



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

Floralife® Floral Foam Food Soft Stemmed Flower Arrangements in OASIS® Floral Foam Maxlife

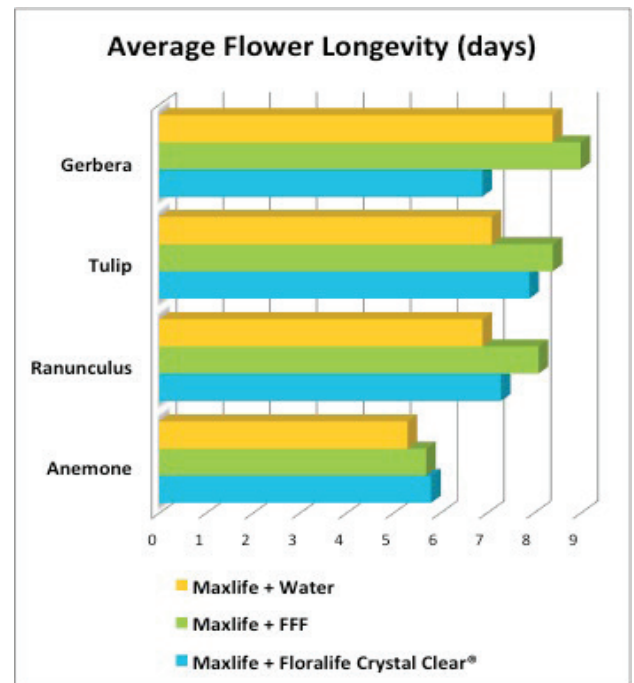
Introduction

Our researchers have engineered the Floral Foam Food solution to work in partnership with the unique chemistry of the floral foam to the effect of improved flower longevity in arrangements. Florists have expressed concern over the use of soft stemmed flowers (Gerbera, Tulip, Anemone, and Ranunculus) in foam arrangements due to inconsistent flower life performance. This flower food not only improves flower performance, but also reduces the degree of stem discoloration that may be observed on the softer stemmed flowers that occurs when foam is saturated in a conventional flower food solution.

Research

Floralife evaluated the performance of soft stemmed cut flowers (Gerbera, Tulip, Anemone, and Ranunculus) arranged in OASIS® Floral Foam Maxlife soaked with Floralife® Floral Foam Food flower food.

- Flowers were obtained from a local wholesaler. Stems were re-cut on arrival and hydrated overnight in tap water in the flower cooler (2° C)
- The following combinations were evaluated:
 - OASIS® Floral Foam Maxlife + Floralife Crystal Clear®
 - OASIS® Floral Foam Maxlife + Floralife® Floral Foam Food
 - OASIS® Floral Foam Maxlife + water (control)
- Treatments were tested in replicates of 3 foam bricks saturated in their respective flower food treatments. Gerbera and Tulip were tested separately and Anemone and Ranunculus together. Each floral foam brick contained 4 stems of each cultivar. The test evaluated 3 varieties of Gerbera, 3 varieties of Tulip, and 2 varieties of Anemone and Ranunculus.
- Foams were saturated in their respective flower food treatment solutions. All stems were re-cut and inserted to a uniform depth of 6 to 7 cm. Design tray reservoirs were filled with the same type of solution that the floral foam had been soaked at the initial set-up of the experiment. No additional solution was added for the duration of the test.
- The OASIS® Floral Foam Maxlife treatments were arranged randomly on tables in the flower testing lab (20° C with 12 hours of fluorescent lighting). Flower longevity (# of days) was determined subjectively for each flower. Flower life averages were then determined for each treatment and flower type.



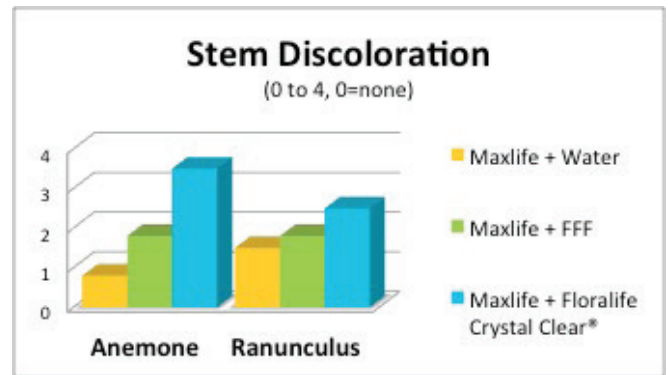
RU September 2013 continued...

6. Stem discoloration and collapse was rated subjectively on Anemone and Ranunculus using the following scale:

- 0 – no discoloration
- 1 – intermittent discoloration where stem is inserted into the foam
- 2 – uniform discoloration but stem is structurally sound
- 3 – uniform discoloration and softening of stem
- 4 – stem collapses where it is inserted into the foam

Results

Gerbera: OASIS® Floral Foam Maxlife + Floralife® Floral Foam Food observed a 31% increase in flower longevity compared to OASIS® Floral Foam Maxlife + Floralife Crystal Clear® flower food when average across all cultivars. Comparatively, the OASIS® Floral Foam Maxlife arrangement saturated with Floral Foam Food measured a 7% increase in arrangement life.



Day 5: Gerbera with water (control)



Day 7: Tulips with water (control)



Day 5: Gerbera with Floralife Crystal Clear®



Day 7: Tulips with Floralife Crystal Clear®



Day 5: Gerbera with Floralife® Floral Foam Food



Day 7: Tulips with Floralife® Floral Foam Food

RU September 2013 continued...

Tulip: For the Tulips in OASIS® Floral Foam Maxlife saturated with Floralife® Floral Foam Food, the average flower was observed to live 18% longer than the foam saturated with water alone. The OASIS® Floral Foam Maxlife + Floralife® Floral Foam Food also show an increase of 6% in flower longevity over OASIS® Floral Foam Maxlife saturated with Floralife Crystal Clear® when averaged across all cultivars.

Anemone: OASIS® Floral Foam Maxlife saturated with Floralife® Floral Foam Food observed a 9% increase in flower longevity compared to the floral foam saturated with water. No appreciable flower longevity treatment differences were observed when comparing the arrangements saturated with Floralife® Floral Foam Food and Floralife Crystal Clear® when averaged across all cultivars. However, no stem collapse was observed in the OASIS® Floral Foam Maxlife + Floralife® Floral Foam Food treatment.

Ranunculus: The Ranunculus arrangement in OASIS® Floral Foam Maxlife + Floralife® Floral Foam Food measured a 17% increase in flower longevity over the flowers in floral foam saturated with water. It was also observed that OASIS® Floral Foam Maxlife saturated with Floralife® Floral Foam Food observed an 11% increase in flower longevity compared to OASIS® Floral Foam Maxlife saturated with Floralife Crystal Clear® flower food when averaged across all cultivars. OASIS® Floral Foam Maxlife + Floralife® Floral Foam Food observed a lower incidence of stem discoloration.



Day 5: Anemone and Ranunculus with water (control)



Day 5: Anemone and Ranunculus with Floralife Crystal Clear®



Day 5: Anemone and Ranunculus with Floralife® Floral Foam Food

Conclusion

OASIS® Floral Foam Maxlife saturated in Floralife® Floral Foam Food observed a significant increase in flower longevity with all flower types. The Gerberas' longevity was significantly higher (31%) in the floral foam saturated with Floralife® Floral Foam Food over the floral foam saturated with Floralife Crystal Clear®. When comparing the arrangements in Floralife® flower foods, Anemone observed no appreciable difference. In addition, OASIS® Floral Foam Maxlife soaked in Floralife® Floral Foam Food showed no stem collapse and a reduced incidence of stem discoloration compared to the same type of floral foam saturated with Floralife Crystal Clear®.