

P-55 (164)**CLASSIFICATION OF SOME NEW IRANIAN SWEET CHERRY (P.AVIUM) GENOTYPE BASED ON MORPHO-PHYSIOLOGICAL DIVERSITY USING MULTIVARIATE ANALYSIS****Sepideh Shirani Rad**, Department of Horticultural Science, Isfahan University, Esfahan, Iran; s.shirani.ssr@gmail.com (Presenting author)**Assoc. Prof. Naser Bouzari**, Horticultural Science Research Institute, Karaj. Iran, Iran; bouzari1111@yahoo.com**Assist. Prof. Seied Mehdi MIR**, Department of Horticulture, Karaj Branch, I, Karaj, Tehran, Iran; smmiri@kiaau.ac.ir

As one of the centres of origin of the subgenus *Cerasus*, Iran is rich in cherry germplasm resources, having a variety of improved cultivars and genotypes possessing distinctive characteristics. In this paper, in order to describe and compare the quality of Iranian genotypes by improved cultivars, we address 70 agro-morphological traits (41 qualitative and 29 quantitative trait) established by the DUS and 4 chemical factors (TSS, TA, PH and TSS / TA). The results showed statistically significant differences between the landraces and improved varieties; the biggest variety was linked to fruit characteristics. We also evaluated the compactness and the peculiarity of each cultivar, thus providing information on the mixing level among the cultivars within the space of their morphological traits. The results of cluster analysis based on assessed characteristics revealed that Iranian varieties and genotypes are classified in three groups, in which some genotypes are separated of the improved cultivars. Although some landraces were in a same group with improved cultivars, they were at a higher position than improved cultivars in characteristics like fruit weight, fruit color, total sugar, titratable acidity, aroma and taste, and test panel. This survey showed that Mahali Karaj, Siahe Daneshkadeh and Dir ras Daneshkade cultivars and KB3, KB9 and KB17 genotype compared with Siahe Mashhad, can be considered promising genotypes of Iran, in terms of physicochemical properties and superior fruit quality

Keywords: Cherry, Diversity, Genetic traits, Pomological and Morphological, Test panels, Cultivars.