

Title Sweet cherry quality in the horticultural production chain

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Abstract

Purpose of the review: This article discusses the different quality definitions and meanings for different parts of the horticultural chain, the main quality characteristics and indicators, and the importance of heterogeneity of consumer wishes. Key aspects to improve overall fruit quality in the sweet cherry horticultural chain are indicated.

Main findings: Consumers do not behave uniformly and, next to consumer acceptance, other parameters have to be considered for the sweet cherry chain as a whole. The concept “quality” depends on the product itself and on the preferences of the consumer. It is often defined in terms of objective measures that relate to the consumers experience of eating quality. Cherry fruit quality is also determined by attributes that affect fruit marketing appeal and consumer satisfaction at consumption. The drivers behind the consumer’s experience of eating quality may include colour, taste, texture and smell. These drivers can be assessed indirectly by measuring parameters related to this experience, such as sugar content, acid content, dry matter content, juiciness, firmness and volatiles content. These parameters change with ripening and fruit colour is the main indicator of maturity. Harvesting, handling, postharvest treatments, packaging, transport and fruit distribution involve a large number of mechanical operations that subject the produce to dynamic loads, mainly impacts, which are the main cause of pitting.

Directions for future research: To clarify the relationship between quality measurements and consumer acceptance, research on cherry quality attributes and on consumer preferences for different markets is needed. Future research should also include the effect of agricultural practices on fruit quality, using a systemic approach and considering the importance of each quality parameter on each link in the chain. The increasing interest in the nutraceutical effects of fruits and vegetables will require further specific research on sweet cherry. An integrated approach using a Quality Analysis and Critical Control Points system specifically designed for sweet cherry will require an in-depth understanding of the mechanisms affecting cherry quality throughout the horticultural chain.