

Evaluation of papaya varieties for jam making

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ABSTRACT

An attempt was made to ripen the papaya in different ripening media and to evaluate them for preparation of jam. The fruits ripened in straw were found to contain more sugar, total carotenoids and ascorbic acid. The physiological loss in weight was comparatively rapid in straw than at room temperature. The product prepared from Solo papaya had more organoleptic score as compared to the product prepared with Washington papaya

Key words : Papaya, Jam, Vitamin

Papaya is the fifth most important fruit crop of India. It is being cultivated in the tropical as well as sub-tropical regions of the country. The papaya yields a heavy crop of ripe fruits within a year of planting. The ripe papaya fruit is most extensively used in all tropical countries as a breakfast fruit just as it is or with salt, pepper, sugar or lime-juice. It is very wholesome sweet fruit rich in sugar and digestive enzymes. It is also an important source of Vitamin A and C. According to Aykroyd (1951) it ranks second to the mango as a source of precursor of Vitamin A. Yamamoto (1964) described the carotenoids composition of papaya, showing significant amounts of carotenoids with provitamin 'A' activity.

In India, about 34,200 ha area under papaya cultivation (Bose and Mitra, 1990) out of which Maharashtra constitutes 1500 hectares. The demand for products prepared from papaya is increasing in Gulf countries which is third most important international export market for India.

The fruit pulp of Washington is yellowish red, very sweet, agreeable flavour with fine consistency. The fruit of solo cultivar are of pear shape, weighing 300-500 g each. It has been introduced in India from Hawaii. Fruits are very sweet and tasty which are free from unpleasant odour.

Because of the initiation of papain industry, area under this crop is increasing at rapid rate. Utilization of papaya ex-treated fruits because of scars present on surface is a problem. However, the pulp if processed can turn out greater profit to the grower. Though these fruit yields good pulp and are excellent source of Vitamin A and C and can be used for various purposes, the work done is scanty. Hence, an attempt has been made to

evaluate the papaya varieties for preparation of jam.

MATERIALS AND METHODS

For the purpose of present study, the fruits of Washington and Solo papaya having uniform maturity were obtained from the Department of Horticulture, Marathwada Agricultural University, Parbhani. Fresh, sound fruits were brought to the laboratory and analysed for physico-chemical characters to know their suitability for preparation of the product. The average weight of fruit was determined by weighing the fruits. Average length and breadth of the fruit was measured with the help of measuring tape. Pulp and peel percentages were calculated on the basis of total weight of the fruits. Total soluble solids were determined with a hand refractometer. Moisture and titratable acidity were determined according to the procedure outlined in A.O.A.C. (1970). The method standardized by Roy (1973) was followed for the estimation of carotenoids. The ascorbic acid content was determined by the method of Association of Vitamin Chemists (1966). Method of Lane and Eynon (1923) was followed for the estimation of reducing and total sugars.

Ripening studies :

Fresh weights were kept for ripening. One lot was kept as such at room temperature and another lot was ripened in rice straw. In each lot 10 fruits were kept. Fruits were analysed after ripening.

Physiological loss in weight (PLW) :

For the studies on PLW, separate lots were kept for ripening, where individual fruits were weighed daily during ripening. Cumulative per cent loss was calculated.