## Quality assessment and postharvest technology of mango: A review of its current status and future perspectives

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## Abstract

Mango (Mangifera indica L.) is a commercial fruit crop produced in tropical, subtropical regions in the world. It is widely consumed due to the delicious flavour, pleasant aroma, and rich source of nutrients and phytochemicals (vitamin C, Vitamin E,  $\beta$ - carotene, lutein, guercetin, mangiferin, omega 3 and 6 polyunsaturated fatty acids etc.). Deficiency of  $\beta$ - carotene which is a precursor for the biosynthesis of vitamin A is a major challenge faced by Sub-Saharan African countries. Therefore, mango consumption could relatively be an affordable strategy to supply  $\beta$ - carotene to alleviate the vitamin A deficiency in the Sub Saharan Africa. However, fruit shelf life is limited due to high respiration rate, ethylene production and excessive ripening, pests, diseases cumulatively resulting in postharvest loss of valuable nutrients and decline in market value. Furthermore, rejection by consumer of fresh mangoes is attributed to improper fruit maturity, mechanical damage caused during harvesting or field handling. The fruit marketability is closely linked with the development of suitable technology which reduces the losses at different stages of harvesting and storage conditions. Instruments for monitoring and predicting the fruit quality have been introduced recently. This review presents an overview of fruit physiological changes, postharvest quality and non-destructive assessment criteria during mango supply chain. Furthermore, the application of current postharvest technologies, capturing (low cost storage structures, low temperature, modified atmosphere storage, anti-ripening treatments and hot water treatment) and its implications on mango fruit nutritional quality are pointed out.