

Investigation of Yield Variation and Morphological Traits of Mango Genotypes in Southern Parts of Iran

S. Omranipour, L. Fahmideh* and B. Fakhari¹

Mango is one of the most important tropical fruits. In this study, the relationships among 19 morphological traits of leaves and fruits corresponding to 27 mango genotypes were evaluated. Based on the results of analysis of variance, there were significant differences among genotypes in most studied traits. Therefore, these genotypes showed diversity in these traits. According to the results, the Sindri and Nargil genotypes had the highest and the lowest number of fruits per tree (with an average of 847 and 340 per, respectively). Moreover, Sindri and Shahani 2 genotypes showed the highest yield per tree (with an average of 261 and 240 Kg, respectively). Based on the results of the correlation coefficient, these traits showed high and significant correlation. The highest and the most significant correlation (0.75) was observed between the number of fruits and yield. According to the results of cluster analysis, these genotypes could be divided into four major groups. This investigation indicates there is a high variation among mango samples which can be attributed to the sexual reproduction by seeds, its cross pollination nature as well as climatic variations in Iran. Since Sindri and Shahani 2 genotypes had the highest number of fruits, weight of fruit and yield, the Shahani 2 genotype could be suggested as an appropriate genotype in future studies, breeding programs and mango cultivation in these areas.

Keywords: Correlation coefficient, Mango, Morphological traits, Principal component analysis.

1. M.Sc. Student, Associate Professor and Professor of Department of Plant Breeding and Biotechnology, University of Zabol, Zabol, Iran, respectivley.

* Corresponding author, Email: (leila.fahmideh@yahoo.com and l.fahmideh@uoz.ac.ir).