

Title Controlled atmosphere storage of 'Opal Star' feijoa
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Abstract

Feijoas (*Acca sellowiana*) have a short harvest season and a limited postharvest life. In order for the New Zealand feijoa industry to export to distant markets a postharvest life of at least 6 weeks is required. Controlled atmosphere (CA) storage of 'Opal Star' feijoa fruit was evaluated as a means of extending postharvest life. Fruit quality changes were measured when fruit were stored in air or in four CA atmospheres (a matrix of two levels of oxygen (2 % and 5 %) and two levels of carbon dioxide (0 % and 3 %) at 4°C for up to 10 weeks. Fruit weight loss during 10 weeks in CA at 4°C was 1.5-2 % of initial weight. Firmness of fruit stored in air or in CA with 3 % CO₂ decreased from about 18 N at harvest to 9 N after 10 weeks at 4°C. Firmness declined at a lower rate for fruit under CA conditions with 0 % CO₂ (14 N after 10 weeks). Total soluble solids decreased as storage time and subsequent shelf life increased. Air stored fruit yellowed slightly during 10 weeks at 4°C while CA fruit remained green. Individual fruit from all treatments, including fruit stored in air, developed an external discolouring injury after 6 weeks at 4°C. CA appears to offer some benefits for increasing the storage life of 'Opal Star' feijoa but further investigation is required to explore the commercially efficacy under commercial conditions feijoas.