



## Research Paper

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# Effect of pre harvest spray and post harvest dipping of fruit on shelf life and quality of papaya

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**ABSTRACT :** An experiment was conducted to study the pre harvest spray and post harvest dipping of fruit on shelf life and quality of papaya (*Carica papaya* L.) cv. Madhubindu was carried out at Fruit Research Station, Lalbaug and P.G Research Laboratory, Department of Horticulture, Junagadh Agricultural University, Junagadh during 2013. The experiment was laid out in Completely Randomized Design (Factorial) in two factors with three replications. There were two factors comprised of pre harvest spray *i.e.* water spray (S<sub>1</sub>), GA<sub>3</sub> 15 ppm (S<sub>2</sub>), alar 500 ppm (S<sub>3</sub>), GA<sub>3</sub> 15 ppm + caobendazim 0.05% (S<sub>4</sub>) and alar 500 ppm + caobendazim 0.05% (S<sub>5</sub>) along with post harvest dipping *i.e.* water (D<sub>1</sub>), CaCl<sub>2</sub> 1% (D<sub>2</sub>) and Ca(NO<sub>3</sub>)<sub>2</sub> (D<sub>3</sub>). The pre harvest spray of GA<sub>3</sub> 15 ppm + carbendazim 0.05% and post harvest dip in CaCl<sub>2</sub> 1% individually as well as their combination (S<sub>4</sub>D<sub>2</sub>) were found to be more effective in reducing physiological loss in weight, highest percentage of marketable fruit, lowest percentage of ripened fruit, lowest days to start ripening and highest shelf life. Similarly for biochemical parameters and organoleptic score, highest TSS, lowest acidity, highest ascorbic acid, total sugar, vitamin A and fungus intensity as well as organoleptic parameters like color, texture, taste, flavor and overall acceptability were also found better in GA<sub>3</sub> @ 15 ppm + carbendazim 0.05% as pre harvest spray and CaCl<sub>2</sub> 1% (D<sub>1</sub>) as post harvest dip. The interaction effect was also found significant and better performance was observed in treatment combination S<sub>4</sub>D<sub>2</sub>.

**KEY WORDS :** Papaya, Pre harvest, Post harvest, Shelf life, Quality

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