Refrigerated Storage of the Seeded Breadfruit (Breadnut) or “Chataigne”

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Abstract

Breadnut or chataigne, the seeded type of breadfruit (Artocarpus altilis), harvested at the partially immature, firm, green stage was stored for 25 days at 10°C and 16°C and 9 days at 28°C (ambient conditions). Fruits were previously treated by packaging in sealed polyethylene bags or by waxing. Untreated (unpackaged) fruits served as the control. Fruits in refrigerated storage showed reduced weight losses compared to ambient (28°C) stored fruits. Fruit firmness was further enhanced when low temperature storage was combined with polyethylene packaging. Irrespective of storage temperature and treatment, there were no significant moisture content changes in the fruit’s pulp or seeds. Unpackaged and waxed fruits stored at refrigerated temperatures (16°C and 10°C) showed peel colour variations from green to brown-green which were pronounced at 10°C. These symptoms are consistent with chilling injury. Fruits in polyethylene bags at 16°C showed a reduction in brown colour development of the peel for up to 25 days. Waxed fruits, particularly at 10°C and 16°C, underwent deteriorative changes in internal seed and pulp colour. Storage at 16°C for 25 days in polyethylene packaging appears best for retaining fruit colour, firmness and appearance, and the pulp of these fruits was the most suitable for traditional cooking.

Keywords: Breadnut, Seeded breadfruit, Chilling injury, Polyethylene packaging, Waxing