



Accelerated Production and Flowering of Remontant Hydrangeas

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Nature of Work: Production of *Hydrangea macrophylla* normally requires a full season to produce three gallon plants. They are very susceptible to over watering, foliar yellowing and usually require heavy pruning. Plants still get excessively large the second season. Rooted liners could be planted in the fall and forced into early bloom in the spring. The quality of the liners could affect the spring growth and development.

Cuttings of Endless Summer, Penny Mac and David Ramsey, all remontant flowering *Hydrangea macrophylla* cultivars, were rooted in 3 1/2" x 4" deep pots. Cutting treatments were stuck on (Treatment 1) June 26, (Treatment 2) July 10, (Treatment 3) July 24 and (Treatment 4) August 13, 2003. Ten rooted liners of each cultivar and cutting treatment were planted into three gallon pots on September 18, 2003. Plants were over wintered in a shade house and were covered with a frost blanket when low temperatures were expected to cause damage. On February 5, 2004 all plants were moved into a heated greenhouse. The low temperature was held at 45° F for one week and at 55° F for the remainder of the trial. A Bonzi drench of 25 ounces at 4 ppm was applied to half the plants on April 1, 2004.

The fall growth was determined by recording plant height and number of breaks on January 7, 2004. The height, width, number of flower buds, flower size and market quality were determined as the plants matured in the greenhouse. Plants were expected to be ready for spring sales 10 to 12 weeks after being placed in the greenhouse.

Results and Discussion: The cutting Treatments 1 and 2 produced the tallest plants by January 7 on all cultivars (Figure 1). The heights of the last two cutting dates were nearly equal for all cultivars. Treatments 1, 2, and 3 produced more breaks than treatment 4 on all cultivars (Figure 2). The last cuttings taken produced the poorest plants with the fewest breaks going into the forcing greenhouse. See Photo 1 for growth as existed on February 5 when moved into the greenhouse.

Photo 1. Dormant hydrangeas when moved into the heated greenhouse on February 5, 2004.



The growth produced by all cultivars showed that the height and width was poorest for Treatment 4 on March 18 (Photo 2). By April 22, the end of the trial, all treatments had reached nearly the same size as shown in Figure 3 illustrating Endless Summer height.. The number of flower buds was reduced on Treatment 4 (averaged about 3) while all other treatments averaged about 7 flowers per plant. There were no differences in flower size. Most flower buds were 4-5" across and showing color by April 22. Market quality for Treatment 4 was poor while all other treatments were acceptable (Figure 4). David Ramsey was the poorest cultivar. Plants with four to five inch blooms were marketable after 11 weeks of forcing even under the cloudy conditions of this spring.

Photo 2. Endless Summer bed with the four treatments from left to right. (Treat 1 - 6/26/03 cuttings, Treat 2 - 7/10/03 cuttings, Treat 3 - 7/24/03 cuttings and Treat 4 - 8/13/03 cuttings.)



Significance to the Industry: Forcing hydrangeas in the Southeast can deliver flowering plants to local and Northeastern markets when the consumers are in the retail stores. The remontant hydrangeas flower earlier than most nursery cultivars and will flower on new wood. A premium price can be charged by both the grower and retailer for this product.

Photo 3. Endless Summer hydrangea planted from a rooted liner into a three gallon pot on September 18, 2003 and in heavy bud on April 22, 2004, eleven weeks after being forced in a heated greenhouse.



Figure 1. Height of Fall Planted Remontant Hydrangeas.

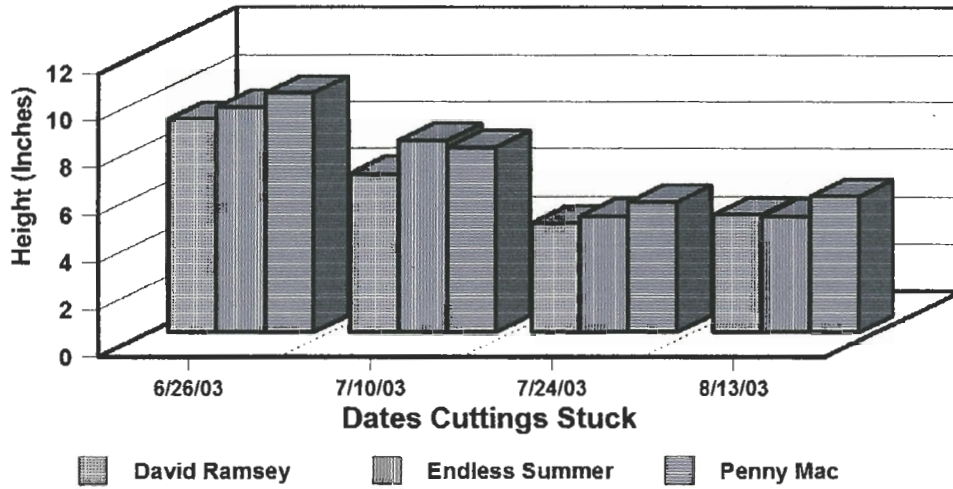


Figure 2. Breaks on Fall Planted Remontant Hydrangeas.

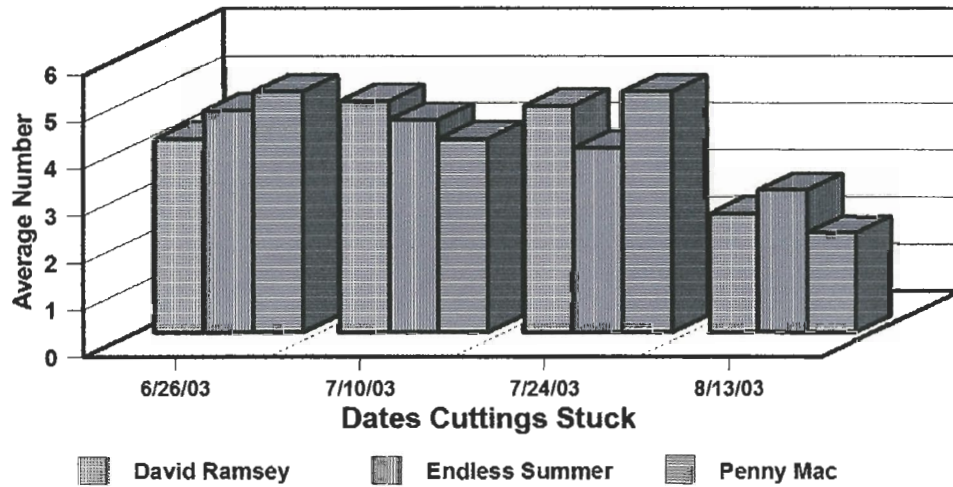


Figure 3. Forced Height on Endless Summer Hydrangea.

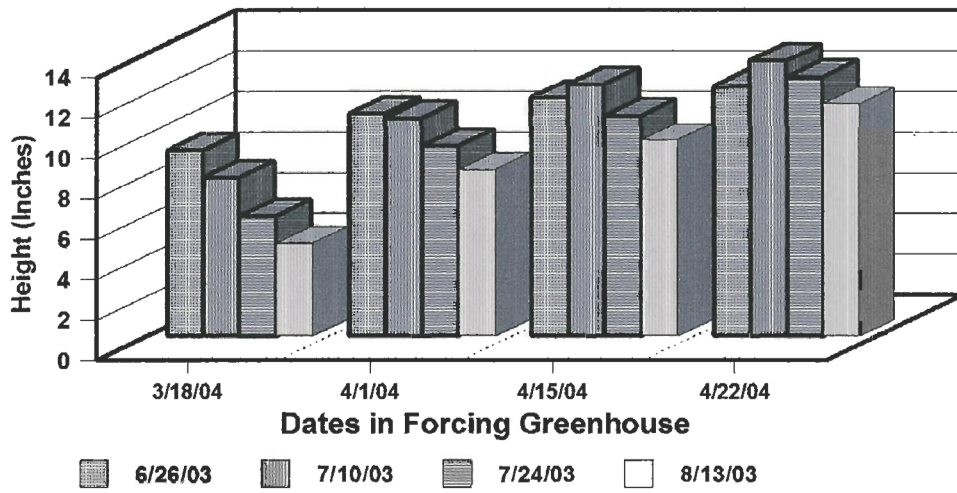


Figure 4. Market Quality on Fall Planted Remontant Hydrangeas.

