

Determination of Genetic Diversity in the Fruit and Leaf Characteristics Some Quince Genotypes Collected from Kayseri Region

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Aim of the study: Turkey is the first place in world quince production. In Turkey, quince is generally assumed to grow from the seeds in home gardens and it has a wide genetic diversity quince in turkey. This richness should be evaluated by selection studies and genotypes that can be candidate for variety should be determined. In this study, it was aimed to determine the genetic diversity of some quince genotypes selected from the provinces of Kayseri province.

Material and Methods: The study material was obtained by determining genotypes showing superior characteristics in Develi, Felahiye, Incesu, Talas, Tomarza, Yahyalı and Yesilhisar regions where the quince populations are intense in the provinces and districts of Kayseri. DNA isolation was performed in quince genotypes and analysis was performed on 2% agarose gel with 16 SRAP primer combinations. PCR components and cycles were arranged in accordance with the method specified by Uzun et al. (2009). PCR products were run in 2% agarose gel at 100 volts for 2-3 hours. To determine band widths, 100 bp DNA ladder was used. Resultant bands were imaged under UV light.

Results: According to the results of the study, 97 scorable bands were obtained, 91 of these bands were polymorphic and polymorphism rate was 87.7% the genetic similarity interval varied from 0.53 to 0.92. For the primers used, the average number of bands was 6.06 and the average number of polymorphic bands was 5.68. While The highest polymorphism rate was 100% with the primers em10me10, em3me7, em1me1, em11me2, em8me3, em2me2, em9me6, em15me10, em4me4, em6me6, em9me6, the lowest polymorphism ratio was obtained as 0% from the combination of primer em11me11.

Keywords: Quince (*Cydonia oblonga* Mill.), SRAP, Kayseri, genetic diversity.