

Performance of some aonla (*Emblca officinalis* Gaertn) cultivars under Vidarbha condition of Maharashtra

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SUMMARY

An experiment was conducted with eight varieties of aonla viz., NA-6, NA-10, Kanchan, Krishna, Fransis, Chakaiya, Banarasi and NA-7 grown at Regional Fruit Research Station, Katol, dist. Nagpur (Dr. Panjabrao Deshmukh Krishi Vidyapeeth) were studied for growth, yield and quality parameters. Pooled analysis indicated that variety NA-7 had given the highest fruit yield, followed by Kanchan and Chakaiya, while, the fruits of better quality were obtained from variety Chakaiya and NA-10.

Key words : Aonla varieties, Growth, Yield, Quality

Aonla (*Emblca officinalis* Gaertn) is indigenous to tropical Asia and it can be successfully grown in area where tropical as well as dry conditions prevail. Aonla plant can tolerate freezing as well as temperature as high as 40°C (Sankar, 1969). As it suits to tropical conditions, it does well in Vidarbha region of Maharashtra state where some of the commercially important varieties of Aonla are being grown.

In Maharashtra, Aonla plants can survive better and given good returns with minimum precipitation in this region because after fertilization, in the February-March, the ovary of Aonla fruit lies in dormant phase up to end of July. After this period fruit size start increasing.

However, the fruit growers of this region are in need of specific variety which will give the higher yield of quality fruits. In view of this, an experiment was conducted from 2000-01 to 2003-04 to study the growth and bearing performance of Aonla varieties under Vidarbha conditions.

MATERIALS AND METHODS

Present studies were carried out at Regional Fruit Research Station, Katol, dist. Nagpur (Dr. Panjabrao Deshmukh Krishi Vidyapeeth) during 2000-01 to 2003-04. The soil of experimental field was light to medium sandy loam. Rainfall during 2003-04 was 354 mm during rainy season, which was 57.02 per cent less than the normal rainfall (824.60 mm). Eight aonla varieties viz., NA-6, NA-10, Kanchan, Krishna, Fransis, Chakaiya, Banarasi

and NA-7 brought from Faijabad (U.P.) and planted during 1994 in a square system at 6 x 6 m spacing and recommended package of practices were followed for establishment of orchard.

No any irrigation was given to the orchard. The experiment was formed in randomized block design with three replications having three plants as treatment unit. Observations were recorded on growth (Height and volume of plant), yield per plant, yield per hectare and quality parameters, viz., fruit weight, fruit size, pulp weight, seed weight and vitamin 'C' content in the fruits. The fruits on each harvesting of tree of each variety were weighed and per tree fruit yield was recorded. The harvesting season in each year was from November to December.

Twelve mature fruits were taken randomly from each direction of each variety and these fruits were used for physico-chemical analysis viz., fruit weight, fruit size, pulp weight, seed weight and Vitamin 'C' content in fruits.

RESULTS AND DISCUSSION

The results obtained from the present investigation are presented below:

Growth performance:

It is revealed from the data presented in Table 1 that different varieties of Aonla had exhibited significant differences in plant height and plant volume.

Data presented in Table 1 showed a significant differences in respect of plant height and plant volume. Significantly maximum plant height was recorded in the variety Fransis followed by NA-6 and minimum plant height was recorded in variety NA-10 followed by NA-7. However, significantly highest plant volume was recorded by Fransis followed by Kanchan and minimum

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