



Kristen Miller, PhD.
Postharvest Scientist
Floralife, a division of
Smithers-Oasis Company

INTRODUCTION

Cut hydrangeas are a difficult to hydrate crop that often wilt prematurely and unexpectedly. Due to these unique challenges, we developed a hydrangea-specific formula intended to enhance the flow of liquid through the stems to hydrate and condition flowers after harvest and after a period of dry storage. This experiment demonstrates how hydrangea-specific technology enhanced flower quality throughout the supply chain and consistently improved vase life.

OBJECTIVE

The objective of this experiment is to demonstrate the increase and consistency in vase life of hydrangeas that are treated with **Floralife® Hydrate Hydrangea**, a new hydrangea-specific hydration product, as compared to those hydrated and stored in water.

METHOD

Hydrangeas were sourced from farms in Colombia and the United States in 2017, and were subjected to the simulation described in Table 1. Table 2 describes the products used at each step of the simulation. Hydrangeas were stored dry in cardboard boxes with loose plastic liners in the shipping phase of the experiment, and hydration bags on the end of the stems were not used. The flowers were recut at each step and vase life data was collected during the consumer phase.

CONCLUSION

The hydration of hydrangeas with Floralife® Hydrate Hydrangea after harvest resulted in longer vase life and less unpredictable and premature wilting than that provided by plain water. The additional use of Floralife® Hydrate Hydrangea as a storage solution for hydrangeas provided some extra protection from premature wilting, and delayed the average day of death of the first stem. Floralife® Hydrate Hydrangea provided consistent and lasting vase life for the hydrangeas tested when used as a hydration solution to prepare the flowers for dry shipping.

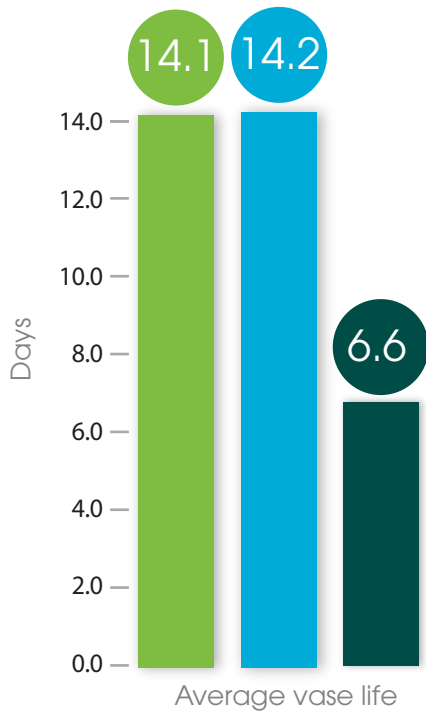
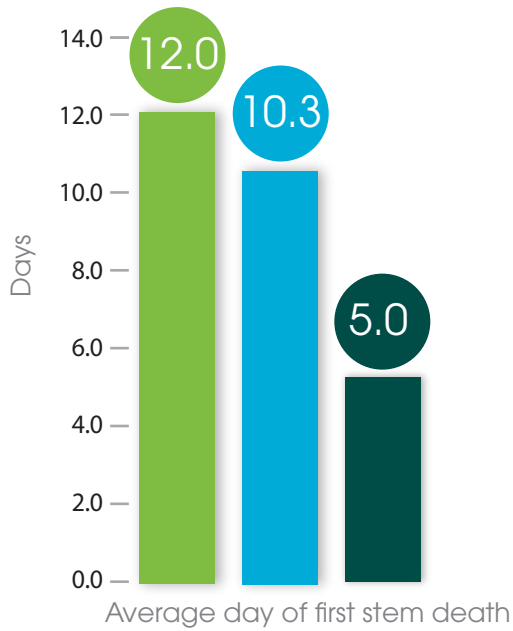
Table 1. Experimental method designed to simulate shipping of hydrangeas from farm to depot to retailer to consumer.

Phase	Hydration at Farm	Shipping	Storage – Depot	Storage – Retail	Consumer
Temperature	2° C	2° C	2° C	20° C	20° C
Duration	24 hours	3 - 5 days	2 days	2 days	until termination of flower

RESULTS

Table 2. Products used at each phase of three simulations.

Phase	Hydration at Farm	Storage (Depot/Retail)	Consumer
Simulation 1	Floralife® Hydrate Hydrangea	Floralife® Hydrate Hydrangea	Floralife® Express Clear 300
Simulation 2	Floralife® Hydrate Hydrangea	Floralife® Express Clear 200	Floralife® Express Clear 300
Simulation 3	Water	Water	Water



● Simulation 1 ● Simulation 2 ● Simulation 3

Figures 1 & 2. Average day of first stem death and average vase life (days) of hydrangeas in three different treatment simulations. Phases of simulations described in Table 2.

photos on day 7 in vases



Figure 3. Hydrangeas sourced from Colombia. Flowers on left treated with water throughout simulation. Flowers on right treated with Floralive® Hydrate Hydrangea for hydration, Floralive® Hydrate Hydrangea for storage, and Floralive® Express Clear 300 in vase.

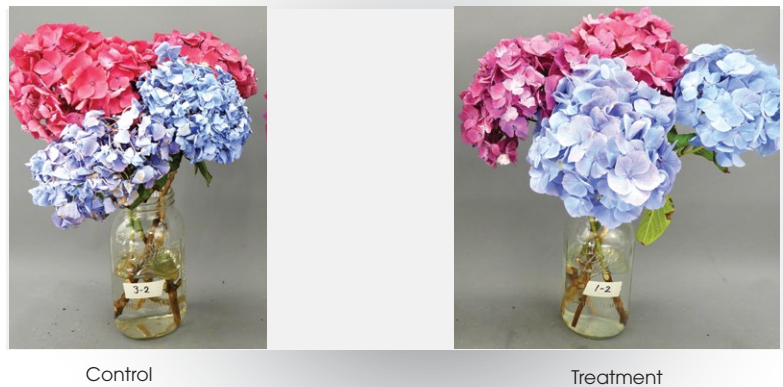


Figure 4. Hydrangeas sourced from California. Flowers on left treated with water throughout simulation. Flowers on right treated with Floralive® Hydrate Hydrangea for hydration, Floralive® Express Clear 200 for storage, and Floralive® Express Clear 300 in vases.