Correlation studies in a guava (*Psidium guajava* L.)
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The knowledge on association of characters among themselves and with fruit yield is important for selection, genetic improvement programme in guava. It is influenced by diverse environment, seasonal characteristics and spatial heterogeneity over that, in turn, interacts with the cultivars chosen and cultural practices adapted. Improvement of fruit yield of the best quality is the foremost goal of varietal improvement programme. In order to incorporate desirable characters to maximize qualitative and economic yield, the information on the nature and extent of genetic variability attained in guava varieties for desirable characters, their association and relative contribution to yield constitute the basic requirements. Looking to the these facts, the correlation study was taken up in case of guava.

The soil of the experimental site was mixed red – black with clay–loam having 4 metres depth. The soil pH was 7.2, organic carbon 0.56%, electrical conductivity 0.32 dS/m, available N,P_2O_5 and K_2O 234, 8.8 and 277 kg/ha, respectively, and water–holding capacity 11%. The total rainfall received during July, 1997 to March, 1998 was 1214.6 mm distributed in 67 rainy days.

The present investigation was carried out at Fruit Research Station, Kuthulia, College of Agriculture, Rewa (M.P.) during 1997-98. This study was limited to nine guava varieties collected from different parts of India and maintained under AICRP on subtropical fruits. The varieties *viz*. Allahabad safeda, Sardar, Chittidar, Red- fleshed, Seedless, Apple coloured, Dhareedar, Gwalior- 27 and Rewa-72 were planted in the month of September 1988. Total eight plants of each varieties were planted comprising of four replications *i.e.* two plants under

each replication, were tested under R.B.D. These varieties were evaluated during the year 1997-98. The age of the trees under study was 9 years.

An uniform dose of 640 g N, 460 g P_2O_5 and 300 g K_2O per tree was applied in the form of urea, DAP and MOP, respectively, by the end of June after onset of monsoon. Recommended cultural practices were given to all the plants uniformly as and when required.

The data in Table 1 reveal that the plant height showed significant positive association with canopy height and volume, which revealed that if the height of a particular plant is more than the canopy height and volume of that plant will also be higher. This positive correlation might be due to increased area of aerial parts, which helped in the productions of more photosynthates and photo hormones in the plants. Circumference of rootstock showed significant positive association with circumference of scion, E-W and N-S spread and volume. Circumference of scion was positively correlated with N-S and E-W spreads and volume. Spread N-S and E-W had significant positive association with volume. The volume of tree was calculated from the spreads and canopy height, due to which spread had got highly positive association with the volume. Volume of plant was not associated with the other attributes. Highly significant positive correlation was observed among number of fruits per plant, yield per plant and weight of fruit. Weight of the fruit also showed significant positive correlation with yield per plant. Association between growth and yield parameters was also reported by Chakrawar and Jature (1980) in Kagzilime, Prasad (1987) in mango and Pandey *et al*. (1997) in guava.