

### MAKE THE CUT THIS VALENTINE'S DAY

**THE PATIENT** Valentine's Day roses

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**THE SYMPTOMS** Wilted, dry leaves that won't open

#### The Examination

Amazingly, the roses in the photograph are the same age, grown by the same grower and handled identically until we received them in our laboratory. They were even placed into the same commercial flower food. And yet, the flowers on the right look like a Valentine's Day Massacre. These flowers are wilted, not opening and have dry leaves, while the flowers on the left are opening and look fine.

#### The Diagnosis

One simple act made all the difference. We re-cut the stems of the flowers on the left but not those on the right. Water is as critical to the life and quality of the flower as blood and oxygen are to our hearts, brains and bodies. Re-cutting the stems removes the blockages that prevent water absorption by the stem. Water is carried from the vase solution to the leaves and flowers through a series of xylem vessels, small tubes that act much like arteries carrying blood to the human heart. The xylem tubes are easily blocked within the bottom inch of the base of the stem by air bubbles, microbes, dirt and other debris (just as plaque blocks arteries) that might have contaminated the hydration solution used by the grower, wholesaler or retailer. Storing flowers too long dries out their cells, rendering them dysfunctional and increasing the problems associated with water absorption.

One such problem is the flower's failure to open. The expansion of existing cells, not the addition of new ones, opens flowers. And existing cells can't expand without absorbing water, with flower food in it. Sugar in flower foods provides the energy for the expansion and maintains the flower color.

#### The Cure

Re-cutting stems is extremely important to the life of cut flowers. Start with a clean, sharp cut of the stems when received and when you make arrangements. New research shows that cutting underwater is not necessary; if you cut the flowers dry, quickly place them in water.

#### Healthy Habits

Stem re-cutting is the first step in an important process. Continue that process by using a properly mixed commercial flower food with a biocide, clean buckets and clean containers.

Don't deny your flowers (or your customers) their full beauty — give them the water they need and the access to it by cutting the stems again. Don't forget to give customers the flower food to keep the healthy process going. 🌹

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**LOVE THEM, LOVE THEM  
NOT** The roses on the left benefited from TLC: tender loving cuts to their stems.

