

EFFECTS OF QUANTITATIVE AND QUALITATIVE POST HARVEST
LOSSES OF MANGO (Mangifera indica L.) AND
YELLOW PASSION FRUIT (Passiflora edulis cv. flavicarapa)

By

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ABSTRACT

Even though mango and passion fruit are high yielding, 20–33% of mango harvest get infected; a considerable amount of passion fruit harvest get wasted due to rapid shrinkage of the fruit rind. As there is limited production of fruits, methods to reduce such postharvest losses are required to cater for the demand. Therefore, experiments were carried out with the objectives of reducing quantitative and qualitative postharvest losses and of increasing storability of mango and passion fruit.

The results of experiments carried out for mango revealed that the fruits treated with 1000 ppm benomyl (50% w/w) at 52°–55° C for 5 min. and subsequently packed in 150 gauged sealed polythene bags could be stored at a temperature of 20° C and 85–90% relative humidity up to a period of 11–14 days. Comparatively lower weight loss (3.65%), *Collototrichum* disease loss score (0–1.33) stem end rot (*Diplodia* spp.) disease incidence score (0–0.67), higher acceptability score of 26.33–26.00 based on satisfactory qualitative characteristics and higher Brix value (11.30–12.30), titratable acidity (2.12–1.43%) were observed under the above conditions.

Though the seeds of heated benomyl dip recorded a lower percentage of germination than those of non treated ones, vigour of seedlings was not affected by the treatment.

The experiments conducted using passion fruit indicated that the waxed fruits (using TAG) could be stored successfully in a refrigerator (5.6°–12° C and relative humidity of 20%) for 14–19 days. These fruits showed much lower

degree of weight loss (9.84–20.76%), volume loss (2.00–7.83%), increase in extractable juice content and satisfactory qualitative characteristics of increase in Brix value and decline in acidity than unwaxed fruits held at 25.9°–33.3° C temperature and 73.40% relative humidity. However, the shrinkage of fruit rind could not be completely avoided by wax treatment but shrunk fruits could be utilized for processing purposes as far as qualitative and quantitative characteristics sustained. Furthermore, wax treatment does not affect the germination of seed and seedling vigour. Seeds of waxed fruits can be used for planting passion fruit as both germination and seedling vigour were not affected by the wax treatment.