

BUKTI KORESPONDENSI ARTIKEL JURNAL

Biosaintifika 14 (1) (2022): 1-8 p-ISSN 2085-191X | e-ISSN 2338-7610
Journal of Biology & Biology Education <https://journal.unnes.ac.id/nju/index.php/biosaintifika>

Diversity of Tidal Swamp Rice (*Oryza sativa*) Cultivars Indigenously from South Kalimantan, Indonesia

Dindin Hidayatul Mursyidin*, Muhammad Zia Zul Haq, Badruzaufari

Laboratory of Genetics and Molecular Biology, Faculty of Mathematics and Natural Sciences, Universitas Lambung Mangkurat. Jl. A. Yani Km. 36 Banjarbaru, South Kalimantan, Indonesia
*Corresponding Author: dindinhm@gmail.com

Submitted: 2021-11-06. Revised: 2022-02-03. Accepted: 2022-03-30.

Abstract. Studies on genetic diversity and relationships are necessary for breeders and scientists to increase the effectiveness of future breeding programs. The tidal swamp rice (*Oryza sativa* L.) is one of the potential germplasms which has a prominent opportunity to be incorporated in the rice breeding program. This study aimed to investigate and reveal the genetic diversity and relationship of tidal swamp rice germplasms indigenously from South Kalimantan, Indonesia, using Random Amplified Polymorphic DNA (RAPD) markers. A total of ten rice samples, consisting of nine from this region and one from South Sumatera (an outgroup), and five selected RAPD markers, i.e., OPB-06, OPAJ-01, OPAB-17, OPAL-09, and OPAL-08, were used in this study. DNA amplifications were performed and programmed for one cycle of initial denaturation (5 min, 94°C), 45 cycles of denaturation (30 sec, 94°C), annealing (30 sec, 37°C), and extension (1.5 min, 72°C), as well as one cycle of final extension (7 min, 72°C). The genetic similarity was analyzed using Dice's coefficient method, whereas their relationship (dendrogram) by the UPGMA. The results showed that these germplasms have a moderate genetic diversity level, indicated by the polymorphism degree of 75.64%. The clustering analysis revealed that they are grouped into three main groups at a similarity coefficient of 0.70. In this case, *Siam Unus* is distantly related to the other cultivars and forms a solitaire group. *Siam Unus* also shows the farthest relationship with *Sardani*, an outgroup. It is a new finding for the genetic insight of tidal swamp rice of South Kalimantan, Indonesia, including their diversity and relationship. Thus, the results obtained from this study is useful in supporting future rice conservation and breeding programs.

Key words: breeding program, DNA fingerprint, genetic diversity, rice landrace

How to Cite: Mursyidin, D. H., Haq, M. Z. Z., & Badruzaufari. (2022). Diversity of Tidal Swamp Rice (*Oryza sativa*) Cultivars Indigenously from South Kalimantan, Indonesia. *Biosaintifika: Journal of Biology & Biology Education*, 14(1), 1-8.

The screenshot displays the login interface of the Biosaintifika journal website. At the top, the journal's name and logo are visible, along with the SINTA S2 accreditation logo. The navigation bar includes links for Home, About, Login, Register, Search, Current, Archives, and Conference Publication Collaboration. The main content area is titled 'Home > Login' and contains a login form. The form has a 'Username' field with the text 'dindinhm' and a 'Password' field with masked characters. Below the password field, there is a checkbox for 'Remember my username and password' and a 'Login' button. Two links are provided: 'Not a user? Register with this site' and 'Forgot your password?'. On the right side, there is a 'SERTIKAT' (Certificate) section and an 'ABOUT THE JOURNAL' section with links for 'Aims and Scope', 'Publication Ethics', 'Indexing & Abstracting', 'Editorial Team', and 'Contact'. At the bottom, there is a 'COLLABORATE WITH' section. The Windows taskbar at the bottom shows the search bar, taskbar icons, and system tray with the date 5/31/2023 and time 7:16 AM.

Archive

https://journal.unnes.ac.id/nju/index.php/biosaintifika/author/index/completed

HOME ABOUT USER HOME SEARCH CURRENT ARCHIVES CONFERENCE PUBLICATION COLLABORATION

Home > User > Author > Archive

Archive

ACTIVE ARCHIVE

| ID | MM-DD SUBMIT | SEC | AUTHORS | TITLE | VIEWS | STATUS |
|-------|--------------|-----|------------------------------------|---|-------|----------------------------------|
| 33168 | 11-06 | ART | Mursyidin, Haq, Badruzsaufari | DIVERSITY OF TIDAL SWAMP RICE (ORYZA SATIVA) CULTIVARS... | 307 | Vol 14, No 1 (2022): April 2022 |
| 29904 | 04-19 | ART | Mursyidin, Ahyar, Saputra, Hidayat | GENETIC DIVERSITY AND RELATIONSHIPS OF PHALAEOPSIS BASED... | 258 | Vol 13, No 2 (2021): August 2021 |

Start a New Submission
 CLICK HERE to go to step one of the five-step submission process.

Rebacks

ALL NEW PUBLISHED IGNORED

| DATE ADDED | HITS | URL | ARTICLE | TITLE | STATUS | ACTION |
|------------|------|----------------------------|--|-------|--------|--------|
| 2021-09-14 | 2 | https://scholar.google.co/ | Genetic Diversity and Relationships of | New | 5072 | DELETE |

7:18 AM 5/31/2023

#33168 Summary

https://journal.unnes.ac.id/nju/index.php/biosaintifika/author/submission/33168

HOME ABOUT USER HOME SEARCH CURRENT ARCHIVES CONFERENCE PUBLICATION COLLABORATION

Home > User > Author > Submissions > #33168 > Summary

#33168 Summary

SUMMARY REVIEW EDITING

Submission

Authors: Dindin Hidayatul Mursyidin, Muhammad Zia Zul Haq, Badruzsaufari Badruzsaufari
 Title: Diversity of Tidal Swamp Rice (Oryza sativa) Cultivars Indigenously from South Kalimantan, Indonesia
 Original file: 33168-04021-1-SM.DOCX 2021-11-06
 Supp. files: None
 Submitter: Dindin Hidayatul Mursyidin
 Date submitted: November 6, 2021 - 12:25 PM
 Section: Articles
 Editor: Taltha Widatningrum
 Abstract Views: 364

Status

Status: Published Vol 14, No 1 (2022): April 2022
 Initiated: 2022-04-05

7:20 AM 5/31/2023

#33168 Review

https://journal.unnes.acid/nju/index.php/biosaintifika/author/submissionReview/33168

Home > User > Author > Submissions > #33168 > Review

#33168 Review

SUMMARY REVIEW EDITING

Submission

Authors: Dindin Hidayatul Mursyidin, Muhammad Zia Zul Haq, Badruzsaufari Badruzsaufari
 Title: Diversity of Tidal Swamp Rice (*Oryza sativa*) Cultivars Indigenously from South Kalimantan, Indonesia
 Section: Articles
 Editor: Talitha Widiatringrum

Peer Review

Round 1

Review Version: 33168-84822-1-RV.DOCX 2021-11-06
 Initiated: —
 Last modified: —
 Uploaded file: None

Editor Decision

Decision: Accept Submission 2022-03-30
 Notify Editor: Editor/Author Email Record 2022-01-10
 Editor Version: 33168-85510-1-ED.DOCX 2021-11-22
 Author Version: 33168-87036-1-ED.DOCX 2021-12-18 DELETE
 33168-87036-2-ED.DOCX 2022-02-03 DELETE

Upload Author Version: No file selected.

SERUHIKA

ABOUT THE JOURNAL

- Aims and Scope
- Publication Ethics
- Indexing & Abstracting
- Editorial Team
- Contact

COLLABORATE WITH

perhimpunan biologi Indonesia

FOR AUTHORS

- Guidelines for Author
- Manuscript Template
- Mendeley Guidelines

7:21 AM 5/31/2023

#33168 Editing

https://journal.unnes.acid/nju/index.php/biosaintifika/author/submissionEditing/33168



Biosaintifika

Journal of Biology & Biology Education



HOME ABOUT USER HOME SEARCH CURRENT ARCHIVES CONFERENCE PUBLICATION COLLABORATION

Home > User > Author > Submissions > #33168 > Editing

#33168 Editing

SUMMARY REVIEW EDITING

Submission

Authors: Dindin Hidayatul Mursyidin, Muhammad Zia Zul Haq, Badruzsaufari Badruzsaufari
 Title: Diversity of Tidal Swamp Rice (*Oryza sativa*) Cultivars Indigenously from South Kalimantan, Indonesia
 Section: Articles
 Editor: Talitha Widiatringrum

Copyediting

COPYEDIT INSTRUCTIONS

| REVIEW METADATA | REQUEST | UNDERWAY | COMPLETE |
|-----------------------------------|---------|----------|----------|
| 1. Initial Copyedit File: None | — | — | — |
| 2. Author Copyedit File: None | — | — | — |

SERUHIKA

ABOUT THE JOURNAL

- Aims and Scope
- Publication Ethics
- Indexing & Abstracting
- Editorial Team
- Contact

COLLABORATE WITH

perhimpunan biologi Indonesia

FOR AUTHORS

- Guidelines for Author
- Manuscript Template
- Mendeley Guidelines

7:21 AM 5/31/2023