

BACTERIA ASSOCIATED WITH RICE PANICLE BLIGHT AND GRAIN DISCOLOURATION IN PENANG

Sharifah Siti Maryam Syd Abdul Rahman¹, Nurul Hidayah Samsulrizal², Nur Sabrina Ahmad Azmi^{3*}, Mohd Syahmi Salleh⁴, and Suhaila Mohd. Omar⁵

¹Affiliation
sh.ct.maryam@gmail.com

²Affiliation
hidayahsamsulrizal@iium.edu.my

³Affiliation
sabrinaazmi@iium.edu.my

⁴Affiliation
msyahmi@iium.edu.my

⁵Affiliation
osuhaila@iium.edu.my

*Corresponding author: sabrinaazmi@iium.edu.my; Tel : +6011-2614-0205

Abstract: Rice panicle blight and grain discoloration condition is a newly paddy disease that firstly discovered from China in 2020 and recently discovered in Malaysia with adverse impact on our granary production. The symptoms first appeared on the glumes as light-brown spots that progressed to darker brown or black spots, dotted spots that varied in shape and size, hollow light weight panicles, or even unfilled grains. Therefore, the objective of this research was to study the bacteria associated from rice panicle blight and grain discoloration by identifying the causal pathogen based on their phenotypic and molecular characterization. Sampling was done in naturally infected granary areas and the collected panicles have been performed throughout surface sterilization for bacteria isolation until obtained single pure colony. 11 representatives of pure isolates obtained have been identified and classified through phenotypic and molecular characteristics. Based from that, 4 genera of bacteria were obtained. They were from *Pseudomonas* sp., *Pantoea* sp., *Enterobacter* sp. and *Paenibacillus* sp. Hence, to alleviate this serious disease, a precise identification of the pathogen is required in order to control the disease from spreading which results in a rice grain yield reduction.

Keywords: Bacteria, Pathogen, Rice panicle blight, Grain discoloration, Penang