International Journal of Agricultural Sciences
Volume 8 |Issue 2| June, 2012 | 407-409

RESEARCH PAPER

Physico- chemical status of different Aonla (*Emblica officinalis*) cultivars under tropical conditions of Central India

S.R. PATIL*, A.M. SONKAMBLE AND M.M. GANVIR[1]
College of Horticulture, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, AKOLA (M.S.) INDIA

Abstract : The physico - chemical characters of five aonla cultivars *viz*., Kanchan, Krishna, Chakaiya, NA-7 and Francis were studied. Kanchan had yielded maximum fruits (116.10 kg/tree). Significant variation in average weight of fruit length and diameter of fruit, per cent seed and pulp content was recorded. There was variation in ash per cent, polyphenols and crude fibre content during successive months. A downward trend was noted in the mineral content especially calcium, potassium, sodium at delayed harvesting. However, a remarkable increase in phosphorus content was observed in almost all the cultivars. TSS and acidity showed an increasing trend at delayed harvesting. Delay in harvesting period of fruit increased ascorbic acid of the fruit.

Key Words : Aonla, Physico-chemical characters

View Point Article : Patil, S.R., Sonkamble, A.M. and Ganvir, M.M. (2012). Physico- chemical status of different Aonla (*Emblica officinalis*) cultivars under tropical conditions of Central India. *Internat. J. agric. Sci.*, **8**(2): 407-409.

Article History : Received : 09.02.2012**; Revised :** 09.04.2012**; Accepted :** 03.05.2012

INTRODUCTION

Aonla is one of the most important non-traditional indigenous fruits of India. It is a hardy tree and can be successfully grown in variable agro-climatic and soil conditions. It is highly nutritious and rich source of vitamin 'C'. It is known for its medicinal value and the fruits are used in one form or the other. The physico-chemical changes occurring toward maturity stages may serve as an important parameters (Teaotia *et al.,* 1968) for determination of proper harvesting stage.

Since, systematic work on physico - chemical studies have not been undertaken in Maharashtra, the studies on five aonla cultivars during 2008 to compare the characteristics were undertaken.

MATERIALS AND METHODS

Fruits of the five cultivars *viz*., Kanchan, Krishna, Chakaiya, Francis and NA-7 of nine year old trees, free from attack of insect pest and diseases were taken for the present studies. All the experimental trees treated with uniform cultural practices. For physico-chemical analysis, ten randomly selected fully mature fruits of each cultivar were taken. The fruits were thoroughly washed. Pulp of fruits was separated and relative weight of pulp and seed was determined and expressed on percentage basis. The stones were cleaned so as to remove remaining pulp sticking to it. Total soluble solids content was determined by hand refractometer (0-32 ^{0} Brix)

Acidity was determined by alkali titration method and expressed in terms of citric acid per 100 g of flesh. Reducing and non-reducing sugars were determined by the method of Lane and Eynon (1960) and vitamin 'C' was estimated in accordance with A.O.A.C. (1980) method using 26 dichlorophenol indophenol dye and expressed as mg per 100 g of pulp. The physico-chemical analysis of fruit was carried out at full maturity stage (25 th Oct.) and after delayed

*** Author for correspondence.**
[1]AICRP on Dryland, Dr. Punjabrao Deshmukh Krishi Vidyapeeth, AKOLA (M.S.) INDIA