

Title Sensory evaluation of pears: a useful tool to detect changes in eating quality during ripening

Author M.D. Raffo, A.P. Candan, V. De Angelis , L. Mañueco, M.J. Miranda and N. Barda

Citation ISHS Acta Horticulturae 909:651-656.2011.

Keywords maturity stage; trained panel; 'Bartlett' pear; taste attributes; texture

Abstract

Since pears are very perishable once they are ripe, they are generally purchased unripe and require a few days at room temperature to reach maturity. Consumers complain that pears advance from unripe to overripe in a very short time. The rapid loss of eating quality is sometimes indicated as a reason why consumers do not buy pears. For consumers, it is very important to know how to ripen the fruit as well as the sensory attributes that are associated with different maturity stages. The aim of this work was to quantify the sensory changes induced by conventional cold storage and subsequent ripening at room temperature using descriptive sensory analysis as a tool. 'Williams Bon Chretien' (also known as 'Bartlett') pears were stored for 60 days at 0°C and then ripened at 20°C for 0, 1, 3 or 5 days followed by sensory evaluation by a trained panel. Statistically significant differences were observed for intensity of aroma attributes, flavor intensity, firmness, meltiness and juiciness between pears that were ripened for different durations. The unripe fruit evaluated at room temperature showed little taste, low flavor intensity and juiciness, and high firmness. After 5 days of ripening, pears were much lower in firmness and crispiness. Although the aroma intensity was higher after 5 days of ripening, this was primarily due to the development of defective aromas such as solvent, alcohol and fermented. It can be concluded that the pears attained their best sensory quality after ripening for 3 days at room temperature.