

Title Surface coating treatments influence fruit weight loss and fruit surface microstructure of N36 and Gandul pineapples

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Abstract

Effect of surface coating treatments on fruit weight loss and fruit surface microstructure of N36 and Gandul pineapples stored at 10°C were carried out. The coating materials tested were; liquid paraffin and palm oil and Semperfresh. Hydrophobic emulsion (liquid paraffin and palm oil) were found to be effective in reducing weight loss in pineapples during storage at 10°C for 8 weeks. Environmental scanning electron microscope (ESEM) microstructure analysis also showed that both liquid paraffin and palm oil can effectively cover the stomata and lenticel on fruit skin which possibly reduce the moisture loss of the fruit. Surface coating treatments affect the weight loss of pineapple as significantly ($p < 0.05$) increased weight loss of N36 pineapples was noticeable when the pineapple was treated with Semperfresh. However, significantly ($p < 0.05$) reduced in weight loss was observed when the Semperfresh was treated to Gandul pineapples. The results revealed that the effectiveness of coating materials in the reduction of weight loss in pineapples varies according to fruit variety. Hydrophobic emulsion (liquid paraffin and palm oil) were effective in reducing weight loss in both varieties of pineapples.