

Title Chilling injury during storage influences ripening process in Kensington pride mango fruit
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Abstract

Cool storage is usually employed to extend the shelf life of fruits, but mango (*Mangifera indica* L.) fruit are susceptible to chilling injury (CI) when stored below 13°C. In the present study mature fruit of mango cv. Kensington Pride were stored at 5 and 15°C for two weeks and allowed to ripen at 22°C to assess the development of chilling injury (CI), and fruit ripening process including fruit firmness, respiration rate, β -carotene, TSS/acid ratio, reducing, non reducing and total sugars during the ripening period of 11 days. CI symptoms were observed during ripening period on the fruit stored at 5°C and no symptoms were noticed in the fruit stored at 15°C. The CI symptoms increased as the ripening process was progressed at 22°C on the fruit stored at 5°C. CI developed during low temperature storage (5°C) suppressed fruit respiration rate. CI induced during low temperature storage reduced fruit colour development, weight loss, β -carotene, TSS/acid ratio, reducing, non-reducing and total sugars and increased fruit firmness and acidity during ripening as compared to the fruit stored at 15°C. In conclusion chilling injury during storage hindered the normal ripening process of the fruit and some chill-injured fruit failed to ripen.