Title Nectarine Woolliness Detection by Non-destructive Mechanical Impact

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Abstract

Samples of Fairlane and Festina nectarines were stored at 6 °C to develop woolliness. After different storage times, sensory analysis and impact testing from 5 cm high were performed. Both varieties developed woolliness. A classification of the fruits—unsuitable or not for the market—according to the sensory woolliness degree was performed. Parallel classification was done by discriminate analysis using non-destructive impact test variables. A correlation was established between woolliness and other factors such as storage time and cultivar. Woolliness is also related to the impact test variables, and particularly to the maximum resistance to the impact. By processing the data using signal detection tools, a classification was achieved prioritising the improvement of textural quality of the selected sample. Samples with a total absence of woolliness were obtained from both studied cultivars.