CHANGES IN PHYSICAL PROPERTIES OF TWO DIFFERENT BANANA ACCESSIONS UNDER DIFFERENT STORAGE CONDITIONS

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Abstract

Banana storage is very challenging all over the world due limited cost-effective strategies. Therefore, this study aimed at exploring the effect of different storage conditions: cardboard boxes; banana sheath box and hands with no containers, to check the quality of two banana accessions: *Seeni* (ABB) and *Puwalu* (AAB). Hands were disinfected before imposing treatments. The quality parameters: moisture content of banana peel and pulp; dry matter content of banana peel and pulp, were measured at one day interval for six consecutive days. The result revealed that the storage box made with banana stem sheath retained the quality parameters: moisture content of pulp and peel; dry matter content of peel and pulp of varieties after six days of storage compared to other two treatments. Peel moisture content values of *Seeni* variety were 86.89±0.60 (Cardboard box), 86.44±1.06 (Banana sheath box), 83.97±1.79 (Control), and for *Puwalu* variety, peel moisture content values were 87.27±0.56 (Cardboard box), 87.58±0.48 (Banana sheath box) and 87.07±0.61 (Control). Pulp moisture content values of *Seeni* variety were 64.41±1.40 (Cardboard box), 63.32±1.28 (Banana sheath box) and 64.13±0.67 (Control), whereas for *Puwalu* variety, pulp moisture content values were 68.06±0.61 (Cardboard box), 66.69±0.31 (Banana sheath box) and 67.59±0.46 (Control). The pulp dry matter content values of *Seeni* variety were 35.80±0.609 (Cardboard box), 36.48±1.06 (Banana sheath box) and 36.70±1.79 (Atmospheric storage). The pulp dry matter content values of *Puwalu* variety were 31.93±0.56 (Cardboard box), 33.30±0.48 (Banana sheath box) and 32.38±0.61 (Control). For the *Seeni* variety, the pulp to peel ratio values were 2.2533 (Cardboard box), 2.205 (Atmospheric storage), 2.4267 (Banana sheath box) and for *Puwalu* variety, the values for pulp to peel ratio were 1.7383 (Cardboard box), 1.6508 (Banana sheath box) and 1.7067 (Atmospheric box). Based on the outcome of this study, banana sheath box is good at maintaining the moisture content and freshness of two banana varieties used in this study. It is, therefore, be used in sustainable way to store banana effectively.

Keywords: Banana, Eco-friendly, Physical properties, Postharvest handling, Storage methods

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