

Benefits of Drying to enhance shelf stability of mango



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Mango is a Pakistan native fruit with different varieties mainly Chaunsa, Sindhri, Fajri, etc.

Mango is also famous as king of fruit all over the world because of its taste. It is used ripe as well as

unripe in food items. Mango has health boosting properties because it is a rich source of minerals, carotenoids and fiber. Various portions of mango (pulp, seed kernel, leaves, peel) are used as a traditional medicine because of their health benefits. Pakistan is the 6th largest producer of mango all around the world with almost 1.717 million tons production on 170-thousand-hectare area in 2025, mainly grown in Punjab and Sindh. According to research studies, about 75% of mangoes do not reach their market value due to postharvest losses. About 25-27% of fruits are spoiled due to fruit diseases and 60% are damaged due to improper handling. Research reported that the loss of mango occurs due to improper postharvest handling and storage. There are different factors which affect the quality of fruits before and after harvest. Lack of technologies, skilled persons, irrigation system, environmental hazards are the pre harvest factors which may affect the quality of fruits. The use of improper tools for harvesting, lack of storage, processing and transportation techniques are the main reason for postharvest losses of mango. Due to improper management different disease may attack on mango fruits. There is no use of proper processing technique to overcome the losses of mango and achieve its high market value. To maintain the fruit fresh and nutritionally save there should be proper post-harvest management like transportation, packaging, and handling after harvesting. There are various processing techniques available in the world which need the chemical treatment, low or freezing temperature and high temperature

(drying) to maintain the fruit fresh and preserve for long time. According to the study, chemically preserved fruits are stored at low temperature for a specific time period. Chilling injury may occur in case of time prolonged and the surface of fruit get deteriorate and decay by discolor. Removal of water or drying is one of the best and cost-effective processing techniques to reduce the losses and attain market value of fruits. All drying method have aim to develop fruit products with different unique characteristics. There are almost 50 different dryer types are designed, proved and working in the food industry for the food preservation. Research claim that the drying technique increases the shelf life of fruit by decreasing the autolysis (enzymatic activity) and microbial growth. Drying technique is also best because of decreasing in weight as well as reduction in store cost, packing cost and reduction in transportation cost and availability of fruit all around the year. So we can reduce mango losses by drying technique and increase the market value of mangoes by value added mango products. It should be used by growers and at industrial level to enhance the value of our Pakistani mangoes all around the world and reduce the losses of mango by value added dried mango products.

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