



214/B

**Effect of oxalic acid, ethanol vapour and packaging on postharvest performance of  
*Carica papaya* var. Red Lady**

R M N A Wijewardane\*

*Institute of Postharvest Technology, Jayanthi Mawatha, Anuradhapura*

Papaya is native to tropical America and grown in most of the tropical and sub tropical countries. At present the extent of papaya cultivation is 4941 ha with the annual production of 19754 Mt. Shelf life of papaya varies from 3-6 days under tropical climatic conditions. Therefore this study was conducted to identify suitable pre treatments and suitable packaging techniques for shelf life extension of papaya.

Papaya, variety Red Lady was harvested at the maturity stage of 25% yellowing and washed using 200-ppm chlorine solution. Fruits were dipped in 3 ppm, 6 ppm and 9 ppm oxalic acid solution for 10 min at ambient temperature (28-30 °C) and subjected to ethanol vapour treatment, (5 ml ethanol per kg of fruits) for 6 hrs. Treated fruits were packed as bulk using Corrugated Fiber Board Boxes (CFB) with different conditions such as; CFB box + ventilation + lined with LDPE (200 gauges), CFB box + ventilation + lined with 200 gauges LDPE + scavengers (potassium permanganate and activated charcoal), CFB box + ventilation + scavengers (potassium permanganate and activated charcoal, CFB box + ventilation and stored at ambient temperature (28-30 °C). Fruit quality was determined at 2 days interval and physiological weight loss, fruit firmness, total soluble solids (TSS), titratable acidity, pH, and sensory qualities were evaluated.

Shelf life of papaya could be increased by dipping in 9ppm oxalic acid solution coupled with CFB box + lined with 200 gauges LDPE + scavengers (potassium permanganate and activated charcoal) by retaining most of the physiological and biochemical characteristics of fruits.