

Title Interaction between production characteristics and postharvest performance and practices for fresh fruit

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Abstract

There is ever-increasing evidence of significant impacts of production characteristics on the postharvest quality of fresh fruit. Accordingly, there is an attendant need for adaptive postharvest actions to modulate pre-harvest effects. The most significant pre-harvest effects appear to be mediated through mineral/nutritional influences on the physical characteristics of fruit. Examples of specific influencers include fertilisers, water availability, rootstock and crop load effects on fruit quality aspects, such as skin colour, susceptibility to physiological disorders and fruit nutritional composition. Also, rainfall around harvest can markedly affect fruit susceptibility to skin blemishes, physical damage and diseases. Knowledge of pre-harvest - postharvest interactions can help with understanding variability in postharvest performance and, thereby, allow refinement of postharvest practices to minimise quality loss after harvest. This understanding can be utilised in predictive management systems. Such systems can benefit from characterisation of fruit nutritional, particularly mineral, status several months before harvest and / or at harvest to allow informed decisions as to when the fruit should be sold on either domestic or overseas markets, and as to any additional postharvest treatments required to minimise losses in quality and volume during handling, storage and marketing. Other examples of proactive management practices include adjusting harvesting and packing systems to account for 'rainfall effects before and / or during harvest. Our improving understanding of pre-harvest - postharvest interactions is contributing to better and more consistent fruit quality delivered to consumers. This paper focuses on the state of knowledge for sub-tropical and tropical fruits, particularly avocado and mango.