

Ruethaichanok Kittiwarodom 2011: Identification of Durian Cultivars in Nonthaburi Province using Morphological Characters and Amplified Fragment Length Polymorphism (AFLP). Master of Science (Botany), Major Field: Botany, Department of Botany. Thesis Advisor: Associate Professor Kanapol Juthamane, D.Agr. 130 pages.

The purpose of this research was to classify 45 accessions of 42 durian cultivars in Nonthaburi province by morphological characters and Amplification Fragment Length Polymorphism (AFLP) technique. The result showed that morphological characteristic of 29 accessions from 26 cultivars based on morphological characteristics. However, 16 accessions could not be identified because they did not have fruits or flowers during this study. The use of eight primer pairs; E-ACT/M-CAT, E-AGC/M-CTC, E-AGG/M-CTA, E-AAG/M-CAT, E-AAC/M-CTA, E-ACC/M-CTC, E-AAC/M-CAG and E-AGG/M-CAG. 45 durian accessions could be separated into five group and 12 individuals. The range of genetic similarity index within group of 0.82-0.90. When the dendrogram was reconstructed using 29 accessions of durian cultivars which could be classified by morphological characters, they were separated into 6 groups. The result was quite similar to those of morphological characters. Thus, all durian accessions could be identified by DNA fingerprint from leaves while, some of accessions could be not classified by morphological characteristics.

Key words: durian, morphological characteristic, genetic diversity, DNA fingerprint, AFLP

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Thesis Advisor's signature

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