

QUALITY VALENTINE'S DAY ROSES: EASY AS 1-2-3

> On Valentine's Day, your customers are looking for that extra special "wow" effect: beautiful roses that open and hold their shape and then delight the recipient for days on end. Don't disappoint them with drooping flowers and dropped leaves. While the quality of roses depends on several factors throughout the supply chain, retail florists can help roses last — and avoid any disappointed customers — by concentrating on three simple postharvest requirements.



CLEAN ACT Roses placed into dirty vase solutions die rapidly (right) compared to roses placed into clean water with a flower food.

Step 1: Feed and Hydrate Them

Roses are more than 90 percent water, and hydration is critical. Retail storage and vase solutions provide water and sugar for roses to open. Properly mixed commercial flower foods also reduce solution pH, which aids water absorption and provides a biocide to limit microbial growth in flower stems. We've found that commercial flower foods can extend roses' vase life up to six days, depending on the variety.



ETHYLENE EFFECT 'Freedom' roses drop leaves and have reduced vase life when exposed to ethylene (right) compared to flowers that are not.

Microbial growth in the storage and vase solution must also be controlled; otherwise, microbes, which are invisible to the human eye, will block the stem opening, restrict water uptake and eventually kill your roses. Use clean and sanitized buckets and clippers to prevent microbial contamination. You don't need to cut stems underwater. In fact, non-circulating underwater cutters allow for the accumulation of microbial populations.

Finally, remember to give customers a pack of flower food to take home. The packet will also help extend vase life.



OPENING DAY 'Movie Star' rose flowers failed to open when exposed to ethylene (right). Without exposure to ethylene, flowers opened well.

Step 2: Protect Them

Roses are ethylene-sensitive and stress during handling — excessive storage periods, high shipping and storage temperatures, etc. — will promote the production of ethylene and cause premature flower death. Ethylene can also be the culprit when blooms fail to open or roses drop their leaves.

Prevent ethylene damage by requiring growers to treat roses with either Silver Thiosulfate or 1-MCP (sold commercially as EthylBloc or Ethylene Buster). These products prevent



COLD SPELL 'Freedom' roses displayed at 70°F had a short vase life (right) compared to flowers displayed in the cooler.

the action of ethylene from external sources, as well as from the internally produced ethylene.

Step 3: Keep Them Cold

Cold temperatures help roses conserve energy that can later be used for flower opening and extended vase life. To accurately monitor temperatures (roses should be kept between 33°F and 35°F), hang a thermometer in the cooler and keep a thermometer in flower buckets. Designate an employee to monitor and record the cooler temperature every two to three hours. 🌹

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