Genetic diversity analysis of sweet kernel apricot in China based on SSR and ISSR markers

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ABSTRACT. Simple sequence repeat (SSR) and inter-simple sequence repeat (ISSR) markers were used to evaluate genetic diversity among 22 sweet kernel apricot accessions and 12 cultivars in China to provide information on how to improve the utilization of kernel apricot germplasms. The results showed that 10 pairs of SSR primers screened from 40 primer pairs amplified 43 allelic variants, all of which were polymorphic (100%), and 9 ISSR primers selected from 100 primers amplified 67 allelic variants with 50 polymorphic bands (74.63%). There was a relatively distant genetic relationship between the 34 samples, where their genetic similarity coefficient was between 0.62 and 0.99. The UPGMA dendrogram constructed using combined data of the two marker systems separated the genotypes into three main clusters.

Key words: Kernel apricot; Simple sequence repeat; Genetic diversity; Inter-simple sequence repeat