FloraLife®

Research Update

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Garry Legnani, PhD.
Manager
Horiculture Research
and Development
Smithers-Oasis Company, Kent, OH

Long-lasting Hydration for Hydrangeas Using Floralife® Quick Dip 100 Hydration Treatment and Floralife Crystal Clear® Flower Food

Introduction

Few cut flowers provide a greater visual impact than hydrangeas, contrasting a large but delicate floral display with lush green foliage. Unfortunately when utilizing hydrangeas as cut flowers, the large number of individual flowers, high foliage surface area, and thick woody stems make premature wilting a challenge. For these reasons, cut hydrangeas have a reputation of lasting just a few days in floral arrangements. In this experiment, various florist pretreatments were tested for rehydrating water stressed hydrangea in combination with flower longevity in water and in Floralife Crystal Clear®.

Method

Florists have various techniques they use to pretreat water stressed hydrangea prior to using in an arrangement. These techniques include:

1. Dipping stem ends in alum powder
2. Dipping stem ends in hot water (140° F)
3. Submersion in cold water (fully submerging flowers, stems, and foliage in 50° F water for 2 hours)

In addition we tested:

4. Floralife® Quick Dip 100 (QD 100)
5. Fully submerging flowers, stems, and foliage in cold water for 2 hours + QD 100
6. Control (no treatment)

The effects of these pretreatments were observed during the next 24 hours for water uptake and vase longevity in water or Floralife Crystal Clear®.

The white hydrangeas were received from a local wholesaler. The flowers were stored dry in the flower cooler (36° F) for 24 hours prior testing. The hydrangeas were unpacked and the flower leaves were removed, leaving 1 to 2 sets of leaves. Flowers were left out (dry) at room temperature until visible water stress was observed on petals (approximately 90 minutes). Experimental units of 3 stems were then cut to 12 inches, weighed, pretreated, and placed in vase solutions (500 ml / 6 inch vase) in the postharvest lab (12 hour fluorescent lighting, 70° F). The hydrangea stems were re-weighed following 24 hours in the postharvest lab to determine solution uptake.

Results

All of the pretreatments tested helped increase the water uptake in the 24 hour period compared to the untreated control flowers. The highest water uptake was observed with the 2 hour submersion treatment + Floralife® Quick Dip 100. It was also observed that the Floralife Crystal Clear® flower food significantly increased flower longevity compared to the water only treatments, regardless of pretreatments. The longest

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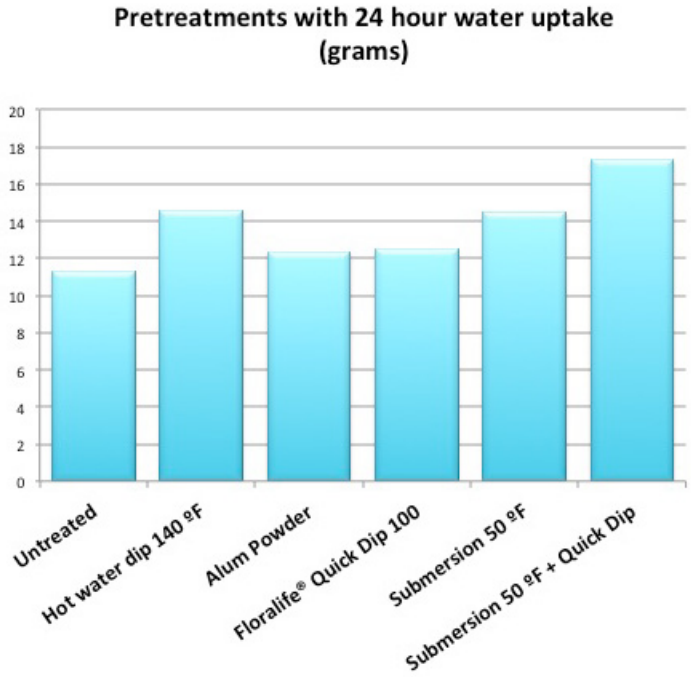
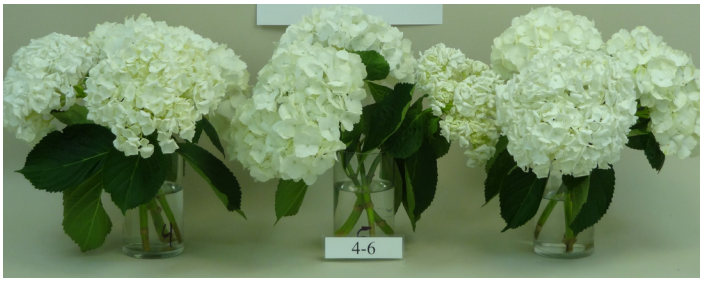
flower longevity was observed when the 2 hour submersion + Floralife® Quick Dip 100 pretreatment was combined with Floralife Crystal Clear®.





Day 8: Vase solution of Floralife Crystal Clear®

Day 8: Vase solution of Water

Day 8: Fully submerged flowers, stems, and foliage in cold water for 2 hours + Floralife® Quick Dip 100 in vase solution of Floralife Crystal Clear®

Day 8: Fully submerged flowers, stems, and foliage in cold water for 2 hours + Floralife® Quick Dip 100 in vase solution of Water

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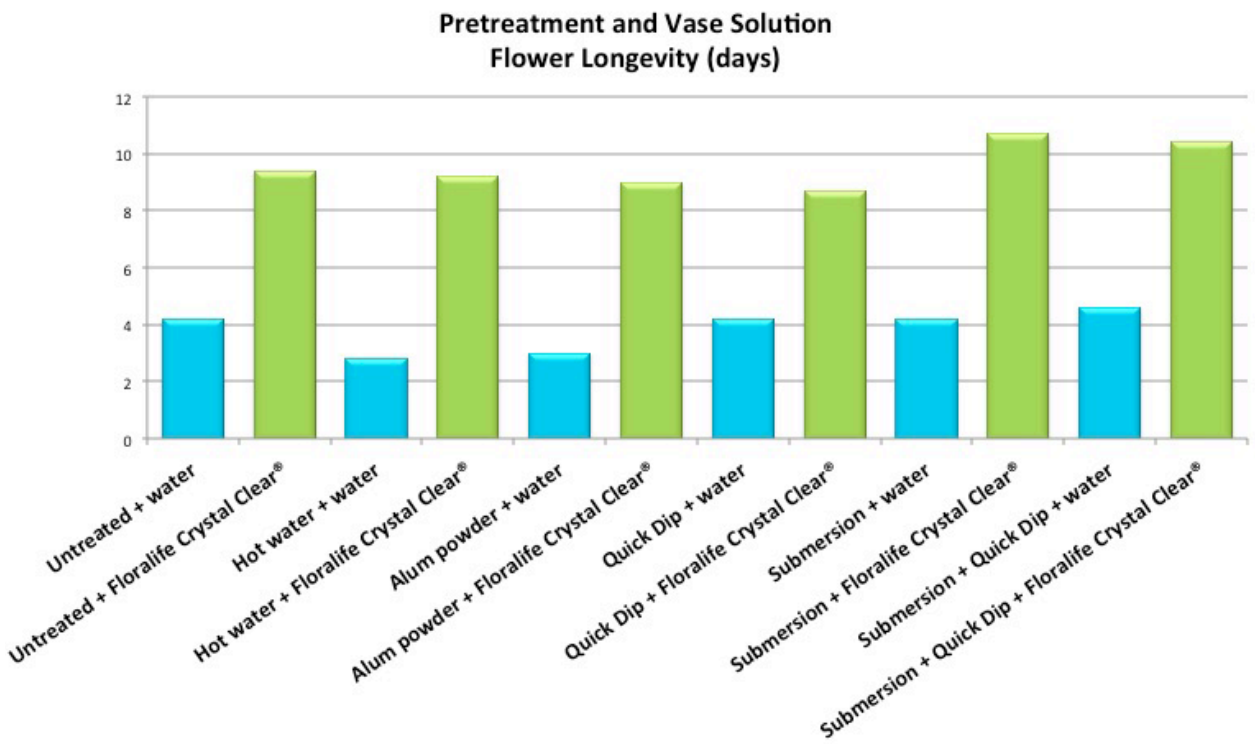

Conclusion

For this experiment regardless of the pretreatments, the comparisons with the scientifically formulated Floralife Crystal Clear® vase solutions observed significantly better flower longevity than the water vase solutions. The pretreatments of the stressed hydrangea with submersion in cold water (50° F) followed by Floralife® Quick Dip 100 treatment and placement in Floralife Crystal Clear® flower food resulted in the highest 24 hour uptake and resulted in a vase longevity of 10 days. Although submersion is a widely used practice in the floral industry, more testing is needed to affirm the efficacy of the submersion protocols.

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