COMPARATIVE PERFORMANCE OF PHYSICAL CHARACTERS OF *Ambia bahar* AND *Mrig bahar* FRUITS OF SWEET ORANGE (*Citrus sinensis* Osbeck)

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ABSTRACT

The present investigation was carried out in the Department of Horticulture, College of Agriculture, Parbhani during the fruit season of 1994-95.The collective samples of each *Mrig* and *Ambia bahar* were analyzed to compare physico-chemical characters of sweet orange fruits. Physical analysis was carried out for fruits weight, length and breadth of fruit, pomace percentage, juice percentage, rind thickness, rind percentage, number of segments, number of seed per fruits and number of fruits per tree. All these values except number of fruits (yield) per tree and pomace percentage were higher in *Ambia bahar* to *Mrig bahar* fruits. Thus quantitative characters of fruits of *Ambia bahar* were superior to fruits of *Mrig bahar.*

Key words : *Ambia bahar*, *Mrig bahar*, Physical character, Sweet orange.

Citrus is considered as one of the most important fruits of the world. In terms of acreage it occupies probably the third position among the sub-tropical fruits. Citrus occupies commercially a very important place among the fruit crops next to mango and banana. Oranges serve as the most refreshing, delicious and health promoting juicy fruits and as such they deserve a prominent place in daily diet. Its juice is rich in vitamin C, which play the role of health promoting ingredients in human diet.

In tropical region, oranges produce new growth and flowers thrice in a year at intervals of four-months i.e. in June, October and January-February. The January-February flowering is called *Ambia bahar*, the June flowering *Mrig bahar* and October flowering *Hasta bahar*.

If the trees are left to nature, the trees may blossom and set fruits very irregularly in any one or in all the three seasons. This may produce irregular small crops at indefinite intervals, which is difficult to manage and market. So, to avoid the risk and to get a full crop in any one of the three flowering seasons as required by the market demand, a method of treating the trees for any one of the flowering is practiced in Deccan called the Bahar treatment.

The resting or bahar treatment of sweet orange trees involves ploughing the whole orchard land and with holding of water for a month or two depending on type of soil before one of the flowering season. The choice of bahar system to be adopted depends largely on market depend, availability of irrigation and incidence of fruit sucking moth. As fruits of sweet orange, have continuous demand throughout the year farmers treat the trees for both *Ambia* and *Mrig bahar*. In order to have complete information regarding the quality of fruits of the Bahars the experiment was undertaken.

MATERIALS AND METHODS

Two orchards consisting of nucellar mosambi (sweet orange) trees were selected for present investigation. Plants were treated for *Mrig bahar* and *Ambia bahar* on 10th April and 25th November 1993, respectively. After withholding of water irrigation was resumed on 8th June1993 and 20th January 1994 for *Mrig* and *Ambia bahar* respectively. A composite sample of twenty fruits of *Mrig* and *Ambia bahar* were used for physical analysis. Physical character such as fruit weight, length and breadth of fruits, pomace percentage, juice percentage, rind thickness, rind percentage number of segments, number of seeds per fruit and number of fruits per tree etc were calculated.

RESULTS AND DISCUSSION

Data presented in the Table 1 clearly indicated differences in physical characters of *Ambia* and *Mrig bahar* fruits of sweet orange. In *Ambia bahar* fruits, weight of fruit (238.50g), length of fruit (7.46cm), breadth of fruit (7.87cm), rind thickness (0.60cm), rind percentage (34.64) were more. Similarly number of segments/fruits (12.70),number of seed per fruits(12.30)and juice