

# COMPARATIVE STUDY ON EVAPORATIVE COOLING CHAMBER AND AMBIENT STORAGE FOR SHELF LIFE AND QUALITY OF BRINJAL,

Sanchika,R<sup>1</sup> and Vasantharuba S<sup>1</sup>. and Sivakumar,S<sup>2</sup>.

<sup>1</sup>Department of Agricultural Chemistry, Faculty of Agriculture, University of Jaffna, Jaffna, Sri Lanka

<sup>2</sup>Department of Agriculture (Ext), Jaffna, Sri Lanka

## ABSTRACT

A low cost evaporative cooling chamber with the capacity of 50kg of vegetables was constructed using clay bricks, sand, cement and wooden planks with the aim to reduce the postharvest losses and price fluctuation problems of vegetables in Jaffna, Sri Lanka. The aim of this study is to compare the storage period of freshly harvested brinjal kept inside the cooling chamber and at ambient environment. Changes in loss of weight, rotting percentage, shrinkage percentage and microbial count of the brinjal kept under both conditions were evaluated continuously. The sensory characteristics like colour, texture, shrinkage, rotting and overall acceptability of all the samples were evaluated using a hedonic scale. Weight loss, rotting and shrinkage percentages and microbial count of brinjal were significantly lower in cooling chamber than at ambient ( $p < 0.05$ ). The sensory characteristics of brinjal fruits stored in the cooling chamber were significantly higher than the samples stored at ambient ( $p < 0.05$ ). The shelf life of brinjal kept in the cool chamber was 10 days and this was only 2 days for the samples kept at ambient. Therefore, brinjal can be successfully stored for 10 days with low cost inside the evaporative cooling chamber without affecting their quality.

*Keywords:* Ambient, Brinjal, Evaporative cool chamber, Shelf life