

Title Effect of chemicals and growth regulator on storage behavior of papaya (*Carica papaya* cv. CO2)

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Abstract

In India, papaya occupies an area of 60,000 ha with the national average productivity of 27.5 tonnes ha⁻¹ in tropical and subtropical regions. Despite the fact that the fruit is climacteric and nutritionally rich, this crop is not exploited on a large scale because of perishability and poor postharvest storage facilities. The efficacy of various chemicals on the postharvest was laid out in a completely randomized block design, with four levels of CaCl₂ (1%, 2%, 3%, 4%), Ca(NO₃)₂ (1%, 2%, 3%, and 4%) and GA₃ (50, 100, 150 and 200ppm) replicated five times along with a control. Uniform sized fruit was harvested at the physiological maturity and treated for five minutes at room temperature. The treated fruit were observed for physiological changes such as loss of fruit weight (kg/ fruit), firmness (kg/cm), percentage of ripening, the proportion of decayed fruits and biochemical aspects such as TSS (°Brix), titrable acidity (percent), ascorbic acid content (mg/100g) along with sensory evaluation. The data revealed that postharvest dipping of papaya fruit either in GA₃ at 100ppm or CaCl₂ at 2% treatment preserves the fruit with extended shelf life upto nine days without any decline in fruit quality.