

Instrumental and sensory evaluation of eating quality of peaches and nectarines

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Abstract

The influence of flesh firmness on consumer acceptance and its relationship with total soluble solids (TSS), titratable acidity (TTA) and sensory analysis were studied for fruits of 'September Sun' and 'Sweet September' (low acid) peach (*Prunus persica* (L.) Batsch), and 'Maria Dolce' (low acid) and 'Venus' nectarine (*Prunus persica* (L.) Batsch, var. *nucipersica*) cultivars. Sensory descriptors, assessed by a short-trained panel, were firmness, sweetness, sourness, aroma, acceptability. Different stages of fruit firmness did not always result in significant differences of TSS, TTA and their ratio, but the panel was able to discriminate fruit ripening stages, in terms of fruit firmness, aroma and sweetness and to relate them to fruit acceptability. Acceptability of fruits with a 3.2 to 5.3 kg cm⁻² firmness was similar, provided they had a high TSS, TSS/TTA and aroma. Values of flesh firmness higher than 5.5 kg cm⁻² always resulted in unacceptable fruit quality. A threshold TSS/TTA value cannot be used as a single marker for eating quality, since it may range among cultivars, while fruit aroma is the limiting factor for the consumers' choice.