JURNAL ABE (Agricultural Biosystem Engineering) Vol. 2 No. 3, September 2023

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. 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 [57218993913], Agricultural Engineering Department, Faculty of Agriculture, Lampung University, Indonesia
- 3. Winda Rahmawati, M.Sc, [57211949634], Agricultural Engineering Department, Faculty of Agriculture, Lampung University, Indonesia
- 4. Dr. Ir. Sapto Kuncoro M.S. [47962380800], Agricultural Engineering Department, Faculty of Agriculture, Lampung University, Indonesia
- 5. Dr. Rakhmawati, M.Si.[57212030453] Aquaculture Department, Lampung State Polytechnic, Indonesia
- 6. Dwi Dian Novita, S.T. P., M.Si. [56156645100], Agricultural Engineering Department, Faculty of Agriculture, Lampung University, Indonesia.
- 7. Dr. Irwin Syahri Cebro, S.T., M.Si. [57203138585], Mechanical Engineering Department, Lhokseumawe State Polytechnic, Indonesia

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

Address of J-TEP 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: <u>j.abe.2k22@gmail.com</u>

Editorial Introduction

By giving thanks to Allah the Almighty, the Journal of Agricultural Biosystem Engineering (J-ABE) Volume 2 No 3, September 2023 can be published. This edition contains 15 (Fifteen) 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. 2 No. 3, September 2023

	page
Table of Content editorial introduction	
Pengaruh Dosis Pupuk dan Tinggi Permukaan Air pada Budidaya Padi Varietas M70D dengan Media Pasir Ridwan, Annisa Mar'atus Sholihah, Elhamida Rezkia Amien, Muhammad Amin	338-344
Pemanfaatan Bonggol Jagung Sebagai Bahan Campuran Pembuatan Paving block Porous Firmansyah Ully Pratama, Winda Rahmawati, Febryan Kusuma Wisnu, Siti Suharyatun	345-353
Pengaruh Lama Fermentasi Menggunakan Mikroba Ghalkoff terhadap Perubahan Konsentrasi Kandungan Kafein Kopi Robusta Organik Kabupaten Lampung Barat Riky Yan Wijaya, Tamrin, Cicih Sugianti	354-360
Pengaruh Sinar UV-C terhadap Perubahan Mutu Wortel (<i>Daucus carota</i> L.) Selama Penyimpanan Nesti Kurnia Ningsih, Dwi Dian Novita, Tamrin	361-372
Pengaruh Tipe Sistem Hidroponik dan Ukuran Wadah Nutrisi Terhadap Hasil Buah Tomat Ceri (<i>Lycopersicum esculentum</i> M.) Disca Anggi Pratiwi, Sugeng Triyono, Winda Rahmawati, Agus Haryanto	373-382
Analisis Ergonomika Pengoperasian Bagian Pencacah pada Mesin Pencacah Pakan Ternak Multiguna Ayu Anggiana, Siti Suharyatun, Febryan Kusuma Wisnu, Warji	383-392
Mempelajari Pembuatan Tepung dari Buah Pepaya sebagai Bahan Baku Makanan Nur Oktavia, Tamrin, Winda Rahmawati, Sapto Kuncoro	393-398
Modifikasi Alat Perajang Batang Singkong (Rabakong Tipe Tep 5) untuk Meningkatkan Kapasitas Kerja Sandi Asmara, Sapto Kuncoro, Siti Suharyatun, Firnando Anggi Setiawan	399-409
Pengaruh Variasi Bahan Peredam Kemasan dan Tingkat Kematangan Buah Alpukat terhadap Tingkat Kerusakan Mekanis pada Simulasi Getaran Selama Transportasi Fadhlilla Rahmah, Tamrin, Winda Rahmawati, Sapto Kuncoro	410-418

Optimasi Ukuran Pot dan Dosis Pupuk pada Budidaya Melon (<i>Cucumis melo</i> L) Singgih Krisdiyantoro, Sugeng Triyono, Ahmad Tusi, Agus Haryanto	419-427
Pengaruh Jumlah Masukan dan Varietas Batang Singkong Terhadap Kinerja Mesin Rabakong Tipe TEP-6 Sandi Asmara, Sapto Kuncoro, Siti Suharyatun, Muhammad Alif Aditya	428-437
Performance Test of Hotong Seed Billing Machine (Setaria italica (L.) P. Beauv) Abrasive Roll Type with Grinding Stone Agus Sutejo, Kemas Asror Abdillah, Lilis Sucahyo, Dionisius Dwi Wicaksono, Gatot Pramuhadi	438-449
Pengaruh Pola Pengolahan Terhadap Efisiensi Pengolahan Tanah Menggunakan Traktor Tangan Adi Saputra, Siti Suharyatun, Winda Rahmawati, Warji	450-460
Uji Kinerja Sistem Fertigasi Tanaman Bawang Merah (Allium cepa L.) Leni Tri Wahyuni, Ahmad Tusi, Elhamida Rezkia Amien	461-469
Pengaruh Kecepatan Putar dan Jumlah Masukan Batang Singkong Terhadap Kinerja Mesin Rabakong Tipe TEP-6 Sandi Asmara, Sapto Kuncoro, Siti Suharyatun, Rizky Juliantoro	470-476

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-TEP 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.