

Title Effect of pre-harvest spray of zinc, calcium and boron on the storage behaviour of guava (*Psidium guajava* L.) fruits cv. Allahabad Safeda

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Citation ISHS Acta Horticulturae 735:633-638. 2007.

Keywords zinc sulphate; calcium nitrate; borax; physico-chemical composition

Abstract

An experiment was conducted to study the effect of pre-harvest sprays of zinc, calcium and boron on storage behaviour of guava cv. Allahabad Safeda grown under central U.P. agro-climatic conditions in Kanpur, India. Eight year old guava trees were sprayed with zinc sulphate (0.2 and 0.4%), calcium nitrate (1.0 and 2.0%) and borax (0.2 and 0.4%) along with water as a control. The wetting agent Tween-20 at 1 ml/liter of solution was used in all spray solutions for their better absorption. Each tree was sprayed with 5 liter of solution (450 ml/min.) using a foot operated sprayer equipped with a duronist spray nozzle 20 days before harvest. The harvested fruit samples were stored at $10 \pm 1^{\circ}\text{C}$ and $85 \pm 3\%$ R.H. The observations were taken at 5 day intervals up to 20 days for physical and chemical analysis, viz. physiological loss in weight (PLW), per cent spoilage, ascorbic acid content, acidity, total sugars and total soluble solids (TSS). The results showed that the spray of zinc sulphate (0.4%) minimized the physiological loss in weight and spoilage percentage up to 15 days and maintained the quality of fruits (TSS, ascorbic acid, sugars and acidity). Calcium nitrate at lower concentration, i.e., 1.0% also showed beneficial effects in prolonging the storage life of guava fruits up to 10 days.