

Evaluation of disease severity on rice genotypes to bacterial blight using amino acid content analysis

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Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20326176&lokasi=lokal>

Abstrak

ABSTRACT

The bacterial blight (BB) disease severity on two rice genotypes i.e.; BP 4110-2d-33 (backcross between Ciherang x Angke; containing Xa-4, xa-5) and BP 3688e-23 (sister lines derived from cingri/memberamo//widas///IRBB 8; containing xa-8) were lower compare with TN-1 (containing Xa-14). The total amino acid content in cultivar's TN-1 was accounted for about one third to about a half of total amino acid than those of other rice genotypes where the total amino acid was ranging from 1.95% to 4.22%. In BP 3688e-23, and BP 3688e-22 genotypes more amino acid levels were decline although these advance lines showing xa-8 background. BB resistant gene carried by BP 4110-2d-33 and BP 3688e-23 were stable, whilst BP 3688e-22 was less effective to inhibit BB disease severity. Overall, amino acids were not found to be related to the level of BB resistance; where correlation between amino acid content and BB disease severity is not significant. The slower growth of Xoo on rice genotypes BP 4110-2d-33 and BP 3688e-23 may probably due to other than nutritional factors. The degree of resistance in rice genotypes infected by races of pathogen; as well as the resistance gene possessed by genotype BP 3688e-23 need to be further determined.