

## Genetic studies of “noble cane” for identification and exploitation of genetic markers

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**ABSTRACT.** Forty genotypes (clones) of sugarcane, including elite lines, commercial cultivars of *Saccharum officinarum* and clones of *S. barberi* were fingerprinted with 50 SSR markers using a PCR-based marker assay. Nei's genetic distances for SSR data were determined and relationships between accessions were portrayed graphically in the form of a dendrogram. Genetic distance values ranging from 0.60 to 1.11 were observed among the 40 sugarcane accessions. The shortest genetic distance of 0.60 was seen between genotypes US-804 and US-130. These two genotypes differed from each other only in 10 bands, with 20 primers. The most dissimilar of the accessions were CP-77-400 and US-133, with a genetic distance of 1.11. SSR fingerprints can help sugarcane breeders to clarify the genetic pedigree of commercial sugarcane varieties and evaluate the efficiency of breeding methods.

**Key words:** DNA marker; SSR; Genetic distance; Fingerprinting; *Saccharum*