

Keragaman Genetik Isolat Cendawan *Pyricularia Oryzae* Menggunakan Primer Pot-2 (Rep-PCR)

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Abstrak

Genetic Diversity of Rice Blast Fungus *Pyricularia oryzae* Based on a Specific Primer Pot-2 (Rep-PCR). Tasliah, Reflinur, and Masdiar Bustamam. Rice blast (*Pyricularia oryzae*) is one of the most important diseases of rice. It can be very destructive in the field, when the environmental conditions are favourable. Information on genetic diversity of this pathogen could assist plant breeders in determining strategy for a successful control of the disease. This study was conducted to analyze genetic diversity in *P. oryzae* isolates by a pair of Pot-2 primers using the rep-PCR technique. These primers were designed from a transposon element of the entire blast fungus genomic DNA. DNA samples were extracted from 212 isolates of *P. oryzae* collected from two endemic areas of the disease in Indonesia, i.e., Tamanbogo, Lampung, and Sukabumi, West Java, as well as from some non-endemic areas in North Sumatra and West Sumatra). Results of the study indicated that the 212 isolates could clustered into 21 haplotypes. The most dominant haplotypes as indicated by their highest frequency of haplotypes were haplotype Pot 2-019 (54.46%) followed by haplotype Pot 2-021 (14.73%) and haplotipe Pot 2-016 (6.25%). Regardless of origins of the *P. oryzae* isolates, we found 6 haplotypes from Tamanbogo (out of 117 samples), 13 haplotypes from Sukabumi (out of 77 samples), and 11 haplotypes from North Sumatra and West Sumatra (out of 18 isolates). It seems that genetic diversity of the *P. oryzae* isolates was not affected by the total number of samples/isolates, but rather by place of the origin and rice genotypes from which the isolates were collected.