

Title Stem end blockage in cut *Grevillea* 'Crimson Yul-lo' inflorescences
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Abstract

Grevillea 'Crimson Yul-lo' inflorescences have cut flower potential, but their vase life is short. End of vase life is characterized by early wilting. The possibility of physiologically mediated stem end blockage was investigated. Hydraulic conductance of 2 cm long stem end segments declined rapidly and remained lower throughout vase life than that of 2 cm long stem segments from immediately above. Re-cutting daily to remove basal 2 cm stem ends increased solution uptake, delayed declines in inflorescence water potential and water content, and improved inflorescence vase life. S-carvone is a potential inhibitor of wound related suberin formation, via inhibition of phenylalanine ammonia-lyase. Vase solution treatments with S-carvone (0.318 and 0.636 mM) delayed the decline in hydraulic conductance of basal 2 cm long stem end segments and decreases in vase solution uptake and relative fresh weight of cut stems, and extended vase life. Treatments with the catechol oxidase inhibitor 4-hexylresorcinol (2.5–10 mM) also delayed stem end blockage. These findings suggest that stem end blockage in cut *G.* 'Crimson Yul-lo' stems is physiologically mediated.