Effects of different low temperature storage conditions on the physico-chemical properties of Mastura (J37) jackfruit bulbs

ABSTRACT

Mastura (J37) jackfruit planted in Pahang (Malaysia) is less preferred by the consumers and has caused backlog in the plantation as reported by Pahang State Farmers Association (PASFA). In this study, the proposed solution given was to use vacuum packaging to pack the bulbs and store them at 8-10^{o}C (refrigerator) and -18^{o}C (deep-freezer). After 3 weeks of storage, deep-frozen vacuum-packed bulbs had lower ripening index (265) and microbial count (6x102cfu/ml) when compared to refrigerated vacuum-packed bulbs which had higher ripening index (629) and higher microbial count (52x102cfu/ml). The lightness, L* value of vacuum-packed jackfruit bulb samples under deep-freeze storage was higher compared to the ones under refrigeration storage. The output obtained from this work provides preliminary data which are useful for Mastura (J37) jackfruit further downstream processing. These data are helpful as they contribute towards the understanding of further processing of this particular jackfruit variety into end products, in order to solve the issue faced by PASFA.

Keyword: Jackfruit; Low temperature storage; Vacuum packaging; Minimally process fruit; Food security