



Molecular identity of ramie germplasms using simple sequence repeat markers

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ABSTRACT. DNA identity is highly effective and efficient for distinguishing crop varieties regardless of their phenotypic similarities. To establish DNA identity in ramie, 21 simple sequence repeat primers were amplified in 108 accessions of domestic and exotic ramie germplasms. Sixty polymorphic bands were obtained, with an average of 2.9 bands per locus and 2-8 band types per primer locus (average of 5.19 band types). The Simpson's diversity index of the 21 simple sequence repeat loci ranged from 0.158 to 0.808 with an average of 0.612. There was large difference in the specific index in the germplasm tested, from 44.082 to 218.163, with an average of 83.620. Based on allele band type, 8 primer pairs were selected for DNA fingerprinting of the 108 genotypes. The combination of the 8 primer pairs were found to be very effective for distinguishing these genotypes, indicating that they can be used in the molecular DNA identity of ramie.

Key words: Molecular identity; Ramie; Simple sequence repeat