

**ABSTRACT****GENETIC DIVERSITY OF ROBUSTA COFFEE (*Coffea canephora* Pierre Ex A. Froehner) BASED ON CODING GENES N-METHYLTRANSFERASE IN BOGOREJO, PESAWARAN, LAMPUNG**

By

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Robusta coffee (*Coffea canephora* Pierre Ex A. Froehner) is the most widely cultivated plant in Indonesia. It is a leading commodity for plantations and has high economic value in Indonesia. Indonesia is a country that ranks second after Vietnam as a producer of robusta coffee and is a type of coffee that is widely cultivated in various regions of Indonesia, including Lampung. Pesawaran is one of the areas that cultivates robusta coffee in Lampung. Robusta coffee cultivation in Pesawaran is carried out in traditional coffee plantations. Genetic biodiversity can be used as basic data on germplasm from the genetic diversity of robusta coffee. Studies on the genetic information of robusta coffee in the traditional coffee plantation of Lembah Gunung Betung, Bogorejo, Pesawaran, Lampung have never been carried out. This study aims to determine the genetic diversity of robusta coffee species based on molecular tagging. This research was conducted under Penelitian Dasar Grant of Dra. Elly Lestari Rustiati, M.Sc., and Priyambodo, S.Pd., M.Sc. with the title "Genetic diversity of robusta coffee (*Coffea Canephora* Pierre Ex A. Froehner) based on the N-methyltransferase encoding gene in the traditional coffee plantation of Lembah Gunung Betung, Bogorejo, Gedong Tataan, Pesawaran". Molecular analysis was carried out to determine the diversity of robusta coffee by DNA sequencing method and DNA sequencing data analysis using BLAST search and MEGA software. The results obtained for this study are to find out the confirmation and kinship relationship in robusta coffee species. The genetic distance of robusta coffee samples with robusta coffee reference (accession code: AY918124) has a value range between 0.1% - 0.6% and a high homologous value ranging from 99.40% - 99.90%.

Keywords: DNA sequencing, genetic diversity, Pesawaran, robusta coffee