

JURNAL ABE (Agricultural Biosystem Engineering)
Vol. 4 No. 4, December 2025

Journal of Agricultural Engineering Biosystem Engineering (J-ABE) is a scientific publication that contains the results of research, development, studies or ideas in the field of agricultural engineering. The scope of writing scientific papers in this journal includes: power and agricultural machinery, agricultural cultivation, renewable energy, bioprocessing of agricultural products, environmental civil engineering, agricultural irrigation, robotics, automatic control in agriculture, design of agricultural machinery and tools, agricultural ergonomics, and nanotechnology. J-ABE is published 4 (four) times a year in March, June, September, and December. J-ABE open to the public, researchers, students, practitioners and observers in the world of agricultural engineering.

Editor-in-Chief:

Dr. Ir. Warji, S.TP., M.Si., IPM. [Scopus ID:57202450810] Department of Agricultural Engineering, Lampung University, Indonesia.

Editorial Board:

1. Dr. Sandi Asmara, [Scopus ID: 57211941445], Agricultural Engineering Department, Faculty of Agriculture, Lampung University, Indonesia
2. Prof. Dr. Agus Haryanto, [Scopus ID: 56237082700], Agricultural Engineering Department, Faculty of Agriculture, Lampung University, Indonesia
3. Dr. Ahmad Tusi, [57220958767], Agricultural Engineering Department, Faculty of Agriculture, Lampung University, Indonesia
4. Dr. Ir. Agus Sutejo, M.Si, [57205419123], Department of Mechanical and Biosystem Engineering, Faculty of Agricultural Engeneering Technology, IPB University, Indonesia
5. Dr. I Putu Surya Wirawan, S.TP., M.Si. [57205231765], Department of Mechanical and Biosystem Engineering, Faculty of Agricultural Engeneering Technology, Udayana University.

Managing Editors:

1. Elhamida Rezkia Amien, M.Si. [Scopus ID: 57678293300], Agricultural Engineering Department, Lampung University, Indonesia
2. Resti Astria, S.P, Agricultural Engineering Department, Lampung University, Indonesia.

Reviewers:

1. Dr. Siti Surayatun, [Scopus ID: 57211948982], Agricultural Engineering Department, Faculty of Agriculture, Lampung University, Indonesia
2. Dr. Tamrin [Scopus ID: 57218993913], Agricultural Engineering Department, Faculty of Agriculture, Lampung University, Indonesia
3. Winda Rahmawati, M.Sc, [Scopus ID: 57211949634], Agricultural Engineering Department, Faculty of Agriculture, Lampung University, Indonesia
4. Dr. Rakhmawati, M.Si.[Scopus ID: 57212030453] Aquaculture Department, Lampung State Polytechnic, Indonesia
5. Dwi Dian Novita, S.T. P., M.Si. [Scopus ID: 56156645100], Agricultural Engineering Department, Faculty of Agriculture, Lampung University, Indonesia.
6. Dr. Irwin Syahri Cebro, S.T., M.Si. [Scopus ID: 57203138585], Mechanical Engineering Department, Lhokseumawe State Polytechnic, Indonesia

The J-ABE is published by the Department of Agricultural Engineering, Lampung University.

Address of J-ABE Editor:

Department of Agricultural Engineering, Faculty of Agriculture, Lampung University
Jl. Soemantri Brodjonegoro No.1, Bandar Lampung, Lampung, Indonesia.
Phone. 0721-701609 ext. 846
Website : <https://jurnal.fp.unila.ac.id/index.php/ABE/index>
Email :jabe.2k22@gmail.com

Editorial Introduction

By giving thanks to Allah the Almighty, the Journal of Agricultural Biosystem Engineering (J-ABE) Volume 4 No 4, December 2025 can be published. This edition contains 10 (Ten) articles which are scientific papers from various fields of study in the world of Agricultural Engineering which includeing cultivating, waste processing, mapping, renewable energy, design, and bioprocess technology.

On this occasion, we would like to express our deepest gratitude to the authors for their contributions to J-ABE and to the reviewers of this journal for their participation in improving the quality of scientific papers published in this edition.

In conclusion, we hope that this J-ABE will benefit society and make a meaningful contribution to the development of science and technology, especially in the field of agricultural engineering.

Editor of J-ABE

Jurnal Agriculture and Biosystem Engineering (J-ABE)

Vol. 4 No. 4, December 2025

page

Table of Content

editorial introduction

Rancang Bangun Mesin Pengupas dan Pemisah Kulit Polong Kacang Hijau Menggunakan Silinder Pengupas dan Tenaga Blower	331-353
<i>Agus Sutejo, Gilang Ramdani, Raihan Muhammad Boer, Edwin Novryanta Ginting, Dinur Saptiadi, Muhamad Dava Al Ghifari</i>	
Uji Kinerja Mesin Chopper Serbaguna untuk Memperkecil Ukuran Pelepas Sawit	354-363
<i>A. Refaldi Fayza Alamsyah, Sandi Asmara, Oktafri Oktafri, Siti Suharyatun</i>	
Pemanfaatan Limbah Biomassa Batang Singkong Sebagai Bahan Pembuatan Pori pada Paving Block Porous	364-373
<i>Nia Hikmah Maharani, Winda Rahmawati, Warji Warji, Siti Suharyatun, Englang Febriani, Yoga Al husein</i>	
Pembuatan Briket Biocoal Campuran Batu Bara dengan Tempurung Kelapa Sawit	374-385
<i>Yusi Putri, Yuni Safitri, Tamrin Tamrin</i>	
Analisis Fase Pertumbuhan dan Kesehatan Tanaman Padi di Kabupaten Tulang Bawang Barat Berbasis Interpretasi Citra Sentinel - 2A	386-392
<i>Rahmat Sobirin Harahap, Ridwan Ridwan, Sasongko Aji Wibowo, Sandi Asmara</i>	
Rancang Bangun dan Uji Kinerja Alat Pengasap Ikan Lele (<i>Clarias batrachus</i>) Tipe Kabinet	393-406
<i>Muhammad Hisyam Alfawwaz AS, Tamrin Tamrin, Warji Warji, Sandi Asmara</i>	
Uji Sifat Fisik dan Laju Pembakaran Terhadap Variasi Persentase Campuran Bagas Tebu dengan Batubara dalam Pembuatan Briket Biocoal	407-414
<i>Zana Azalia Maktub, Tamrin Tamrin, Budianto Lanya, Sapto Kuncoro, Sasongko Aji Wibowo</i>	
Pengaruh Jumlah Padatan Terlarut Mineral Terhadap Warna Seduhan Teh Hitam	415-427
<i>Cicih Sugianti, Andiny Suryaningrum, Hana Yepani Br S</i>	
Studi Viabilitas Benih Kedelai (<i>Glycine Max [L.] Merril.</i>) Varietas Dega-1 Pada Berbagai Proporsi Kapur Tohor Dalam Dua Ukuran Wadah Pascasimpan Empat Bulan	428-439
<i>Ermawati Ermawati</i>	

**Pengaruh Penambahan Urine dan Penghalusan Kohe Kambing terhadap
Kualitas Pupuk Kompos Limbah Kulit Kopi Robusta (*Coffea Canephora*)**
Yosavat Rimbanu, Siti Suharyatun, Ahmad Tusi, Agus Haryanto

440-451

GUIDELINES FOR AUTHORS

Manuscripts: The editors accept manuscripts/scientific writings in Indonesian or English, with the following restrictions:

- a. The manuscript is typed on A4 size paper (210mm x 297mm) with 2 spaces and Times New Roman 12pt font size. The distance of the left, right, top and bottom edges is 3 cm each. The length of the manuscript does not exceed 20 pages including abstract, bibliography, tables and figures. All tables and figures are placed separately at the end of the manuscript (not inserted in the manuscript) with the numbering as stated in the manuscript. Manuscripts are arranged in the following order: Title; The author's name is accompanied by a footnote about the agency where he works; Introduction; Materials and Methods; Results and Discussion; Conclusions and recommendations; Bibliography; and attachments if needed.
- b. **Abstract** in Indonesian and English, no more than 200 words. Contains information contained in writing and easy to understand. The summary (abstract) must briefly contain the background, objectives, methods, and conclusions and which are the high light results of the research.
- c. **Introduction:** contains the background of the problems that prompted the implementation of engineering and research, citations of related and relevant previous findings, as well as the objectives of engineering or research.
- d. **Materials and Methods:** clearly explain the materials and methodologies used in the engineering or research along with the location and time of implementation, as well as the statistical analysis used. Reference is given to specific methods.
- e. **Results and Discussion:** Contains engineering or research results obtained and their relation to how these results can solve problems and their implications. The similarities and differences with the results of engineering or previous research and development prospects. Results can be presented by displaying pictures, graphs, or tables.
- f. **Conclusions and Suggestions:** contains important things from the research results and their contribution to overcoming problems as well as suggestions needed for the direction of engineering and further research.
- g. **Bibliography:** arranged alphabetically by author, in the following order and format: The author's name is preceded by family name/last name followed by the first letter of the lowercase or first name. For the second author and so on written the opposite. Example:
 - Library from the Journal:
Tusi, Ahmad, and R.A. Bustomi Rosadi. 2009. Application of Deficit Irrigation in Corn Plants. *Irrigation Journal*. 4(2): 120-130.
 - Libraries from Books:
Keller, J., and R.D. Bleisner. 1990. Sprinkle and trickle irrigation. AVI Publishing Company Inc. New York, USA.
- h. **Units:** Units must use the international system (SI), for example: m (meter), N (newton), °C (temperature), kW and W (power), etc.

Attention:

- 1) Submission of Manuscripts: Manuscripts can be sent to the address in the form of soft copies to:
Address of J-ABE Editor:
Department of Agricultural Engineering, Faculty of Agriculture
Lampung University
Jl. Soemantri Brodjonegoro No.1, Bandar Lampung, Lampung, Indonesia
Telp. 0721-701609 ext. 846
Website : <https://jurnal.fp.unila.ac.id/index.php/ABE/index>
Email :j.abe.2k22@gmail.com
- 2) During the process of receiving scientific papers, review by reviewers, until receipt of papers for publication in journals will be confirmed to the authors via email.
- 3) The reviewer has the right to evaluate, correct, add or reduce the contents of the manuscript/writing if deemed necessary, without reducing the intent and purpose of writing.