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ABSTRACT BOOK

The value of texture in berries breeding

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Texture is one of the most important traits for breeding activity in berries, considering its impact on consumer appreciation and postharvest performance. Since berries are consumed as a whole fresh fruit, the knowledge about its physiological dynamic over the different phases of fruit development is a crucial aspect in order to identify the most favorable genotypes for breeding and economic purposes. Fruit texture resulted to be berry specific and depending on the several cell wall architectural composition. Three different models of instrumental analysis of texture were developed, specific for strawberry, blueberry and cherry. A significant genotypic variation was detected and the model here presented resulted to be transferrable across the different phases of fruit development. The metodology employed in this investigation identified a set of novel textural parameters associated to flesh firmness, juiciness, mealiness and skin toughness. These parameters are now used as fruit descriptors for breeding purposes. The use of these paremeters allowed also the definition of a storage index, which permitted the classification of the postharvest capacity of each cultivar tested after a postharvest period. The instrumental analysis for texture characterization is here presented for three main berry, such as strawberry, blueberry and cherry.

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