

ACCREDITED SINTA 2

p-ISSN 2085-2916, e-ISSN 2337-3652

Vol. 52 No. 1

April 2024

Jurnal Agronomi Indonesia (Indonesian Journal of Agronomy)



PUBLISHERS
INDONESIAN SOCIETY OF AGRONOMY &
DEPARTMENT OF AGRONOMY AND HORTICULTURE,
FACULTY OF AGRICULTURE,
IPB UNIVERSITY (BOGOR AGRICULTURAL UNIVERSITY)

Jurnal Agronomi Indonesia (Indonesian Journal of Agronomy)

p-ISSN 2085-2916, e-ISSN 2337-3652

A scientific journal accredited "Sinta 2" by the Ministry of Research, Technology, and Higher Education No. 158/E/KPT/2021

EDITORIAL BOARD

Editor-in-Chief

Edi Santosa (IPB University - Indonesia, Plant Ecophysiology)

International Members

Bunyamin Tar'an (University of Saskatchewan - Canada, Molecular Genetics), Ghizan Shaleh (Universiti Putra Malaysia - Malaysia, Plant Breeding), Zlatko Svecnjak (University of Zagreb - Croatia, Agronomy), Vasco Fitas da Cruz (Evora University - Portugal, Agronomy), Hiroshi Ehara (Mie University - Jepang, Produksi dan Ekologi Tanaman), Walter Ajambang Nchu (Institute of Agricultural Research for Development (IRAD) - Cameroon, Plant Genomics)

National Members

Agustina Asri Rahmianna (Indonesia, Agronomi), Aris Hairmansis (National Research and Innovation Agency (BRIN), Plant Breeding), Aslim Rasyad (Riau University - Indonesia, Plant Breeding), Bambang Sapta Purwoko (IPB University - Indonesia, Plant Biotechnology), Didik Inradewa (Gajah Mada University - Indonesia, Agronomy and Physiology), Edy Sigit Sutarta (Indonesian Oil Palm Research Institute - Indonesia, Soil Fertility), Endah Retno Palupi (IPB University - Indonesia, Seed Science and Technology), Jajang Sauman Hamdani (Padjadjaran University - Indonesia, Agronomy), Muhammad Azrai (Hasanuddin University - Indonesia, Plant Breeding), Muhammad Rahmad Suhartanto (IPB University - Indonesia, Ilmu dan Teknologi Benih), Nurmayulis (Sultan Ageng Tirtayasa University - Indonesia, Agronomy), Reflinur (National Research and Innovation Agency (BRIN), Molecular Biology), Roedhy Poerwanto (IPB University - Indonesia, Horticulture), Slamet Susanto (IPB University - Indonesia, Ecophysiology), Sobir (IPB University - Indonesia, Plant Breeding), Sudarsono (IPB University - Indonesia, Plant Biotechnology), Sudirman Yahya (IPB University - Indonesia, Plantation Crops), Sumeru Ashari (Brawijaya University - Indonesia, Horticulture)

MANAGING EDITOR

Lead: Willy Bayuardi Suwarno (IPB University - Indonesia, Plant Breeding)

Members: Abdullah Bin Arif (National Research and Innovation Agency - Indonesia, Post Harvest), Ady Daryanto (National Research and Innovation Agency - Indonesia, Plant Breeding), Ahmad Rifqi Fauzi (Trilogi University - Indonesia, Crop Production), Andi Nadia Nurul Lathifa Hatta (IPB University - Indonesia, Plant Biotechnology), Anggi Nindita (IPB University - Indonesia, Plant Breeding), Arya Widura Ritonga (IPB University - Indonesia, Plant Breeding), Asri Subkhan Mahulette (Pattimura University - Indonesia - Indonesia, Agronomy), Mamik Sarwendah (Agricultural Instrument Standardization Agency - Indonesia, Agronomy), Maryati Sari (IPB University - Indonesia, Seed Technology), Maya Melati (IPB University - Indonesia, Plant Ecophysiology), Miftahur Rizqi Akbar (Indonesian Coffee and Cocoa Research Institute - Indonesia, Plant Breeding), Okti Syah Isyani Permatasari (IPB University - Indonesia, Seed Technology), Siti Marwiyah (IPB University - Indonesia, Plant Breeding), Zulfikar Damaralam Sahid (IPB University - Indonesia, Plant Breeding)

TECHNICAL EDITOR

Nurdianah (IPB University - Indonesia)

PUBLISHERS

Indonesian Society of Agronomy (Perhimpunan Agronomi Indonesia, PERAGI) and
Department of Agronomy and Horticulture, Faculty of Agriculture, IPB University, Bogor, Indonesia.

MAILING ADDRESS

Jurnal Agronomi Indonesia (Indonesian Journal of Agronomy)
Department of Agronomy and Horticulture, Faculty of Agriculture, IPB University
Jl. Meranti, Kampus IPB Dramaga, Bogor 16680
Tel. +622518629351; Fax. (0251) 8629353; Mobile +628121894906
Email: jurnal.agronomi@yahoo.com
Website: <https://journal.ipb.ac.id/index.php/jurnalagronomi>

Indonesian Journal of Agronomy (Jurnal Agronomi Indonesia), formerly named Buletin Agronomi, first published in 1962.

This journal publishes primary research papers, review articles, and research notes in all areas of agronomy.

Issues are published three times a year, in April, August, and December.

Cover Photo: Mosaic of RGB UAV images of rice field. See "Application of RGB UAV images to identify spectral patterns and estimate rice production", by Khursatul Munibah, Wahyu Iskandar, Baba Barus, and Chiharu Hongo (p. 29).

Photo Credit: K Munibah and B Barus.

TABLE OF CONTENTS

1. Responses of shallot to ameliorant and actinobacteria applications in water-saturated system on tidal land
A. Haitami, Munif Ghulamahdi, Didy Sopandie, Anas Dinurrohman Susila, and Yulin Lestari 1-9
2. Effects of row ratio and plant spacing for enhancing hybrid rice seed production in the tropics
Bayu Pramono Wibowo, Yuni Widyastuti, R. Noviadi Prabowo, Cecep Suparman, Satoto, and Trias Sitaresmi 10-16
3. Dynamics of weeds and main pests in different rice planting systems supplemented with biodecomposer
Firmansyah Firmansyah, Elisurya Ibrahim, Rini Ismayanti, Nur Rosida, and Wasis Senoaji 17-28
4. Application of RGB UAV images to identify spectral patterns and estimate rice production
Khursatul Munibah, Wahyu Iskandar, Baba Barus, and Chiharu Hongo 29-37
5. Root cutting on growth and yield of oil palm (*Elaeis guenesis* Jacq.)
Cecep Ijang Wahyudin, Hariyadi, Sudradjat, Sudirman Yahya, and Syaiful Anwar 38-44
6. *Trichoderma* spp. isolates stimulate rice seedling growth of Sertani 13 variety
Sulistya Ika Akbari, Dedat Prismantoro, Nia Rossiana, and Febri Doni 45-53
7. Optimization of nutmeg (*Myristica fragrans*) grafting using multiple rootstock and scion types
Fiolita Kermite, Winarso Drajad Widodo, and Dhika Prita Hapsari 54-63
8. Analysis of soil fertility status on rice (*Oryza sativa* L.) planted land in Polewali District, Polewali Mandar Regency
Sudirman Numba, Abdul Haris, Saidah, B. Ibrahim, Jabal Rahmat Ashar, and Muh. Ibnu Hari Sucipto 64-73
9. Seed tuber production of potato from stem cuttings, planting densities, and paclobutrazol concentrations
Andi Sri Ummi Kalsum Yulifar, Awang Maharijaya, Agus Purwito, Endang Gunawan, Heri Harti,
and M. Rahmad Suhartanto 74-81
10. Growth response of pak choi (*Brassica rapa* L.) on different concentrations and intervals of eco-enzyme applications
Nerty Soverda, Elly Indra Swari, Neliyati Neliyati, Desma Putri, and Dilla Wahyuni 82-91
11. Performance of sorghum varieties with various fertilizer doses in peatlands of West Aceh Regency
Dewi Andriani, Jekki Irawan, Iwandika Syahputra, Mawaddah Putri Arisma Siregar, and Putri Mustika Sari 92-100
12. Callus formation response from immature male flower explant of plantain banana (*Musa acuminata* x *Musa balbisiana* cv. Kepok) treated by 2,4-D and BAP
Dhiya Nabilla Ardhani, Awang Maharijaya, and Megayani Sri Rahayu 101-109
13. Effect of CaCO₃, humic acid, and arbuscular mycorrhizal applications on soybean growth in ultisol of Sijunjung, West Sumatra
Rahayu Arraudah, Heni Purnamawati, and Munif Ghulamahdi 110-121
14. The influence of nutrient concentration and hydroponic growing media on the growth and yield of pagoda mustard greens (*Brassica narinosa* L.)
Deni Ahmad Fauzi, Selvy Isnaeni, and Siti Nurhidayah 122-129
15. Propagule origin and soil organic carbon content determine the growth and yield of *Amorphophallus muelleri* Blume
Bobot Sudoyo, Hariyadi, and Edi Santosa 130-140