



Development of simple sequence repeat markers in persimmon (*Diospyros L.*) and their potential use in related species

Y. Yang^{1*}, Z.B. Jing^{2*}, X.F. Ruan¹ and J.M. Cheng²

¹College of Horticulture, Northwest A&F University, Yangling, Shaanxi, China

²College of Animal Science and Technology, Northwest A&F University, Yangling, Shaanxi, China

*These authors contributed equally to this study.

Corresponding author: X.F. Ruan

E-mail: xf.ruan@nwsuaf.edu.cn

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ABSTRACT. Persimmon (*Diospyros L.*) is an economically important fruit in the world, and it has been recognized as a healthy nutrient supply for human consumption. In this study, 14 microsatellite markers were developed from an AG/TC and AC/TG-enriched genomic library of Chinese persimmon Mopanshi. Twelve polymorphic markers were selected in 4 related species; these markers showed transferability to the 4 related persimmon species. In addition, 10 simple sequence repeat (SSR) markers were used to detect the genetic diversity among 51 persimmon accessions from China, Japan, and Korea. A total of 57 polymorphic bands with an average of 5.7 bands per primer pair were observed. According to cluster analysis and principal coordinate analysis, all persimmon accessions could be divided into 4 groups. A close relationship existed between *D. kaki* and *D. oleifera*, and *D. glaucifolia* and *D. lotus*. Jinzaoshi could be considered a separate

species of persimmon. These new SSR markers provide tools for evaluating genetic relatedness among different persimmon species.

Key words: *Diospyros* L.; Simple sequence repeat marker; Genetic diversity; Cluster analysis