

# Floralife®

## RESEARCH UPDATE

January 2009



### Recent University Research Study on Anti-leaf Yellowing Properties of Floral Foam

*Excerpts of findings from a recent University\* study:*

#### Overview:

This research project focused on testing of the anti-leaf yellowing properties of floral foam bricks developed by Smithers-Oasis North America, Kent, Ohio. Floral foam bricks were tested on 'Elite,' *Alstroemeria* variety 'Diamond,' tulip variety 'Maureen' and *Chrysanthemum* variety 'Factor Daisy.' The results have shown the bricks containing the anti-leaf yellowing components were effective in minimizing or delaying leaf yellowing in *Alstroemeria*, tulip and *Chrysanthemum*.

#### 1. General Methods

Prior to use, the two different types of floral foam bricks (treated and control) were soaked separately in 5 gallon buckets containing tap water for 5 minutes to ensure proper saturation. The bricks were then placed into plastic trays and the tray reservoirs were filled to the top with tap water. After hydration, flower stems were cut to 40 cm (15.75 inches) and placed into the new floral foam brick and the control brick. The trays with the bricks were topped off with tap water to the top of the reservoir at the end of each workday throughout the experiment.

Six flowers of the same type were inserted into each brick. Stems were inserted approximately 2.5 inches (6.35cm) into the brick to make sure there was contact into the saturated zone of the brick. Each flower stem was left with as much foliage as possible. Trays were placed in the postharvest room for evaluation. Flowers were maintained at 70° F (21.11° C), relative humidity of 50 +5% , and 70 foot candles of light (12 hours / day) that simulated retail / home conditions.

#### Assessments

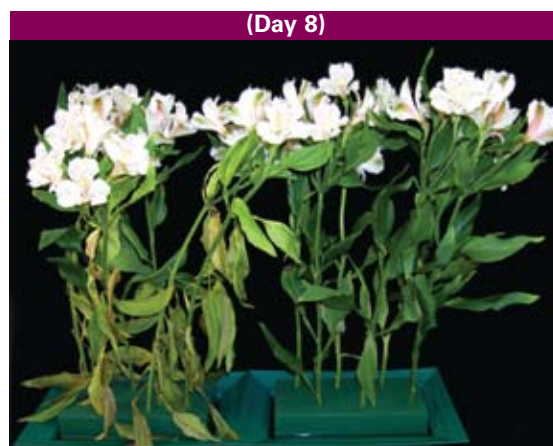
The initial number of leaves on each stem were counted and recorded at set-up (day 0). The number of damaged leaves (yellow, brown and/or dry) were counted after Days 7 and 11 in postharvest. *Chrysanthemum* leaves were counted up to 21 days. Leaf yellowing was expressed as a percentage relative to the total number of leaves on each stem.

#### 2. Results: Leaf-yellowing

##### **Alstroemeria**

*Alstroemeria* is a species of cut flowers which has postharvest leaf yellowing problems. By experiment day 7, the floral foam brick treated with the anti-leaf yellowing

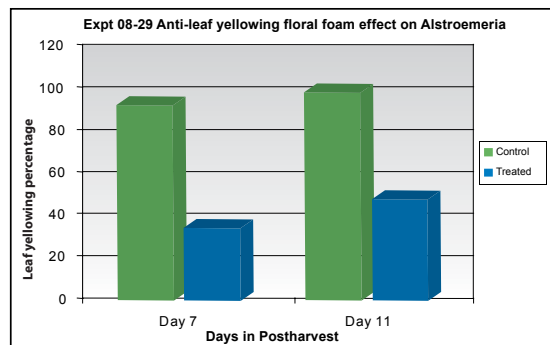
components significantly reduced leaf yellowing in comparison to the control brick. By day 11, the treated brick still significantly reduced leaf yellowing, by half compared to the control brick.



Control

Treated – New OASIS® Floral Foam powered by Floralife® Technology

The treated floral foam brick delayed the onset of leaf yellowing compared to the control brick in this *Alstroemeria* variety.



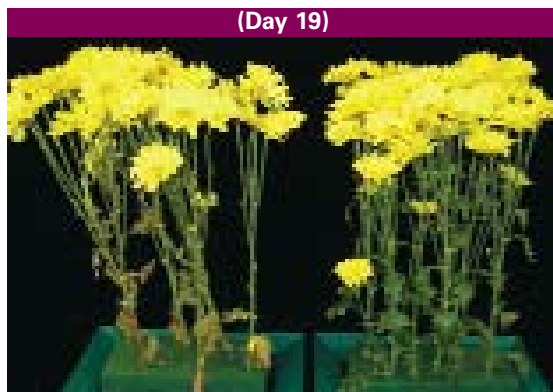
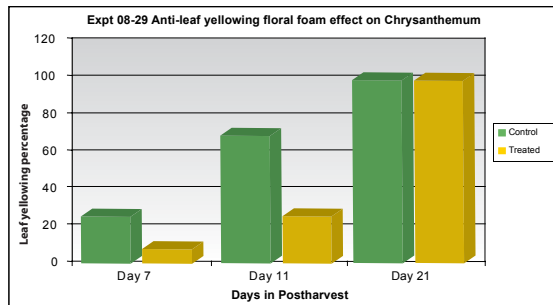
## Chrysanthemums

By day 7, the floral foam brick treated with anti-leaf yellowing components reduced leaf yellowing in the Chrysanthemums by over half as compared to the control brick. This reduction continued through day 11.



Control

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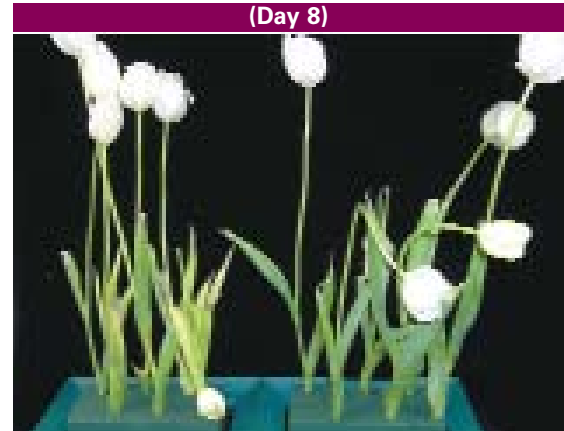


Control

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## Tulips

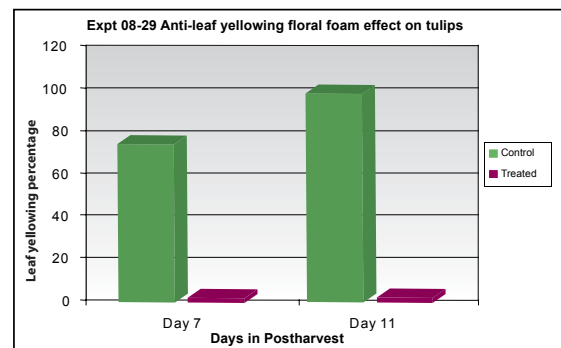
Day 7, the floral foam brick treated with anti-leaf yellowing components protected the tulip leaves from yellowing compared to the control brick. This protection continued through day 11.



Control

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The treated floral foam brick prevented the onset of leaf yellowing in this tulip variety.



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