



Original Research Article

<https://doi.org/10.20546/ijcmas.2018.708.265>

Enhancing Firmness and Nutritional Quality of Ber Fruit with Suitable Packaging Materials and Waxing during Storage

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ABSTRACT

Ber can provide food security, due to sustained production of the fruit in even degraded lands. It is highly nutritive which untapped source of nutrition. It is an ideal fruit for arid and semiarid regions and tropical and subtropical climate where most of the fruits cannot be grown. Therefore, a study was conducted to evaluate the suitable packaging material for transporting the fruits in distant market by road route. The four packaging materials with and without cushioning materials viz. gunny bag, polythene bag, netlon bag and CFB box, two waxing treatments on fruit, viz. waxing and not waxing, three storage conditions, viz; room temperature (RT), zero-energy cool chamber (ZECC) and cold storage (CS) were evaluated for better firmness and maintained chemical properties with enhance the shelf life during storage after transportation. The maximum firmness was recorded in RT (6.770 N, 4.550 N), ZECC (6.970 N, 5.957 N) and CS (7.170 N, 6.270 N) stored fruits, which were packed in CFB boxes with providing wax treatment on 6th and 12th day of storage. The minimum PLW (1.38%, 2.77%) was observed in the fruits packed in polythene bag with paper cutting cushioning material and maximum ascorbic acid (92.65 mg/100g, 76.46 mg/100g) was recorded in the CFB boxes packed fruits with cushioning material on 3rd and 6th days after storage (DAS). The maximum reducing sugar (6.26%) was noticed in those fruits packed in netlon bag without cushioning material on 3rd DAS while minimum acidity (0.135%) was recorded in netlon bag without cushioning material packed fruits on 6th DAS. The maximum TSS (15.79%) was observed in the fruits packed in polythene bag with cushioning material on 6th DAS. These results suggested that fruit can be treated with wax for retaining the firmness during storage and cushioning material can be applied during transportation for enhance the quality of the fruits. Polythene bag is the cheapest among all the packaging materials with and without cushioning and waxing.

Keywords

Ber, Firmness, Transportation, Storage, Packaging materials, Cushioning Materials

Article Info

Accepted:
15 July 2018
Available Online:
10 August 2018