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# Effects of Postharvest Treatments on Hydration, Fresh Weight, and Quality of Cut Flowers

## Background

Vase life, proper petal development, and color intensity of fresh cut flowers are largely dependent upon water balance and nutrient availability. After harvest and during subsequent transportation, cut flowers lose a considerable amount of water. Replenishing this lost water with a quick hydration, along with maintaining a positive water balance, are essential to the quality and longevity of flowers. In addition, nutrients are needed to provide energy and building blocks for further growth and development. Proper sequences of postharvest treatments ensure initial quick rehydration of flowers followed by a constant supply of nutrients for greatest flower freshness.

## Research

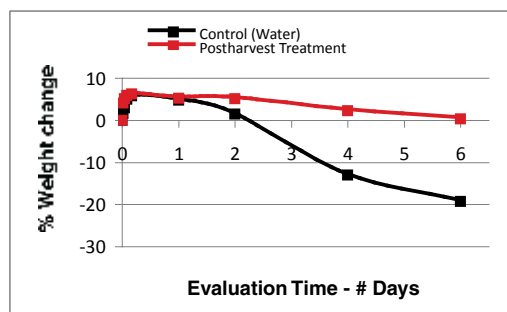
An experiment was conducted at Floralife, Inc. Laboratory, Walterboro, SC, to investigate the effects of postharvest treatments on fresh cut flower weight. Dry shipped roses ('Illios' and 'Crazy Sher' varieties) and a lisianthus variety were received in the lab and processed immediately for the experiment. Flower stems were recut removing 1 inch of the stem and subjected to the following sequence of postharvest treatments.

	Hydration Treatment for 2 days	Holding / Storage Treatment	Vase Treatment (continuous treatment after storage phase)
<b>Control</b>	None	Water	Water
<b>Postharvest Products</b>	Floralife Quick Dip® Instant Hydration Pretreatment	Floralife Clear Professional® Flower Food	Floralife Crystal Clear® Flower Food

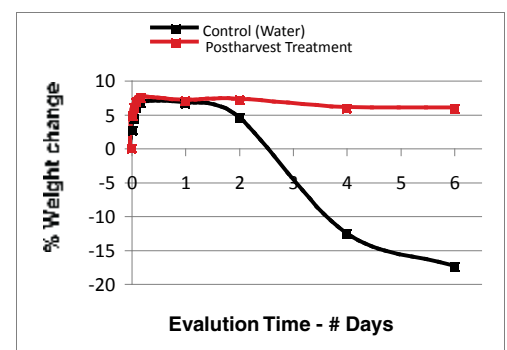
The fresh weight of whole flower stems was determined immediately after the recutting process, then after 30 minutes, 1 hour, 2 hours, 4 hours, 1 day, 2 days, 4 days and 6 days. The percentage change in fresh weight relative to the initial weight was then calculated for each time point.

## Results

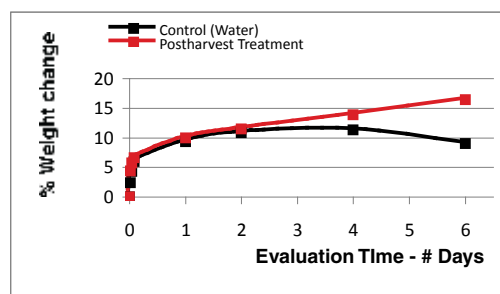
'Illios' Rose



'Crazy Sher' Rose



Pink Lisianthus



## Illios' and 'Crazy Sher' Rose - Day 9



Control



Postharvest Treatments

## Pink Lisianthus - Day 12



Control



Postharvest Treatments

### Conclusions

Proper postharvest treatments help with fresh flower hydration and in maintaining fresh weight of cut flowers. These treatments ensure flower freshness, enhanced quality and improved longevity.