

## Research Update

**October 2016**

### **Water Uptake and Vase Life of Different Cut Rose Varieties Treated With Express Technology**

**Background:** Floralife has recently developed a line of products – Express Technology – with formulas that will enable flowers to take up solution without the need to recut the end of the stems. The Express Technology formulas have been extensively tested in flower laboratories and at our customer locations. Third party independent testing, performed by private labs and / or Universities, is incorporated in our testing protocols. Testing for the efficacy of Floralife® products is done under varying conditions such as multiple growing locations, different flower species and varieties, various water types, several dry storage regimes, etc. In these tests, Floralife® Express Technology is compared with and without the re-cutting of the stems. The following research paper is based on a study of Floralife® Express Clear 200 laboratory tests.

**Objective:** To test the effectiveness of Floralife® Express Clear 200 product on water uptake and vase life performance of 6 rose varieties with or without re-cut of the end of the stems.

#### **Method:**

Six varieties of cut roses were obtained from a farm in Colombia. The flowers underwent standard hydration, packaging and storage treatments adopted by the farm, and no changes were made. Total time between harvest and receipt at the lab was 8 days. Flowers were received dry at the Floralife laboratory and processed immediately for the experiment. Depending on the treatment, some of the flower stems were recut to remove 3 cm of the end of the stem. Other flowers were not recut. Flowers were placed in vases (1 L) filled with solutions described in the following treatment list. There were a total of 12 roses per vase (3 varieties x 4 roses from each variety). There were 3 replicated vases per treatment combination. There were two sets of experiments (each set comprising of 3 varieties). The vases were placed in a postharvest evaluation room (18-20 °C, 12/12 hr light/dark) for vase life evaluation.

#### **TREATMENTS:**

1. Floralife Clear 200 – Recut (current practice)
2. Floralife Express Clear 200- Recut
3. Floralife Express Clear 200- No cut

## Data:

1. Uptake of water (solution) from each vase after one day and 3 days
2. Vase life (days)

## Results:

Table 1. Solution Uptake per Vase on Day 1 and Day 3 (in ml)

Treatment	Stem Cut	Set #1		Set #2	
		Day 1	Day 3	Day 1	Day 3
Clear 200	Recut	55	164	57	175
Express Clear 200	Recut	56	159	5	175
Express Clear 200	No Cut	71	207	78	236

Table 2. Vase Life (days) of Different Rose Varieties

Treatment	Stem Cut	Set #1			Set #2		
		'Freedom'	'Tressor 2000'	'Orlando'	'Poison'	'Jade'	'Miracle'
Clear 200	Recut	12.6	14.7	12.1	20.0	20.8	9.8
Express Clear 200	Recut	15.1	14.4	13.1	19.2	21.2	11.0
Express Clear 200	No Cut	14.9	14.4	13.7	21.8	20.8	10.3

## Photos on day 8 in vase

### Set #1 (Freedom, Tressor 200 and Orlando)



**Clear 200 – Cut**



**Express Clear 200 – Cut**



**Express Clear 200 – No Cut**

### Set #2 (Poison, Jade and Miracle)



**Clear 200- Cut**



**Express Clear 200- Cut**



**Express Clear 200- No Cut**

## **Conclusions**

Cut flower stems placed in Express Clear 200 solution with stem ends not cut, took up water at the same rate or better than the volume of water uptake with stem ends cut. In 5 out of 6 varieties tested, Express Clear 200 product gave better vase life than Clear 200 regardless of the stem ends were cut or not cut.