodorize**
- Use on flower buckets, vases, counters, tools, work surfaces, coolers, shipping & packing areas
- Reduces bacterial growth which harms flower stems which reduces flower vase life
- Major advantage is the persistence of the disinfecting effect or “residual activity” compared to chlorine bleach
- No rinsing needed (ease of use)
- Will not stain clothes and has a pleasant smell
- Scrub items with solution and let soak for 5 10 minutes
- Can be dispensed with dosing unit







Not cleaned

Cleaned with water

Cleaned with D.C.D.(r)

- Cut flowers were stored in vases for two weeks.
- Water was discarded.
- One vase was not washed. One was washed with water. One was washed with D.C.D.®
- Flowers were put back into vases with clean water only.





<b>Bucket Treatment</b>	<b>Relative Bacterial Counts</b>	<b>Relative Fungal Counts</b>
<b>Floralife D.C.D.™</b>	1	1
<b>Clorox®</b>	389	38
<b>Water</b>	889	560

***High Bacterial Counts = Dead Flowers***





- *Botrytis* is a fungus that attacks damaged, dead, and dying tissue
- Also called “Grey Mold”
- Spores need a liquid film of water to germinate
- Spores are ubiquitous!





- Temperature management
- Reduce or eliminate temperature fluctuations
- Proper sanitation
- Removing grower sleeves from bunches
- Avoid wetting the flower heads



# Treated vs. untreated roses



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## *“Freedom” rose*



Control



With Transport Paper



# Ethylene – What does it do in plants?



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- Growth Promotion
- Flower Initiation
- Fruit Ripening
- Flower, leaf and fruit drop (Abscission)
- Flower and Leaf Senescence (death)



# Ethylene Sensitive Cut Flowers



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- Carnations
- Delphinium
- Roses (some varieties)
- Alstroemeria
- Snapdragon
- Lily
- Stock





# Carnation



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# Delphinium



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## 'Clear Ocean' Rose



Control



EB Gas



EB Sachet

## 'Charlotte' Rose



Control



EB Gas



EB Sachet

(Source: Andrew Macnish, Ria Leonard, Amy Alexander and Terril Nell, University of Florida)

# Ethylene Sources



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- INTERNAL
  - Flowers/Fruit generate their own ethylene as a hormone
- EXTERNAL -
  - Other flowers
  - Fruits & Vegetables
  - Bacteria
  - Burning Organic Material
  - Cigarette smoke
  - Propane heater or truck fumes





- Educate your staff to educate customers on how to take care of their flowers
- Inform them as to what to expect from individual varieties
- Give your customers at least 10 grams of flower food and explain the importance of properly mixing
  - 10 grams makes only 1 quart of solution
  - 5 grams makes only 1 pint of solution
- Sell flowers by variety or cultivar names





The screenshot shows the FloraLife website interface. At the top, there is a navigation bar with the FTD logo and 'FLOWER EXCHANGE' text. Below this is a secondary navigation bar with categories like 'SPECIAL OFFERS', 'BUILD-A-BOX', 'CASH & CARRY', and 'HOLIDAYS & EVENTS'. The main content area features a search bar, a 'FLOWER FINDER' sidebar with filters for color, type, variety, grade, and delivery date, and a 'STEM COUNT CALCULATOR'. The central focus is the 'Floral Care and Handling' section, which includes a list of educational topics: Sanitation, Hydration, Storage, Flower Food, Ethylene, Water Quality, Rose - Care & Handling, Potted Plant - Care & Handling, Fresh Ways to Peddle Your Petals, 5 Steps of Fresh, and Quick Tips for Healthier Flowers. A red arrow points to the 'Floral Care' link in the left sidebar. At the bottom of the main content area is a 'BACK' button.





# Questions?

**Email: [sdaum@floralife.com](mailto:sdaum@floralife.com)**

**Handouts are available at:  
[FTDi.com/FTDUniversity/WebinarMaterials](http://FTDi.com/FTDUniversity/WebinarMaterials)**

**Webinar will be available to view at:  
[YouTube.com/FTDMercuryNetwork](http://YouTube.com/FTDMercuryNetwork)**