

# Post-harvest Treatment of Polyamines Maintains Quality and Extends Shelf Life of Mango (*Mangifera indica* L.) cv Himsagar

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**Abstract**—Much research evidence indicate that polyamines (PAs) in their free forms act as anti-senescent agents reduce rate of respiration, delay ethylene production and increase shelf life of fruits. keeping this in view an investigation was undertaken with the objective to study the post-harvest dip of PAs on fruit quality and shelf life of mango cv Himsagar which is a climacteric fruit that undergoes huge post-harvest losses. The experiment was undertaken during 2014-2015 in a randomised block design. Result revealed that, different treatments of polyamines (PAs) significantly increased the total soluble solids content of fruit, total sugar, titrable acidity, calcium content and shelf life of fruit at ambient room temperature. It was found that the different treatments of polyamines reduce the respiration rate of fruit as compared to the control. Among different treatments under study, Putrescine 1.0 mM showed maximum TSS (19.80 °Brix), total sugar (13.74 %) acidity (0.29 %) and calcium content (13.72 mg/100g fruit) followed by Putrescine 1.5 mM while control recorded maximum. This treatment also exhibited maximum shelf life (10 days) with minimum Co<sub>2</sub> evolution (50.27 mg/hr/100g fruit). Finally, it is concluded that polyamines improve the fruit quality and shelf life of mango. Among different polyamines Putrescine 1.0 mM proved most effective as post harvest dip.

**Keywords:** Polyamines, Mango, Postharvest losses, Quality and shelf life.