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Molecular characterization of twenty polymorphic microsatellite markers in the polyploid fruit tree species *Syzygium samarangense* (Myrtaceae)

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ABSTRACT. *Syzygium samarangense* (Blume) Merr. & Perry (wax apple) is an important commercial fruit tree in Southeast Asia. Here, microsatellite markers were developed to evaluate genetic diversity and distinguish cultivars in this species. In total, 161 microsatellite loci with sufficient flanking sequences to design primer sets were isolated from wax apple using a magnetic bead-enrichment method. Fifty-eight primer sets were designed based on the flanking sequences of each single sequence repeat (SSR) locus and were tested using 14 wax apple cultivars/lines. Twenty SSR loci were found to be polymorphic and transferable across the 14 wax apple cultivars/lines. The number of alleles and effective number of alleles detected per locus ranged from 4 to 12 and from 1.697 to 9.800, respectively.

The expected heterozygosity ranged from 0.150 to 0.595 (mean = 0.414). Polymorphism information content values ranged from 0.502 to 0.866 (mean = 0.763). These new microsatellite loci will be of value for characterization of genetic diversity in wax apples and for the identification of cultivars.

Key words: *Syzygium samarangense*; Genetic diversity; Microsatellite; DNA marker

