

Jurnal Natural

www.jurnal.unsyiah.ac.id/natural

ISSN 1411-8513
eISSN 2541-4062

VOLUME 21 NUMBER 2 JUNE 2021



Chief Editor
Marwan Ramli

Managing Editor
Suhartono

Associated Editors
Hadi Susanto
Anton Abdulbasah Kamil
Syed Azhar Syed Sulaiman
Rinaldi Idroes
Masatoshi Kondo
Peter Woodfield
Waltram S Ravelombola
Rosli Saad

Associated Editors
Elin Yusibani
Febriani
Rahmi
Mahdhivan Syafwan
Muhammad Syukri
Tedy Kurniawan Bakri
Vera Halfiani
Bodhi Dharma





Jurnal Natural (JN) was published by the Faculty of Mathematics and Natural Sciences, Syiah Kuala University since 2001 in association with the professional association: IndoMS, HKI, PSI, HAGI. JN is an open access journal involving anonymous (blind peer-reviewed) reviewers partners. Since 2011, JN has been using the Open Journal System (OJS) in article processing. Until now JN is published three times a year, February, June and October. The manuscript published in JN is an original script that contributes to state-of-the-art and applications in the field of mathematics and science.

Jurnal Natural (JN) is entirely open access, with apply a publishing charges for authors. The review process is blind review and efficient.

Jurnal Natural (JN) is Nationally Accredited by Ministry of Research and Technology/National Research and Innovation Agency, Number 148/M/KPT/2020 (Sinta Category 2). Additionally, Jurnal Natural has also been indexed in the Index Copernicus International (ICI) Journals Master List in 2019.

Peer Reviewers in this issue:

Agus A. Munawar, *Agricultural Engineering Department, Faculty of Agriculture, Universitas Syiah Kuala, Indonesia*
Agustiansyah, *Crop Cultivation Department, Faculty of Agriculture, Universitas Lampung, Indonesia*
Aidil Azhar, *Vocational School, Bogor Agricultural University, Indonesia*
Alia Rizki, *Biology Department, FMIPA Universitas Syiah Kuala, Indonesia*
Decky I. Junaedi, *Bureau for Plant Conservation, Cibodas Botanic Gardens, LIPI, Indonesia*
Dewi Elfidasari, *Biology (Biotechnology) Department, Universitas Al Azhar Indonesia*
Dewi Yunita, *Agricultural Product Technology Department, Faculty of Agriculture, Universitas Syiah Kuala, Indonesia*
Diana Waturangi, *Biotechnology Department, Universitas Katolik Atmajaya, Indonesia*
Khairan, *Chemistry Department, FMIPA Universitas Syiah Kuala, Indonesia*
Kismianti, *Department of Mathematics, FMIPA, Yogyakarta State University, Indonesia*
Lisnawita, *Agroecotechnology Department, Faculty of Agriculture, Universitas Sumatera Utara, Indonesia*
Muhammad Bahi, *Chemistry Department, FMIPA Universitas Syiah Kuala, Indonesia*
Muliadi Ramli, *Chemistry Department, FMIPA Universitas Syiah Kuala, Indonesia*
Nunik Ariyanti, *Biology Department, FMIPA, IPB University, Indonesia*
Sutarman, *Mathematics Department, FMIPA, University of Sumatera Utara, Indonesia*
Wan Asrina Wan Yahaya, *Department of Crop Science, Faculty of Agriculture and Food Sciences, Universiti Putra Malaysia*

Editorial Team

Chief Editor	Marwan	
Managing Editor	Suhartono	
Associated Editors	Hadi Susanto	Elin Yusibani
	Anton Abdulbasah Kamil	Febriani
	Syed Azhar Syed Sulaiman	Rahmi
	Rinaldi Idroes	Mahdhivan Syafwan
	Masatoshi Kondi	Muhammad Syukri
	Peter Woodfield	Tedy Kurniawan Bakri
	Waltram S Ravelombola	Vera Halfiani
	Rosli Saad	Bodhi Dharma

Publisher:

FMIPA Universitas Syiah Kuala, Indonesia

Mailing Address:

Fakultas Matematika dan Ilmu Pengetahuan Alam
Universitas Syiah Kuala, Darussalam, Banda Aceh-23111
Telpon (0651) 7410248, Fax. (0651) 7551819
Email: jurnal.natural@fmipa.unsyiah.ac.id



TABLE OF CONTENTS

The effect of organic fertilizers on the leaf morphology and stomatal density of <i>Pogostemon cablin</i> Benth MEUTIA ZAHARA, SUWARNIATI, QURRATU AINI, MUSLIM MUSLIM	52-56
Natural Decomposer (MOL) developed from various banana waste and different storage times DEWI YUNITA, IRFAN, MARLINA	57-63
Detection of <i>qnrS</i> and <i>tetA</i> resistance coding genes in <i>Pseudomonas aeruginosa</i> of egg-laying hens farming Cianjur Regency, West Java FAUZAN ARISANDI, SAFIKA, FACHRIYAN HASMI PASARIBU	64-71
A generalized linear mixed model for understanding determinant factors of student's interest in pursuing bachelor's degree at Universitas Syiah Kuala ASEP RUSYANA, KHAIRIL ANWAR NOTODIPUTRO, BAGUS SARTONO	72-80
The potential protective effects of malacca (<i>Phyllanthus emblica</i> L.) extract against doxorubicin-induced cardiotoxicity in male Wistar rats ETRINA MELINDA, ERMI GIRSANG, ALI NAPIAH NASUTION	81-88
Reduction mechanisms of Ag(I) and Au(III) in the synthesis of silver and gold nanoparticles using leaf extract of <i>Terminalia catappa</i> MUHAMMAD ZAKIR, MAMING, MISKA S. LEMBANG, ESTY Y. LEMBANG	89-98
Diversity and population structure of Dipterocarpaceae species in Weh Island Nature Tourism Park, Indonesia RIDHA UL FAHMI, SAIDA RASNOVI, ESSY HARNELLY	99-104
Indigenous Rhizobacteria treatment in controlling diseases <i>Phytophthora palmivora</i> and increasing the viability and growth of cocoa seedling SYAMSUDDIN, MARLINA, TJUT CHAMZURNI, VINA MAULIDIA	105-113



AUTHOR GUIDELINES

Manuscripts must be original. By publishing only original reports, JN is committed to deterring plagiarism, including self-plagiarism. Note that all manuscripts may be screened during the submission or peer-review process.

Text. Manuscripts must be prepared using accepted word-processing software. Times new roman 10th, double coloums.

Tables. Tables may be prepared in Microsoft Word or Microsoft Excel and must be embedded in the word-processing file. Authors are asked to follow these guidelines:(1) Number tables consecutively using Arabic numerals. (2) Include a descriptive heading that explains the table. (3) Give footnotes a letter designation, and cite in the table by italic superscript letters, labeling sequentially by lines of the table.

Graphics. The preferred submission procedure is to embed graphic files in the word-processing document near the point where they should appear in the final publication. Separate graphic files may also be included with the submission package. Additional acceptable file formats for graphics are TIFF, PDF, or EPS (vector artwork). EPS files: For EPS files, all fonts should be converted to outlines or embedded in the graphic file. The document settings should be in RGB mode. EPS is preferred for line-art figures. TIFF files are preferred for photographs. A rule should not be placed around the graphic.

Colors. Choose colors that will allow all features to be clearly visible on white paper, and format in RGB color mode. The RGB requirements are essential for producing high-quality graphics within the published manuscript. Graphics submitted in CMYK may be used; however, the colors may not appear the same in the final output.

Naming and Numbering. Name your graphics Figure 1, Figure 2, etc. (Arabic numerals), consecutively, and for figures not embedded in the text, place a call-out in the main manuscript text where the graphic should be located. Boldface Arabic numerals should be used for numbering structures.

Lettering. Lettering should be 10 points, and lines should have ≥ 0.5 -point thickness at final printed size. Lettering and lines should be of uniform density. Size. Submit graphics at the required print publication size. At printed size, graphics must be 300 dpi for color art and images containing photographic material, 600 dpi for grayscale art, and 1200 dpi for black and white line art. The resolution requirements are essential for producing high-quality graphics within the published manuscript. Graphics submitted at lower resolutions may be used; however, graphics that do not meet stated resolution requirements may appear at a lower quality in the final output.

Titles, Abstrack, Footnotes, Captions, Legends. Schemes may have titles and footnotes. Figures must have captions. To save space, place legends for graphs within the main body of the graphic, whenever possible.

Acknowledgment. Include financial support, technical assistance, advice from colleagues, gifts, etc. Be precise and thorough when acknowledging funders and include grant numbers where appropriate.

References. Compile all references together in a list at the end of the manuscript text. Many references will link directly to the cited article or other Web sites. It is crucial that authors verify the accuracy of references cited. Authors must reference all previous publications in which portions of the present work have appeared. Literature references should be numbered with Arabic numerals in the order of their first citation in the text and the corresponding superscripted numbers inserted at the appropriate locations in the text. References will be properly formatted during the technical editing and page formatting process. Articles accepted for publication should be cited as "in press"; the DOI should be given if the paper is published online only.