

**O-61 (198)****LATE LEAFING FABAAĞI PERSIAN WALNUT (*JUGLANS REGIA L.*) PROMISING GENOTYPE AS THE NEW SELECTION FROM TARBİAT MODARES UNIVERSITY FRUIT TREES BREEDING PROGRAM**

**Dr. Saadat Sarikhani Khorami**, Department of Horticultural Science, Tarbiat Modares University (TMU), P.O.Box 14115-336, Tehran, Iran; [saadat.sarikhani@modares.ac.ir](mailto:saadat.sarikhani@modares.ac.ir)  
(Presenting author)

**Prof. Kazem Arzani**, Department of Horticultural Science, Tarbiat Modares University, Tehran, Iran; [arzani\\_k@modares.ac.ir](mailto:arzani_k@modares.ac.ir)

Persian walnut (*Juglans regia L.*) as its name suggests originated from Persia (Iran). After pistachio, it's the second important nut crops in this country. Most of walnut trees in Iran were propagated by seed; thus, its walnut populations represent a wide range of phenological and pomological variations. Climate change and global warming has increased the risk of late spring frost in fruit orchards. Hence, identify late leafing superior genotypes is the best approach to escape this phenomena. To identify superior genotypes of walnut in Southwest of Iran, this study was carried out to evaluate walnut population in Fars province (Bavanat, Eqlid and Sepidan) during 2010-2015. For this purpose, 81 out of 412 walnut genotypes in Bavanat, 48 genotypes in Eqlid and 40 genotypes in Sepidan were finally evaluated in aspect of phenological and pomological traits. We selected 16, 9 and 10 walnut superior genotypes in Bavanat, Eqlid and Sepidan, respectively. Nut and kernel weight and nut size of selected superior genotypes were more than "Chandler" commercial and standard cultivar. Between these superior genotypes, FaBaAg1 genotype was an exception; because of its bud break date was 30 days later than the reference standard during five-year evaluation. Despite the severe chilling in 2013, the production of FaBaAg1 was satisfactory. Interestingly, FaBaAg1 genotype was a homogamous genotype with 58.90% lateral bearing habit. Based on the results, FaBaAg1 had superior genotypes with large nut, high kernel percentage and extra light kernel. In general, FaBaAg1 genotype has the potential to introduce as a late leafing commercial walnut cultivar.

**Keywords:** Late leafing, superior genotypes, Fars province, spring frost, Persian walnut