

Abstract

Feijoa have a short storage life of -3 weeks when held at the standard storage temperature of 4°C. Storage at 0°C results in chilling injury. We have examined a range of temperature manipulations in an attempt to extend storage life and improve fruit quality. Low temperature conditioning (LTC) treatments examined were 12, 9 and 6°C for 3 or 6 days prior to storage at 0°C for either 3 or 5 weeks. LTC treatments did not appear to reduce chilling symptoms. Hot water treatments (HWTs) showed no significant effect on rate of ripening at 4°C, and failed to increase tolerance to 0°C storage. Feijoas are the most heat sensitive fruit we have examined to date, with some cultivars showing heat damage following HWT at 33°C. Step-down temperatures are a technique of storing fruit at progressively lower temperatures as the time in storage increases. We have examined fruit response to both constant storage temperatures (0, 2 or 4°C), and to temperatures reducing from 4°C down to 0°C over a 5 week period. Both the step-down temperature regime and storage at 2°C resulted in fruit of better quality than storage of fruit at 0°C. In conclusion, feijoas continue to pose a significant challenge in terms of improving storage and shelf life. The large variability of maturity at harvest, cultivar differences, and the sheer number of cultivars, contribute to the complexity of storage of feijoas.