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Research article

Genetic diversity and relationship of Indonesian swamp rice (*Oryza sativa* L.) germplasm based on agro-morphological markers

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Abstract

Importance of the work: Swamp rice (*Oryza sativa* L.) is essential germplasm for future rice breeding because of some agronomical characters or functional genes.

Objectives: The genetic diversity and relationship was determined of 108 cultivars of Indonesian swamp rice using 31 agro-morphological markers to identify the distinctiveness of the characters that contributed to the genetic diversity based on Pearson correlation analysis among these characters.

Materials & Methods: The standardized Shannon diversity index (H') was used to determine the genetic diversity of the germplasm. Principal components analysis (PCA) and the unweighted pair group method with arithmetic mean (UPGMA) were used to identify the distinctiveness of the characters that contributed to the genetic diversity and to reconstruct relationships.

Results: This germplasm was generally low in genetic diversity (Shannon index value of

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Decision Letter (ANRES-2021-0226.R4)

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To: dindinhm@gmail.com
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Subject: Agriculture and Natural Resources - Decision on Manuscript ID ANRES-2021-0226.R4
Body: 29-Dec-2021

Dear Dr. Mursyidin:

It is a pleasure to accept your manuscript entitled "Genetic diversity and relationship of Indonesian swamp rice (*Oryza sativa* L.) germplasm based on the agro-morphological markers" to publish in the Agriculture and Natural Resources. The article proofs will be sent to you after the final format checking and English editing. After page-proof, the article will be scheduled for publication.

Thank you for your fine contribution. On behalf of the Editors of the Agriculture and Natural Resources, we look forward to your continued contributions to the Journal.

Sincerely,
 Prof. Uthairat Na-Nakorn
 Editor-in-Chief, Agriculture and Natural Resources
 ffsurn@ku.ac.th

Date Sent: 29-Dec-2021

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