

Effect of harvesting time and washing treatment on post-harvest quality of mango

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Receipt: 28.04.2025

Revised: 01.06.25

Acceptance: 02.06.25

DOI: 10.53552/ijmfmap.11.1.2025.264-273

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ABSTRACT

To study the quality of mango fruit as influenced by sap burn injury during harvesting time and washing treatment a field research was done in farmer field at KanchanRupa municipality, Saptari and laboratory work at National Citrus Research Program, Dhankuta from 13th June, 2023 to 28th June, 2023. The research was laid out in two factorial completely randomized designs with three replications. The first factor consists of harvesting time (09-11 am, morning time and 02-04 pm, day time). The second factor, washing treatment done in field consists of (No washing, Normal tap water, Sodium chloride - 1%, Potassium metabisulphate- 1%, Detergent- 1%, and Calcium hydroxide- 0.5%). The physiochemical quality, shelf-life, sap burn and physiological loss in weight (PLW) were studied. The highest total soluble solids (TSS) was obtained in No washing (16.63 °Brix) and the lowest in Calcium hydroxide (14.03 °Brix) at 10 days after harvesting. Similarly, the lowest titratable acidity of fruit was obtained in washing treatment with Sodium chloride (0.62%) and highest in both Normal tap water and Calcium hydroxide (0.79%). Among different washing treatments, the longest shelf-life of mango was obtained in Calcium hydroxide (12.10 days) washed fruit followed by Detergent (10.17 days). The shortest shelf-life was obtained in washing treatment No washing (8.25 days). The sap burn injury was recorded more in day harvest (2.03) than morning harvest (1.94) which are statistically not different apart. The PLW of fruit was observed lowest in Calcium hydroxide (7.62%) treated fruit upto 13th days of storage. Overall, Calcium hydroxide was found as best washing treatment for better post-harvest life of mango than rest of the treatments.

Key Words: Mango, physiological property, sap burn, washing treatment,