

Post-harvest vaselife evaluation on two cultivars of *Hydrangea paniculata*

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Figure 1. *Hydrangea paniculata* cultivars

Table 1. Vaselife of *Hydrangea paniculata* 'Unique' with and without dry storage

Treatment	Non-stored (Fresh) (days) ^x	Stored (days)
23JUL/27JUL 2003		
Control (water pH = 7.8)	5.5 c	3.8 c
Florilife	11.9 a	10.5 a
Pokon & Chrysal	11.1 a	10.0 a
Aquaplus	7.6 b	7.4 b
Florilife + Flora Novus-XL	11.5 a	6.4 b
Pokon + Flora Novus-XL	11.6 a	9.3 a
Aquaplus + Flora Novus-XL	7.3 b	6.4 b
Flora Novus-XL	5.8 c	4.4 c

^x Values within column followed by a different letter are different at $P < 0.05$ using t-Test.

Table 2. Vaselife of *Hydrangea paniculata* 'Tardiva' with and without dry storage

Treatment	Non-stored (Fresh) (days) ^x	Stored (days)
12AUG/16AUG 2003		
Control(water pH = 7.8)	18 c	18 c
Florilife	25 a	25 a
Pokon & Chrysal	24 a	25 a
Aquaplus	23 ab	21 b
Florilife + Flora Novus-XL	25 a	25 a
Pokon + Flora Novus-XL	21 b	22 b
Aquaplus + Flora Novus-XL	21 b	21 b
Flora Novus-XL	18 c	18 c

^x Values within column followed by a different letter are different at $P < 0.05$ using t-Test.



Figure 2. *Hydrangea paniculata* with 1 – 1.5 m stem length

Materials and Methods: *Hydrangea paniculata* (Figure 1) is noted as a species of hydrangea capable of producing stems longer than one meter and inflorescences that are 15 to 30 cm long (Figure 2). These attributes contribute to making this a floral cut stem for large arrangements such as special events, atriums, etc. Two cultivars were evaluated for post harvest life using four floral preservatives and two storage techniques. Floral preservatives included: Floralife Original Flower Food (FLF), Pokon & Chrysal Professional #3 (PKC), Aquaplus (AQP) and Flora Novus-XL(FNV) singly and in combination with FNV. Storage included: no storage and cold dry storage(2°C and 90% relative humidity). Stems were harvested between 9:00 and 10:00 AM and placed in hydration solution (Pokon & Chrysal Professional #2) for an hour. After hydration, stems were placed in treatments or storage for 4 days. Stems were divided into lots of 8 to provide 8 replications for each treatment. Each stem was placed in a tube with 500 ml of solution and held at 22°C (Figures 4 & 5). Statistical analysis was completed using SAS.

Figure 3. (R) *Hydrangea paniculata* placed in a floral shipping box before entering dry storage



Figure 4. T. Leeson placing 500ml of treatment solution in each tube



Figure 5. Single stem placed in each tube



Figure 6. *Hydrangea paniculata* inflorescence during treatment

Results and Discussion: Stems were evaluated daily and with the first indication of wilt or discolor they were removed and the day was recorded. Between the two cultivars, there was a statistically significant difference in vaselife with 'Tardiva' lasting over twice as long. Across all treatments, fresh treated stems were statistically significant in lasting longer than stems which were stored. Stems of *H. p.* 'Unique' harvested on 23 JUL 03 that did not enter storage responded with post harvest longevity of 6 to 12 days (Table 1). Stems that were dry stored in a cut stem shipping box responded with post storage vaselife of 4 to 11 days (Table 1). Stems of *H. p.* 'Tardiva' harvested on 12 AUG 03 either was fresh treated or was dry stored in a cut stem shipping box. In both cases, fresh vaselife and post storage vaselife were 18 to 25 days (Table 2). *H. p.* flowers over an extended period with each cultivar covering part of the period. Florilife and Pokon & Chrysal were significantly better than Aquaplus in maintaining vaselife. Aquaplus was better than Control or Flora Novus-XL. Flora Novus-XL is classified as a vaselife extender for *Hydrangea* wilted flowers. By itself or in combination, it did not provide additional longevity when compared to the Control. With 'Unique' and 'Tardiva', responses to preservatives significantly vary and vaselife could be maintained even with a short period of dry storage.