

PHYSICO-CHEMICAL ANALYSIS OF ALPHONSO AND BANGALORA VARIETIES OF MANGO

Performance of mango varieties is likely to differ when grown under various agro-climatic regions (Yadav and Rajan, 1993). Hence an attempt was made at the Kerala Agricultural University, to evaluate the physicochemical properties of two commercial varieties of mango viz., **Alphonso** and **Bangalora** collected from the already established orchards in the mango growing tracts of **Palakkad (Muthala-**

-mada, Malampuzha and Pudukkottai). Two trees were randomly selected from each of these localities and 10 fruits per tree were picked at the time of harvest. The fruits were subjected to detailed analysis.

The results are presented in Table 1. Along with the values obtained in the present study, the results of physicochemical analysis repor-

Table 1. Physicochemical analysis of Alphonso and Bangalora

Source	Fruit wt., g	Stone %	Peel %	Pulp %	TSS %	Acidity %	Sugars, %		
							Reducing	Non-reducing	Total
<i>Alphonso</i>									
Sangareddy*	180	16.0	14.0	70.0	25.0	0.50	5.80	14.20	20.00
Vengurla**	250	11.2	15.1	73.7	19.0	0.34	3.50	11.43	14.93
Palakkad	230	13.0	10.1	76.9	18.5	0.50	3.00	13.00	16.00
<i>Bangalora</i>									
Sangareddy	388	14.0	14.0	72.0	16.50	0.13	3.60	9.50	13.10
Palakkad	328	10.0	09.0	79.0	16.50	0.30	3.50	6.50	10.00

* Rameshwar *et al.* (1979) ; ** RFRS (1985)

-ted from the Regional Fruit Research Station, Vengurla (Maharashtra) and Fruit Research Station, Sangareddy (Andhra Pradesh) are also presented for the purpose of comparison.

Alphonso : Alphonso variety produces medium sized fruits of excellent quality (Bose and Mitra, 1990). This variety is also known as **Gundu** and **Hapus** in Kerala (Kannan, 1982). The fruit weight is only 180 g at Sangareddy (Andhra Pradesh conditions) whereas, in Vengurla (Maharashtra) the fruits weighed 250 g each on an average. The average fruit weight of this variety in Palakkad is 230 g. The stone percentage is 13.0 which is in between the values from Sangareddy and Vengurla. The peel content of fruits from Palakkad was substantially lower in the present study (10.1%) which is an advantageous character. The

higher pulp content of the fruits (76.9%) can be considered as an added advantage of this variety under Palakkad conditions. With respect to the quality parameters, TSS was 18.5% whereas the values from Sangareddy and Vengurla were higher (25 and 19%, respectively). Acidity values at Palakkad and Sangareddy are 0.5% while Vengurla fruits exhibited lower acidity levels. Non-reducing and total sugar contents for the fruits were in between the values from Sangareddy and Vengurla, the values from Palakkad being 13.0 and 16.0% respectively. The reducing sugar content was at a lower level in fruits from Palakkad.

Bangalora: Bangalora is considered to be a commercial variety producing large sized fruits, even though the quality is poor (Bose and Mitra, 1990). The synonyms of this

variety in Kerala are **Killimukku** and **Totapuri** (**Kannan**, 1982). The average fruit weight of **Bangalora** fruits collected from **Palakkad** was 328 g whereas, fruits weighed 388 g at **Sangareddy**. The values of peel, stone and pulp contents of fruits from Palakkad are at better and advantageous levels when compared with those from **Sangareddy**. TSS values were the same at both the places, whereas fruits from Palakkad were more acidic (0.5% acidity). In this variety also the fruits contained lower non-reducing and total sugars when compared to fruits from Sangareddy.

In general, the results indicated comparable fruit size, desirable physical characters such as reduced peel and stone contents and increased pulp content with slightly inferior quality for

the fruits (**Alphonso** and **Bangalora**) collected from the major mango growing tracts of Palakkad district. Differential responses of varieties to varying **agroclimatic** conditions are likely to occur in a crop like mango. The present study was conducted on the fruits from the already existing mango trees, the sources of majority of them could be traced back to grafts from Salem and **Tirupathur**. Lack of selection of good mother plants for the production of planting materials might have led to poor quality fruits, to a certain extent. However, elaborated studies are to be taken up to evaluate the performance of Alphonso, **Bangalora** and other commercial varieties under Palakkad conditions when grown from quality planting materials of selected and reliable sources.

Kerala Horticulture Development Programme
Vellanikkara 680 654, Trichur, India

T. Radha, S. R. Nair
K. C. Sreejaya

REFERENCES

- Bose, T. K. and Mitra, S. K. 1990. *Fruits-Tropical and Subtropical*. Naya Prokash, Calcutta, p. 1-62
- Kannan, K. 1982. '*Mavum Mangayum*'. Kerala Language Institute, Trivandrum, p. 52-56
- Rameshwar, A., Kulkarni, V., Ahmed, S. M., Sultan V. and Rarnulu, A.S. 1979. Physicochemical analysis and keeping quality of mango cultivars at Sangareddy. Paper presented at Mango Workers Meeting, Panaji, Goa under AICFIP, ICAR, 2nd to 5th May 1979
- RFRS, 1985. Variety release proposal of "*Sindhu*". Regional Fruit Research Station, KKVP, Vengurla
- Yadav, I. S. and Rajan, S. 1993. Genetic resources of *Mangifera*. *Advances in Horticulture* 1. Malhotra Publishing House, New Delhi, p. 77-93