

## EXTEND THE VASE LIFE OF DAHLIAS

> Lush and lovely, dahlias have been called the queen of cut flowers. With a stunning variety of colors, shapes and sizes, there is a dahlia for every occasion. All colors and shades are available with the exception of true blue, and sizes range from petite miniatures to stunning dinner plates. Add singles, doubles and variety of petal styles, and you have the most diversity in any commercial cut flower. The most commonly grown types for commercial cut flowers are the medium-sized ball or decorative types due to their productivity, and compared to other types of dahlias, a relatively long vase life.

Alas, for every flower there is an Achilles' heel — and for dahlias, it is the vase life. Most types (there are thousands of cultivars!) have a relatively short vase life and are best used for events. The stunning dinner plate types can be particularly short lived. However, commercial cut flower growers have sorted through the many cultivars to find those that are not only productive but also long lasting. Commercial cultivars should last at least five to seven days and up to 11 days for specific cultivars harvested as buds. Work with your growers and suppliers to select the cultivars and harvest stages best suited to your needs.

For most types, select flowers with one to two outer rows of petals fully expanded as many cultivars do not open up much after harvest. Ball and pompon types can have three or four rows of petals open. Flowers harvested when they are too open are prone to shattering. Avoid flowers where the back petals are starting to wilt or look transparent.

For the longest vase life, some cultivars can be purchased as buds when they are just starting to open with only a few petals showing color. These flowers should be treated with flower foods containing sugar and can have a vase life of 10 to 12 days. However, few growers harvest at this stage.

Upon receipt, recut stems and place in water with a low-sugar flower food, which can increase vase life up to three days. In our research at North Carolina State University, we have found that using the plant growth regulators benzyladenine (BA, a cytokinin) and gibberellic acid ( $GA_{4+7}$ ) can increase vase life by two days. Commercial solutions for bulb flowers can provide similar results.

Cold storage at 35 to 40 degrees Fahrenheit is necessary for this relatively short-lived flower, but keep storage to less than four days as longer storage will decrease vase life. After storage, recut stems again for longest vase life. Our work with dahlias shows that they last just as long in floral foam as they do in water. Dahlias did not appear to be sensitive to ethylene in our testing.

Finally, many floral professionals may have heard recommendations for searing stem ends with flames, dipping stems in hot or boiling water, or filling the hollow stem cavity with water and plugging the cavity with a piece of cotton. Our work has shown that the standard practices of recutting stems and using commercial holding solutions work the best to increase vase life. 🌿

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