Title Postharvest performance of two *Cyrtanthus* genotypes (PM12 and NR7)

Author M. Debenham, A. McLachlan and J. Eason

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Abstract

As part of an ongoing programme screening new *Cyrtanthus* cultivars for suitability for the cut-flower market, two genotypes (PM12 and NR7) were assessed for vase life performance. Stems were harvested when florets were in tight bud, pulsed for 24 h at 5°C with one of four postharvest solutions (100 µM GA_3, sucrose 5%, Chrysal SVB® 1 tab/3L, Chrysal SVB® 2 tabs/3L) or water, then packed in boxes to simulate transport for 48 h, after which vase life was assessed. Flower senescence was defined as when tepals showed the first signs of blue colouration and translucence at the margins, and the end of vase life was defined when 50% or more of the florets on a stem showed signs of tepal senescence. Mean vase life was 14.2 d for PM12 and 15.4 d for NR7 in water alone. PM12 vase life was improved by 3.3 d, and NR7 vase life was improved by 1.5 d when pulsed with either GA_3 or Chrysal SVB® 1 tab/3 L. The majority of florets (90% for PM12, 86% for NR7) were fully open before senescence started. There was no significant difference between treatments in the rate of floret abortion in PM12. A lower proportion of floret abortion was observed in NR7 that had been pulsed with GA_3, whereas the Chrysal SVB® 1 tab/3 L treatment resulted in a high proportion of aborted florets in NR7 (27%). There was no significant difference between treatments in stem splitting for PM12 but sucrose treatment reduced the incidence of stem splitting in NR7. Flower colour was not significantly affected by any treatments. Stem colour was significantly different with sucrose pulsing, resulting in greater yellowing of stems in both genotypes. Further studies may establish a link between parentage and response to pulsing solutions to extend vase life.