Title Selection of fruit quality assessment factors for peach genus

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Citation Abstracts of 27th International Horticultural Congress & Exhibition (IHC 2006), August 13-19, 2006, COEX (Convention & Exhibition), Seoul, Korea. 494 pages.

Keywords peach; quality; comprehensive evaluation; varieties

Abstract

Quality parameters of 10 varieties in the honey peach family, 6 varieties in the flat peach family, and 3 varieties in the smooth-skinned family grow in Beijing rural areas, were evaluated for a range of quality attributes including fruit weight, fruit shape index, shape color, flesh firmness, content of total soluble solids (TSS), titratable acid (TA), and flavor. Principal Component Analysis and Systematic Cluster Analysis were used to analyze the data. There was either relative independence or close correspondence among the fruit quality characteristics. There were 5 indicators obtained which could be used to develop a comprehensive system of peach quality evaluation and these were fruit weight, moisture content, flesh firmness, flavor, and the ratio of TSS to TA Data of there 5 indicators in all tested fruits were analyzed using a Rationalization-Satisfaction Index and the Consolidating Rule of Multidimensional Value Theory. This analysis indicated that Wanmi, Lvhun 9, and Beijing 38 in the honey peach family, Ruipan 1 and Bixia in the flat peach family, Ruiguang 19 in the smoonth-skinned family were of good quality, and this related very closely to the results obtained by taste panel of organic evaluation. This work supported the theoretical basis for selection of indicators in quality assessment of peach.