

What Lies Beneath

By Gay Smith

HERE'S WHAT YOU KNOW: FLOWERS ARE PRETTY, but dirty. Blooms pollute bucket and vase solutions quickly when untreated water is used rather than flower food.

What you may *not* know is that visible contaminants — soil and organic material on stems — are only the half of it. When it comes to bacteria, it's what you *can't* see that mucks up the system. When phloem cells “bleed” enzymes and carbohydrates as part of healing wounded tissues, tap water lacks antimicrobial ingredients to keep pollution in check. Consequently, bacteria and fungi populations detonate in this carbo-enzymatic rich soup. If biocides are nonexistent, or under-dosed, the micro-organisms explode fast, sometimes completely blocking water uptake. Leaves and flowers go limp and finally wilt. If stems are nicked or scraped, the wound site stimulates “bleeding” and provides an excellent entryway for diseases or bacteria infection. The worst part? Bacteria and fungi are microscopic, so even if untreated solutions appear clean, they are not. Remember the adage: if you wouldn't drink it or out of it, neither will your flowers.

Find the Right Solution (and Solutions)

Biocides vary by product and manufacturer, but here are several “popular” options:

Chlorine. Probably the best known biocide, chlorine is an aggressive antimicrobial. **Drawbacks:** Once chlorine molecules attack organic matter, they are rendered inactive, because chlorine has no residual power. **Best Bet:** Ditch liquid bleach in favor of a slow-release chlorine that packs its punch over a two- to four-day period. Available from Floralife (PRG) and Pokon & Chrysal (Professional Gerbera).

Aluminum sulfate. Another biocide used in hydration and flower food solutions, aluminum sulfate, boosts flow, lowers pH and keeps pollution in check. **Drawbacks:** Sometimes, aluminum sulfate causes a milky appearance depending on the hardness of the starting water. It is not a negative reac-

Make It Work

When should you clean key elements of your shop and how often should you be scrubbing?

Buckets: Every time one is dumped

Tools: Spray knives and shears with a quat-based floral cleaner at least two to three times daily

Work tables: Sanitize several times daily

Floors: Mop with anti-bacterial solution weekly

Cooler floors and shelving: Monthly

Aprons: Wash weekly

— G.S.

tion, but simply a precipitate of calcium and magnesium molecules as a function of lowering the pH of the water. **Best Bet:** Use cleaners effectively by scrubbing buckets or work surfaces with a low-suds biodegradable floral detergent first; then sanitize by spritzing with a floral cleaner based on quaternary ammonium compounds. Quat-based cleaners not only sanitize, they also provide residual anti-microbial power. Available from Floralife (Micro-bloc and DCD) and Pokon & Chrysal (Micro-bloc and DCD) and Syndicate Sales.

Handle with Extra Care

Handling procedures can go a long way in controlling bacteria. For example, when a stem is cut, the wound will start to seal up, just like human skin seals wounds. With flower and plant material, this layer of callous tissue keeps bacteria and organic gunk lodged in the bottom inch or two and must be removed to insure good flow. Do not place polluted stems in clean solutions. Re-cutting at least an inch is important in all stages of the distribution chain anytime flowers are held dry for more than an hour.

Sanitation Matters

The growth of bacteria is accelerated when work areas are unclean. Dirty counters, vases, tools and equipment reduce vase life at every level of flower handling. Here are some of my best tips for keeping your shop clean:

- Using a good antimicrobial is as important as developing and maintaining a sanitation schedule.

- Toss rags and use paper towels to avoid cross-contaminating surfaces.

- Sanitize trash barrels and floor mats, dip your broom into the cleaning bucket to clean off bristles.

- Avoid a mountain of dirty buckets by assigning bucket cleaning as a daily or weekly activity. Let buckets dry before stacking them. Remind designers that swishing water in a container is no substitute for proper sanitation.

- Use a detergent scrub and bleach or quat-solution spray to ensure your tools and materials are not only clean, they are also sanitized.

Good to Go, From the Start

Consider the cost per stem of ready-to-use flower food solutions, and you'll realize that clean, correctly prepared solutions are one of the cheapest insurance policies you'll ever buy. In reality, quality is not defined by the price on the sleeve or the number of stems in a bunch, but by focusing on procedures that maximize the vase potential of flowers so consumers are satisfied with their purchase. 🌿

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