Title Evaporative cooling storage of tomato in Cambodia and Laos

Authors M. Vanndy, B. Buntong, T. Chanthasombath, K. Sanatem, A. Acedo Jr., K. Weinberger

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Abstract

A simple brick-walled evaporative cooler (EC) with moistened sawdust (Cambodia design) or sand (Lao design) as wall insulation was tested for the storage of mature-green and breaker fruits of two promising tomato AVRDC varieties, CLN1462A and TLCV15. During fruit storage, the temperature in the EC decreased by about 1-10°C lower than that at ambient while RH increased by about 10-35% higher than the ambient RH. As a result, weight loss of stored fruits of both varieties decreased considerably. However, the EC had no appreciable inhibitory effect on ripening, except in TLCV 15 fruits as obtained in the Cambodia experiment. Decay incidence showed variations due to treatment conditions. In the Cambodia experiment, decay in both varieties was higher in the EC than at ambient. Pre-storage wash in 2% bicarbonate solution (2 g ordinary baking soda in 100 ml water) for 3 min. reduced decay during EC storage. In the Lao experiment, decay did not vary with storage condition. EC storage had no adverse effect on the physicochemical and sensory quality attributes of the fruits at the red-ripe stage but these attributes differed with variety. In general, CLN1462A fruits had lower soluble solids and were rated lower in sensory quality than TLCV15 fruits.