

Title Ripening regulation and consumer expectations
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Abstract

If consumer expectations are satisfied then a product will be accepted and repeated purchase will occur. Quality specifications for apples in commerce rely mainly on size and colour. However, eating as well as nutritional quality and hence acceptance of apples by consumers is determined by many other aspects. Studies in the literature indicate that firmness, soluble solids and titratable acidity are important factors determining eating quality. Sensory investigations and questioning of consumer about expectations related to sensory aspects confirm that aroma, firmness, crispness and juiciness are most relevant traits of apples. It is well documented that ripening regulation as effected by low oxygen long term storage and more recently by application of 1-methylcyclopropene (SmartFresh™) shows great benefit in terms of maintaining texture, soluble solids and acidity but hampers aroma formation. However, in spite of that consumer seem to prefer crisp and juicy apples with not quite satisfying aroma to soft or slightly mealy ones with well developed apple aroma. Understanding of how fruit maturation and ripening relate to quality is growing. It has become evident that fruit have a tight regulation of gene expression not only under normal developmental processes but also in response to biotic and abiotic stresses. Thus pursuing approaches to manipulate ripening by activating genes encoding aroma forming enzymes in apples seems worth pursuing.