Morphophysiological parameters associated with vase life of cut-flowers of *Anthurium andraeanum* Hort.

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Abstract

Twelve cut-flower morphological and six physiological quantitative parameters along with vaselife were evaluated for 9 cultivars of *Anthurium andraeanum* Hort., with the objective of identifying the interrelationships between morphological and physiological parameters affecting vaselife in anthurium. There were significant ($P<0.05$) cultivar differences for all the parameters except for adaxial hydathode number. Vaselife showed a significant correlation ($P<0.05$) with duration of steady state transpiration ($r=0.86$), rate of steady state transpiration ($r=0.67$) and lab colour space parameter a* ($r=-0.82$). Rate of steady state transpiration also showed a significant negative correlation with a* ($r=-0.77$, $P<0.05$). Principal component analysis of 18 parameters showed that the first five principal components explained 89.3% of the variation in the data. Vaselife loaded on the third principal component and was found to be closely associated with duration of steady state transpiration, rate of steady state transpiration and a* (-a* values = green spathe colour). The correlation circle on the F1×F3 axes showed that vaselife was also positively associated with larger L* values (white spathe colours), small abaxial stomata and hydathode numbers and short time to steady state transpiration.