FloraLife®
Research Update

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Hydration Pretreatment of Mixed Flower Bouquets with Floralife® HydraFlor® Clear ULTRA 100

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Introduction

Colombia, Ecuador and Costa Rica move the highest volume of bouquets to the USA. The mixed bouquet operations in these countries can move volumes of 9 million stems during the low season to more than 30 million stems during the high seasons, such as St. Valentine's Day or Mother's Day.

Most of the bouquets are prepared one of two ways, either with mixed flowers or as only a specific flower bouquet (ex: the most common is a rose bouquet). These bouquets are most often prepared for the Superflor market, where the flower farms have the largest demand for their cultivars.

Some of the bouquet operations use a hydration solution containing calcium hypochlorite, which has been frequently used by some in the floral industry instead of the Floralife® hydration solutions such as HydraFlor® 100 or HydraFlor® Clear ULTRA 100. It is well known that calcium hypochlorite is toxic and can produce a discoloration in the flower. It is also a highly volatile substance, which results in loss of its properties.

Objective

Evaluate the effectiveness of HydraFlor® Clear ULTRA 100 as a treatment to extend vase longevity in mixed bouquets and individual stems.

Method

Three bunches of a mix bouquet of flowers were used per treatment. The flowers were graded and bunched following regular farm procedures. Each bouquet was hydrated for 1 hour in a bucket with 3.5 liters of the solutions in the chart below. After hydration, 7-day transport simulation was performed on the flowers consisting of 3 days at a cooler temperature, 1 day at room temperature, and 3 days at a cooler temperature. Then, the flowers were placed in a 1 liter solution of Floralife® Flower Food Clear 300 (aka: Floralife Crystal Clear®) for vase longevity evaluation. The flower room conditions for vase longevity evaluation were between the temperatures of 17°C - 21°C, a relative humidity 56% and a 12-hours photoperiod.

Cultivars used in the experiment.

2 stems Alstroemeria "Lucero" light orange
2 stems Rose "Miracle" orange
2 Carnation "Bizet" hot pink
2 stems Pompon "Valeska" yellow
2 stems Pompon "Atos" green

Treatment	Doses	Hydration Time
1. Control (Water)	-	1 hour
2. Calcium hypochlorite + ph stabilizer	0.06gr/L + 1.5 cc/L	1 hour
3. HydraFlor® Clear ULTRA 100	1cc/L	1 hour

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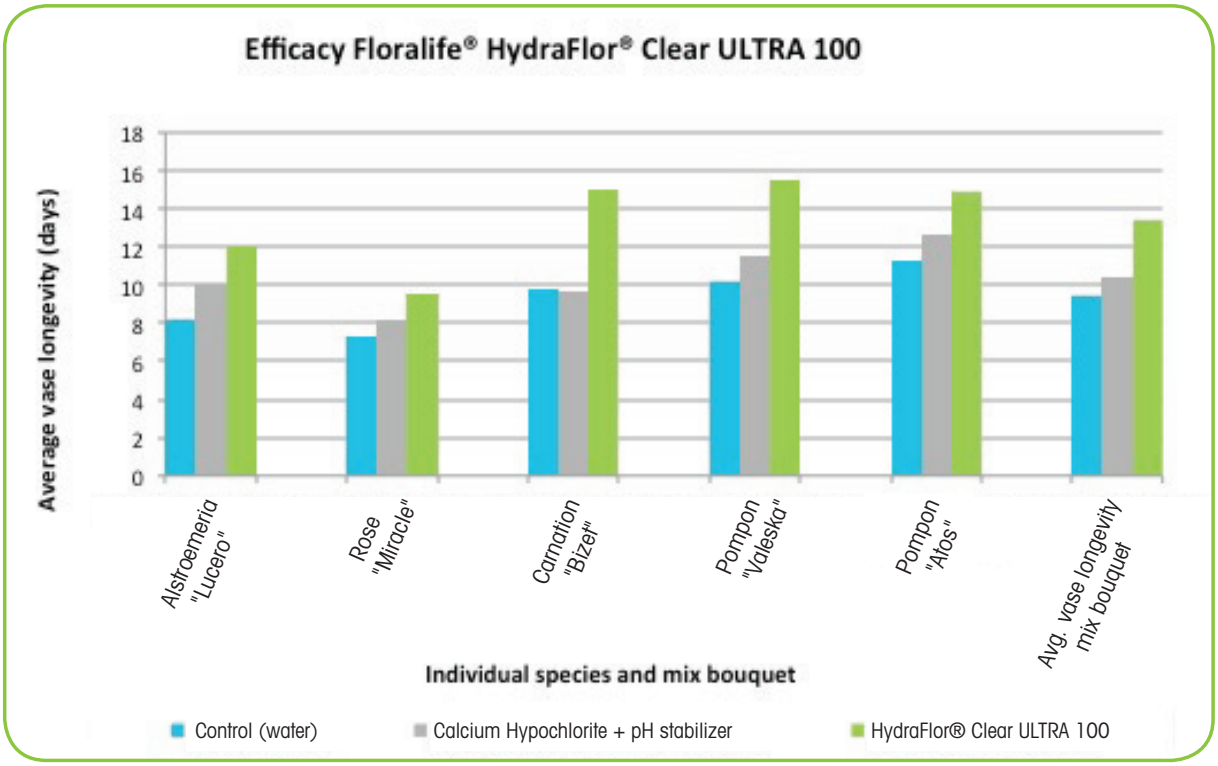
Results



Pictures at day 10

Treatment 1
Control (Water)

Treatment 2
Calcium Hypochlorite+
ph stabilizer

Treatment 3
HydraFlor® Clear ULTRA 100

Percentage of extended vase longevity of HydraFlor® Clear ULTRA 100 compared with T1. Control and T2. Calcium hypochlorite

Treatment	Alstroemeria "Lucero"	Rose "Miracle"	Carnation "Bizet"	Pompon "Valeska"	Pompon "Atos"	Avg. vase longevity mix bouquet
T1. Control (water)	47%	30%	53%	52%	31%	43%
T2. Calcium Hypochlorite + pH stabilizer	20%	16%	55%	35%	17%	29%

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Conclusion

Floralife® HydraFlor® Clear ULTRA 100 as a hydration treatment improved the quality and vase longevity of the mix bouquet and the individual species.

The mix bouquet of flowers that were hydrated with HydraFlor® Clear ULTRA 100 had 29% more vase longevity than Calcium Hypochlorite and 43% more than the Control (water) in the mix bouquet.

The vase longevity of the individual flower species was extended with HydraFlor® Clear ULTRA 100 versus that of the control (water) and Calcium Hypochlorite + pH stabilizer.

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