

Title Construction of genomic library of Chokanan mango (*Mangifera indica* L.)

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Citation Book of Abstracts, Southeast Asia Symposium Quality and Safety of Fresh and Fresh Cut Produce Greater Mekong Subregion Conference on Postharvest Quality Management in Chains, August 3-5, 2009, Radisson Hotel, Bangkok, Thailand.

Keyword genomic library; Chokanan mango; DNA

Abstract

Chokanan mango (*Mangifera indica* L.) is special for its attractive aroma and sweet taste. More importantly, it exhibits high tolerance against adverse weather conditions during fruiting and is resistant against the attack of fruit fly due to its thick peel characteristic. A bacteriophage lambda DNA genomic library is under construction to establish a database of Chokanan mango. The improvement on the quality of the extracted total DNA was achieved through the optimization of leaf harvesting stage and modification on the CTAB DNA extraction procedure. Fully expanded, softened and purplish coloured leaf proved to yield good quality DNA while the addition of polyvinylpyrrolidone (PVP), β -mercaptoethanol and high salt washing was effective in the removal of polyphenolic compounds and polysaccharides. Insert DNA was digested with Sau 3AI while Lambda FIX II vector was used as vector. The completion of the genomic library will serve as a database to consolidate a genetic map of Chokanan mango, which will enable gene discovery, studies of gene functions, and comparative genomics with other plant species.