

Evaluation of Different Postharvest Treatments on the Shelf life of Guava (*Psidium guajava* L.)

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Guava (*Psidium guajava* L.) is a climacteric fruit with limited shelf life. Considerable postharvest loss can be occurred in guava due to its high perishability. The present study was conducted at the Fruit Crops Research and Development Center, Kananwila, Horana with the aim of identifying the correct harvesting stage and proper postharvest treatment to extend the shelf life of guava while maintaining its quality. For this purpose, experiments were carried out. Using four recommended varieties of guava namely Horana white, Horana red, Kanthi and Pubudu, the fruits were harvested at four different maturity stages and analyzed for their quality, color turning stage. Harvested fruits were treated with four different postharvest treatments; keeping at ambient conditions, packaging in 200 gauge LDPE bags, wax coating with 4 % gelatin based edible wax and keeping at cold storage conditions (4 - 8 °C) until decaying. Seven days of shelf life was recorded, Horana white, Horana red and Kanthi fruits kept at ambient conditions. Pubudu fruits showed nine days of shelf life under ambient conditions. Equal shelf life of nine days was observed in Horana white and Horana red varieties treated with LDPE packaging and wax application. Kanthi fruits treated with wax coating and LDPE packaging maintained seven days of shelf life similar to the fruits kept at ambient conditions. Maximum shelf life with high quality was recorded in fruits kept at cold storage conditions. The shelf life of fruits stored at cold storage conditions of Horana white was fifteen days and it was thirteen days for both Horana red and Kanthi fruits. Wax coating and LDPE packaging delayed the fruit ripening only for two days in Horana white and Horana red varieties. No extension in shelf life was observed in Kanthi either by LDPE packaging or wax coating. Shelf life was extended for additional six days in Pubudu by LDPE packaging. Considering the above facts, keeping fruits at cold storage conditions (4 - 8 °C) can be considered as a treatment to extend the shelf life of guava harvested at the color turning stage. Further investigations are required for recommendations.

Key words: Guava (*Psidium guajava* L.), Quality, Maturity, Postharvest treatments, shelf life