

# BUKTI KORESPONDENSI ARTIKEL JURNAL

e-ISSN 1983-4063 - www.agro.ufg.br/pat - Pesq. Agropec. Trop., Goiânia, v. 52, e71016, 2022



Research Article

## Genetic diversity of coconut germplasm native to South Kalimantan, Indonesia: a molecular study<sup>1</sup>

Dindin Hidayatul Mursyidin<sup>2</sup>, Gusti Muhammad Zainal Ahyar<sup>2</sup>

### ABSTRACT

Coconut (*Cocos nucifera* L.) is one of the most important tree crops in the world, especially in the tropics. This study aimed to determine the genetic diversity of coconut germplasm native to South Kalimantan, Indonesia, using the *rbcL* marker. Nine coconut samples, being eight natively collected from this region and one as an outgroup (obtained from the GenBank database), were used in the study. According to the *rbcL* marker, the coconut germplasm native to South Kalimantan has a relatively high diversity, with a nucleotide diversity ( $\pi$ ) of 0.51. The level of diversity is strongly correlated with the mutation present in the observed region, *rbcL*. The phylogenetic analysis showed that the coconut germplasm has a unique relationship, where the 'Dalam' cultivar is the closest to three other dwarf coconuts, i.e., 'Genjah Kuning 1', 'Genjah Kuning 3' and 'Wulung'.

**KEYWORDS:** *Cocos nucifera* L., breeding program, phylogenetic analysis.

### RESUMO

Diversidade genética de germoplasma de coco nativo de Kalimantan do Sul, Indonésia: um estudo molecular

O coco (*Cocos nucifera* L.) é uma das culturas arbóreas mais importantes do mundo, principalmente nos trópicos. Objetivou-se determinar a diversidade genética de germoplasma de coco nativo de Kalimantan do Sul, Indonésia, usando o marcador *rbcL*. Nove amostras de coco, sendo oito coletadas nativamente nessa região e uma como grupo externo (obtida do banco de dados GenBank), foram utilizadas no estudo. Segundo o marcador *rbcL*, o germoplasma de coco nativo de Kalimantan do Sul apresenta diversidade relativamente alta, com diversidade de nucleotídeos ( $\pi$ ) de 0,51. O nível de diversidade está fortemente correlacionado com a mutação presente na região observada, *rbcL*. A análise filogenética mostrou que o germoplasma de coco caracteriza-se por uma relação única, onde a cultivar 'Dalam' é a mais próxima a três outros cocos anões, ou seja, 'Genjah Kuning 1', 'Genjah Kuning 3' e 'Wulung'.

**PALAVRAS-CHAVE:** *Cocos nucifera* L., programa de melhoramento, análise filogenética.

The screenshot shows the journal's website interface. At the top, there's a navigation bar with the journal logo 'SciELO 25' and 'Pesquisa Agropecuária Tropical'. Below that, there's a search bar and a list of navigation links: 'Journal homepage', 'all issues', 'previous issue', 'current issue', 'next issue', 'search', and 'metrics'. The main content area features 'Our Mission' and 'Latest articles' section. The 'Latest articles' section lists several articles with their titles and brief descriptions. A footer at the bottom contains a cookie notice and a Telegram link.

**Our Mission**  
To promote the development of the agricultural research in the tropics.  
Most recent issue  
**Pesquisa Agropecuária Tropical, Volume: 53, Published: 2023**

**Latest articles**

- Physiological quality of *Physalis peruviana* Brot. ex Hornem seeds in relation to maturation stage and growing season
- Fusarium sacchari* associated with stem rot in sweet corn in Brazil
- Profitability of organic carrot cultivation under weed interference and sowing methods
- Reaction of common bean genotypes to plant parasitic nematodes
- Using plastic house shading in the summer improves eggplant and sweet pepper yield
- Carbon stocks and lability in land use and management systems in southwestern Goiás, Brazil
- Production of pre-sprouted sugarcane seedlings using carnauba bagasse substrate

This site uses cookies to ensure you get a better browsing experience. Read our [Privacy Policy](#).

Scholastica x SciELO - Pesquisa Agropecuária x PKP Login | Pesquisa Agropecuária x

https://revistas.ufg.br/pat/login

Register Login

**PESQUISA AGROPECUÁRIA TROPICAL** "Conhecimento em Ciências Agrárias desde 1971" UFG

About Current Archives Announcements Contact Search

Home / Login

## Login

Username \*

Password \*

[Forgot your password?](#)

Keep me logged in

[Register](#) [Login](#)

[Make a Submission](#)

**Language**  
[English](#)  
[Português \(Brasil\)](#)

[Information for Authors](#)

[Open Journal Systems](#)

Type here to search

6:29 AM 5/31/2023

Scholastica x SciELO - Pesquisa Agropecuária x PKP Mursyidin et al. | Genetic diversi: x

https://revistas.ufg.br/pat/authorDashboard/submission/71016

**Pesquisa Agropecuária Tropical [Agricultural Research in the Tropics]**

— Back to Submissions

71016 / Mursyidin et al. / Genetic diversity of coconut germplasm native to South Kalimantan, Indonesia: a molecular study [Library](#)

Workflow **Publication**

Submission **Review** Copyediting Production

**Submission Files** [Search](#)

|  |   |                   |              |
|--|---|-------------------|--------------|
|  | 331405 dindinhm, Genetic diversity of native coconut germplasm.docx | November 29, 2021 | Article Text |
|  | 331406 dindinhm, Authors Declaration-Mursyidin.pdf                  | November 29, 2021 | Other        |
|  | 331430 gpborges, 71016-Texto do artigo-331405-1-2-20211129.docx     | November 30, 2021 | Article Text |

[Download All Files](#)

Type here to search

6:35 AM 5/31/2023

Scholastica x SciELO - Pesquisa Agropecuária x PKP Mursyidin et al. | Genetic diver: X

https://revistas.ufg.br/pat/authorDashboard/submission/71016

**Pesquisa Agropecuária Tropical [Agricultural Research in the Tropics]**

Back to Submissions

71016 / Mursyidin et al. / Genetic diversity of coconut germplasm native to South Kalimantan, Indonesia: a molecular study [Library](#)

Workflow **Publication**

Submission **Review** Copyediting Production

Round 1

**Round 1 Status**  
Submission accepted.

**Reviewer's Attachments** [Search](#)

No Files

Type here to search

6:35 AM 5/31/2023

Scholastica x SciELO - Pesquisa Agropecuária x PKP Mursyidin et al. | Genetic diver: X

https://revistas.ufg.br/pat/authorDashboard/submission/71016

**Pesquisa Agropecuária Tropical [Agricultural Research in the Tropics]**

Back to Submissions

Submission accepted.

**Reviewer's Attachments** [Search](#)

No Files

**Revisions** [Search](#) [Upload File](#)

No Files

**Review Discussions** [Add discussion](#)

| Name                               | From                               | Last Reply                         | Replies | Closed                   |
|------------------------------------|------------------------------------|------------------------------------|---------|--------------------------|
| <a href="#">Editorial Decision</a> | gpborges<br>2022-03-22<br>12:29 PM | dindinhm<br>2022-04-01<br>09:29 AM | 2       | <input type="checkbox"/> |

Type here to search

6:36 AM 5/31/2023

Scholastica x SciELO - Pesquisa Agropecuária x PKP Mursyidin et al. | Genetic diversity | X +

https://revistas.ufg.br/pat/authorDashboard/submission/71016

Pesquisa Agropecuária Tropical

Back to Submissions

### Editorial Decision

**Participants**

Gilson Pedro Borges (gpborges)  
Dindin Hidayatul Mursyidin (dindinhm)

**Messages**

| Note  | From                |
|---|---------------------|
| Dear Authors,   | gpborges            |
| We are sending the reviews for the submitted article. Please, observe the following topics: | 2022-03-22 12:29 PM |

- All suggestions must be accepted, or detailed explanations for not doing it must be provided. All alterations must be highlighted in the text, so it is possible for Reviewers to see exactly what was modified.
- The final version must be proofread by a specialist in the English language (preferably a native speaker). We currently recommend five companies (Insight - <https://www.ilepub.com/>; Proof-Reading-Service.com - <https://www.proof-reading-service.com/en/>; MSL -

Type here to search

6:36 AM 5/31/2023

71016 Mursyidin et al. Genetic diversity of coconut germplasm native to South Kalimantan, Indonesia: a molecular study Published View

|   |                            |
|---|----------------------------|
| 0 | Copyedited files submitted |
| 0 | Open discussions           |

Last activity recorded on Wednesday, April 6, 2022.