

Title The effect of uniform and fluctuating temperature on the respiration and vase life of 'Akito' roses

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Abstract

As is well known temperature is one of the most fundamental factors affecting the postharvest life of flowers. Therefore, it is important to have control in regulating the temperature of stored flowers and other plant material. The effect of storage temperature on the vase life and quality of dry cut flower stems of *Rosa hybrida* L. 'Akito' was investigated. The flowers were stored at 2, 15, 25°C and fluctuated between 2 and 15°C with changes made every 2 days. Flowers were also placed in vases on the first day. After a storage period of 8 days the difference in vase life between those stored at a uniform 2°C and those stored at fluctuating temperature was minimal. This is in line with the small changes in respiration during dry storage. Those stored at uniform 15 or 25°C did not last the 8 days dry storage. High temperature increased the respiration resulting in faster utilization of metabolites and faster senescence. The respiration of the flowers increased in an exponential form with increasing temperature.