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## PRE-HARVEST AND AT-HARVEST FACTORS AFFECT APRICOT FRUIT QUALITY

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When questioned in a survey, over 40% of consumers were unsatisfied with the apricots they had eaten; fruit were either too firm and lacking in flavour or were over-soft, mealy and lacking in juiciness (Bruhn et al., 1991. *J. Food Quality* 14, 187-195). In trials over three years, pre-harvest and at-harvest factors that affected fruit quality were investigated. Lower crop loads resulted in fruit that showed higher fresh weight (FW) and soluble solids concentration (SSC) and less postharvest mealiness development. Fruit in upper canopy locations were larger and had higher SSC for the same flesh firmness than fruit in the lower canopy. Light penetration to upper outer canopy positions were typically between 30 and 70% full sunlight but declined to between 1 and 20% full sunlight in lower inner canopy positions. Fruit from 3- or 4-year-old wood were largest whilst those from 1-year-old wood were smallest, although results varied slightly depending on genotype. Genotype determined which wood age and type exhibited the highest SSC. Postharvest mealiness development was lower on older wood and was strongly affected by genotype. Maturity at harvest also affected fruit quality. Fruit harvested at a less mature stage were firmer and had lower SSC than more mature fruit. They softened at a slower rate in coolstorage than fruit harvested at a more mature stage and showed less mealiness development after the same length of storage and shelf-life. Implications for improving fruit quality through tree and harvest management are discussed.

## ALTERNATING PATTERNS OF MANGO – QUANTIFICATION AT THE GROWTH UNIT LEVEL ON FOUR CULTIVARS

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As in other fruit species, the alternate bearing of mango trees is a main concern for orchard profitability. In this paper, we focused on the effect of the fate (vegetative, flowering or fruiting) of the terminal growth units produced during a growing cycle on the flowering and fruiting of terminal growth units produced during the following growing cycles. Flowering and fruiting of twelve young mango trees belonging to four cultivars (Cogshall, Irwin, José and Kensington Pride) have been exhaustively described at the growth unit level during three successive growing cycles. Contrasted patterns were evidenced. For example, Irwin and Kensington Pride showed high flowering and fruit setting on terminal growth units across the three observed growing cycles. On the opposite, Cogshall and José were characterized by various alternating patterns between reproductive and vegetative fates, whether at the tree or at the growth unit level. Our study highlighted cultivar-specific alternate bearing patterns beginning from the first crops. Mango alternate bearing appeared to be related to complex relationships between vegetative and reproductive growths, which strongly varied according to the cultivar.