INNOVATION OF LOCALLY AVAILABLE POSTHARVEST TECHNOLOGIES FOR IMPROVING SHELF-LIFE OF VEGETABLES

Dr. Md. Nazrul Islam*

Executive Summary

Production of fresh vegetables is increasing in Bangladesh. No accurate estimates for postharvest losses of fresh produce are available in the country. An integrated effort is required to reach a better understanding of harvest maturity, harvesting techniques, pack house operation such as washing, sorting, grading, packaging, transportation and storage of fresh produce in order to minimize the losses, maintain quality and safety. Thus, there is an urgent need for development of postharvest technologies and acquisition of existing technologies of home and abroad. The experiment was carried out at the Postharvest laboratory of Sher-e-Bangla Agricultural University, Dhaka-1207. The single factor experiment was laid out in a Completely Randomized Design (CRD) with three replications. The present research was conducted to evaluate the effect of different post-harvest treatment on shelf life and quality of tomato. The postharvest treatments were (*viz*: Wo = Tap water dips, WH = Hot water dips, I = With ice, Io = Without ice, P= Perforated Polybag, Po = Non-Perforated Polybag, RH = 80±5% Relative Humidity and Ro = Relative humidity at room condition 60-65%. Results revealed that the lowest disease incidence (43.54%) and weight loss (7.62 %) were recorded from T_{13} (Hot water dips + With ice + Perforated Polybag + 80±5% RH) treatment where the highest disease incidence (100%) and weight loss (16.17 %) were found in T_{12} (Tap water dips + Without ice + Control + RH at room condition 60-65%) treatment. The highest shelf life (17 days) and quality of tomato were obtained from T_{13} (Hot water dips + with ice + Perforated Polybag + 80±5% RH) treatment. Better performance was observed in tomatoes when treated with hot water including ice and storage with perforated polybag and 80±5% relative humidity for longer shelf life and quality. Increasing the storage life, proper handling and transportation methods of fresh produce by developing new techniques would greatly expand the opportunities to supply high quality fresh vegetables to the local and export markets.

* Professor, Dept. of Horticulture, Sher-e-Bangla Agricultural University, Dhaka-1207