

Title Developing maturity standards for mango our experience with the new cultivar B74
Author P.J. Hofman, J.R. Marques and B.A. Stubbings
Citation Program and Abstract. 2007 Australasian Postharvest Conference. Crowne Plaza Terrigal, NSW, Australia. 12 September 2007. 87 p.
Keywords mango; maturity; flavour

Abstract

Good and consistent fruit quality is essential to growing and maintaining the market for a new cultivar. The locally bred B74 mango has improved production characteristics and visual appeal compared with existing cultivars. However, its mild flavour requires that the fruit attain a certain level of maturity before harvest to ensure desirable and consistent flavour. To develop a maturity standard, flesh colour, percentage dry matter (DM), brix, and heat accumulation units (HAU) were investigated over four seasons and across the three main growing areas in Australia to address seasonal and location interactions. Fruit were harvested at different maturity stages from trees that flowered at different times within each orchard. The potential maturity standards were measured on fruit at harvest and a second batch of fruit ripened for quality assessment including flavour by a taste panel. Given the large number of samples (up to 60 samples per region per season) and the unpredictable time of assessment, a compromise in the sensory analysis methodology was required between practicality and accuracy. This involved using a selected panel from the Research Station, but 'benchmarking' their preferences to a broader population of Brisbane consumers. Using this approach, we identified strong correlations between flavour and the flesh colour, DM, and HAU at harvest. These are now used as commercial maturity standards and have helped improve flavour of the ripe fruit at retail level. Additional information has been obtained from these studies, such as the significance of sugars and acidity in flavour, and the effect of early versus late flowering.