

Title Ripening of 'Radana' and 'Conference' pears as influenced by cold storage duration
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Abstract

The influence of cold storage on the subsequent ripening of 'Radana' and 'Conference' pear cultivars was evaluated during two successive seasons: 2005/2006 and 2006/2007. Fruits were collected in the experimental orchard of the Research Institute of Pomology and Floriculture, located near Skierniewice (Poland). After harvest, fruits were stored in air at -0.5°C for 0, 2, 4, 6 weeks and subsequently transferred to a temperature of 18°C for ripening. During the whole period of ripening the ethylene and CO₂ production were measured each day. At harvest time and at the end of the ripening periods, the parameters associated with the ripening processes, including flesh firmness (FF), titratable acidity (TA), and total soluble solids (TSS) were also determined. 'Radana' pears held at 18°C immediately after harvest (without cold treatment) ripened properly within a short time, but 'Conference' ripened very slowly and unevenly. The storage in low temperature made this process more rapid and uniform. In both cultivars, the low temperature treatment hastened the ripening process and the stimulatory effect depended on the length of the cooling period. The cold treatment also significantly increased the level of maximum ethylene production in both cultivars.