

Title Postharvest Fruit Weight Loss, Pericarp Water Loss and Their Relation to Pericarp Browning of Longan

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Abstract

Longan (*Dimocarpus longan* Lour.) fruit are very susceptible to water loss, and post-harvest pericarp browning is the most important factors affecting storage life and quality of longan fruit. 'Fuyan' longans stored for 1, 2, or 6 days at 10°C and 50% RH lost 5.84%, 10.73% and 23.98% fresh weight, respectively, and water loss from the pericarp was 13.59%, 26.40% and 42.78%, respectively, but there was minimal weight loss if the aril and seed part. Hence, selective dehydration of pericarp occurred with little movement of water between the aril and the pericarp, and water loss of fruit was mainly from the pericarp rather than the aril. Both weight loss from the fruit and water loss from the pericarp were positively correlated with pericarp browning index significantly ($P < 0.01$). Storage in plastic film bags and low temperatures is effective in reducing moisture loss and desiccation-induced browning. 'Fuyan' fruit packed in polyethylene (PE) film bags (0.015 mm thick) and held at 20°C lost 2.87% of their weight after 15 days, while fruit held at 4°C only lost 2.01% after 30 days. Storage at 4°C also retarded pericarp browning and extended storage life of fruit.