

Title Ripening effects on the chilling sensitivity of processing and non-processing tomato cultivars
Authors Mohammed, M. and Brathwaite, R. A. I.
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Abstract

Studies on the sensitivity to chilling injury (CI) of 8 processing and 8 non-processing tomato cultivars stored at the table-ripe stage were examined. Fruits were stored for 21 days at 7 deg C and upon transfer to 20 deg C for 1 or 3 days, respectively. The low correlation coefficient between pitting and decay suggested that these two early manifestations of CI are not significantly related. The least sensitive tomato cultivars to CI were Advantage, Dorado, and Rio Grande among the processing types and Star Pak and Walters of the non-processing types. The least tolerant to CI were processing cultivars Caraibe and Cascade and non-processing cultivars Early Set, Carnival, and Capitan. The observed tolerance of table-ripe tomatoes after 21 days at 7 deg C plus 3 days at 20 deg C compared to control fruit stored continuously at 20 deg C for only 8-11 days indicates that a longer marketing period could be obtained at temperatures lower than those currently recommended.