Construction, performance and evaluation of double cooling pad evaporative cooling chamber for storage of tomato

S.P. CHAVAN, A.N. YADAV AND R.D. DHANAWADE

ABSTRACT

During the storage and transit from farmer’s fields to market place, there is a substantial loss in quality and shelf-life of vegetable due to improper post harvest handling and storage methods which is about 30-35 per cent. To overcome this problem, the evaporative cooling chamber is introduce to the farmers. Three evaporative cooling chamber to storage the tomato vegetable viz., Double cooling pad (T₂), Single cooling pad (T₁) and Room temp. storage (T₀) were constructed. Results of present investigation indicated that, depending upon quality parameters viz., colour index, softness index, PLW, M.C, T.S.S. and acidity, double cooling pad showed better result followed by the single cooling pad and room temperature storage. The shelf life of tomato in double cooling pad was up to 27 days followed by treatment T₁ (21 days) and T₀ (12 days). The shelf-life of tomato was increased by 15 days in double cooling pad as compared to room temperature storage. Also, depending upon inside temperature and relative humidity treatment T₂ was reported better than other treatments. Considering the above double cooling pad was best suited for storage of tomato with low cost and negligible operational cost.

Key words: Colour index, Softness index, Acidity, Percentage loss in weight, Total soluble salt