

P-102 (202)**PRELIMINARY MORPHO-PHYSIOLOGICAL EVALUATION OF SOME CHERRY ROOTSTOCKS IN RESPONSE TO DROUGHT CONDITIONS**

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Sweet Cherry (*Prunus avium* L) is one of the popular stone fruits in the temperate regions. Iran is a rich country for various fruit tree germplasm including the Subgenus *Cerasus*. The Subgenus *Cerasus* (*Prunus subg. Cerasus*) is in the genus *Prunus* L. includes many types of trees that have the name cherries as a fleshy stone fruit. The aim of this research was to explore and evaluate drought resistant of some recent introduced vegetatively propagated cherry rootstocks as well as some wild genotypes within *Prunus subg. Cerasus*. Seeds of wild cherry genotypes including 20 populations of *Cerasus* subgenus collected from Kurdistan, Kerman and the North Provinces of Iran. Collected seed samples were disinfected with Captan fungicide solution (2 g^l⁻¹) and then kept in the moist at 4°C to germinate. Results showed the good germination percentage of collected wild cherry rootstocks. In addition, the clonal and vegetatively propagated rootstocks including 'Mahlab', 'Mazard' and 'Gizela 6' were purchased from the commercial nursery in Albourz province. All germinated seeds of wild rootstocks as well as the obtained clonal rootstocks were planted in the 20 liters containers in the specific soil medium and kept in the controlled greenhouse for further growth, treatments applications and water stress assessments. Morphological and physiological characters of the studied rootstocks were measured or continuing to determine under specific water stress conditions. The suitable recovery of the studied rootstocks under drought conditions will warrant the best selection of appropriate rootstock for new future sweet cherry development orchards under semi-arid and arid conditions of Iran.

Keywords: Wild genotype, Clonal rootstocks, Gizela, Mahlab, Mazard, Water Stress, Seed germination