

Trading Spaces

By Gay Smith

ARE THE DAYTIME TEMPERATURES IN YOUR AREA lower than 38°F between mid-November and January? If so, you probably fence a small portion of your parking area to store evergreens and holly outside during December. I started my floral career in Phoenix, where a naturally cold, outside storage option doesn't exist. Instead, we struggled to stuff holiday greens and boxes of *Ilex*, *Callicarpa* (Beautyberry) and mistletoe into back-stock coolers already packed with everyday flowers and foliages. Space was tight. Pine boughs dried out fast, and often, when we pulled product, more holly berries were in the bottom of boxes than on the branches.

Cooler space is premium real estate at the holidays. There's a way to maximize it without sacrificing flower quality. Here are answers to typical questions I hear from retailers and wholesalers who struggle with staging products in December.

Do I really have to keep greens in the cooler?

Evergreens, huckleberry, berried branches and even eucalyptus like it cold and are best stored between 33°F and 35°F. Low temperatures minimize ethylene production and exposure. Stack boxes and bundles on pallets, leaving about 10 inches between the boxes and cooler walls to maximize air circulation.

Cool foliage bundles before covering with plastic to avoid dehydration and minimize condensation (and the resulting rot and *Botrytis* infection). Hang easy-to-read, laminated signs in different coolers so the staff knows where foliages go.

Will ethylene from holiday greens kill flowers stored in the same cooler?

Not all evergreens produce ethylene. The following are **low ethylene producers** and can be stored with other cuts and blooming plants: Noble fir, cedar, spruce and hemlock. **Moderate ethylene producers** are balsam fir and red, Scotch and white pines. These also can be stored with other cuts and plants, but temperature control and airflow is critical — any mildew or *Botrytis* development will increase ethylene production. Douglas fir and redwood, however, are **high ethylene producers** and should be stored away from all other flowers and blooming plants. A good storage temperature for evergreens is 33°F to 35°F.

Categorize and separate greens according to their ethylene production levels so you can store them appropriately.

Are popular non-evergreen foliages also ethylene producers or ethylene sensitive?

Provided there's no rot inside the bunches, huckleberry and boxwood neither produce nor are sensitive to ethylene (store the bunches at 33°F to 35°F). Nor is eucalyptus, provided it's not warm or water-stressed — in which case it becomes an ethylene-producing machine. Keep it hydrated by processing the foliage in sugarless hydration solutions like Floralife Hydraflor or Chrysal Professional #1 and store at 33°F to 38°F.

Bonus Holiday Green Trivia

What's the difference between holly and *Ilex*? *Ilex* is the botanical name for a wide variety of evergreen and deciduous shrubs and trees. English holly (*I. aquifolium*) is the most familiar variety mentioned in holiday legends and used in Christmas wreaths. This evergreen species grows well in the Northwest and coastal Northern California. English holly is available with green or variegated foliage and generally sold by the box rather than by the bunch.

Ilex verticillata, commonly called winterberry, is a deciduous shrub and loses its leaves in the fall. *Ilex* branches sport heavy clusters of red berries with all or most of the foliage gone.

Why do my berrying branches lose so many berries?

Berries fall off because of ethylene exposure. With the exception of *Ilex* sold in the Dutch auctions, most twigs bearing fruit (berries) are not treated with an anti-ethylene product such as STS, so keep them apart from ethylene producing flowers, foliages, fruits and vegetables.

Juniper is very ethylene sensitive and produces ethylene if there is any *Botrytis* inside the bunches. Cool these bunches before covering with plastic to avoid condensation. **Holly** is ethylene and temperature sensitive and it should be treated with anti-ethylene treatments like silverthiosulphate or 1MCP.

Rose hips, callicarpa, sumac, privet and hypericum fare best when processed in a hydration solution (no sugar). They gain no benefit from the sugar component in flower foods.

How can I get the best shelf life from holly? Spray or dip it with an anti-transpirant upon arrival (one industry veteran swears by Hydroseal from Smithers-Oasis for holiday greens), and store it very cold: 33°F to 34°F (it begins to deteriorate once above 35°F). Berries turn black if exposed to ethylene, so store holly away from all ethylene sources (cigarette smoke, exhaust, dirty water, fruits, high ethylene producing Christmas greens, flowers and rotting green material).

Never spray berried foliage with an oil-based leaf gloss — it will turn the berries black. A silicon-based leaf cleaner is OK (like Pokon's Leaf Shine). Holly leaves also turn black if infected with a disease, *phytophthora ilicis*. Sanitize cutters at least twice a day and throw infected stems into a trash can (not on floor) to avoid spreading the contamination. 🌿

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