

**Title** Incidence of Chilling Injury in Two Varieties of Winter Squash (*Cucurbita maxima* Duch.) at Low Temperature Storage

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**Citation** Horticulture, Environment, and Biotechnology, 49(2) p. 104-108, 2008.

**Keywords** Weight losses

#### **Abstract**

Winter squash 'Ebis' from Jeju Island cured for 10 days at  $28\pm 1^{\circ}\text{C}$  with RH of  $70\pm 5\%$  were stored at  $5^{\circ}\text{C}$ ,  $12^{\circ}\text{C}$  and at ambient conditions for 6 months. Another batch of 'Ebis' and 'Kurijimang' from Anheung pre-treated with 200 ppm of NaOCl were stored at the same conditions for at least 4 months. Changes in quality and incidence of chilling injury were investigated. Good quality 'Ebis' can be stored for at least three months at low temperature storage. The development of chilling injury contributed much to a shortened storability. Manifestation of chilling injury in cured 'Ebis' started at 4 months storage while 'Ebis' from Anheung exhibited symptoms of the injury as early as two months. Chilling injury in 'Kurijimang', on the other hand, was apparent on the third month of storage. Chilling injury affected the firmness of both varieties by exhibiting reduction of flesh consistency. Weight loss was highest at room temperature storage while moisture loss was least at low temperature storage. Chilling injury contributed much to an increase in weight loss at  $5^{\circ}\text{C}$  storage. The development of chilling injury was characterized by rind darkening and the development of pitting due to weakened tissues resulting in internal tissue breakdown following mold invasion.