

Title Symptoms and sensitivity to chilling injury of cantaloupe melons during postharvest
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Abstract

The nature and development of specific symptoms of chilling injury (CI) and the variation in sensitivity to the disorder of different cultivars of cantaloupe melons (*Cucumis melo* L. subsp. *melo* var. *cantalupensis* Naudin) was assessed during two seasons. Twenty-three cultivars of the Eastern Shipper (2), Western Shipper (13) and Galia (8) types were grown in a semiarid environment in Curacaví (33°27' S, 70°38' W), Chile, using common cultural practices. Fruits were harvested at the half-slip stage, except Galia (3/5 color), graded, washed, and stored for 18 days at 0 °C, with an additional 3 days at 20 °C. Symptoms of CI appeared with varying intensity in almost all cultivars and were generally similar. Symptoms developed progressively: surface discoloration progressed from light pink to brownish to black, followed by large sunken areas, and eventually, discrete indentations and net whitening. Surface decay was not present in most fruits and should be considered a consequence rather than a symptom of CI. Cultivars had different sensitivities to the disorder; some cultivars were severely injured (Athena, Colima and Revigal) whereas others developed almost no symptoms of CI (Hy-Mark, Gal 96, and Voyager I). The response variability to chilling showed the need for precise temperature recommendations for these cultivars, and signaled a potential for future long-term transport or storage of some cultivars.