

Abstract

Gentiana is an expanding cut flower crop in international markets, but until recently large numbers have not been exported from producing countries flower naturally between January and March, depending on cultivar. The typical flower colour is blue. Our breeding program typical flower colour is blue. Our breeding program has been developing a new range of *Gentiana* which flower outside the normal and range in colour from pale pink to deep red. The current study characterises flower senescence and vase life of a novel red variety , which is likely to be released to commerce as ‘Diva’. The development and senescence of individual flowers progresses through 6 easily identifiable stages. Detached flowers held in solutions containing GA₃ (100 μM) and sucrose (2%) remained open for longer than control flower s exposed to ethylene(5ppm, 1 h) senesced more rapidly than those held in air. In addition, pollinated flowers senescence faster than unpollinated or self-pollinated ‘Diva’ flowers. The cut stem had an average vase life of 13 days after 4 days wet storage (held upright in buckets of water, 2 °C) and 4 days dry storage (packed in boxes, 2 °C), and survived multiple wilting and rehydration events. The plants flower in autumn/winter, outside the normal flowering period, another desirable character for this novel genotype.