

Evaluation of banana (*Musa paradisia* L.) varieties for flour making

■ ISHA SWAMI AND A.G. NAIK

SUMMARY : An experiment on evaluation of different banana (*Musa paradisiacal* L.) varieties for banana flour making was carried out at the Post Graduate and Post Harvest Laboratory, Department of Horticulture, N. M. College of Agriculture and ASPEE College of Horticulture and Forestry, Navsari Agricultural University, Navsari during the month of January to June 2010. Keeping the varieties V₁ (Rasthali), V₂ (Saba), V₃ (Bluggoe), V₄ (Rajapuri), V₅ (Chandraballi), V₆ (Udhyam) and V₇ (Grand Naine) as treatments in CRD with three repetitions. The nutritional value viz., titratable acidity (per cent), ascorbic acid (mg/100g), starch (per cent), T.S.S. (°Brix), total sugar (per cent) was carried out. The titratable acidity of flour was found lower in Grand Naine while higher in Bluggoe variety. While ascorbic acid was significantly maximum in Udhyam while lower in Chandrabali variety. In respect to T.S.S., starch and total sugar content, it was found maximum in Grand Naine and lowest in Saba variety. In other hand moisture was found significantly maximum in Grand Naine while the lowest in Chandrabali variety.

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Banana (*Musa paradisiaca* L.) is the largest produced and maximum consumed amongst the fruits cultivated in India. It is known as the as “apple of paradise” and “poor man’s apple”. It is highly nutritive and very delicious. It ranks third in area after mango and citrus. In India, annual production of banana is 262.17 lakh tones from an area of 7.09 lakh hectares. (Anonymous, 2010). In Gujarat state the banana crop occupies 60900 ha area with annual production of 35, 71,600 MT (Anonymous, 2010).

Banana flour contains high per cent of starch hence it is used for the formulation of nutritious weaning mixes and supplementary foods (Ogazi *et al.*, 2000). Most important use in the baby food.

“Soyamusa” a plantain baby food which is a mixture of 60 per cent plantain flour, 32 per cent soyabean grit, 8 per cent sugar, vitamin and mineral added to improve the

taste. High quality cakes and biscuits could be formulated from wheat-plantain composite using up to 80:20 (w/w) per cent, 60:40(w/w) ratios of wheat plantain flour substitution for bread and biscuits, respectively (Horsfall *et al.*, 2007).

Many improved national and international varieties such as Rasthali, Rajapuri, Chandraballi (Red), Saba, Bluggoe, Grand Naine etc are under trial at Fruit Research Station; Gandevi, (Navsari). Moreover, banana is cultivated on largest scale in our country also because of commercialization of micropropagation of banana cultivation further enhanced its area and production. Which needs to evaluate product processing of banana in our country. It is, therefore, proposed to conduct research on varietal evaluation of banana for flour making.

EXPERIMENTAL METHODS

Full three quarter level (Thompson and Burden, 1995) fruits were taken and washed and then steamed (Krauss Maffei, munchen Germany) at 1kg/cm² (100-115°C) for 7min. Then fruits were removed from steam and then weighed to determine the pulp to peel ratio. Then bananas were sliced by slicer (A Stephan, U.Sohne, Weser, Germany). The slices were dried in hot air dryer (Armstrong Smith, PVT Ltd., India) with drying temperature maintained

MEMBERS OF RESEARCH FORUM

Author for Correspondence :

Isha Swami, Department of Post Harvest Technology, ASPEE College of Horticulture and Forestry, Navsari Agricultural University, NAVSARI (GUJARAT) INDIA
E.mail : ishaswami22@gmail.com

Coopted Authors :

A.G. NAIK, Department of Horticulture, N.M.College of Agriculture, Navsari Agricultural University, NAVSARI (GUJARAT) INDIA